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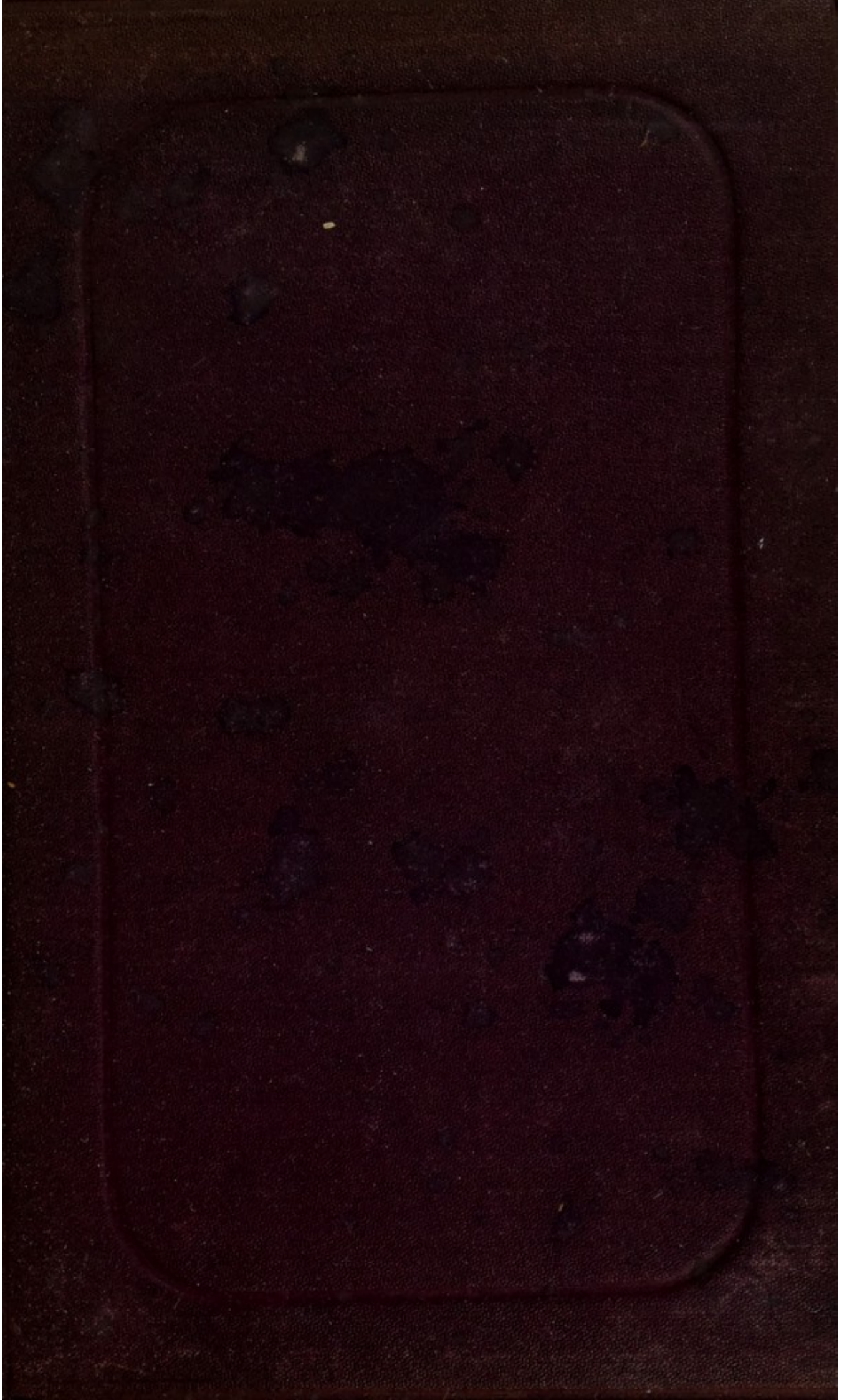
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A HANDBOOK
OF
GYMNASTICS AND ATHLETICS.

BY
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PRESIDENT OF THE GERMAN GYMNASTIC SOCIETY, LONDON,

AND
JOHN HULLEY,
GYMNASIARCH OF LIVERPOOL.

WITH NUMEROUS WOODCUT ILLUSTRATIONS, FROM ORIGINAL
DESIGNS.

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P R E F A C E.

In presenting to the public a work on gymnastics, we feel that scarcely any justification is required for such an undertaking. We are indeed aware that numerous works on gymnastics and manly exercises generally have been published, and a few of these have no mean merit. Nevertheless, our experience in connection with two of the largest gymnasia in the country, our communications with the leading men of the principal clubs interested in the spread of physical education, gave us reasons to believe, that a Handbook such as ours, would still prove acceptable.

This Handbook is intended, primarily, for the use of Gymnastic and Athletic clubs, but by omitting some of the more arduous exercises it can be used also in connection with schools.

We have endeavoured to explain the different exercises as clearly as possible, and without doing violence to the spirit of the English tongue. Figurative expressions have been used pretty extensively, for, if once accepted, they convey the idea of an exercise, which otherwise could be explained only by using many words — but as a rule, we have confined ourselves to technical terms, the very sound of which conveys to the mind some idea of the exercise to be performed. Such terms are twirl, straddle-vault, squatting vault etc. We trust, the expressions introduced will meet with favour, and any suggestions for improving them, shall meet with our most careful

consideration, with a view to their being adopted in any future edition of this work.

We cannot conclude these few prefatory remarks without expressing our sense of obligation to Mr. A. Ravenstein of Frankfurt-on-the-Main, whose "*Volks-Turnbuch*" has been to us a mine of wealth, upon which, by kind permission, we have drawn frequently.

Those amongst our Readers desirous of full information with reference to the construction of apparatus, we refer to a work of ours, just published, and entitled "The Gymnasium and its Fittings."

LONDON and LIVERPOOL, July 1867.

THE AUTHORS.

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NOTE. The Latin figures I, II, III or IV distributed throughout the work express the degree of difficulty attending the performance of the exercises thus distinguished.

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PART I.

INTRODUCTORY REMARKS.

I. HISTORICAL SKETCH.

1. THE ancient Greeks were the first nation who paid the same attention to physical and mental training. Their gymnasia were not only training schools for the body, but for the mind also, and the office of Gymnasiarch was one of great honour and repute. The exercises carried on by the Greeks were simple. Their Pentathlum included wrestling, running, leaping, throwing the disc and throwing the javelin. At a later date boxing was substituted for javelin throwing, and the Pancration, a combination of boxing and wrestling, introduced; but these last exercises never enjoyed a very high reputation, and the Spartans rejected them altogether. In addition to the exercises of the Pentathlum, the Greeks practised swimming, riding and driving, archery, dancing, and games of various descriptions. Competitions in many exercises formed a principal feature of the many popular Festivals, amongst which those of Olympia were the most celebrated.

2. Amongst the Romans gymnastics never enjoyed the same reputation as amongst the Greeks. The soldiers, indeed, learnt to swim, to leap, to run, to fence and throw the lance, because these things proved profitable in the field, but gymnastics, at no time, formed a branch of public education. The public games, too, lacked the refinement of those of Greece, and instead of

the manly competitions of Olympia, we meet with the barbarous and blood-thirsty contests of gladiators.

3. Manly exercises were highly esteemed amongst the ancient Germans. The "Nibelungen Lay" tells us of contests in running, putting the stone, leaping, throwing the lance and wrestling. King Teutobach of the Teutons is reported to have vaulted over four to six horses, standing side by side, and Tacitus describes the sword dance of German youths. During a great part of the middle ages bodily exercises continued to be cultivated. The knights had their tournaments, the citizens their shooting-matches, the villagers their festivals, and on each of these occasions contests in leaping, running, climbing, tilting, putting the stone, wrestling and other sports took place. But the church interposed. The clergy were adverse to physical education, and the scholastic system introduced by them excluded bodily exercises altogether.

The Reformers Luther and Zwingli were amongst the first to oppose this system and to stand up in favour of bodily exercises. Camerarius of Bamberg, in his "Rules of Life for Boys", published about 1540, recommends leaping, running, wrestling and other games. Montaigne, in his "Essays", published in 1580, eloquently urges the claims of physical education, and Locke, in his "Essay on Education", and J. J. Rousseau, in the "Emile", 1762, follow in his foot-steps.

4. The recommendations of these philosophers were first put in practice by B. Basedow in 1774. He founded an educational establishment at Dessau, which he called Philantropinum, and introduced bodily exercises as a regular branch of instruction. The example thus given was followed at other schools, especially at that established by Salzmann at Schnepfenthal, near Gotha. Here J. C. F. Gutsmuths directed the exercises for a number of years. His work on gymnastics was translated into many European languages, though generally the name of the author was suppressed or that of some other person substituted. His works, and those of G. U. Vieth, are full of thought and valuable suggestions; they are mines of wealth, too frequently drawn upon by later writers without due acknowledgment. — Pesta-

lozzi also, the great school reformer, paid due attention to physical education.

We thus find gymnastics introduced in a number of schools as a regular branch of instruction, — *F. L. Jahn* made them a popular institution in Germany. In 1811 he opened the first public gymnasium near Berlin. Germany at that time was bowed down under the yoke of a foreign oppressor. Jahn's aim was to regenerate the people by educating them physically as well as mentally. Jahn's efforts were successful at first. Gymnasia sprung up in many towns, and plans were prepared for introducing gymnastics into all the public schools; but the opponents of physical education and friends of darkness for a time carried the field. The gymnasia were closed in 1818 by the police, on the plea of their being hot-beds of political agitation, and Jahn himself was thrown into prison and kept there until 1825, when he was acquitted of the fabricated charges brought against him. He lived to see gymnastics introduced into the schools by a Royal Decree, in 1842, and societies of young men flourishing all over Germany. He died in 1852, at the ripe age of seventy-four. Amongst other men who have largely contributed towards the spread of gymnastics in Germany and Switzerland we must mention Eiselen, Clias (first at Bern, subsequently in France and England), Werner and *A. Spiess*, whose chief merit lies in a systematic treatment of the exercises and their adaptation for children of both sexes.

5. From Germany Gymnastics spread first to Denmark, where *Nachtegall* opened a gymnasium in 1799, and thence to Sweden. In the latter country *P. H. Ling*, a man of great natural gifts, developed a peculiar system. Ling's chief merit consists in his having drawn attention to the treatment of diseases by gymnastic exercise.

In France Colonel *F. Amoros* was the first to introduce gymnastics. He followed in the main the ideas of *Gutsmuths* and other German writers. Nor do the military gymnastics introduced in 1843 differ essentially from the gymnastics carried on at that time in Germany. *Triat's* system offers some

peculiarity, as machinery of the most complicated description, and in great variety, has been introduced by him.

In Great Britain out of door sports, such as rowing, cricketing, foot-ball, have been carried on extensively for many years. Nevertheless the introduction of systematic gymnastic training appears necessary, especially in large towns, and it is satisfactory to observe that Athletic and Gymnastic Societies have been formed of late in the principal cities and are prospering.

II. GYMNASTIC DEFINITIONS.

6. Gymnastics, as practised at the present time, have several distinct branches, according to the object which it is desired to attain. We have thus military gymnastics, medical gymnastics, school gymnastics, spectacular or show gymnastics, and national or popular gymnastics.

7. **MILITARY GYMNASTICS** are the root whence all other kinds of gymnastics sprang. They are not a product of modern times: for long ere physicians, teachers and statesmen had availed themselves of the advantages of gymnastic training they were practised by the barbarian, and through all ages, up to the present time, they have remained one of the chief means of attaining military excellence. Military gymnastics form a separate branch only in as far as a preference is accorded to some special kinds of exercise. It is admitted unanimously that bodily culture is the true foundation of military excellence: the experience of the battle-field has gone far to confirm this verdict.

No essential differences should exist in the manner according to which gymnastics are carried on in military or popular gymnasia, for practical results should be kept in view in the latter also; and to accord a preference to showy performances is quite opposed to the views of those who have done most to popularize gymnastics. Directors of gymnasia should have an eye always to the development of martial qualities in their pupils; they need not neglect for this the humanizing, dietetical or aesthetical aspects of education. By due attention paid in the gymnasium to practical objects, men may become

strong, agile and enduring; skilled alike in cutting, thrusting, marching, running and leaping, and fit to meet any enemy, whether hand to hand, or in the array of battle.

8. **MEDICAL GYMNASTICS** have been carried on from remote times. Of late they have been brought into particular notice by the efforts of Ling in Sweden, Schreber and Berend in Germany, and others. In medical gymnastics the physiological effect of the manifold movements employed is calculated with the greatest possible exactness. The so-called passive movements, as kneading, rubbing, shaking, are a legacy of the old school of practitioners. Ling introduced most of the "duplicated movements", in which the patient offers a regulated resistance, or submits to it. The so called "active movements" are the same as in the other branches.

No doubt, the gymnastic cure, applied by able men, has proved of benefit in the treatment of deformities and of other diseases; however, we cannot recommend an introduction of the movements peculiar to it into public gymnasia, and an attempt of that kind, made by Major Rothstein in Prussia, has failed signally. Nevertheless, teachers in gymnasia should not lose sight of the bearings of the exercises they direct upon health and bodily development, and as guardians of bodily vigour and health they ought to be in a position to judge the dietetical influences of gymnastic exercises, for there are many persons who join a gymnastic society merely to improve their health or to counteract the injurious influence of certain callings.

9. **SCHOOL GYMNASTICS.** The Military and medical gymnastics owe their origin to inevitable necessities existing in the most primitive state of society, and it was reserved for our own age to introduce gymnastics into schools, as a regular branch of education. The benefits conferred by these exercises are acknowledged, and it only requires an earnest will and the surrender of some prejudices, to make the whole of our youth participate in them. These exercises are preferable by far to the drill introduced of late into some schools. Girls as well as boys should join in them, divided into classes according to sex, age and proficiency. If the training institutions take this

matter in hand there will be no lack of efficient teachers. It is generally acknowledged that as yet nothing has been done to provide persons competent for this task, mere play, which cannot be trusted to secure the physical development of children, having hitherto been deemed by their instructors all sufficient. The gymnasium, including a hall and play-ground, should be close to the school itself, and one hour daily should be devoted to these exercises and to gymnastic games.

10. **Gymnastics**, the primary aim of which is a public exhibition of skill, strength, and agility, or the production of athletic or acrobatic feats, or the aesthetical arrangement of groups and movements, form a branch by themselves, cultivated generally by professional men. These performances may be comprehended under the name of **SPECTACULAR** or **SHOW GYMNASTICS**. Their admission into popular gymnasia must be restricted, and it should be optional with individual members whether they will devote their energies to them. The task of public gymnasia is to prepare the great body of the people for the practical requirements of life; not to produce athletes for public exhibition.

11. **POPULAR GYMNASTICS**. The aim of a system of popular gymnastics is far more comprehensive than that of either of the branches above mentioned. Onesidedness of any kind is foreign to it. It includes the chief elements of military gymnastics, and is the indispensable foundation of a national system of defence; it confers a public benefit with respect to health and, though disclaiming rivalry with the achievements of the circus or the stage, it opens to its followers the delightful realms of art and beauty exhibited in bodily culture and training, besides affording them a means of healthful recreation.

Jahn says: — "Gymnastics are to restore the uniformity in our education, which has been lost; to add bodily education to one-sided mental culture; and to balance over-refinement by manliness regained." Elsewhere he says, — "The gymnasium is a place where bodily strength may be exercised; a school, where skill in manly strife may be acquired; a field

for chivalry to contend in; a help to education; a nursery for health; and a public benefit."

Spiess expresses himself as follows, — "Gymnastics are designed to obtain for all a free use of their bodily powers, for without fostering care they, like our mental capacities, are but a poor possession. Each limb should be trained with reference to its natural uses, in order that our whole body, thus uniformly cultivated, may obey the behests of the mind. In a gymnasium, order and propriety should be taught, energy developed, wilfulness put down, and the young citizen prepared equally well for the pursuits of peace and the turmoil of war."

The German patriot E. M. Arndt says with reference to gymnastic societies, — "It is one of the first lessons of the gymnasium, given to each on entering, and held up to him during all the time he remains, that these exercises are not exercises of vanity or jugglery, but are intended to prepare for the work which befits a man, and for responding to the noblest calls of our life. That their aim is to form a healthy, strong, valiant and gladsome man; to endow his body with strength and endurance to render him fit to undergo the hardships of a march and the work of the camp and battle-field. And is it not the greatest calamity of all if a man is not strong enough, in the hour of need, to pay the irremissible debt he owes his country?.... Vanity and empty swagger are restrained, chastity is taught to be the first and most sacred duty of every German and Christian; beings effeminate or dissolute are pointed at with abhorrence, and none are allowed to stay in this strict and honourable association who have done, or suffered to be done, anything infamous or vicious."

III. ON THE CONSTITUTION OF GYMNASTIC SOCIETIES.

12. Gymnastic societies are a necessity if bodily exercises are to become part and parcel of a people's existence. Few persons are able to provide a private gymnasium, and even when this difficulty is surmounted, the exercises, from lack of emulation and encouragement, are carried on in a somewhat slovenly manner. A society, on the other hand, is not only able to provide ample apparatus and efficient teachers, but through its regulated activity inculcates those principles of order and subordination, which play so important a part in public and industrial life. A short statement of the matters to be mentioned in the "rules" may be acceptable.

First of all the aim and object of the society should be stated clearly, thus, — "The aim of the society is to afford its members opportunity for bodily exercise, not only for the sake of healthful recreation, but with a view to render them fit to serve their fellow-men and their country in all cases where bodily strength, endurance and skill are called for." The society need not necessarily confine itself to this object. A singing club, or a library may be united to it advantageously, and occasional social meetings, decorously conducted, have much in their favour.

Members should be admitted by the council, and not by ballot. The council will be best able to judge whether an applicant is eligible. The council should also have the right to expel members who may offend against the Rules and Regulations, or act in an ungentlemanly manner.

The Council should include a number of officers sufficient to manage the affairs of the society without any one of them being over-burdened. A President and Vice-President, two secretaries, a treasurer, a librarian, a Director of Exercises, three Assistant directors, and five ordinary members will be found sufficient in the case even of a large society. The council is elected annually, one officer after the other, in order to prevent the votes being split. The greatest care should be exercised in electing the Council, for upon its constitution the

well-being of the society depends. The members of the Council should not merely take an interest in the objects and the well-being of the society, but they must be able and willing to do a great deal of work. It is absurd to elect a President simply for the purpose of taking the chair or making a speech on some public occasion; moreover, it is unjust. For the man who has laboured incessantly for perhaps twelve successive months, sacrificing time and money, ought not to be put aside for some titled nonentity to reap the harvest, which *he*, to a great extent, has sown. By all means let us have "men of standing", if such can be found, willing to perform the duties entailed by their position in the council; but above all we must have men possessed of some practical knowledge of the business they are to direct, and whose private and public conduct has gained for them the esteem of their fellow-members.

The office of Director of exercises is perhaps the most important in the council. Societies able to afford it should always employ a professional Director, who must be a man of education and a *gentleman*. His services will be found extremely useful and even remunerative, for the Gymnasium may be used during the day by ladies, gentlemen and children, practising in separate classes, and paying at a higher rate than the evening members.

General Meetings are held once a quarter or even less frequently. Special meetings are called by the council or on requisition of twenty members. These meetings control the expenditure, and the council should not be permitted to incur any extraordinary expense beyond a certain amount, nor to enter into an agreement binding the society beyond its term of office, unless after having obtained the sanction of a meeting.

Regulations for the Gymnasium itself will be found further on. We advise gentlemen about to form societies to make the rules as short as possible.

13. SOCIETIES existing in one and the same town or within the same county should not rest satisfied with living together upon friendly terms, but they should form themselves into *Town and County Associations*. The task of such associations

would be the promotion of new societies, in places where none exist; the introduction of gymnastics into all places of education, including girls schools; the training of teachers and leaders, and the promotion of a rational system of instruction; the holding annually a Festival in one of the associated towns, etc. The *National Olympian Association for promoting physical education*, ought to embrace these various minor associations, and afford their members an opportunity to distinguish themselves on a national arena.

IV. ON THE MANNER OF CONDUCTING THE EXERCISES.

14. THE practice of the gymnasium on the one hand should accustom the members to act together as a body, and on the other develop their individual capacities.

Tactical and Free Exercises serve the first purpose; they are eminently suited to be carried on by large numbers in common, though some other exercises can be practised in the same way, for example bar-bells, clubs, etc.

Squad practice, in squads of at most twelve men placed under a leader, is resorted to when the apparatus does not admit of many practising at a time, or when it is sought to develop the capacity of each man individually.

Voluntary practice enables members to follow their own inclination in selecting exercises. This liberty should be used wisely, and it is recommended to practise every night one of the more arduous exercises, such as climbing, rising at the bar etc., to the full extent of your strength; then to leap in height or distance; next to encounter one or the other of your comrades in the wrestling ring or on the balancing beam, always choosing one rather superior in strength and skill. Having thus done the most needful, try again those exercises which did not succeed satisfactorily during the squad practice, and lastly try to attain greater proficiency in exercises for which you have an inclination or natural capacity. Whenever you do anything attended with risk secure the aid of some proficient comrade.

Lastly we have *Gymnastic Games*. These, to some extent, combine the advantages of common with individual exercises, for the players, whilst submitting to certain rules, are allowed a wide field for individual distinction.

15. AN evening at the gymnasium may be passed in the following manner. *Voluntary practice* may prevail whilst the members are assembling. At an appointed time they are ordered to fall in, each man taking up his position in the squad to which he belongs. Mass Exercises are then gone through for about 15 minutes. These are succeeded by squad practice, lasting about one hour, the apparatus being changed once. And in conclusion a game is arranged or voluntary practice allowed until the gymnasium closes.

16. REGULATIONS, similar to the following, should be exhibited in the gymnasium, and they must be strictly enforced.

REGULATIONS FOR THE GYMNASIUM.

THE DIRECTOR OF EXERCISES.

1. The Director of Exercises is responsible to the Council of the Society for an orderly and efficient practice of the Exercises. His orders must be strictly attended to.

2. Complaints against the Director or his Assistants cannot be preferred whilst the regular exercises are being carried on, but are to be submitted, at their conclusion, to the President, who will either adjust the difference, or place it before the next meeting of the council.

SQUADS.

3. The members are divided into Squads according to their proficiency. The Leader of each squad is nominated by the Director of Exercises, the assistant leader is chosen by the squad.

4. Members are not to absent themselves from their squad without leave from the leader.

5. On the order "Squads Change" each squad is to fall in immediately, without going through the exercise then performing, and is to march in single file to the apparatus next assigned to it.

LEADERS.

6. Leaders are to explain and proceed with the exercises according to the instructions they have received. They, as well as the Assistant and Substitute leaders, are to attend a special Course of Instruction, unless excused by the Director.

7. It is the duty of the Leader to ascertain that the apparatus is in a safe condition before he begins the exercises.

8. Complaints against leaders can be addressed to the Director of Exercises after the dismissal of the squads only.

9. Leaders who attend regularly are allowed to join the Boxing or Fencing Class without paying an extra subscription. Tickets for that purpose are granted by the Director of Exercises.

APPARATUS.

10. Apparatus injured in the course of regular practice will be repaired at the Society's expense. Breakage caused wilfully, or through carelessness is to be made good by the offender.

11. Portable apparatus must, after use, be restored to its proper place.

GYMNASTIC PRACTICE.

12. In order to prevent accidents members are not to attempt the performance of any exercise which they have not previously gone through in their squad, unless with the aid of a proficient comrade.

13. Assistance must be asked for and given in all exercises attended with risk.

14. No one is allowed to practise at a rack which he is not able to reach by springing off the ground.

15. No one is to practise at the parallel bars unless able to jump or rise into the rest upon them unaided.

16. The hanging horizontal bar is not to be used as an ordinary swing.

17. Ropes, ladders etc. are not to be swung about.

18. Climbers must not be interfered with, nor shall two climb at the same rope or pole at the same time, unless by mutual agreement.

19. No one is to ascend a slanting ladder on the lower side, unless able to climb a rope of the same height.

20. Members are not to pass along a high cross-beam, unless they have gained proficiency in this Exercise at a lower beam, are able to do all Exercises of the first course, and are free from giddiness.

21. Weights, dumb-bells, etc., must not be thrown on the ground, but are to be put down quietly.

22. The target for javelins is to be used only by leave of the Director of Exercises.

23. In wrestling, it is forbidden to catch hold of the clothes, hair or flesh, or to kick; in boxing, blows must not be struck below the waist.

24. Gymnastic Excursions are looked upon as an Exercise, and as far as practicable, the same regulations will be enforced upon them as in the Gymnasium itself.

DRESS.

25. The Dress should not interfere with free movement of the limbs. Members are recommended to wear the club uniform. At London they wear flannel shirts, drill or flannel trousers and canvas shoes; at Liverpool, singlets, knickerbockers, stockings and shoes.

CONCLUSION.

26. Smoking, eating or drinking are strictly prohibited.

17. NEXT the order in which the squads are to change apparatus is to be settled. In compiling a table for this purpose care should be taken that each squad has nightly one set of exercises mainly trying the arms, and another practising the legs. We will suppose a Society forming twelve squads. The arrangement might then be as follows, —

1	2	3	4	5	6	7	8	9	10	11	12
Clubs.	Rings.	Throwing.	Leap.	Balancing.	Horse.	Leap.	Buck.	Wrestling.	Rack.	Climbing.	Bars.
Leap.	Buck.	Wrestling.	Rack.	Climbing.	Bars.	Clubs.	Rings.	Throwing.	Leap.	Balancing.	Horse.

The first line of this diagram gives the number of each squad; the second line the exercise put down for each squad for the first

half hour, and the second line the exercise to be practised during the second half hour. The names of the exercises are written on separate slides of wood. Every evening the first slide is taken out, the others are pushed to the left, and it is then inserted at the end.

V. DISTRIBUTION INTO SQUADS.

18. THE usual exercises of the Gymnasium are divided into three courses according to the degree of strength and skill required in their performance, and the members of a society are divided in a corresponding manner into beginners, middling performers and good performers. Exercises which require unusual strength or address form a fourth degree. Fresh members, whatever their strength, are to be treated as beginners, and only with increasing proficiency are they to be advanced. Unless this be done, their gymnastic training will not only be superficial and one-sided, but they run the risk of injuring themselves. We will now detail a very simple plan of testing muscular strength without reference to age, height or weight.

19. THE extensors of the arms and part of the muscles of the neck and back are tested at the parallel bars. The gymnast goes into the rest at the end of the bars, face turned outwards. He slowly lowers himself by bending the arms, touches one of his hands with the mouth, and again rises. This he repeats, alternately kissing the left and right hand, until exhausted. One mark is allowed each time he rises. Swinging to and fro, or jerking, must not be allowed. The exercise must be done slowly and fairly.

20. THE flexors of the arms and part of the muscles of the chest are tested at the Rack. The gymnast hangs sideways, knuckles over (ordinary grasp); rises until the chin is on a level with the top of the bar, and then lowers himself until the arms are again perfectly straight. He is neither allowed to swing nor to jerk his legs. One mark is allowed for every rise.

21. THE extensors and flexors of the legs, with part of the muscles of the stomach, are tested by requiring the gymnast

to touch his thighs with both heels whilst jumping, a fore-spring being allowed between each jump. The thighs should be touched forcibly. Beginners generally go through this performance most successfully, for in spite of railways and omnibuses our legs get more practice than our arms. A rational course of gymnastics, however, should develop our bodily strength uniformly, and as a man with strong legs but weak arms is not any the more fit to join an advanced squad, the number of marks attainable at this jumping exercise is limited to the total already obtained at the Bars and the Rack. Half a mark is allowed for each jump and touch.

22. MEN who obtain 15 marks or less are to be considered as beginners, 16 to 40 marks constitute a middling performer, and above that number a good one. The results of these tests enable us to distribute our men into squads according to their strength, and if repeated from six to six months they afford a very fair standard for estimating the progress made by each individual.

The above method of testing recommends itself by its simplicity but need not exclude more comprehensive methods of testing the strength and address of the gymnasts. The competitive exercises mentioned in the next chapter are well suited for that purpose, and others, such as walking long distances with or without equipments, running up steep inclines, ascending, carrying burdens, may be added.

23. Where feasible we recommend to weigh each member and to measure his chest on joining, to enter the results into a list, and to repeat the process every six months. The increased width of the chest even after six months training, and in the case of men forty and fifty years of age, is truly surprising, and fully demonstrates the usefulness of these exercises. The girth of the chest is measured in the following manner. The gymnast allows his arms to hang down by the side; a tape is then slung round his chest at the height of the nipples and he is required to draw breath; he is then measured and the result put down. The girth is then measured a second time *after* exhalation. The difference between the two

measurements is the true test of the condition of the respiratory organs. This difference, with a healthy man, should amount to three inches, and by training it may be increased to 6 inches.

24. THE results of these tests and measurements should be tabulated in the following manner, —

NAME.	Date.	Year of Birth.	Height. in.	Weight. st. pds. oz.	Girth of Chest.			Bars. Marks.	Rack. Marks.	Jump. Marks.	Total.	etc.
					Inh.	Exh.	Diff.					
Smith, J. J.	6/64	1838	65½	11 6 2	36	32	4	14	18	30	62	

If four lines are allowed for each member the results of four tests can be inserted, embracing a period of two years. This certainly entails some labour, but the evident proof of progress obtained by these means is a source of real satisfaction.

VI. INSTRUCTORS.

25. IN course of time the number of gymnastic exercises has accumulated to such an extent that even professional teachers are scarcely able to master them all theoretically and practically. How then, it will be asked, can Amateur Directors and Leaders render themselves fit for the task they undertake? The answer to this is simple: — let them learn to distinguish between essential and inessential exercises. Our book, in this respect, will serve them as a guide. By confining the gymnastic practice to reasonable proportions, they will the sooner be able to master it, and a thorough knowledge of a few essential exercises is more beneficial than a superficial acquaintanceship with many. As strength, skill and science increase, the circle of exercises can be enlarged. Though our main object, — to raise the average bodily strength and capacity of the masses, — should always be borne in mind.

26. LEADERS and others called upon to act as Instructors should render themselves proficient in the exercises they are to direct. An extensive theoretical knowledge is not required from them, and a thorough study of a book like our own, together with practical exercise and intercourse with men of

greater experience than themselves, are sufficient. — More is asked for from the Assistant Director, who is called upon occasionally to direct the movements of two or more squads. He should be well versed in directing all kinds of mass-exercises, capable of giving the words of command with clearness and precision. —

27. THE Director of Exercises should possess qualities similar to those of the captain of a company, in addition to gifts of the heart and mind which alone will enable him to direct successfully large bodies of men, freely associated, and not tied by the iron law of discipline. Jahn, in his "*Turnbuch*", speaks thus of the Director of a Gymnasium, —

"The office of Director of Exercises is one of high responsibility, and on undertaking such an important office a man should well examine whether he be fit. He is to foster and cherish the simplicity of youth, to keep it from being broken by precocious immaturity. To his care are entrusted growing men, the future supports of the state, the lights of the church, and the ornaments of the fatherland. He must not serve the fleeting fancies of the day. Let him avoid this office who is not full of childlike simpleness and winningness The teacher of gymnastics should avoid all outward show, for in this respect each mountebank can surpass him; nevertheless he should strive to acquire and maintain as much proficiency in the exercises, as his bodily formation will permit.

Jahn then requires the following from a teacher of Gymnastics, —

1. He must not give a bad example to youth, whether within the gymnasium or without.
2. In the gymnasium he must abstain from all practices not becoming to youth, such as smoking, drinking, etc.
3. His behaviour should be courteous at all times, without arrogance and conceit.
4. In his attendance he should be regular.
5. As guardian of the regulations he should be the foremost in their observance, and the severest judge upon his own actions.
6. He should not try to surpass or equal all other members, but direct the exercises with modesty.

7. He should render the conversation of the young instructive and entertaining; neither by word or deed should he give offence.

8. Let him avoid all pedantry. Kindliness and heartiness should be blended in his behaviour with earnestness and dignity.

9. He must show plainly that the cause in which he is engaged fills him with enthusiasm, and that neither venal selfishness nor contemptible vanity actuate him.

10. He should lead those entrusted to his care to love and respect him.

11. He should search for hidden peculiarities, cultivate germinating virtues, and develop in a popular spirit those that have sprouted forth.

12. He should act among the members as friend regulator, umpire, adviser, and admonisher."

28. OUR readers will easily find out those of the above qualities which would also ornament a leader. The following hints will still further assist the leader in his office, —

On the command to fall in, being given, the leader should see that his squad attends to it immediately. He takes his place on the right wing of the squad.

He is to attend to his squad during the mass exercises, and by example, hints and reproof he is to ensure their proper performance.

During the squad practice he must keep his men in order.

The lives and limbs of the squad are entrusted to the leader; and he is to prevent accidents by strict attention and careful assistance.

All exercises should first be named and explained. Beginners must not be hurried. In more advanced squads, however, man should rapidly follow man. The squad may be arranged according to proficiency, to keep its less advanced members from interrupting the regular progress of each exercise.

In squads of beginners, the exercises should be proceeded with in the order set down in the tables. In more advanced squads each difficult exercise should be preceded by the preparatory exercises leading to it.

One or more members of a squad will be found frequently unable to perform some exercise. In such a case, the leader may go on with the exercises belonging to the series, but the men, who were unsuccessful, perform the preceding exercise every time their turn comes round, until they are successful. If the majority of a squad fails in an exercise it should be repeated several times, and in no instance are the succeeding exercises belonging to the same group to be attempted, until those preceding it in our "Tables" have been mastered.

The leader is to prepare himself carefully for the nights practice, but there must be no pedantry; nor must he astonish his squad by a feat, which he knows they are not able to imitate.

In all cases where the apparatus admits of it, there should be an alternation between hanging and "resting", and between exercises requiring mainly strength or address. The group chosen for practice should offer variety, but at the same time there should be no indiscriminate practice.

When possible two or more members of the squad should be engaged at the same time, especially when an exercise of endurance is introduced. In these cases the word of caution should be given slowly and distinctly, and the word of command with decision.

The leaders, during the Voluntary Practice, are to render assistance whenever appealed to; they are to interfere and reprove when the irregular use of apparatus is likely to lead to danger, or unbecoming conduct threatens to disgrace the society.

It is one of the most difficult tasks to train competent leaders to fulfill these requirements.

VII. GYMNASTIC FESTIVALS AND COMPETITIONS.

29. IN arranging a gymnastic Festival care should be taken to afford an opportunity to the public at large to become acquainted with the means employed in cultivating the physical powers. At the same time, some of the results achieved should be shown in a manner at once prominent and calculated to excite interest. The first of these objects we attain

by producing some mass-exercises, done by a large number of the men in unison; by picking out some of the best men to practise at the apparatus according to a preconcerted plan, and by introducing some athletic game as a wind-up. — Some voluntary practice should be allowed in order to afford the more expert gymnasts an opportunity to shine in feats of strength and skill.

If we add to this a competition in some manly exercises, the practical value of which is apparent to all, we have done our best to render the Festival at once instructive and interesting. We need not, however, stop even here. The hard work done, let the proceedings terminate at a festive board, where the gymnasts and their friends may meet in friendship.

Festivals carried out in the proper spirit will gain us friends, but mistakes committed in public carry along with them a bitter punishment.

Each town might annually hold its Festival, and where several societies exist in the same town, they ought to combine for this occasion. Each county might then hold a perambulating country festival, and to crown the whole, the "National Olympian Association" will annually hold a Festival in one of the larger cities of the kingdom. We will now say a few words on.

COMPETITIONS.

30. A competition in manly exercises well befits a man; but the promoters of such contests must keep within proper bounds inordinate ambition or avarice, and the exercises chosen should be of acknowledged practical value. No inducement should be held out to competitors by awarding money-prizes. A medal, accompanied by a Certificate, setting forth the achievements of the successful competitor, ought to be deemed an ample reward.

Our endeavours in the gymnasium should to be directed towards a harmonious development of our men. We want them to become possessed of strength, endurance, and agility; and desire to avoid all one-sided development of legs or arms. Our

competitions ought to be arranged with a view of promoting this harmonious development. No prizes should be awarded for one-sided achievements. It is easy for a man practising nothing but running to surpass others who strive after general proficiency. Nor is a man, able only to put up a heavy weight the beau-ideal of a gymnast. No, we want *harmonious development of the entire bodily system.*

The exercises suitable for a general competition, such as we propose, may be brought under three heads:

1. Exercises mainly trying the arms.
 - a. Exercises requiring a sudden effort, — such as putting the stone, throwing the hammer, etc.
 - b. Exercises of endurance, — such as climbing.
2. Exercises mainly trying the legs.
 - a. Exercises requiring a sudden effort, — leaping, running less than 200 yards.
 - b. Exercises of Endurance, — running longer distances.
3. Exercises in which address is required, rather than strength or endurance, — throwing the javelin, balancing.

In a general competition one or two exercises of each class should be admitted, and marks awarded for each, as will be explained presently. The competition might thus include:

1. <i>Arms.</i>	Putting a 36-Pr. shot . . .	up to	20 marks:
	Climbing a rope	" "	20 "
2. <i>Legs.</i>	High leap	" "	10 "
	Long leap	" "	10 "
	Running half-a-mile	" "	20 "
3. <i>Address.</i>	Throwing the javelin	" "	10 "
	Balancing	" "	10 "
	<hr style="width: 50%; margin: 0 auto;"/>		Total 100 marks.

No competitor would be entitled to a prize, unless he came up to a certain standard of proficiency in each of these exercises.

Antagonistic exercises, such as wrestling, boxing, fencing, owing to their special nature, should be left for special competition.

We are perfectly aware that many of our friends, who are training for some special exercise, object to an arrangement

like that proposed above. But we are quite willing to make them a concession. Let prizes be awarded for great achievements in special exercises, but let it be plainly understood that a man coming off victorious from a General competition is deserving of greater honour, than one victorious merely in one of the special exercises.

Another point has to be settled, before we proceed to a description of different competitive exercises. It is a practice, lately introduced, to separate competitors into classes according to weight or height. It is asserted that a tall man ought to leap further and higher than a little one, and that a light weight is no match for a heavy weight. That in consequence some allowance ought to be made in favour of small men and light weights. In leaping, for instance, each man should be expected to clear his own height, 60 inches cleared by a man 60 inches high, being deemed equivalent to 70 inches cleared by a man ten inches taller. Now, though we admit there is some force in this way of reasoning, we cannot advocate the introduction of this principle into our competitions. It is our aim to reward the men most efficient for the exercise in which they compete, quite irrespective of their natural capacities, their weight or height. Nor is this singular. In public schools, where prizes are awarded for mental achievements, no one has ever thought of making an allowance for a deficiency of brains.

We now give a short notice of the various exercises most suitable for competition.*)

31. THE RACK OR HORIZONTAL BAR. The bar should be 7 feet 6 in. above the ground. It is usual for the judge to require each competitor to do one or more "set" exercises, which are obligatory. This practice is not objectionable if the exercises are chosen discreetly. When there are two exercises one should be a feat of mere strength (slow movement), the other an exercise requiring a certain amount of address and skill. At

*) We have included amongst these the exercises at the Rack, the Bars and the Horse, though we do not quite approve of their introduction.

the same time these exercises should not deter a less expert performer, whilst allowing full scope to a proficient one to exhibit his skill. One or more exercises are then left, at the choice of each competitor. Up to 5 marks (or less, as may be agreed upon) are allowed for each exercise, and it is understood that the highest number can be awarded only for very difficult exercises performed to perfection. Particular attention should be paid to the manner in which the gymnast gets on the bar, and how he leaves it. Competitors must not be allowed to string together a mass of exercises in the hope of getting a higher number of marks; they must confine themselves to one exercise only.*)

32. PARALLEL BARS. The bars should be the height of the mouth. The marks are awarded in the same manner as at the Rack.

33. THE HORSE should be about the height of the shoulders. A stiff spring-board may be allowed where the soil is not firm, but on no account an elastic "*tremplin*". The marks are awarded on the same principle as at the Rack. One or more exercises may be done from the croup, and amongst these the "long vault" is one of the most suitable to be "set" by the judge.

Forms for entering the marks awarded are arranged as follows, —

NAME.	1st.	2nd.	3rd.	4th.	Total Marks.	REMARKS.
Smith, J. C.	4	3	2	5	14	Done very neatly.

34. RUNNING. It is a splendid sight to see the competitors drawn up abreast, instantly awaiting the signal to start, and then swiftly hastening along a straight course towards the goal. This method, however, suffices only when it is desired to find out the swiftest runners, — it will not answer when the number of competitors is too great to allow them to run at once, or

*) The plan of allowing each competitor to set an exercise for all the others is objectionable for several reasons, and can be excused only where the judges are not very expert.

when the time of each man is to be ascertained. The safest plan for ascertaining the time, is to allow each man to run separately, but with some practice on the part of the umpire or time-keeper four men may run at a time, or more, if the run is a long one. Races up to 200 yards are best calculated to show speed, longer races test endurance as well. One hundred yards have been run in $9\frac{1}{2}$ sec., 200 yards in 20 sec., 440 yards in 49 sec., half-a-mile in 1 m. 56 sec., the mile in 4 m. 18 sec., two miles in 9 m. 11 sec., six miles in 29 m. 50 sec., and ten miles in 51 m. 26 sec.

When awarding marks 20 marks should be awarded for the time stated above and no marks at all to those not able to perform the distance in once and a half that time. Thus, 200 yards done in 20 sec. scores 20 marks, done in 30 sec. scores 0 (or in other terms, 1 mark is awarded for each second short of 30). — Or, half-a-mile done in 116 sec. scores 20, done in 174 sec. scores 0 (that is, 1 mark for every 2·9 sec. short of 174).

Hurdle and Steeple chases may be introduced for special competitions, and the latter affords capital opportunities for introducing obstacles of various descriptions, such as wet ditches, fences, gates, etc.

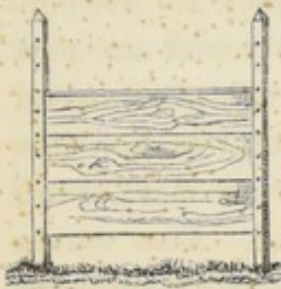
35. WALKING is not nearly as acceptable for competitions as running, principally in consequence of the disputes likely to arise should one of the competitors begin to run. Seven miles have been walked, fair heel to toe, by C. Westhall in 52 min. 43 sec.

36. LONG LEAP. This exercise frequently takes place on the turf, the take-off being indicated merely by a scratch, scarcely to be seen from a distance. We deem it better, however, to provide a regular ditch for long leaping, such as will be described further on. Length of run and manner of springing off, are optional. The distance is measured from the edge of the ditch to the hindmost heel. If a man falls on his back the leap is not allowed to count, nor can he be permitted to have another leap for the chance thus lost. — Each man may be allowed three leaps, the best of which counts towards the points. One mark is allowed for each foot beyond ten feet.

37. **HIGH LEAP.** Generally a run is allowed. A spring-board should not be permitted. The men leap in turn, as their names are called out by the umpires. Any one touching the cane with the feet, the hands, or any other part of the body, is allowed a second and third attempt. If unsuccessful he stands aside (is off.). The best leap of each man is entered in the list. One mark is awarded for every two inches above 48. —

38. **POLE LEAPING** is a capital exercise for competition. Compel each man to bring his own pole. Start with 6 feet and raise from 6 to 6 in. up to 8 feet 6 in., and beyond that from 3 to 3 in. Three attempts are to be allowed before giving in.

39. **VAULTING** is a kind of leaping assisted by the hands. It is best to vault over a wooden wall, such as is shewn in our engraving. The top-board can be raised from 6 to 6 inches. The wall thus represented must be cleared without its being touched with any part of the body except the hands. We deem it needless and vexatious to enforce any other restrictions. A run should



be allowed. —

40. **BALANCING** is an exercise of real utility, though generally neglected. We test our competitors in the following manner.



A beam having a wavering end is fixed upon two uprights, from six to twelve feet above the ground. A flag is placed in a socket at the end of the beam in such a manner that the competitor, after having walked from A to B is able to take it out easily. Having successfully got hold of the flag within one foot of the end of the staff our man faces about, in the direction of A, and slowly waves the flag around his head. For this performance we award one mark. He then faces about a second time, again waves the flag, and so on, until he has succeeded in doing it nineteen times, one mark being allowed for each repetition. He then puts back the flag, walks to A and

descends, thus earning his last mark. — If the beam does not waver sufficiently to render each facing about, worth a mark, the competitor may be required to face round twice in succession, or to wave the flag round twice.

Instead of this high wavering beam, one placed about three feet above the ground may be used. The competitor is then required to shoulder a log of wood, weighing some 75 pounds, to walk to the centre of the beam and to turn about there, one mark being allowed for each turn.

(See also the contest on the balancing beam, par 652.)

41. CLIMBING A ROPE. Climbing should be represented at every gymnastic contest. The rope, say 57 feet long, is suspended from a bracket fixed to the top of a mast. Competitors are allowed to use hands and feet; but they are not permitted to rest themselves by slinging the rope round any part of their person, nor can any competitor be permitted to ascend a second or third time if he puts his foot to the ground or does not come down hand over hand. — The mast is marked off in feet, beginning seven feet above the ground. Five marks are allowed for the 1st. ascent (1 mark for every 4 feet above 30), ten for the 2nd. ascent (1 mark for every 5 feet), and five for half a third ascent. Should any competitor exceed this height the marks must be adjusted differently, for instance, 1st. ascent three marks, 2nd. seven, and 3rd. ten marks.

42. CLIMBING THE MAST. If the mast is fifty feet high, any one reaching the top would be deserving of some reward. The mast, of course must not be smeared with fat or soap (a dangerous practice) and competitors should be allowed to moisten hands, arms, chest, legs and hair with water.

43. PUTTING THE SHOT. We recommend a 36-Pr., as, a man harmoniously developed, should be able to throw this weight as far as he can leap with a run. The shot is taken up by the competitor himself, and thrown from the shoulder first with the right hand, then with the left. Only one hand is allowed to be used when putting. The competitor is allowed to move within a space of six feet square, marked out on the ground. Three trials are allowed with each arm, the best

throws counting. They are added together, and one mark is allowed for every foot beyond 20.

44. **THROWING THE JAVELIN** or Roman Pilum. This is a capital exercise for competition. The target shows the figure of a man, painted black. Each competitor is allowed 6 throws from a distance of 20 yards. The hits count 1 or 2 as indicated in the diagram, and only fair hits count, that is the javelin, in its flight, must not swerve from the direct line. Competitors missing the target altogether, even once, are off.



competitors missing the target altogether, even once, are off.

THROWING THE HAMMER. The usual weights are 11 and 22 pounds. The handle is three feet long. A run of seven yards should be allowed, but competitors must not step beyond the scratch. The 11-pound hammer has been thrown 176 feet, the 22-pound hammer 94 feet.

45. **WRESTLING.** We are in favour of treating wrestling and all other antagonistic exercises separately, and not as part of a general competition. It is therefore unnecessary to award marks. All the judge has to do is to find out the best men, and this is done in the following manner.

Suppose nineteen men have entered as wrestlers. Nineteen slips of paper, numbered consecutively from 1 to 19 are folded up and placed in a hat. Each of the wrestlers then draws out a paper, and his name is inserted on the list, opposite to the number he has drawn, as follows:

No.	NAME.	Results.				No.	NAME.	Results.			
		1	2	3	4			1	2	3	4
1	John	0	—	—	—	11	Robert	0	—	—	—
2	Charles	1	1	1	0	12	Jones	1	1	1	1
3	Fred	1	1	0	—	13	Smith	1	0	—	—
4	Ernest	0	—	—	—	14	Robinson	0	—	—	—
5	Otho	0	—	—	—	15	Thompson	0	—	—	—
6	Jack	1	0	—	—	16	Jackson	1	0	—	—
7	Frank	1	0	—	—	17	Humphrey	0	—	—	—
8	Tom	0	—	—	—	18	Davis	1	1	1	1
9	Peter	1	1	0	—	19	Murray	0	—	—	—
10	Theodore. . . .	0	—	—	—						

Nos. 1 and 2 wrestle first. They, like every succeeding pair, are allowed three rounds. A mark (1) is put opposite the name of the man who throws his opponent twice, and a nought (0) opposite to that of the man thrown twice. — Nos. 3 and

4, 5 and 6, down to 17 and 18, then step one after the other in the ring, and the result of each contest is entered in the first column. The odd man, No. 19, wrestles with the man highest on the list and not yet thrown, viz. with No. 2. — No. 3 then wrestles with No. 6, No. 7 with No. 9, No. 12 with No. 13, No. 16 with No. 18. — There are now only five men left. We begin again at the top, with No. 2, who wrestles with No. 3; No. 9 wrestles with No. 12, and No. 18 with No. 2. — There now only remain Nos. 12 and 18, and between these two the final round for victory will have to be decided.

If the list is kept as above, mistakes can scarcely occur. Wrestlers not present when their names are called out are struck out. This mode of pairing off the wrestlers recommends itself by its simplicity and is perfectly fair when it is desired to find out the best man. But when prizes are to be awarded to three or more men recourse must be had to a more perfect method.

We propose to manage as follows. Arrange the men alphabetically and prepare a schedule as follows.

No.	NAME.	Nos. with whom they have wrestled.					Result.			
1	Alfred	—	2	3	4	5				
2	Charles	1	—	3	4	5				
3	David	1	2	—	4	5				
4	Fred	1	2	3	—	5				
5	George	1	2	3	4	—				

We propose to allow each man a round with all the rest. We might thus simply call No. 1 into the ring, and let him wrestle with No. 2, 3, 4 and 5 in succession; but this evidently would be unfair to N^o. 1. We therefore call up the pairs in the following manner.

Nos. 1 and 2 enter the ring, and the umpire (writer) puts a line through the figures 1 and 2 in the third line, in order to show that these men have had their round. No. 1 throws 2. The result is marked in the fourth column, a stroke (1) being placed behind the name of the victorious No. 1 (Alfred) and a 0 behind the name of No. 2 (Charles). —

Nos. 3 and 4 then step into the ring. No. 4 is thrown.

No. 5 then wrestles with No. 1, No. 2 with No. 3, No. 4 with 5, No. 1 with 3, No. 2 with 4, No. 5 with 2, No. 1 with 4, and No. 3 with 5.

Our schedule ought now to present the following appearance. (The figures in the third column ought to appear as if they had all of them been struck out with a pencil, but our printer is not able to manage that.)

No.	NAME.	Nos. with whom they have wrestled.					Result.				
1	Alfred	—	2	3	4	5	1	0	1	1	3
2	Charles	1	—	3	4	5	0	1	1	0	2
3	David	1	2	—	4	5	1	0	0	1	2
4	Fred	1	2	3	—	5	0	0	0	0	0
5	George	1	2	3	4	—	1	1	1	0	3

A glance at the third column shows that all the men have wrestled together, and the results of each round are plainly put down in the last column.

If a man is absent his name in the second column and his numbers in the third column are crossed out, and no confusion can arise.

When the number of wrestlers is large and the time limited, two or more pairs may wrestle at a time, but in different rings. The results, however, must be put down on the same table.

46. BOXING AND FENCING are managed similarly to wrestling. In boxing, the men are sometimes required to spar for from two to five minutes to show style; after which three face-hits out of five decide each tie. —

47. There are many other sports suitable for competition, and affording no end of amusement to the spectators, such as sack-races, wheelbarrow-races, trundling a wheel, hopping on one leg, the three-legged race (two men standing abreast have their inside legs tied together at the ankles and knees), picking up eggs, etc. and these may be introduced occasionally, though medals and certificates ought not to be awarded to the victors.

Other manly sports, — swimming, boating, riding, driving and tilting, — should not be neglected. Swimming especially is a useful and inexpensive accomplishment within the reach of most men. We are inclined to recommend that no prize

be given in a general competition to any one not able to swim at least 200 yards.

48. In conclusion we must draw attention to a system of competition where one body of men competes against another body. Cricket, foot-ball, boat-racing and many other games and sports have familiarized us with this kind of competition, which might be extended advantageously to other exercises. For instance, let the different clubs send each a squad of ten men, to compete at the Rack, the Parallels and the Horse. The men of each squad might then be required firstly, to go through a series of exercises "set" by the umpires, secondly to go through a series of exercises at the option of each leader. For each series a certain number of marks would be awarded. The leader, in order to obtain many marks, would have to take care to select only those exercises which all his men are able to perform.

VIII. HYGIENE.

49. THE healthful influence of gymnastics, carried on with prudence and discretion, is generally acknowledged.

Gymnastics act beneficially by increasing the circulation of the blood; but when the beatings of the heart become excessively rapid and irregular, you should be careful and avoid those exercises which produce these symptoms. In a healthy man, the heart is felt to beat two fingers breadth below the nipple of the left breast. Persons suffering from organic disease of the heart, and those of apoplectic habits, with short necks and an inclination to corpulency should be specially careful, and take medical advice before practising in the gymnasium.

50. EXERCISE strengthens the lungs and increases the pulmonary circulation. Dr. Speck shows that 553 cubic inches of air are inspired every minute during rest, and 989 during exercise. Dr. E. Smith's experiments show that if the quantity of air inspired when lying down is equal to 1, it is 1.33 when standing, 1.26 when singing, 3.22 when walking at the rate of 3 miles an hour, 4.05 when riding, 4.33 when swimming, 5.5

when working on the treadmill, and 7 when walking at the rate of 6 miles an hour.

The breath should be properly regulated whilst undergoing exertion. Draw breath slowly; you thus strain the muscles of the belly, and fortify the ribs and pelvis. Exercises frequently fail in consequence of not keeping the muscles of chest and belly sufficiently strained, and accidents — such as rupture — are produced by exhaling at an improper time. By proceeding gradually from easy to difficult exercises this danger is avoided, and the gymnast learns to breathe correctly by habit. Exercises should never be carried far enough to produce panting or a pain in the side.

The benefits of exercise upon the lungs are greatly increased by carrying them on, in the open air, and in gymnasia the greatest care should be bestowed upon ventilation.

Drawing a deep breath occasionally when in the open air, reading aloud and singing, are healthful, but the regular use of a Spirometer is injurious.

51. THE amount of exercise beneficial in each particular individual varies. Excessive exercise causes a feeling of pain in the muscles, a feverish excitement of the nerves, and generally disturbs the health. Now and then a healthy person may undergo an excessive amount of exercise without injury to the constitution, but if the excess is repeated frequently the consequences are most hurtful, and congestions, hemorrhage, fever, inflammation of the lungs, the heart or principal arteries may be the result. But not only excessive exercise but one-sided exercise also is injurious. For instance, if you exercise one group or set of muscles to the exclusion of the others, they will only grow to a certain point, and then waste away. You should make it a rule to bring as many muscles as possible into play, to develop them harmoniously. Neither a narrow-chested dancer with thick calves, nor a broad-shouldered gymnast with thin legs, are models of physical beauty.

In consequence the strength and constitution of the individual will be the best test of those exercises most suited gradually to unfold the physical powers of the individual gymnast.

52. **DRESS.** Clothing should be made of slow conductors of heat, so as to afford protection against a sudden change of temperature. It should be porous, to admit of the easy passage of the insensible perspiration. Flannel, in these respects, is to be recommended most; its friction at the same time exercises a gentle stimulus upon the skin, which assists it in its action and functions. Loose flannel shirts are healthier than close-fitting guernseys or singlets.*

The amount of clothing necessary varies according to temperature and individual constitution. Less clothing is required when exercising, but as soon as the exertion is over, the heat of the body rapidly declines, and additional clothing should be put on. The practice of pulling off the shirt after the exercises are over, and washing the body down to the waist with cold water, should not be encouraged by reason of the tendency to chills. In the same way, when you return from a walk, you should not throw off your coat at once, but wait until the normal heat of the body is restored, for otherwise you expose yourself to cold. We need hardly add that clothing, worn on the body, should be washed and changed frequently.

A word on belts may not be superfluous. Tight belts are positively injurious, for they press upon intestines, stomach and liver, and do more injury to the organs of digestion than can be made good by gymnastics. But a belt with elastic side-springs, which expands easily to the extent of six and more inches, may be worn with safety.

53. **FOOD AND DRINK.** The amount of food necessary for a man in health varies according to his constitution, age and habits of life. A man undergoing much exercise necessarily requires more food than one leading a life of indolence. The meals should be taken at intervals of five or six hours, and they should never be taken immediately after exercise, nor should you take exercise for some time after each meal. A

* Flannel must be washed in luke-warm water, with yellow soap and dried in the open air. A dash of salt put in the water in which the flannel is "seconded" is said to prevent the colours running. Soda must not be used on any account.

nap after dinner has much to recommend it. A mixed diet, say daily one pound of meat, roasted, baked or stewed, and $1\frac{1}{2}$ to 2 pounds of bread and vegetables, is most conducive to health. Salt is a necessary of life, but spices should be used in moderation. We need hardly add that the food should be masticated slowly.

Amongst all drinks pure water is the most wholesome. You may take it frequently, but in small quantities and not too cold. Water is not so liable to hurt you if exercise is continued afterwards, than when it is taken freely when in a copious state of perspiration and the exercise suddenly stopped. At such latter times it should be used with caution, and only in small quantity.

Beer and light wines in moderate quantities are healthy, but spirits should be avoided except in special cases. Taken in large quantities they check digestion and they always lessen the muscular power. A glass of spirits and hot water, however, will be found of benefit after you have been exposed to cold or rain. Tea and coffee stimulate the nervous system, and their use is not followed by depression. They are equally serviceable against cold or heat.

54. **CLEANLINESS.** Every man should sponge the body daily from head to foot. With a weak constitution, tepid water and the use of a flesh-brush or rough towel, so as to produce reaction on the skin, is the safest. Cold sponge baths should not be persisted in, unless a reaction sets in after a good rubbing down with a rough towel or brush. Swimming baths, — remaining in the water until you feel nice and comfortable, — are the healthiest of all, but unfortunately very little is done in this country towards placing them within the reach of the mass of the population. A cold bath when in a state of perspiration accompanied by hurried breathing, or when the surface of the skin is chilled by exposure to the air, is decidedly hurtful.

55. **SMOKING TOBACCO** is a bad habit, unpleasant to many persons, expensive, and hurtful to health, if carried to excess. No young man should smoke before he is twenty-one, and after

that time only in moderation, and never immediately before he takes a meal.

56. TRAINING. A few words on training are most necessary in a work on gymnastics. We may at once express our opinion that the system generally pursued is not only irksome, but that it also injures the health, instead of improving it. A man should always be in training. Let him lead a life of temperance, let him carry on bodily exercises regularly, but without excess, and he will be prepared at all times to enter himself for competitions. The diet should be plain, mixed vegetable and animal (with a certain amount of fat); — wine and beer may be taken in moderation, water in plenty, but spirits are to be avoided. — Cleanliness must be attended to carefully. The exercise should be done regularly, and those things should be practised most frequently in which the gymnast desires to compete, though not to the exclusion of other exercises.

We will here give a rule for daily routine. Get up at seven; take a sponge-bath and rub yourself with a coarse towel. Then take up your clubs or dumb-bells, or some other apparatus at hand, and work away for some minutes, introducing occasionally some exercise for the legs. You should not carry these exercises far enough to perspire, but should perspiration come on, you must rub yourself down with a dry towel before you complete your dress.

Let a little interval take place, which may be devoted to reading, if agreeable, or other light matters, and then have your breakfast, consisting of tea or coffee, with stale bread and butter, a couple of eggs, a chop, chicken, or anything else you fancy or can afford. — After breakfast proceed to your daily duties.

Take dinner at one or two. Your food may be underdone or not, according to taste, and a certain amount of fat is advisable. Meat baked, roasted or stewed is the most nourishing, and beef or mutton preferable to other kinds, though in all these things man requires variety. Take bread and vegetables, and a pint of light wine or a glass (not more) of ale. After

dinner you may smoke no more than one pipe, and you should allow yourself some rest.

Your business duties performed, walk home, and about six have your tea, with some toast or bread and butter, a few radishes, etc.

At about 8 you go to the Gymnasium, and there you go through the exercises in the spirit explained in other portions of this work, resting after each exercise, and avoiding too much fatigue. When done, wash hands and face, put on your coat, and only leave the gymnasium when perspiration has ceased. By the time you are at home (for there are few gymnasia having a club-room), you are ready for a light supper. It is now about 10 o'clock. Avoid heavy dishes. Porridge is capital, so are stews, stewed fruit with meat, etc. Now you may take your pint of ale or wine.

About half past eleven prepare for bed. You change of course your shirt, and before lying down rub yourself with a dry towel. Have blankets sufficient to keep yourself warm, but not more.

Every day of your life is not however, to be passed in the same manner. There is not the least need to go to the gymnasium every day, in fact, going there every night is scarcely to be recommended. If you go twice a week, or at most three times, you are doing all that is needful. On those nights on which you do not go you should, however, practise for a little while at home.

You have thus four nights in a week which you may devote to some other pursuit. You can join a singing club, which is very much to be recommended, read, etc. The combination of club-rooms, where inexpensive refreshments are served out, of singing classes, lending libraries, etc., with public gymnasia, has much in its favour.

Sunday also should be spent in a rational manner. If you live in town, and are confined for a great deal of time to your office, you should seek fresh air in the country, and if, instead of taking the rail, you walk on foot, you are actually doing yourself a service. Do not, however, walk by yourself, but in

the society of some comrades, with whom you have feelings in common. But avoid over-fatiguing walks.

57. TREATMENT OF ACCIDENTS AND INJURIES. In a well regulated gymnasium accidents are very rare, but they can scarcely be prevented entirely, and a few hints on their treatment may be of service. In all accidents of a serious nature medical aid should be called in at once, for nothing can prove more injurious than surgical treatment by amateurs.

Fractures and luxations. The limb affected must be put into a comfortable position, the clothes are removed carefully and cold water is applied by means of lint or flannel bandages* until the surgeon arrives, who should be sent for at once.

Sprains generally yield to treatment with cold water, continued for several hours. Some spirits and nitre may be put in the water. Afterwards tie a bandage round the joint and abstain from exercise until you feel perfectly restored. Hot fomentations relieve pain and prevent swelling.

Contusions. Wash and clean the wound, carefully removing all foreign bodies from it, and then apply cold or hot water.

Wounds. Incised wounds occur occasionally in the school of arms. Wash the wound with cold water, cut away the hair near it, if there is any, and apply strips of isinglass or collodion-plaster, leaving a narrow interval between the strips. Simple cold water bandages are, however, often the safest and most soothing. If there is only an abrasion of the skin, wash carefully, and apply cold water freely, and then some lint soaked in vinegar, if the bleeding should not stop of itself.

Concussion may arise from a blow or heavy fall, which produces insensibility. Take the patient into a warm room, place him on his back, wash face and mouth, sprinkle the face with cold water, and apply cold water bandages to the head; or, if the extremities become very cold, and there appears to be a sinking of the pulse, then a hot water-bottle, applied to the feet, may be of service. The left side of the chest should be rubbed in an ascending direction, and sal-ammoniac held

* Any substance such as a flannel or cotton shirt forms an excellent temporary substitute to allay inflammatory symptoms.

to the nose to rouse the activity of the lungs. If the patient does not recover very quickly medical advice must be procured.

Fainting fits. Put the man on his back, the head raised slightly; remove all tight clothing, give access to the air; let him smell sal-ammoniac, wash the temples with cold water or vinegar, and as soon as he begins to recover let him drink a little water.

Pedestrians frequently suffer from sore feet and blisters. Prevention is better than cure: therefore procure boots* made comfortably to the feet, on Dr. Meyer's principles, and wear good woollen socks. It is a good plan to dip the feet in very hot water for one or two minutes before you start, to wipe them dry and rub in with soft soap until there is a lather. At the close of the day, should your feet be sore, wipe them with a wet cloth, and rub them with bears grease, deers fat, tallow, soap or spirits.** If you have blisters, pass a thread of silk through each, and tie the ends together to allow the fluid to ooze out. When making a long halt in the middle of the day, take off your boots and socks, and wash in cold water.

Chafing between the thighs is remedied by flour or fullers earth.

Soft corns between the toes are best obviated by using lunar caustic.

When on a pedestrian tour be careful of your diet and do not eat too much, or too often. You should never take spirits when exhausted, unless it be towards the close of your days work, but some warm tea, coffee or beer. — Onions or garlic, chewed, is a good remedy against thirst.

* Recipe for making boots water-tight. Take shoemakers dubbing $\frac{1}{2}$ pound, linseed oil $\frac{1}{2}$ pint, solution of india-rubber $\frac{1}{2}$ pint. Dissolve with gentle heat, and rub on boots. Repeat every five or six months.

** As much depends upon the firmness of the skin, either unguents or astringents may be used, the former when the skin is hard, the latter when it is soft.

PART II.

GYMNAS TIC EXERCISES

DESCRIBED

SYSTEMATICALLY.

IX. CLASSIFICATION OF EXERCISES.

58. A distinction is made between voluntary movements, which are entirely under the control of our will, and involuntary movements, which are not under the control of the will. Again, we distinguish between active movements and passive movements, the latter being no bodily movements, but submission to some movement emanating from some extraneous force or circumstance. A few examples will make this clearer, than the longest of definitions. Running, climbing, leaping, are voluntary, active movements; riding in a coach or boat, and several processes of the ancient medical gymnasts (such as rubbing, kneading and tapping) are passive movements. A combination of both active and passive movements is presented to us in riding, rowing, driving and swinging. Involuntary movements, such as breathing, the circulation of the blood, yawning, are not under our control, or to a very small extent only. For instance, we can breathe at will more or less deeply, etc. In gymnastics, however, we have naught to do with passive or involuntary movements.

59. We comprehend under gymnastics all those active, voluntary exercises, which are undertaken consciously with a view of strengthening our muscular system, and improving our physical condition, and which are calculated to attain these objects. All active exercises, however, are not gymnastics. A coal-heaver

carrying sacks of coals, is undoubtedly undergoing great bodily exertion, but he cannot be said to engage in gymnastics, for he carries his coals, not with a view of cultivating his bodily powers, but rather as an organic machine. Gymnastics are work indeed, but, as Gutsmuths expresses it, "work in the guise of pleasure", and we may add as a means of developing physically the human frame.

We have to do then with active, voluntary exercises, and will now endeavour to classify these.

A. *Exercises in which we move our own body.*

This class includes all of the so called Free Exercises, as well as the exercises on apparatus. In the former we confine ourselves to the ground, we move our limbs, we leap, we walk and run (exercises of locomotion). In the exercises on apparatus we also move our own body, but we do so availing ourselves of bases of support and opposition offered by the apparatus. Climbing, vaulting, pole leaping, are exercises of this kind, and swimming belongs to the same class.

B. *Exercises in which we move an inert, extraneous body.*

Dumb-bells, bars, wands, weights, are bodies such as we refer to. Boating belongs to this class, as will be admitted after some little consideration.

C. *Antagonistic Exercises.*

Here we have to do with an antagonist, an intelligent being like ourselves, whose power of resistance it is our object to overcome. Not only wrestling, boxing and fencing, belong to this class, but also our gymnastic games, for in these it is the object of the players to overcome the resistance offered by the opposing party.

60. THERE are other principles on which gymnastic exercises may be classified. For instance, we can base our classification upon the muscles called into action by each exercise, but, as Gutsmuths already pointed out, such a classification, considering the complication of muscular movements even in the most simple exercises, would hardly be feasible, and even if carried out successfully it would be barren of results for all practical purposes. We therefore confine ourselves to two kinds of action

of the muscles, which are called most frequently and most characteristically into play, namely flexion and extension. We thus have flexion-exercises and extension-exercises. In the former we hang, in the latter we support ourselves, either upon the arms, as between the parallel bars; or upon the legs in standing. In these cases the action or movement is due to the particular sets of muscles exerted.

In a large class of exercises extensors and flexors are exercised in alternation, or even simultaneously, as a little insight into the practice of a gymnasium will teach.

61. ANOTHER classification may be based on the manner in which the exercises are carried on, namely as individual, co-operative or mass-exercises. All individual exercises can be performed by a single individual; in co-operative exercises two or more persons co-operate or assist each other in the accomplishment of a feat; and in mass-exercises a number of individuals work together and in unison. The tactical movements of soldiers, and the tacto-gymnastical exercises described in our work belong to this class, but many other exercises can be carried out advantageously in this manner.

We will now close our remarks on classification, reserving details for the chapters which treat on the various exercises.*

X. FREE EXERCISES.

62. FREE exercises are performed without the aid of any apparatus, and their primary object is to render the limbs supple, and to prepare the gymnast for the more arduous exercises at the apparatus. The elementary exercises of this kind teach the gymnast to breathe correctly whilst undergoing exertion (this is of importance), and if carried on in the proper spirit they materially aid in implanting that spirit of order and

* Ling of Sweden has adopted the following complex system of classification, viz. subjective-active exercises or Pedagogical gymnastics; subjective-passive exercises or Medical gymnastics; objective-active or Military gymnastics (fencing, wrestling, etc.); and objective-passive or Aesthetical gymnastics (gesticulation and mimicry)!

discipline, which cannot be estimated too highly in societies consisting of a large number of members. Men desirous of becoming first class performers at the apparatus should bear in mind that these exercises are the best preparation they can have. If they neglect them they can never expect to become *graceful* and *finished* performers.

We divide the free Exercises into three distinct classes; the first class including all exercises which can be performed by a single individual; the second class or *co-operative exercises* requiring the aid of one or more comrades; and the third class or *antagonistic exercises* require that the resistance offered by one of the performers should be overcome by the other.

INDIVIDUAL FREE EXERCISES.

POSITIONS AND ATTITUDES.







63. FIRST of all the *Fundamental position* should be explained to the beginner. Heels and knees are locked; the feet form an angle of about 45 degrees; the body is straight and inclined forwards, its weight bearing principally upon the fore-part of the feet; the shoulders are low and turned back; the arms hang down by the sides, and are turned a little outwards; the head is erect, and the eyes look straight to the front. The "position" should be free from all restraint.




All other ways of standing upon the feet are derived from this fundamental one, and they are called "starting positions" only in as far as they are assumed preparatory to perform some exercise, for all positions are not equally suitable for different exercises.

64. We can stand upon our toes (on tip-toe), on our heels, or on the edges of the feet (I).

65. By turning the feet we obtain a number of angular, linear, and locked positions, as follows: † left foot, ‡ right foot. —

Angular, — √ acute angular position; √ rectangular; √ obtuse angular; √ heel to hollow of foot; √ heel to toe; √ reversed angular position, either acute, rectangular or obtuse, as above; √ reversed angular with legs crossed.

Linear, —  heel to heel;  toe to toe;  heel to toe forward,  heel to toe backwards (I).

Locked, —  locked, heel to heel;  the same with legs crossed (I);  heels to toes (III).






66. AGAIN starting from the fundamental position we can take a stride with one foot in any direction, and thus obtain a variety of positions, of which we give a few examples (the left foot is supposed to remain stationary).  right foot astride to the right;  right foot astride diagonally forwards;  right foot astride forwards;  right foot astride to the left, legs crossed;  right foot astride backwards, etc. If the



Fig. 1.

Fig. 2.

stride exceeds the length of an ordinary pace we are said to stand astraddle (straddling position). We can straddle in all directions, and the further our legs are apart, the greater the difficulty. The best way of going into the straddling position sideways, is by raising and shifting alternately the heels and toes. Fig. 1 stands astride forwards, fig. 2 straddles sideways.

67. If we bend our knees in any of the positions explained par. 63 to 66 we obtain a multitude of others, amongst which we will specify three. Standing in the fundamental position

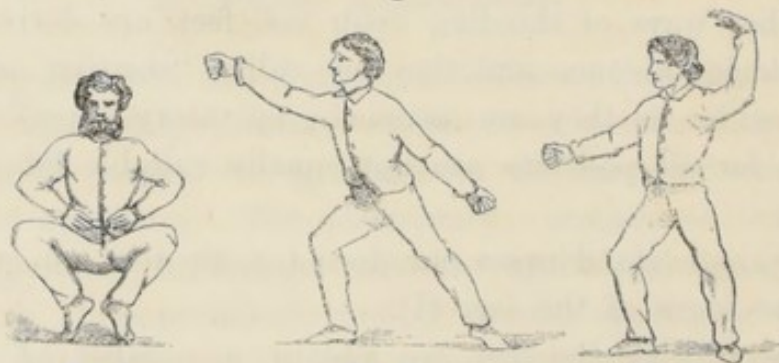


Fig. 1.

Fig. 2.

Fig. 3.

we gradually bend our knees, and as we sink down, we raise the heels off the ground until we are in the squatting position shewn in fig. 1. — Fig. 3 shews the attitude of defence (on guard [right foot forward or left backward] — *stand!*); fig. 2 the attitude of attack (*longe forwards*).

68. By lifting one foot off the ground we find ourselves in a "*balancing position*". Beginners are allowed to steady themselves by holding the arms out sideways and by moving at pleasure the leg which they have raised. More advanced gymnasts place the hands on the hips or fold the arms on the chest or back, and they raise the leg in any direction or to any height which may be demanded of them.



69. *Kneeling.* We kneel upon both knees (see fig.) or upon one knee, the former being done generally from the fundamental position, the latter from standing astride.



Fig. 1.

Fig. 2.

Fig. 3.

70. *Sitting.* We can sit upon the floor in various ways, with legs bent or straight. Fig. 1 squats on the ground; fig. 2 sits both legs extended forwards;

fig. 3 legs extended sideways, a very difficult feat.

71. In the *leaning position* we support ourselves upon the hands and feet (toes), and we either face the ground, fig. 1;



Fig. 1.

Fig. 2.

have the back towards it; or turn one side towards it, fig. 2. Beginners, in order to assume this position, squat on their

heels, place both hands upon the ground by their sides, and bring their legs forwards or backwards. Instead of this they may squat down, raise their arms and throw themselves forwards upon their hands, slightly bending the arms on coming down, in order to break the shock of the fall (I). Expert gymnasts throw themselves forwards upon their hands from the fundamental position without bending the body (II—IV).

72. *Lying* upon the ground, especially flat on the back, is another starting position for various exercises.

73. Several of the above positions recommend themselves either as plastic attitudes or as exercises of endurance. We

mention the following as being specially suited for practice in a gymnasium: — a) fundamental position; b) standing on tip-toe; c) linear position of the feet, to be practised by opposite pairs; d) standing astride and straddling; e) squatting on heels; f) standing on guard; g) longing; h) balancing on one leg.

GENERAL REMARKS.

74. FREE exercises should be performed generally by all the members of the gymnasium in common, for they are not only a wholesome introduction to the more arduous exercises of the evening, but instil a spirit of discipline, and a feeling of community and good fellow-ship.

Previous to beginning the exercises the gymnasts must be placed in a suitable order, and though this arrangement properly forms part of the tacto-gymnastical exercises we will anticipate for the sake of utility and convenience. We suppose the members of each class to be divided into squads of eight or ten men each. On the command, — Squads fall — *in!* — the squads take their accustomed positions in the following manner: —

3rd. squad ○○○○○○○○

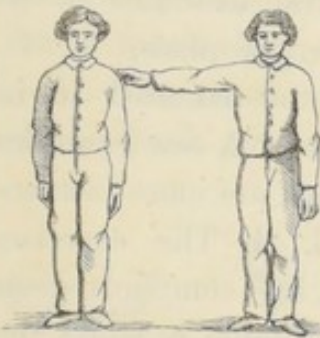
2nd. squad ○○○○○○○○

1st. squad ○○○○○○○○

When there is no division into squads the command would be, — In Ranks, of 8 or 10 men each, fall — *in!* The squads or ranks are then dressed carefully, the successive words of command being, — Eyes — *right!* Dress! — Eyes — *front!* After having dressed, each man is to be able just to distinguish the lower part of the face of the second man beyond him, and the men are to touch each other slightly with the forearms when standing in the fundamental position. The intervals between the ranks or squads are about one pace of 30 inches. Our next task consists in placing the men at a suitable distance from each other, so as to allow of a free movement of the limbs. Where feasible the interval between the men should be two arm's lengths. The following are the words of command; — Grasp — *hands!* (the men in the same rank grasp hands); open files to the left — *march!* (the men go sideways

to the left until the arms are extended); Arms — *down!* To the right — *face!* Grasp — *hands!* Open ranks to the right — *march!* Arms — *down!* *Front* (to the left face)! The men are now in open order at double arm's length from each other. When it is desired to restore the original position the words of command simply are, — Ranks close to the right — *march!* Files close to the front — *march!* *Dress!*

75. FREQUENTLY, however, it will be found impossible to place the men at double arm's length for want of space. They are then placed at single arm's length. Having taken up the positions shewn in our last diagram, the words of command are, —



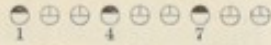


Open files to the left — *march!* Arms — *down!* On the word *march* each man (excepting the leader on the right wing) raises his right arm, palm of the hand upwards, to a horizontal position, and moves to the left until he is just able to touch his neighbour's shoulder with the nails. The dressing must be kept up well. In order to gain a

little more space the men are then commanded, — to the right half — *face!*

76. Another mode of placing the men in open order is as follows. The first command is, — In single rank fall — *in!* *Dress!*



From the right to left in threes tell — *off!* The first man, turning the head slightly to the left, calls out *one*, the second *two*, the third *three*, the fourth again *one*, and so forth.

The twos two paces, the threes four paces-forwards — *march!* We then have the men again in a suitable  position for free exercises. Other modes of  taking up positions will suggest themselves to  any intelligent leader. The men, for instance, may form a ring with the leader in the middle, when all can see each other.

77. Now as regards the exercises themselves. They should be done, whenever possible, according to regular cadence or rhythm, four quarter or three quarter time appearing the most

suitable, with 80 quarters to the minute. But occasionally the cadence is accelerated, the exercise being done slowly at first and by degrees more and more rapidly. Time is generally kept by the leader, who counts aloud, but the members should be taught to keep time for themselves. An excellent means of keeping time is to clap hands or stamp with the feet at regulated intervals. Clappers or castanets are more suited for boys and girls, but a bugle affords an excellent means for regulating the exercises. Counting aloud, or singing on the part of the gymnasts, whilst undergoing some *arduous* exercise is positively injurious. Singing has however been introduced in Germany as an accompaniment to the tacto-gymnastical exercises to be described hereafter, and there it is in its proper place.

78. The following general rules should be attended to in directing the free exercises of a large class. a A few exercises thoroughly mastered and efficiently performed are more instructive than a mass of exercises ill digested. b The exercises selected for common practice must not be too complicated or difficult. c They must be practised in a suitable cadence and rythm, common time ($\frac{2}{4}$ and $\frac{4}{4}$) being preferable, though triple time ($\frac{3}{4}$ or $\frac{3}{8}$) need not be excluded. d The exercises selected should be of real value for promoting suppleness of limb and the power of balancing, they should promote health, and satisfy our sense of that which is aesthetical. e They must lastly bring successively into action all parts of our body.

EXERCISES STANDING.

79. THE terms used in connection with the movements of our limbs are to raise and lower, to bend and straighten (stretch), to twist and move round, to draw or pull back, and thrust and strike, to swing and throw out. The exact meaning of these terms will be made clear in the following pages. The exercises can be done slow and fast. The directions of the movements are expressed by forward and backwards, sideways, diagonally and obliquely, to the right or left, up and down etc. The muscles are either slack — when the minimum amount of force necessary to accomplish the proposed movement is put

forth — or they are strained, when the full strength is put forth and the antagonistic groups of muscles are caused to act as well.

80. THE HEAD can be *bent* forwards and backwards, sideways to the right and left fig. 1, or in a diagonal direction, inter-



Fig. 2. Fig. 1.

mediate between the two; and lastly we can roll or move it round, passing through the whole of the preceding movements. We can furthermore *turn* the head to the right or left (fig. 2), and even back, so as to look over one shoulder. Movements of the eyes, eyebrows or ears, do not form a portion of gymnastics and altogether movements of the head, should be introduced sparingly.

81. The BODY OR TRUNK admits of movements similar to those of the head. Generally speaking the best starting position for



Fig. 1.

Fig. 2.

Fig. 3.

these movements is standing astride, with hands on hips (thumb in front or behind according to circumstances). We can bend the back forwards (fig. 1) backwards, or sideways (fig. 2), and we can impart to it a circular motion, by passing in succession through the forward, sideward, backward, sideward, foreward etc. positions, without raising ourselves.

We can furthermore twist the body to the left and right (fig. 3). In addition to this we can turn the lower part of the trunk independently (wriggle), and we can expand and contract our chest, but these exercises are of little service in the gymnasium. The expansion and contraction of the chest is brought about by inhalation and exhalation (breathing), and as the force of the breathing is subject to our will, it forms a transition from involuntary to voluntary movements.

82. The LEGS admit of a greater variety of exercises than either head or trunk. In doing leg exercises we generally start from the fundamental position. The hands are placed on the

hips or the arms folded on the chest or the back. When standing on one leg the men may be permitted to hold out their arms sideways which materially assists in keeping the equilibrium. The toes should generally be turned out and the foot straight.

We will first of all consider those exercises in which the legs are kept straight. If we raise both heels off the ground we stand on tiptoe (on tiptoe — *stand!*). By repeatedly rising and sinking we have an excellent exercise for strengthening the ankles and feet. The heels may be required to keep off the ground whilst rising and sinking.

We can raise our right (or left) leg in all directions, sideways to the right (a), diagonally forwards to the right (b), forwards (c), diagonally forwards to the left (d), sideways to the left,

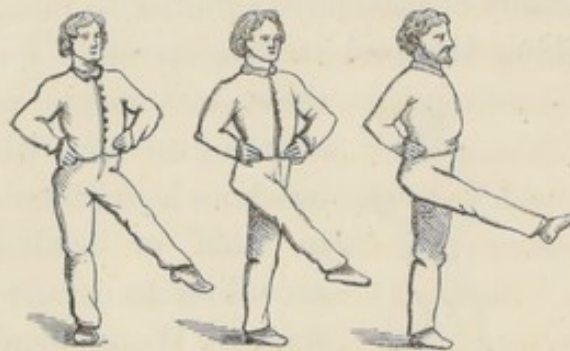


Fig. 1.

Fig. 2.

Fig. 3.

so as to cross the left leg in front (fig. 2, e) or behind (f), diagonally backwards to the left (g), backwards (h) and diagonally backwards to the right (i).

When the men are required to raise their legs merely a foot or thereabouts off the ground the simple command of "Right leg raise forwards — *up!*" is sufficient, but when they are to raise their legs horizontally (fig. 3) the command is "Right leg raise horizontally forwards — *up!*" The men, having raised their legs, may be required to remain in any of the positions indicated above until the order "leg — *down!*" be given; or the leg may be raised and lowered in cadence, as for instance: — "right leg forwards raise and lower — *up! down!*" etc. or, "left and right legs sideways raise and lower — *left! down! right! down!*" etc. When the legs are thus raised and lowered they should generally be brought to a horizontal position, or even higher than that.

83. Again, having raised for instance the right leg forwards, we can, without putting it on the ground, bring it sideways

to the right, backwards etc. One of the best exercises is swinging the leg forwards and backwards. The words of command are — “*Right leg swing fore and backwards — swing!*”



Fig. 4.

(fig. 4). A pleasing variety of this exercise is commanded in the following manner, — “*Left and right legs alternately swing fore and backwards — swing! left!* (the left leg is raised forwards), *back!* (the left leg is swung backwards); *fore!* (the left leg is again brought forward); *down!* (the left leg is put on the ground, in fundamental position); *right!* (the right leg is raised forwards); *back! fore! down! left! back! fore! down!*” and so on. In exercises of this kind the men standing abreast may be allowed at first to grasp hands, or to hold by the shoulders or arms, these latter being extended horizontally.



Fig. 5.

84. Another excellent exercise for learning to hold the balance, standing on one leg, is done by — raising one leg horizontally forwards and then moving it round in a circle, which we may term “funnelling”. The circle can be described inwards or outwards. Both legs must be kept perfectly straight. A similar exercise can be done with the leg raised backwards.



Fig. 6.

Another circular movement of one leg is shewn in fig. 6. Starting from the fundamental position we bring the leg forward or backward, moving it in a circle. The higher we raise the leg, the more difficult the exercise.



Fig. 7.

85. We will now consider those exercises in which one or both knees are bent. If we bend both knees, when standing in the fundamental position, we sink down gradually to the squatting position. As a rule we in proportion rise upon our toes as we sink down. The heels are locked, the knees spread apart, and the body erect. The

command, — “Sink and rise, squatting on heels — *down! up!*



Fig. 8.

down!” etc. requires no further explanation. Standing with feet locked, heel to heel (par. 63), we can also sink and rise, but

the heels in that case are not lifted off the ground, and the knees remain locked. The arms are gradually raised forwards as we sink down (fig. 8). The squatting, sinking and rising, should be done also standing astride.



Fig. 9.

Standing astraddle (the legs not too far apart) we can alternately bend the left and right knee, as shewn in fig. 9.

86. Standing upon one leg we can also squat down and rise, but before attempting this, we get the men to carry out the following command, — “Right leg raise forwards — *up!* Left leg bend and stretch — *bend! stretch!*” etc. The more we bend the leg, that is the lower we sink down, the more trying the exercise. When squatting on one heel in this manner, the arms are extended forwards, and the raised leg must be kept perfectly straight without touching the ground.



Fig. 10.

87. In raising the heels the upper part of the leg or the thigh remains as near as may be in its original position. “Raise right



Fig. 11.

Fig. 12.

Fig. 13.

heel — *up!* (fig. 11). With both hands right instep — *grasp!* (fig. 12). Left leg bend and stretch — *sink! rise!*” etc. is an excellent exercise. It is a trifle more awkward to raise the right heel in front, and to grasp it with the hands (fig. 13). To carry out the following command, — “Kick thighs, left and right — *kick! left,*

down, right, down;” etc., the heel is brought up with a swing, without advancing the knee, and made to touch the thigh forcibly (fig. 11). It is then brought *slowly* to the ground, all in regular cadence



Fig. 14.

Fig. 15.

88. The knee can be raised forwards (fig. 14), and the shin or the thigh grasped with the hands. With a swing the knee may be made to touch the chest ("left and right knees raise, touching chest — *left! down! right! down!*" etc.). The body in this exercise must remain erect. The arms may advantageously be folded on the back (fig. 15).

89. A command to kick will be understood easily. The knee is raised, as in fig. 16, and the kick is generally delivered in a slanting direction forwards (fig. 17).

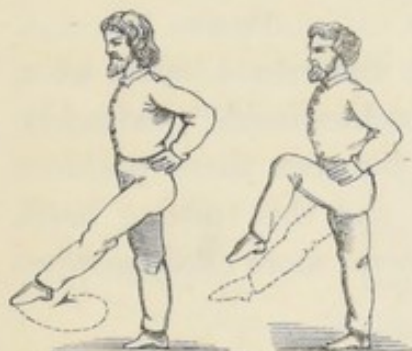


Fig. 16.

Fig. 17.

After delivery the leg is either put down, before the next kick is delivered, or the knee is raised for a second kick without putting down the leg. — We can kick also sideways or backwards, the latter in imitation of the movement made by a swimmer.

90. Throwing out the leg is performed as follows, — "Left knee raise — *up!* Thigh with both hands — *grasp!* Throw out leg six times — *out! back! out!*" etc. The leg is thrown *out* forwards, with considerable force, and brought *back* until the heel nearly touches the thigh!



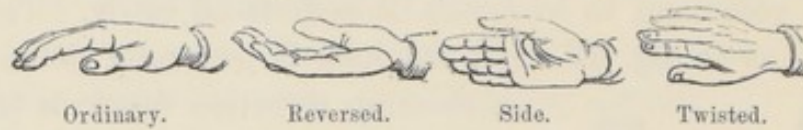
Fig. 18.

A pleasing variety of this exercise is performed in four motions, as follows: — *Up!* The left leg is first raised horizontally forwards and then the knee bent and the leg brought to the position shewn in fig. 18. *Out!* The leg is thrown out. *Down!* The leg is quietly put to the ground. *Stay!* the men remain in the fundamental position. The exercise is then gone through with the right leg, and so on. The hands are placed on the hips.

91. Having raised the knee, fig. 14, we can move or swing the lower part of the leg round in a circle (funnelling).

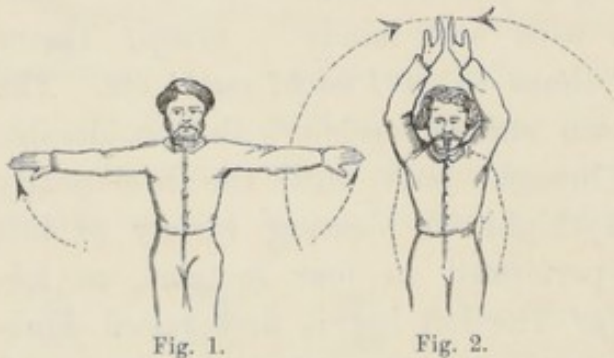
92. The *foot* can be bent and stretched, moved to the left and right, and moved round in a circle. These exercises are performed generally standing upon one leg.

93. The *Arms* admit even of a greater variety of exercises than the legs. In all of these the position of the hands is of some importance, and we speak of an ordinary position (when the knuckles are turned to the front), a reversed position, when they are to the back), a side-position (when they are on the outside, and a twisted position (when they are on the inside).



In the gymnasium, however, it will be understood easier when the leader orders "knuckles outside", "knuckles inside", "knuckles over", "knuckles under". The change between these positions is brought about by turning the arms, and this turning itself, "twisting", is an exercise, rendered however more effective when carrying dumb-bells or wands.

94. We can raise our arms in all directions, either singly or both at once; forwards, sidwards, backwards or in a diagonal



direction; and to a position slanting downwards, horizontal, slanting upwards, and straight up above the head. A few examples of this raising and lowering will suffice. We give the words

of command, the men being supposed to stand in the fundamental position, arms hanging down by the side.

- a. Arms horizontally sidwards — *up!* (fig. 1). *Down!*
- b. Arms sidwards above the head, knuckles to touch — *up!* (fig. 2). *Down!*
- c. Arms horizontally forwards raise, and lower — *up! Down!*
- d. Arms above head forwards — *up!* Sidwards — *down!*

Instead of raising both arms at once we can move them

singly, or we can raise one arm whilst the other is being lowered, for instance: —

“Right arm raise sideways above the head — *up!* Alternately left and right arm raise and lower — *One!* (the right arm goes down, the left up), *Two* (the left down, the right up)”, etc.

Occasionally the men should be required to hold out their arms horizontally, say for fifteen minutes, and in order to prevent this wholesome exercise proving tedious, exercises for the legs may be gone through the while.

95. Having raised both arms horizontally sideways we can close and open them, a capital exercise for strengthening the shoulders and extending the chest. On closing the arms in front the men may be required to clapp hands, or to touch with the knuckles (“Shoulder test”).



Fig. 3.

96. Another excellent exercise is as follows: “Arms raise forwards slanting upwards — *up!* Tips of fingers — *touch!* Circular motion of arms to the rear and front, clapping hands behind — *back! front! back! front! . . . Halt!*” (when the arms drop down at the side). Fig. 3 sufficiently elucidates the motion.

97. One or both arms may be swung round in a circle in a great variety of ways, of which we give a few examples.

a. “Left foot astride forwards — *stand!* Left hand on hip — *place!* Circular motion of right arm backwards — *swing! One! Two!* etc. (fig. 4). *Halt!*”



Fig. 4.

The same is done with the left arm, when the right foot is put astride forwards. Both arms may be swung round at once in the same or in contrary directions, that is one arm forwards, the other backwards. When both arms are swung round at once the fundamental position is retained.

- b. "Left foot astride to the left — *stand!* Right hand on hip — *place!* Left arm sideways horizontally — *raise!* Circular motion of left arm in front, upwards — *swing! one! two!* etc. *Halt!*" (see fig. 5).



Fig. 5.

- c. "Both arms sideways horizontally — *raise!* Circular motion of both arms in front, downwards, three times, then clap behind — *swing! one! two! three! clap! one!*" etc.

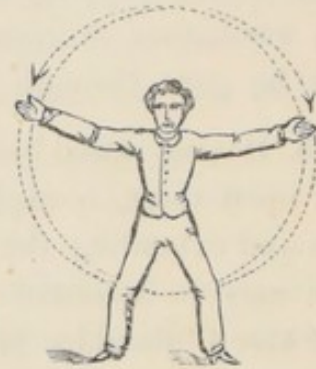


Fig. 6.

The arms are swung round in front, and must cross each other *close to the body*. The arms, before beginning the second set of circular motions must again be raised horizontally. Fig. 6.

- d. "Arms sidew. horizontally — *raise!* Narrow circular motion, forwards or backwards, — *round!*" This exercise is shewn in fig. 7. It might be called appropriately Funnelling exercise from the movement of the arm, the joint being a fixed point. The figure of "Eight" is an exercise in which the arms, extended sideways, move in such a manner, as to describe the figure of an "eight" ∞ on a vertical plane, the point of intersection being right opposite the shoulders.



Fig. 7.

98. We can bend and stretch our arms. When we stretch them, keeping the upper arm perfectly steady, we speak of throwing out. Cuts 8 to 10 shew the principal modes of



Fig. 8.

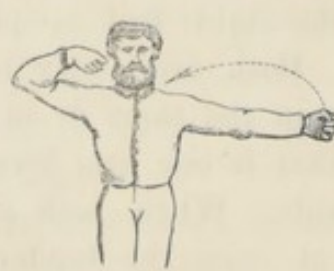


Fig. 9.



Fig. 10.

throwing out the arms, viz. downwards, sideways from the shoulder (which should be touched), and sideways from the chest (knuckles touch, the arms must maintain a horizontal position). These exercises are done with one arm singly, with both at once, or with the right and left alternately.

99. Thrusting with the arms corresponds to kicking with the legs. We can thrust upwards, sideways, forwards, downwards and even backwards. The position of the arms previous to thrusting varies according to the direction of the thrust. When it is upwards or sideways the fist is brought close to the shoulder, knuckle in front; the elbow is firmly placed against the side, and the shoulders are turned back. Fig. 11.



Fig. 11.



Fig. 12.

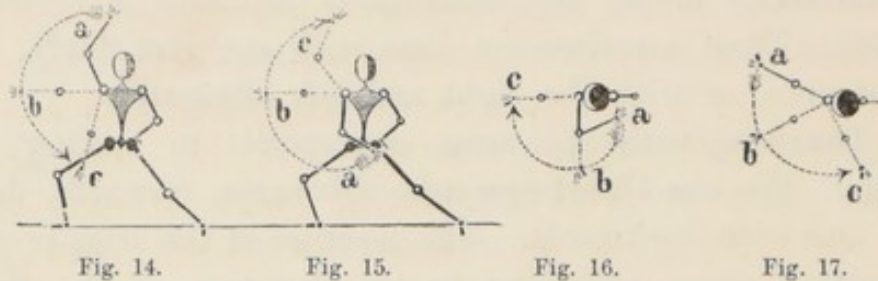


Fig. 13.

In thrusting forward (fig. 12) the fists are placed against the sides of the chest and the elbows are brought back. In thrusting down or backward the elbows are raised high (fig. 13). These exercises are commanded as follows, — “Thrust upwards with both arms—Arms—on! — *Thrust! down! up!*” etc. We will draw attention to the fact that the thrust as well as the pulling back or down may be made feebly or forcibly, and that by ordering one or the other, the character of the exercise can be varied. Generally both should be made forcibly.

100. Striking with the arms is done downwards upwards and in an horizontal direction to the left and right. These exercises are generally done from the position of attack, the right leg being in advance when striking with the right arm, the left when striking with the left. The fist is doubled up, and one arm placed on the hip or up the back. The commands for striking downwards are, — “Longe to the right forwards — *out!* Strike downwards — *ready!* (The right arm is raised

to a, fig. 14.) Downwards — *strike!*” (The arm is then forcibly brought to c.) We strike “short” when, instead of describing



a semicircle with the hand, we only describe one quarter of a circle, from a to b in fig. 14. — Fig. 15 illustrates striking upwards, when the little finger is uppermost; figs. 16 and 17 striking sideways to the right and left. When striking to the right, we bring the right fist close to the left ear, knuckles uppermost; when striking to the left, the right arm is raised horizontally to the right, slightly bent, and knuckles downmost. In the above diagrams a shows the position of the arm when “ready”, b after having struck short, and c after a long stroke.

101. The “reel” is an exercise in which the bent arms are brought before the chest, the forearms being close and parallel to each other, and they are then turned rapidly around each other, inwards or outwards. If done very rapidly, a very effective exercise.

102. The *Hand* can be bent forwards, backwards and sideways (figs. 1 and 2), and it can be moved in a circle, the arm remaining perfectly steady. The *fingers* also admit of a great variety of movements. Let one of our friends make a fist, for instance, and attempt to raise his fourth finger. A great advantage of these exercises is that they can be done, whilst walking along the street, without attracting attention.*

103. *Combinations of the above exercises* are brought about in various ways. We shall confine ourselves to giving a few examples, trusting to the intelligence of the leaders to invent

* See Jackson's *Finger Gymnastics*. London, 1865.

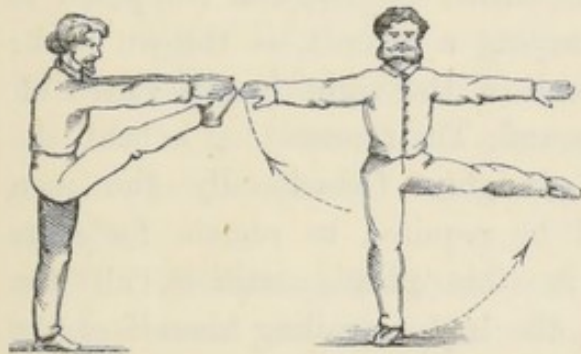
and arrange others. The simplest plan is to do two or more exercises by turns, for instance, thrust both arms upwards



twice; and having done this, sink and rise, squatting on heels, twice. This exercise is done in $\frac{1}{4}$ time, and the leader marks the time thus, — “thrust, down, thrust, down; squat, rise, squat, rise”; etc. Having succeeded in this, *both* exercises are done to-

gether, the arms being thrust up whilst sinking on the heels

etc. Other leg and arm exercises in great variety are devised easily. Legs *and* arms may be raised and lowered sideways or forwards simultaneously, as shewn in the illustrations. In a similar manner may be combined kicking and throw-



ing out of legs, with thrusting and throwing out of arms etc.

104. Longing in combination with thrusting or striking offers a pleasing series of exercises in which grace of movement is exhibited rather than an effort of strength.

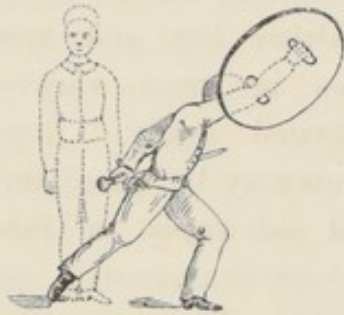
a. The men stand in the fundamental position, hands on hips: — “To the left and right, longe and thrust — *out!* (the left foot is advanced about two feet and a half and at a right angle to the right foot, which remains stationary; the left arm thrusts forwards, the right drops down behind, as in fig. 3, par. 67) *stay! stay!* (the men remain in the above position) *recover!* (the men resume the position from which they started, hands on hips) — *right! stay! stay! Recover!*” (the same exercise to the right). —

b. Instead of thrusting, striking may be combined with the longing out.

c. Again starting from the fundamental position, hands on hips, we assume the attitude of defence by placing the left

leg about one and a half or two feet to the rear, keeping the two feet at a right angle to each other. The right arm is brought to the front, the left arm raised behind, as shewn fig. 2, par. 67. The left shoulder must be turned back, and the weight of the body rests rather more upon the hindmost than the foremost leg; the knees are bent. This position also, is done to the left and right.

d. The *gladiator's attitude*, in imitation of the Borghese Gladiator, is one of the most graceful. The left foot and right arm are advanced simultaneously, the arm being bent gracefully above the head, as if protecting it with a shield; the left arm (supposed to be grasping a sword), is thrown back: the heel of the right foot is raised off the ground. The foremost leg is bent, the other straight. Occasionally the men should be required to remain for some time in this plastic attitude, all the



muscles of the body strained, the leader availing himself of the time to correct faulty positions. — This exercise is done to the left and right alternately in same way as the lunge and thrust.

105. *Combinations of Arm and Trunk* exercises frequently afford good practice. Bending the back forwards and back-

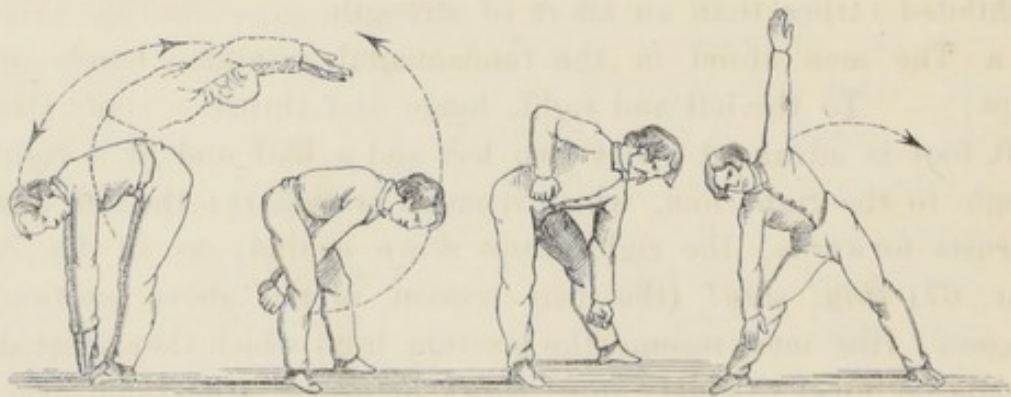


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

wards, touching the ground with fingers, is shewn in fig. 1. — This exercise is easiest standing astride. — Fig. 2 illustrates the "sawyer" exercise, in which the arms are swung between the legs. — Fig. 3 is "pounding": — he stands with back

bent, and rapidly thrusts arm after arm downwards. — Fig. 4 bends sideways, arms extended horizontally.

The twisting of the body is materially assisted by swinging the arms. Fig. 5 twists, swinging the arms round (“Mowing” exercise); the feet remain firmly planted upon the ground.

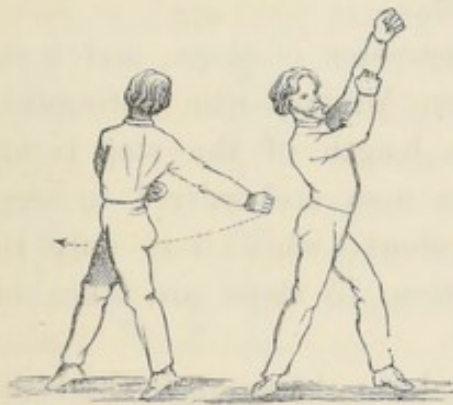


Fig. 5.

Fig. 6.

— A still more efficacious exercise is shown in fig. 6. At one and the same time the body is twisted to the left, the back bent backwards, and both arms thrown sideways and upwards. When changing to the left (for this as most exercises are to be done repeatedly in succession, to the left and right), the arms pass close to the body. The feet

remain firmly planted upon the ground, the legs are kept straight.

106. The *leaning Position*, and the manners of getting into it have been described par. 65, and we confine ourselves therefore to noticing a few exercises.

We sink and rise by alternately bending and straightening the arms, thus touching the ground with the breast, the back, or the side, according to the position from which we start.

We can spread the arms out, forwards or sideways. We can raise an arm, or a leg, or both together (fig. 1).

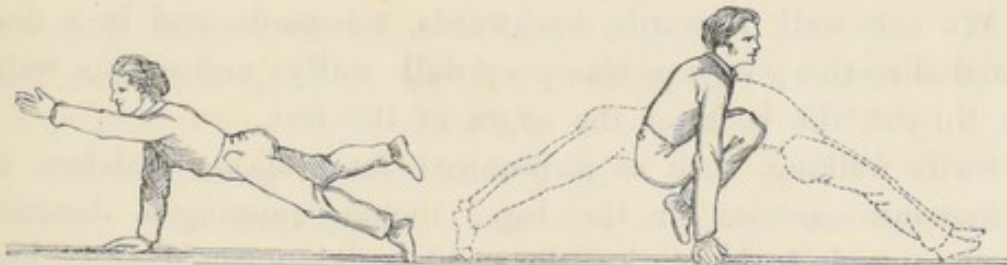


Fig. 1.

Fig. 2.

We can hop with the hands, the feet, or both at once, first without gaining ground, then moving forwards, backwards or sideways. This sort of walking is one of the most amusing competitive exercises.

“Wheeling” in the leaning position is done with the hands or the heels as a pivot.

The passage from the leaning position forwards to that backwards, by squatting between the arms, is shewn in fig. 2. It is by no means easy.

WALKING.

107. IN walking we make a succession of steps, and both feet never leave the ground together. Military men distinguish between slow and quick time, the length of the step being always 30 inches, unless when the men are ordered to step out, when it is 33 in., or to step short, when it is only 10 inches. When marching in slow time 75 steps are taken in a minute, and 110 in quick time.*

In walking the toes are turned out, but not too much, the body is erect, the eyes look straight to the front; the arms are allowed to swing slightly forwards and backwards. The heel touches the ground first. Pedestrian trips afford the best practice for walking, and for this and other reasons they should be encouraged as far as possible. The length of the steps as given above applies as a matter of course only to men moving in concert; when on the march each man must regulate his step by the length of his legs.

A sham-walk, in which the legs are moved as in walking although the gymnast does not gain ground, is known as “marking time” or “beating time”, the latter when the knees remain straight, and the legs are thrown up forwards.

We can walk forwards, backwards, sideways, and in a diagonal direction; we can stamp or walk softly; and we can walk on tip-toe, the heels or the edges of the feet.

Swift walking, such as is required for walking matches, is a first-rate exercise for the legs, though running a distance at the speed, to be attained by swift walking would prove less fatiguing (fair heel-to-toe walking means that the toe of the hindmost leg must not leave the ground before the heel of the leg striding forwards has been placed upon it).

* A small machine marking the time is most handy, otherwise a plummet (pendulum) may be used.

We will now describe some fancy modes of walking which afford useful practice for the gymnasium.

108. In all *balance steps* the gymnast is required to keep his balance for a longer period than usual whilst standing upon one leg.

The *balance step*, raising legs forwards, is as follows. Starting from the fundamental position (hands generally placed on hips), raise the left leg horizontally (*one!*); then place it steadily upon the ground, toe first, raising at the same time the heel of the right leg (*two!*); raise right leg in the same manner, and so on. — This step may be varied by requiring the standing leg to be bent.



The *balance step* kicking thighs: — *one!* kick thigh; *two!* bring leg to the front; *three!* put the foot on the ground.

Balance step raising knees to chest: *one!* raise left knee to chest; *two!* kick forwards; *three!* put foot on ground.

The *balance step*, throwing out legs, is in fact the exercise described par. 90 combined with locomotion. *One!* raise left leg horizontally and bend knee; *two!* throw out leg; *three!* put foot on ground.

109. The *testing step* is a balance-step calculated to test the footing of the gymnast. It is done in four-quarter time. *One!* Raise left knee (fig. 14, par. 88). *Two!* stretch the left leg horizontally. *Three!* swing the left leg backwards and forwards until it is again horizontal (fig. 4, par. 83). *Four!* put down the left leg, toe first, raising at the same time the right heel. The leader counts 1, 2, 3 and 4 (♩♩♩♩).

The same step is done backwards.

110. The *changing or triple step* is always put into requisition when a man in a marching column "loses" his step, but may be practiced also as a special exercise. Fig. 1.



Fig. 1.

Fig. 2.

111. The *Basque Step* is done in three quarter time. The annexed wood-cut fig. 2, shows the positions of the feet.

At *one* the left foot steps diagonally to the left. At *two* the right foot crosses in front and is put down at 2; at *three* the left foot is raised from the ground and put down again. The same step is then done toward the right, and so on. The hands are placed on the hips, or the arms move gracefully in unison with the feet.

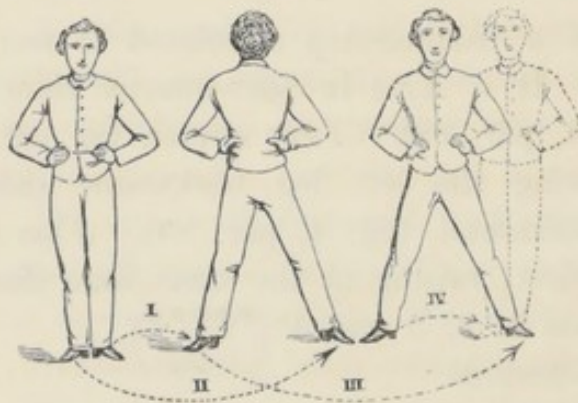
112. The *rocking step* is also done in three quarter time. Start from the fundamental position. *One!* — place left foot a step in advance, and at the same time raise the right foot, without, however, bringing it forwards. — *Two!* Put the right foot down again and raise the left. — *Three!* — put the left foot down and raise the right heel. — *One!* — bring the right foot to the front, put it down a step in advance, and raise the left; etc.

The toes must be pointed downwards.

The above steps should be practised also walking on tip-toe.

113. The *longing step* consists of a succession of longes (par. 67, 104) accompanied by thrusting of arms, striking etc. For instance, start from fundamental position, hands on hips. Longe to the left and thrust (1, 2, 3); place right foot at the side of the left and hands on hips (4); longe to the right (1, 2, 3), left foot forwards (4) etc.

114. The *twirl step*, sideways, is shewn in the annexed wood-



cut. We start from the fundamental position. *One!* — put the left foot a stride to the left. — *Two!* turn to the left about, on the left foot as pivot, still keeping the legs apart. — *Three!* — turn to the right about. — *Four!* fundamental position.

Our illustration will sufficiently elucidate this explanation. Variations of the *twirl-step* can be introduced. We will describe one of them.

Start from the fundamental position. — *One!* — place left foot a stride to the left. *Two!* — put right foot a stride to the left, crossing the left leg in front. — *Three!* turn to the left about

on the balls of both feet, which remain stationary. — *One!* put the left foot again a stride to the left as at first, and so forth. —



115. Walking of various descriptions can be combined with many of the free exercises, but we trust to the intelligence of the Directors of exercises and their powers of combination to arrange exercises of this kind. For the present we must confine ourselves to giving a few examples. The class is supposed to move in single file, in a circle or square; or in column according to the space the gymnasium affords. The Director then gives the following orders, the men marching all the time in regular cadence. —

“Stamp with the left — *foot!*”

“Ordinary step — *march!*”

“Stamp four times with the left foot, and then walk 8 paces on tiptoe — *march!*”

“Walk 8 paces (1 to 8) and then squat on heels twice (1 to 8) — *march!*”

“Ordinary step — *march!*”

“Fists to shoulders — *up!* Thrust arms sideways and stamp, each left step — *thrust!*”

And hundreds of similar variations. —

116. In concluding this notice on walking we may mention the walk on the hands head downmost, and various ways of walking on “all fours” practised more by acrobats than by health-seeking gymnasts.

JUMPING AND HOPPING.

117. IN jumping, as in leaping generally, we momentarily leave the ground by means of a sudden spring, produced by an extension of the extensors of the legs, assisted in many instances by a swing of the arms. Thus, standing in the fundamental position, we bend the knees (not too much) and rise to a trifling extent upon the toes; having done this we suddenly extend the legs and at the same time we throw our arms forwards and upwards.



118. The simplest exercise of this series is *jumping upwards*. At *one!* the knees are bent, at *two!* we jump upwards to a moderate height, and come down to the ground on the same spot and on the balls of the feet, the knees gradually bending or yielding to break the force of the concussion or shock. This exercise is done in regular cadence several times in succession.

We next jump with stiffened legs, the hands on hips or hanging down by the sides. In this exercise we rise on the toes, and the foot alone gives the upwards impulse.

119. We can face to the right or left, to the right or left about, jumping. We can also jump whilst squatting on the heels, or standing on one leg, the other being raised in any direction required.

120. "Jump into straddling position sideways, and back — Jump! *One* (the legs are bent) *two!* The position is then as shewn in fig. 2 par. 66. On going back the legs are bent again. In the same manner we can jump into the straddling position forwards.

121. The "beat-hop" consists of raising and lowering the legs jumping. On the words, — "left leg — *up!*" the left leg is raised sideways; on the word *jump!* the left leg is lowered, but before it touches the ground the right leg is raised to the right, and the exercise continued in this manner. — Instead of raising the legs sideways, one may be raised fore, the other backwards, or both forwards. A spring between advisable.

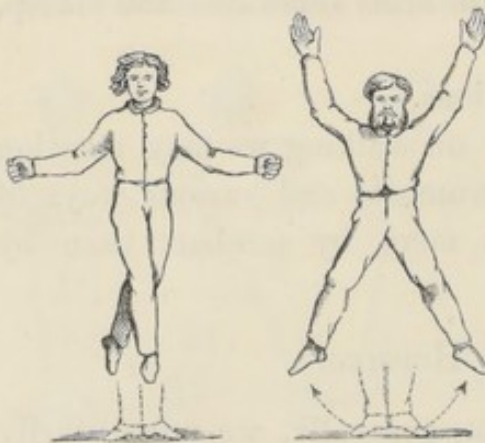


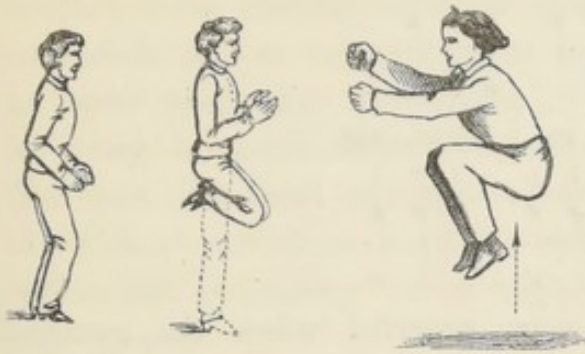
Fig. 2.

Fig. 1.

Straddle-jumping, raising arms sideways, is shown in fig. 1, and the so-called "cutting", or jumping, crossing legs in the air, in fig. 2.

122. We have kicked thighs and raised our knees to the chest standing (par. 87 and 88). The same exercises can be done jumping, and not only leg after leg, but both at once. We command thus, — "kick both thighs jumping — *kick!*" or

both knees to chest, jumping — *up!*” All these jumping exer-



cises are done in regular cadence, but the leader must be careful to find out before hand the rapidity with which the movement may be carried out conveniently. A low spring between the jumps will prove advantageous.

123. Having thus described some jumping exercises in which the gymnast does not gain ground, we will now describe some in which he does.

The jump forwards, springing off with both feet, is simple enough. We jump sideways or backwards in the same way.

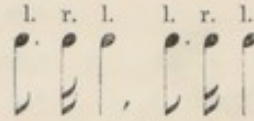
We then practise jumping springing off one leg and coming down upon both or only one. The so-called “Triple leap” of the ancient Greeks consisted of three jumps, first upon the right foot, then upon the left, and lastly upon both, similarly to our “hop, step and jump”. The story, of a man having cleared 55 feet in this manner, may well be doubted.

124. The *Grasshopper jump* is a peculiar sort of jump in which we start from the squatting position, stretch the body during the leap, and come down again into the squatting position. Let a line of men, squatting one behind the other, do this in regular cadence, and mark the effect.

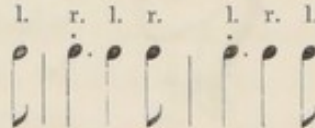
125. *Hopping upon one leg* affords good practice. Let the men do 4 hops on the left leg then four on the right, alternately, or introduce between the hops four long strides or jumps (bounding steps) springing off alternately with the left and the right leg.

126. The various steps described above under walking can also be done jumping or hopping. They should, however, be introduced sparingly in men’s classes, being more adapted to children and ladies. The instruction in the more complicated steps may be left very fitly to the dancing masters.

The *changing or triple step* is done in two quarter time, thus



The *Basque step* is done in $\frac{6}{8}$ time, viz



The *rocking step* looks very graceful when the gymnast keeps himself in a good position and leaps up rather high, coming down on his toes.

RUNNING.

127. IN running we make a succession of long or short leaps, both feet together leaving momentarily the ground. In running we either endeavour to do a long distance at a moderate speed, a short distance at a very great speed, or we combine both exercises. The former mode of running, the so called double-step of the soldiers, is that kind of running of the greatest service, and ought to be practised whenever there is an opportunity. — One hundred and fifty short leaps are made in a minute, and allowing three feet to each leap, a mile is run in less than ten minutes. This is the regulation pace.



Men not carrying arms and accoutrements can do more with ease, as a matter of course. In running the chest is kept steady; the breathing takes place slowly and at the proper moment, the mouth is shut, the arms are bent and assist in the forward movement by being swung forwards and backwards. The legs must not be raised too high, and there must be no jolting.

Men desirous of learning to run long distances should increase the term of practice from day to day. Let them run five minutes the first day, ten the second, and so on, until they are able to run an hour (six miles) or more without losing their breath. Any man feeling a pain in the side should step aside and rest.

After the run most of the men will be perspiring and they must not be allowed to stand still. They should be made then to march at an ordinary pace for some fifteen minutes, and to wear away the tediousness of such a walk a chorus may be sung or some tacto-gymnastical exercises gone through. The run also need not take place round and round the same place but variations may be introduced. One of the best spots for practising is a high road, fairly marked with mile-stones.

When speed is an object the leaps are made in more rapid succession and their length is increased to suit the convenience of the runner. Too long leaps are not advantageous.

128. The *gallop* is a peculiar kind of run in which one leg leads. It can be done forwards and sidwards.

The *bounding step* consists of a succession of short leaps, succeeding each other in the cadence of the slow or quick step. Each leap or bound is five or six feet in length.

Gymnasts should also practise running up and down hill, over stubble fields, over rocks, and in fact all sorts of ground offering natural obstacles. Pedestrian tours will afford ample opportunities for doing this.

FEATS IN INDIVIDUAL FREE EXERCISES.

129. ALTHOUGH in the preceding chapters we might have described all the exercises which can be performed by a single gymnast, we thought it best to reserve some of them for a special consideration, partly on account of their miscellaneous nature, and partly on account of the superior strength and agility required for their execution. There are few who will succeed in the whole of these exercises, and those, who look upon free exercises as fit merely for beginners, will find here many a difficult task.

130. *Feats of Strength and suppleness of the limbs.*

- a. Sit down on the ground and rise without using the hands, first with legs crossed, then with knees locked.
- b. Lie down on the back and rise without using the hands.
- c. Do the same exercises using one leg only.

d. Place the hands on the hips and bring your elbows together behind. Do the same, arms hanging down.

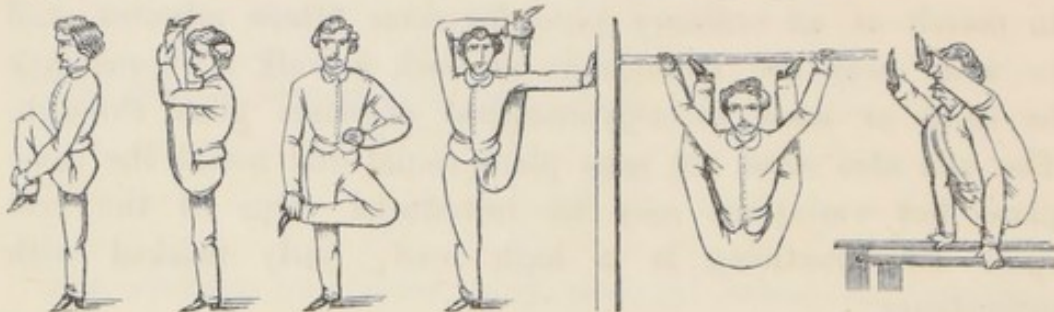


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

e. Shoulder a leg forwards, standing upon the other leg (IV.) Figs. 1 and 2.

f. Shoulder a leg backwards, standing upon the other leg. Figs. 3 and 4.

When hanging at the Rack both legs can be shouldered at once, and a similar feat, called the "turtle", is performed in the rest on the parallel bars. Figs. 5 and 6.

Fig. 8.

Fig. 10.



Fig. 7.

Fig. 9.

Fig. 11.

g. Bend back forwards until the shoulders touch the legs, first standing (fig. 7), then sitting (fig. 8).

h. Bend back forwards and shoulder legs behind, first standing, then sitting. Fig. 9.

i. Sit astraddle upon the ground and bend sideways until the shoulder touches the leg. Fig. 10.

k. Kneel and bend back backwards until the shoulders touch the ground.

l. Stand up, and bend backwards until the hands touch the ground. Fig. 12. This feat is learned most easily when standing back towards a wall, down which the hands move steadily. The turning over in this position is known as the "Fly-flap".

m. The horizontal positions shewn in figs. 14, 15 and 16.
 n. Lever upon both hands and upon one hand, and turning in these positions. Fig. 11.



Fig. 12.



Fig. 13.



Fig. 14.



Fig. 15.



Fig. 16.

o. Balance rest upon both hands, the legs extended horizontally forwards.

p. Stand on tiptoe, upon one or both legs, and spin round or walk.

q. Walk on the knees, the hands having hold of the insteps. Fig. 13.

Standing head downmost.



our illustrations.

131. A gymnast need not confine himself to standing upon his legs: he can stand upon his head (I), his neck (II), his fore-arms (II) or his hands (III), as shewn in

FEATS IN JUMPING.

132. a. Kneel down and leap into a standing or sitting position (II), the latter on a soft mattress.



b. Lie on the back and jump into a standing position, either making use of the hands to push yourself off the ground, or without that aid.

c. Take a wand in the left hand and place it horizontally against the wall, and jump over it (II). Instead of the wand you may place your own leg against the wall and hop over it (III).

d. Grasp your right foot with the left hand and hop over it (II).

e. Fold both hands, stoop down, and jump over them forwards and backwards (IV).

f. Turn to the right or left jumping, making more than one complete turn around your longitudinal axis. One turn = II, one and a half = III, 2 turns = IV.

TUMBLING AND SOMERSETS.

133. THESE exercise must be done on soft ground, filled to the depth of one foot with sand or some similar substance, or on a good mattress. In many cases a belt with a ring on each side, to which ropes or straps are attached, and the ends of which a held by two comrades, will prove of service.



Fig. 1.

Fig. 2.

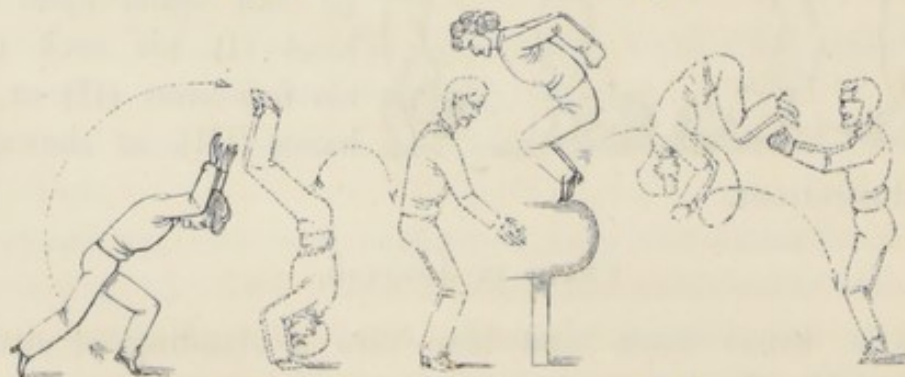


Fig. 3.

Fig. 4.

In *tumbling over forwards*. (Fig. 1) we either support ourselves upon head and hands, upon the hands only, or we

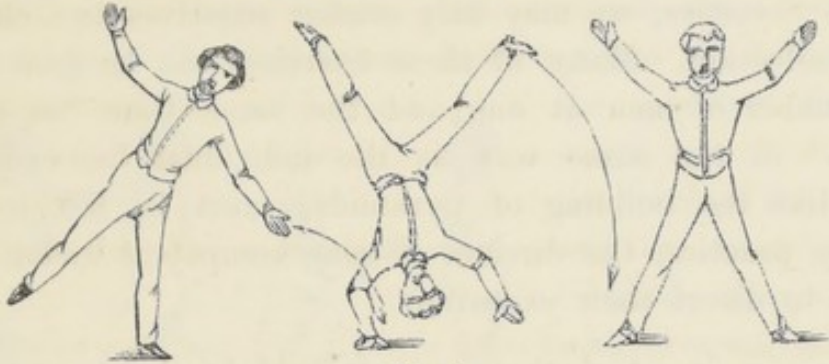


Fig. 5.

touch neither with the hands or the head, but allow ourselves to fall upon the back.

In *tumbling over backwards* we either start from the squatting position or lying on the back. Fig. 2.

The *somerset forwards* is shewn in fig. 3. — It is done at first over the back of a man on hands and knees upon the ground (II), and then without this aid. When confident in the preceding, the gymnast takes a short, but stout stick and places that on the ground when throwing his somerset (III).

The *free somerset forwards* is done at first from an elevation, the back of the horse for instance. The man practising should wear a belt to which two stout straps are attached, which are held by two of his comrades (IV).

The *somerset backwards* should be practised at first slowly, the gymnast bending his back, raising at the same time his arms until he can place his hands on the ground (see fig. 12, par. 130). Once in this position he will find it an easy matter to throw up his legs (III).

The *free somerset backwards* is practised in the same manner as that forwards (IV), fig. 4.

The *cartwheel is a somerset sideways*, shewn fig. 5. (II). It can also be done without touching the ground with the hands (IV).

COOPERATIVE FREE EXERCISES.

134. COOPERATIVE free exercises are done without apparatus, but they cannot be done by a single individual and require

the co-operation of at least two persons. These exercises offer great variety, but in a work like ours, intended to be used in Men's Societies, we may fitly confine ourselves to a characteristic selection. Many of these exercises can be done by a large number of men at one and the same time "as mass-exercises" in the same way as the individual free exercises, others, like the building of pyramids, must be left for the voluntary practice, the director or some competent leader being at hand to direct their execution.

Exercises in which the gymnasts hold hands or arms.

135. These exercises offer a very great variety, in fact, most of the individual free exercises can be performed in this manner.

The gymnasts either clasp hands or hook them together, according to the character of the exercise to be performed. Sometimes the wrists may be grasped.

We suppose the men to fall in abreast in one or more lines. It is best to place them according to height. We then command — "Open lines (ranks) to the left — *march!* Arms — *down!* Clasp — *hands!*"

The men are now in a position to execute a variety of exercises, some of which we will describe.

136. a. The arms can be swung forwards and backwards, the men rising on tiptoe, with the backward swing.

b. This swinging forwards and backwards may be combined with a *longe* to the front.

c. The arms can be thrown out sideways. On the command, "Right arms — *up!*" each man, keeping hold of his neighbours hand, places his right fist close to his right shoulder. On the command, — "Arms to the left and right throw — *out!*" The right arms are thrown out, then the left arms, and so on.

d. All the balancing exercises may be done in this position, or with arms linked together, and they are in fact easier in consequence of the mutual support this position affords. — We can throw out the legs in all directions, bend the back forwards, touching the ground with the hands; sink and rise, squatting on heels, and so forth.

137. Another series of these exercises is done by men standing face to face.

a. The men hook hands, place the left leg forwards, the inner edge of the foot being placed against the inner edge of the partners foot. The

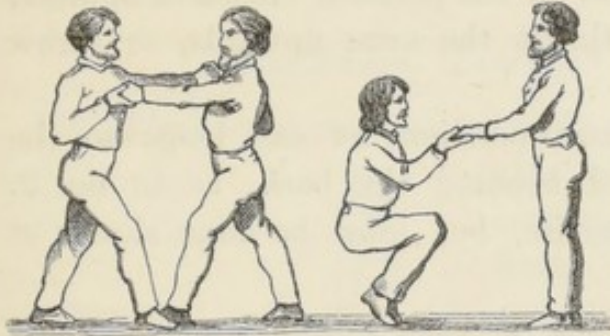


Fig. 1.

Fig. 2.

hands are then raised to the height of the shoulders, and the arms are thrust forwards alternately and with considerable force. This movement is begun slowly, and gradually increased to a very great

rapidity. Children call this exercises the "See-saw". Fig. 1.

The arms can be thrust forwards both at once, instead of alternately.

b. Sinking and rising, squatting on heels, when done by two lines facing each other and holding hands, has a fine appearance. One line should sink whilst the other rises. Fig. 2.

c. The position of the men may then be changed by ordering one line to step a pace sideways. The men then stand thus, —



No. 2 gives his left hand to No. 1, the other to No. 3. The exercises described above are then done in this position.

138. A third group of these exercises is done by men standing back to back.

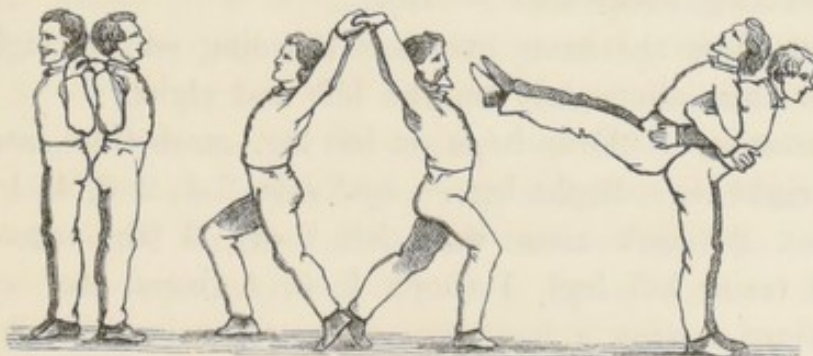


Fig. 1.

Fig. 2.

Fig. 3.

a. A pair standing face to face gets to stand back to back

if each man faces to the right about, raising the arms above the head, without letting go the hands. This well-known motion should be done repeatedly, and in regular cadence, facing alternately to the left and right about.

b. Standing back to back, in the position shewn in figure 1, and heel to heel, we can thrust the arms upwards, or throw them out sideways.

c. Starting from the same position we can lunge to the front, raising the arms and bending the back, as in fig. 2. This is a very effective exercise, but must be done slowly at first.

d. Two men standing back to back link arms. They are then in a position to do the exercise shewn in fig. 3, — a sort of see-saw, the men alternately raising each other.

Exercises in which the gymnasts hold each others legs.

139. Some of these exercises are not only strengthening, but they are also a source of much merriment.

We suppose the men to stand in a ring, one behind the other. Each man places his left hand upon the shoulder of the man in front of him, raises his right leg forwards, and grasps the right leg of the man behind him with his right hand.

The leader then carries out the following exercises:

“Left leg 4 times bend and stretch — *bend!*” 1, 2, 3, 4.

“On left leg 8 times hop, without gaining ground — *hop!*”

“On left leg forwards — *hop!*” 1, 2, 3 etc.

“On left leg backwards — *hop!*”

He then does the same exercises standing on the right leg, and after this, alternately on the left and right.

For instance, — “Four hops on left leg, mark time, and four hops on right leg. Right leg — *up! hop!*” 1, 2, 3, 4. 1 (right leg down), 2 (mark time with left foot), 3 (the same with right), 4 (raise left leg), 1 (hop), 2, 3, 4 (hops) etc.

Instead of raising a leg forwards we can raise it backwards, the man behind laying hold of the instep.

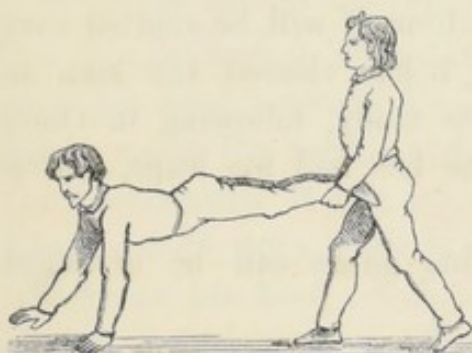
Standing abreast we can raise a leg sideways, our neigh-

bour on the left or right laying hold of it, and hop in the manner indicated above.

Standing face to face we can mutually take hold of our legs raised forwards, or when standing back to back, of legs raised backwards.

Miscellaneous Exercises for two men.

140. The *barrow* exercise is highly amusing and strengthening also as far as the barrow is concerned. The "barrow" goes down into the leaning position and opens his legs. The bunter places himself between the legs, raises them off the ground, when the barrow begins to walk forwards or backwards, as the case may be. By raising the legs above the shoulders this can be made a good preliminary exercises for standing and walking on the hands. —



By raising the legs above the shoulders this can be made a good preliminary exercises for standing and walking on the hands. —



Fig. 1.

Fig. 2.

Fig. 3.

The *roll* in shewn in fig. 1, the *wheel*, chest to chest in fig. 2, the *wheel*, back to back will be understood on reference to fig. 3, par. 138; the *wheel*, standing on the hands is shewn in fig. 3. This latter will require some explanation. On starting, A stands astride forwards, his back bent to some degree, and the arms raised sideways and bent. B stands behind A, he rises on his hands and throws his legs over A's shoulders. A at once grasps B's legs, bends further forward, until A is seated upon his shoulders and finally reaches the ground, when he puts himself in the position previously occupied by A, whilst A rises on his hands, and so forth.

141. *Leap-frog* is a favourite exercise amongst boys. One boy or man stands, the second vaults or leaps. The position of the former is shewn in the annexed woodcut. When there are a great number of players they take their position in a large ring, each man about 4 paces from the other. When all have taken their positions No. 1 starts and vaults without stopping over the whole of the men until he has returned to his old place, when he himself will be vaulted over by all the rest. As soon as No. 1 has cleared the man in front of him, that man himself gets ready, following in One's wake, and thus on, until every one has had his leaps, and is back at his starting place.



Other modes of carrying on this game can be arranged easily.

For the various modes of leaping, or rather vaulting, see "*Buck*" chapter XIII.

Some kindred exercises may be mentioned.

Two men standing abreast link arms, and a third man, taking a run from the rear, and placing his hands upon their shoulders vaults squatting or straddling over them, or throws a somerset, etc.

The bodies of living man afford indeed bases of support similar to those offered by apparatus. Exercises of this kind may be called into requisition on all occasions when apparatus is not at hand, as during a halt when on a pedestrian tour etc.

Carrying.

Sufficient attention is not generally paid to this group of exercises, though they are really of some service in active life.

142. *One man (A) carried by two (B and C).* —

a. A lies on the ground, B takes hold of him beneath the arms, C between the legs (I).

b. B and C prepare a seat for A by taking hold of their left and right wrists, the inside arms forming a back (I).

c. B and C stand side by side, their arms hanging down. The inner hands are bent, so as to form a sort of stirrup,

upon which A steps, supporting himself at the same time upon the shoulders of his bearers.

d. B and C stand side by side. A supports himself upon their shoulders in the rest. (I, kneeling II, standing III, or even standing upon the hands IV.)

143. *One man (A) carried by one man (B).*

a. A is carried like a sack, over the shoulder (I).

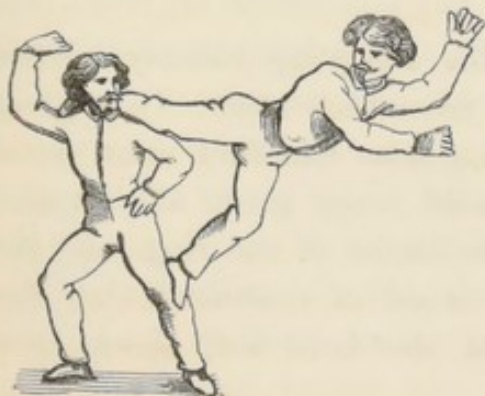
b. He is carried on the back, pick-a-pack.

c. He is carried sitting on the shoulders. A straddles, B puts his head between A's legs and raises him up. A puts his instep upon B's back, and B holds A's legs with the arms. On dismounting B lets go A's legs, A puts his hands on B's head, and B stops until A's legs touch the ground, when he withdraws his head — A much more showy way of mounting on A's shoulders is as follows. A and B stand behind each other. B takes hold of A's hands, both bend the legs, A springs off the ground (B assisting his effort by lifting him up) straddles, and comes down upon A's shoulders (II).

d. A is carried whilst in the rest upon B's shoulders.

e. A is carried kneeling or standing upon B's shoulders. B puts the left hand behind, and raises the right above the shoulder for A to lay hold off. B places his left foot in to B's left hand; grasps with his right B's right hand; raises himself, and puts first his right foot and then the left foot upon B's shoulder. B then lays hold of A's legs.

f. B can carry his man standing on the head, his arms, or head-downmost on his hands.



g. B stands astride with bent legs; A stands on his right side, puts his left leg upon B's left thigh, and hooks his right leg round B's neck (III). See the annexed cut.

144. *Two men (or more) carried by one man (A).*

a. A can carry his men upon

the shoulders, sitting astride and facing each other, or sitting sideways, looking to the front.

b. Other modes of several men being carried are shewn in the annexed cuts.



Carrying with the aid of poles etc. we only mention here as belonging to this class of exercises. We shall notice it more at length under "Wands".

145. Several other co-operative exercises may be included under the head of carrying. One of these is *tossing*. Two lines of at least 4 men each, stand face to face. Those opposite to each other hook hands. The man to be tossed leaps into the bed thus provided for him, and his comrades toss him up, higher and higher, simultaneously bending the knees and raising or lowering the arms. The *tossee* must keep himself perfectly straight his arms extended above the head. — When the number of *tossers* is large, the *tossee* may be propelled from one end of the row to the other — he is being "floated".

Rinsing a glass is done in the following manner. Eight men form a ring, at arm's length from each other. They grasp hands and tell off in twos. Having done this they move round to the left or right. On the word being given all the ones drop down, their feet towards the centre of the ring, and the body perfectly straight. On the word of command they rise into their original position, and the twos drop down, and so forth.

PYRAMIDS.

146. This group of exercises may prove of real advantage for climbing walls or entering houses, whilst at the same time it proves a great attraction. It offers an almost unlimited extent of variations, much resorted to by professional gymnasts. We confine ourselves here to a few leading exercises, and those of our readers, who take pleasure in this sort of exercise, can easily add others.

Beginners should not be permitted to join in these exercises. All precautions must be taken against a heavy fall. A soft ground, the wrestling ring for instance, answers all requirements, and an ordinary climbing rope, suspended from the ceiling, and around which the pyramid is built up, may prove of great advantage. The men should wear soft shoes, and, for some exercises at least, narrow leather belts.

Conical Pyramids.

147. In a conical pyramid three or more men form the basement story. We give a few examples of such pyramids.

a. The conical pyramid, the men of the 2nd. story sitting on the shoulders of those of the first, is very easy. Eight men are required. They are placed in one line abreast, and then carry out the following orders. — "Tell off in twos! The twos to the front of the ones, forwards — *march!*"



"Pairs one to three, attention! Pair three stand at ease! The twos straddle sideways — *jump!* The ones stoop down, put hands on knees and put their heads through the legs of the ones — *through!* The ones rise — *up!*" (The twos then



Fig. 1.

sit upon the shoulders of the ones, and they put their feet right upon the backs of their bearers, as shewn in our illustration.) These three pairs then step together, the bearers grasping each other at the shoulders. — No. 1 of the remaining pair stands upon the shoulders of No. 2, who carries him to the pyramid, and No. 1 then climbs on the top of it. —

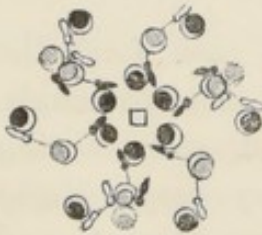
On breaking up, the top most man either leaps or climbs down on the outside. The bearers then let go shoulders, and the riders dismount.



Fig. 2.

b. A conical pyramid of three stories, standing upon the shoulders of the bearers, is shewn in the annexed woodcut. Instead of each bearer carrying a separate man he can carry half of the weight of two men (compare fig. 5). In the latter case the three men of the basement take their positions and place their arms upon each others shoulders. The men of the first story then go into the rest upon the arms, straddle and place their feet upon the shoulders of two bearers.

c. A conical pyramid of 4 stories is shewn in the annexed ground plan, the arms being left out in order to make the plan more clear.



● Base- 2nd. Third. Fourth
ment. story. story. story.
Fig. 3.

The basement story consists of 6 outside and 6 inside men. The outside men face inwards extend their arms sideways and place them upon each others shoulders. The inside men face outwards, extend both arms forwards and place their hands upon the shoulders of the outside men.

The second story consists of 6 men they stand astraddle, with the right foot upon the right shoulder of an inside man, and with the left on the right shoulder of an outside man. The feet are turned well out. They face to the right and grasp each others upper arms.

The third story includes three men, men in whom confidence can be placed. They stand upon the shoulders of the men of the 2nd. story, as in fig. 2.

The 4th. story only includes one man, a "light weight".

Flat Pyramids.

148. The basement of these pyramids is formed by a line. Fig. 5 can be built facing a wall. The basement grasp shoulders and squat on heels. The second story mounts and does

the same etc. And when all have mounted the whole rise, by word of command.

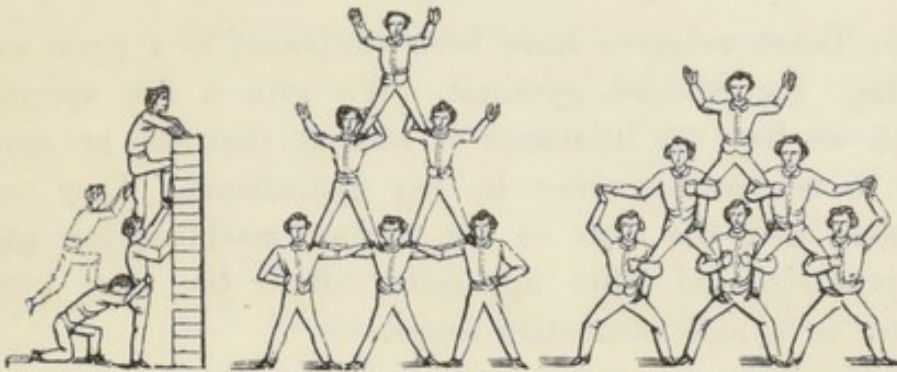


Fig. 4.

Fig. 5.

Fig. 6.

Groups and Tableaux.

We confine ourselves to giving two examples.



Fig. 1.

Fig. 2.

Some fourteen designs will be found on the Munich "Bilderbogen" Nos. 251 and 252, 2d. each.



DUPLICATED MOVEMENTS.

149. THESE exercises have been cultivated to a great extent by Ling, the Swedish gymnast. We give a few specimens, though we have no hesitation in stating, that they are scarcely likely to become favourites in any gymnasium. They can be dispensed with the more as the various machines for pulling and pushing, and other apparatus, afford the same kind of exercise in a more attractive shape. —

In these exercises the movements of each limb put in use are met by a regulated resistance. This resistance can be offered by the gymnast himself. For instance, he can extend his left arm horizontally forwards, and placing his right hand upon it, can exercise upon it a certain amount of pressure, thus bringing into play the antagonistic groups of muscles. Or, when afflicted with a cramp in his calf, he can lie down on



the ground, bend his left foot, and placing the right knee into the hough, and the toes of the right foot against the heel of the left, can bring it down to the ground, the left foot, all the while offering a certain amount of resistance.

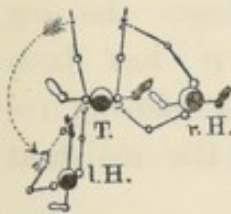
In more frequent instances the resistance is offered by one or two assistants. The gymnast is either ordered to make a certain movement and the assistants impede his doing it, or he is put in a certain position and ordered to resist to a certain degree the efforts of the assistants to remove him from it. In the former instance a contraction or so called duplicated concentric movement takes place, in the second an extension of the muscles, or a duplicated excentric movement.

The subjoined are a few examples.

a. The gymnast extends both arms horizontally sideways. The assistant steps behind him, places his hands upon those of the gymnast and presses the arms down until they hang by the sides, the gymnast offering a certain amount of resistance.

b. Having done this the gymnast again raises his arms sideways, the assistant impeding this movement.

c. The annexed diagram illustrates a chest expanding exercise. The men stand in a line abreast and tell off in threes.



Every first and third man then acts as assistant (H), while the second is the subject operated upon.

When the men are told off, 1 and 3 are ordered a short step backwards, and all men are then made to stand astride sideways. The following orders are then carried out. "Number *one*, both

arms horizontally forwards raise (knuckles outside) — *up!* One and three, with your outside hand grasp the wrist of one — *grasp!* Your inside hand upon one's shoulder — *place!*" On the word of command being given the assistants pull the arm they hold backwards, the gymnast offering a certain amount of resistance. When the arm is in the position indicated in our drawing, it is kept there for about ten seconds, and it is then brought again to the front, the assistant offering a certain resistance to this movement. This exercise may be varied in the following way. The gymnast is told to bring his arms backwards, whilst the assistants oppose some resistance to this movement; and in bringing the arms again to the front the gymnast himself offers the resistance. The arms of the gymnast must be kept straight and in a horizontal position.

d. *Twisting the body* is carried on in the following manner. The men stand in two ranks, those in the first rank are the gymnasts, those in the second the assistants. — "First rank astride to the left — *stand!* Hands on hips — *place!* — Second rank grasp upper arms of first rank, close to elbows — *grasp!*" We have thus the starting position. The assistants, by pulling with the right and pushing with the left hand can twist the gymnast's body to the right, the latter offering some resistance; or, by pulling with the left and pushing with the right they can render this twisting more or less difficult when the gymnast attempts it. This movement, as a matter of course, is done also to the left.

e. A *leg exercise* is shown in our illustration. One of the assistants raises the leg of the gymnast, the latter offering resistance; or the gymnast raises his leg, the assistant resisting; or the assistant presses the leg downwards after it has been raised, the gymnast offering resistance; or the gymnast lowers his leg, whilst the assistant resists this.



These examples will suffice to characterize the duplicated movements. They are essentially different from the antagonistic exercises to be described hereafter, and some of which, as far as outward appearances go, bear a great resemblance to them. Those taking a special interest in these exercises may purchase some work on Medical gymnastics (Nietzsche, *Widerstandsbewegungen*, Dresden 1861). We only repeat that exercises with weights and at some of the simple machines to be described hereafter have the same physiological effect, and offer, moreover, the advantage of its being possible to determine the resistance to be offered with greater accuracy.

XI. TACTO-GYMNASTICAL EXERCISES.

150. Tacto-gymnastical exercises are performed simultaneously by a number of men acting in unison with each other, and according to a certain order. Many of the movements described are similar in character to the movements of soldiers, and they answer the same purpose, but as a rule the gymnastic element should be made to prevail.

We have made use of the military words of command as far as they appeared suited to our purpose. Each command includes an explanatory part (the "caution") and a word of execution. The former is pronounced distinctly, and slowly,—the latter decisively and sharply, a slight pause intervening.

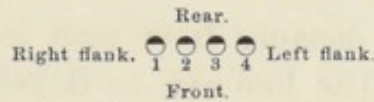
The tactical exercises should never be practised long at a time, or they grow tedious, but the Director may recur to

them frequently, and by combining and alternating them with free or other exercises which can be done by a large number simultaneously, he can by degrees make them familiar and teach his men to appreciate them.

THE LINE.

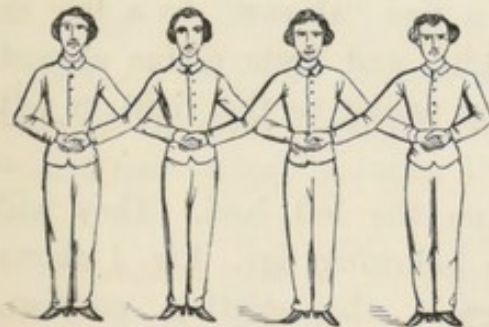
151. In describing these exercises we start from a line of men, standing abreast or side by side, or one behind the other.

In a line abreast, the men stand side by side. They fall



in on the words — “In line abreast fall — *in!*” The leader takes his position facing the squad, and having placed the first man the rest fall in according to height.

The men dress on the words “Eyes — *right!* *Dress!* Eyes — *front!*” The first man looks straight to the front; the rest move steadily into line, without stooping, until they are able to see the lower part of the face of the second man beyond, and touch the next man with the thick part of the



arm, immediately below the elbow. A line like this is called a close line. In a “*linked line*” the connection between the men is however, closer still. They can stand arm-in-arm, arms round shoulders, hand-in-hand; hand-in-hand

with arms crossed etc.

152. The line is opened on the word of command, — “Open line to the right (left) — *march!*” and the original close position is restored on the words, — “To the right (left) close — *march!*” *

* The Military command “close”, when used for the march sideways is absurd.

When we wish to have the men at double distance we command, — “hands — *grasp!* Open line to the right (left) — *march!* Arms — *down!*”

Instead of opening a line from one of the flanks we can open it from the centre, or from any man designated by the leader (“open line from the centre — *march!*” when the men open towards both flanks).

153. When the men stand one behind the other they are said to stand in *flank*.

Right flank.
● ● ● ●
Left flank.

In close order the distance from man to man is equal to a pace of 30 inches. The line can be linked, by requiring the men to place their hands upon the shoulders of the men in front of them, or holding him round the waist, or in the manner indicated par. 139. —

The men of a “line in flank” dress by looking straight to the front, and “covering” each other, that is each man must see only the head of his front-man. The distance is regulated by extending the arms forwards, and touching the shoulder-blade of the man in front, while the arms are kept straight.

154. *Facings*. We pass from a line “abreast” to a line in flank, by facing to the left or right, and from a line abreast or in flank to a diagonal line, by facing to the right or left half.

The facings are made always on the left heel. They will be understood on reference to the following figs. Fig. 1 shows

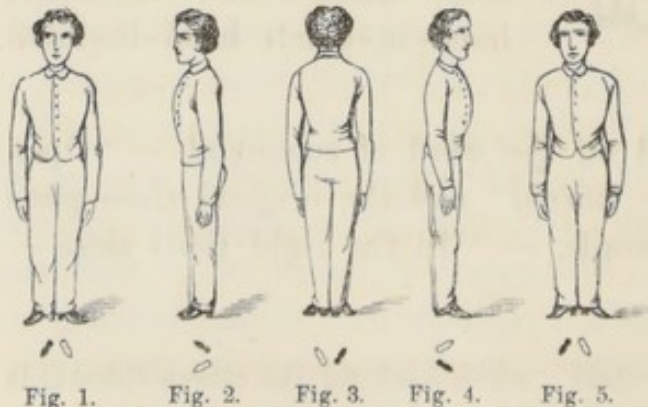


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

the starting position, fig. 2 has faced to the right (one quarter of a circle), fig. 3 to the right about, fig. 4 three quarters to the right about, and fig. 5 four quarters to the right about, — the lat-

ter by no means easy. "To the right half — *face!*" is intermediate between 1 and 2, that is we turn one eighth of a circle.*

The facings to the left are done in a similar manner.

155. *Marching.* A line standing abreast can march to the front (forwards), sidwards, backwards and in a diagonal direction. The words of command are "Forwards, quick step (or any other step, including the balance steps etc. described amongst the free exercises) — *march!*" The words, "Line (squad) — *halt!*" are given as the moving foot is about to come to the ground. The other foot is then placed on a line with it. On starting the men always step out with the left foot; the first step must have the full length of 30 inches.

The steps in marching sidwards are shorter, and so are those backwards. The men always keep their "touch" towards the right.

The facings should be practised on the move. The command is then "To the right — *turn!*" or "to the right about — *turn!*" In the former case the word "*turn*" is given as the left foot comes to the ground; the turn about is done in three short paces.

The *diagonal march* is commanded as follows. — "Right half — *face!* quick — *march! halt! front!*" Or when on the move, — "Right half — *turn! front!*"

156. *Wheeling.* A line abreast can wheel forwards and backwards, from the halt or on the move. The man around whom they wheel is called the *pivot*.

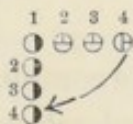


Fig. 1.

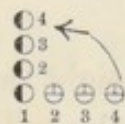


Fig. 2.



Fig. 3.

In wheeling the men turn the eyes towards the "wheeling flank", and keep touch towards the pivot man. Our figures show

"Right wheel (forwards) — *march!*" Fig. 1.

"On the right, wheel backwards — *march!*" Fig. 2.

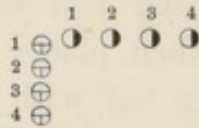
"On the centre, left wheel — *march!*" Fig. 3.

* More logically we ought to say to the right quarter, half, three quarters etc. *face!*

When wheeling on the move the men move to the front on the word *forward!*

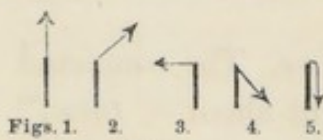
We distinguish between quarter, half, three-quarter and four-quarter wheels. After having done a four-quarter wheel, we, as a matter of course, find ourselves in the original position.

A *line in flank* can wheel to the right or left, either round the first or round the last man as a pivot, though this is not done generally.



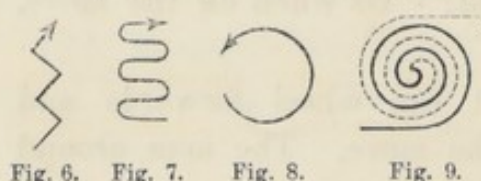
157. *Marching of a flank-line.* A flank line can march forwards, sideways (by the side step) and backwards. We will confine ourselves to the march forwards.

The command is simply "forwards — *march!*" when the line is to move straight to the front (fig. 1).

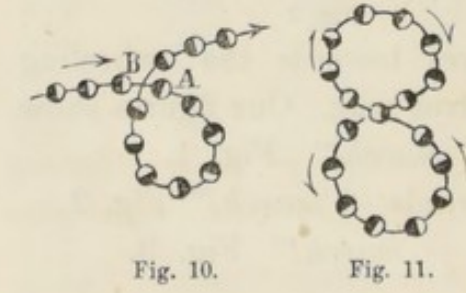


Marching at an obtuse angle to the right, at a right angle to the left, at an acute angle to the right, and the countermarch to the right are shown in diagrams 2 to 5.

A *flank-line* can also move in zig-zag (fig. 6), in a serpentine line (fig. 7), in a ring (fig. 8), or in a maze (fig. 9), the whole of which is easily understood on reference to our diagrams. As a general rule the men run whilst describing these figures.



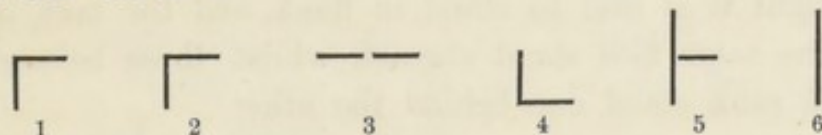
The "loop" and the figure of "eight" are more complicated but they also will be understood on reference to figs. 10 and 11. When making a "loop", running or walking, the leader, on arriving at A leaves the straight direction, turns off towards the right, and intersects the line at B, when alternately a man runs across and one past.



There must be no stoppage. The figure of "eight" is done in a similar manner.

Changes of Position in Line.

158. The men forming a line can change their positions in various manners, some of which we will notice. We start with a line abreast.



"Form in front of the first man — *march!*" (Fig. 1.)

"Form to the left of the last man backwards — *march!*" (Fig. 2.)

"Form to the right of the first man — *march!*" (The men face to the right and take up their positions as indicated in the diagram; they can do this passing in front or to the rear.) (Fig. 3.)

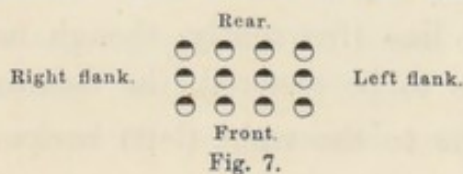
"Form in rear of the first man, backwards — *march!*" (Fig. 4.)

"Form in rear of the last man; right about — *face! March!*" (This is the ancient Spartan counter-march.) (Fig. 5.)

"Form in front of the first man — *march!* To the right about — *face!*" (This is the ancient Macedonian counter-march.) (Fig. 6.)

THE COLUMN.

159. *The Column* consists of two or more lines standing one behind the other. The terms front and rear, right and

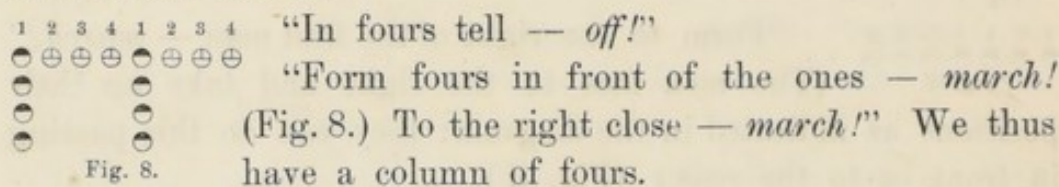


left flank are used in the same manner as with a line. When a column stands in front, as above, the men standing side by side (abreast) are called Ranks, and the men standing one behind the other are called files. If we face the above column to the right it is said to stand in flank, and the men belonging to the same files stand abreast, whilst those belonging to the same rank stand one behind the other.

A column can be in close or in open order (open ranks to the left — *march!*).

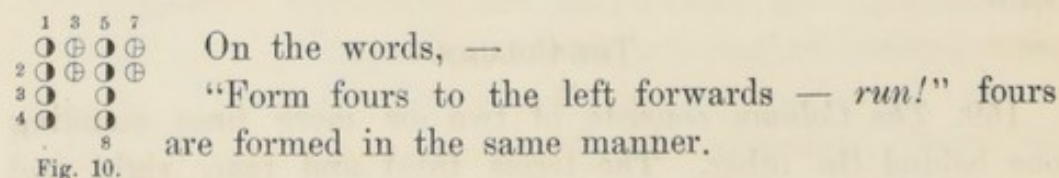
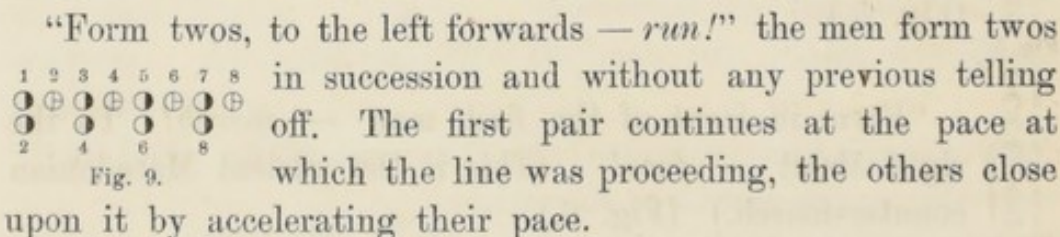
A column marches forwards, backwards, sideways or in a diagonal direction in exactly the same manner as a line.

160. *Formation of the Column from a Line.* We start again from a line abreast.



Instead of forming in front, we can wheel in fours to the left or right. The men having told off, the command is, — "In fours to the right wheel — *march! Halt!*"

161. A flank-line forms column in the following manner. We suppose the flank line to be on the move. On the word of command, —



When the single line (frequently, though not quite correctly called single file) is to be restored, the command is, —

"Form single line to the right (left) backwards — *march!*"

The man on the right flank of the first breast-line or rank then continues at a run, but the rest mark time until they find space to fall into line.

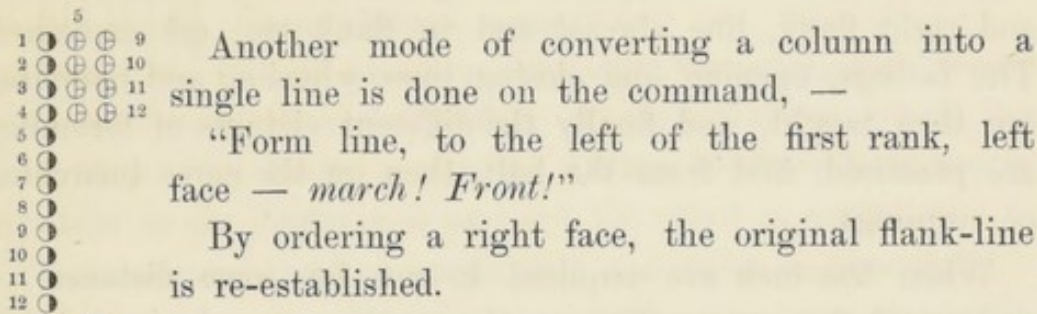


Fig. 11.

We suppose the men to stand again in a column of three ranks

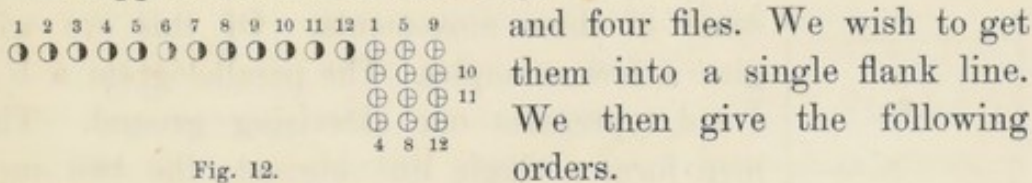


Fig. 12.

“To the right — *face!* First rank at a right angle to the left — *march!*” Other ranks follow the first! (Fig. 12.)

162. *Wheeling* is done always on a “moveable pivot”, that is the pivot-man does not keep his position during the wheel, but moves round a quarter or a half circle, as the case may be, the radius of which is about five feet.

163. *Reversing the Front.* The simplest way of doing this is by facing about.

The front may be reversed also by the counter-march in files. The column, however, must be at open order, if it is desired to do this. The words of command are, — “Counter-march in files, to the right (left) — *march! Halt!*” This mode of reversing the front was in use amongst the ancient Persians. The Spartan and Macedonian countermarches have been explained par. 158. —

COMBINATIONS OF THE ABOVE MOVEMENTS.

164. The above movements will be found quite sufficient for the gymnasium as well as for out of door work (festivals etc.). They must not, however, be practised pedantically. All we

want is that our men should be able to move in order and to assume with some degree of precision the simple formations explained above. — At first the expressions rank and file, left and right flank, line abreast and in flank etc. are explained. The facings, opening and closing lines, wheeling and marching are then taught, and finally the different changes of formation are practised, first from the halt, then on the move (marching or running).

When the men are required to run for some distance, — a very wholesome practice, — the exercise may be varied and rendered more interesting at the same time by introducing some of these movements. Of this we will give a few examples. The parallelogram a b c f e d represents our exercising ground. The men form a single line abreast, the two men on each flank having been selected for their intelligence.

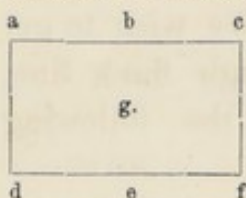


Fig. 13.

This line faces to the left, and on the word, — *Run!* — it enters the practice ground at e, turns to the right, and runs round in the direction f c b a d e.

The following words of command are then given and executed (—→ indicates the line and the direction in which it runs). —

“Countermarch to the right — *run!*”

“Countermarch to the left — *run!*”

“Form twos, to the left forwards — *run!*”

On arriving at b.

“Left wheel — *run!*”

On arriving near e.

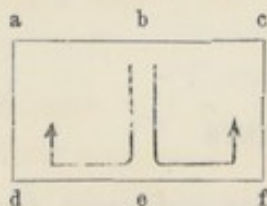


Fig. 14.

“At right angles, left line to the left, right to the right, — *run!*” (Fig. 14.)

Both lines will then meet at b, when the order is given —

“*Pass on right (or left)!*”

Both lines thus meet again at e, when the leader commands, —

“Form twos, to the centre — *run!*” (Fig. 15.)

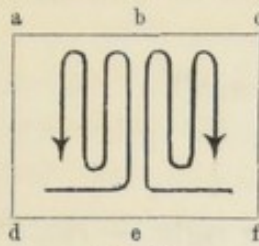


Fig. 15.

Arrived near b, he commands, —

“Countermarch on the outside, to the left and right — *run!*”

and he repeats the word “countermarch” every time the leaders of each line approach the limits a c or d f. When the lines have nearly

advanced to the limits a d and c f the word is given, —

“Countermarch on the inside, left and right — *march!*”

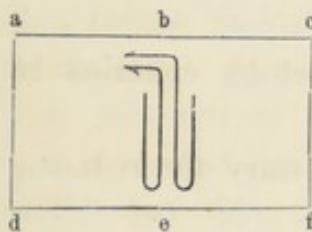


Fig. 16.

By this movement the lines gradually approach each other, and when they are close together, the word is given, —

“In pairs to the left — *run!*” (Fig. 16.)

On again approaching the centre of the practice ground, the command is given, —

“Mazes, to the left and right — *run!*” (Fig. 17.)

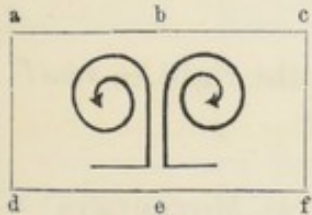
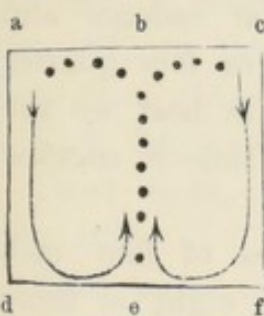


Fig. 17.

By the time these mazes are done our men will be pretty well tired. We therefore let them break off into a single line, and thus leave them as they were at first.*

165. *Formation of a column from a line.* A capital way of



forming a column from line is as follows. Our practice ground is as before. Our men enter it at e in a single line (file) running. When the first man arrives at b, the order is given, —

“One man to the left, one to the right — *run!*”

The first man then runs round to the left, the second to the right, the third again to the left and so on. At e, where the two lines meet, the command is given to form twos.

The first man then links his arm into that of the second man, and the pair runs towards b, the third man forms a pair

* After a run of this kind the men must march about at a walk, singing in chorus etc., until perfectly cool, or they must put on their coats.

with the fourth etc. and we have then a column of two files.
At b the order is given

“One pair to the left, one to the right — *run!*”

This is followed by the following commands, —

At a, — “*Form fours!*”

At b, — “Four to the left, four to the right — *run!*”

At e, — “*Form eights!*”

At b, — “Eight to the left, eight to the right — *run!*”

At e, — “*Form sixteens!*”

At b, — “Attention — *halt!*”

We have thus a column each rank of which contains 16 men abreast.

The following words of command are necessary for reducing this column again to a single line.

From the halt, at b, — “Eight of each rank (*wheel*) to the left, eight to the right — *run!*”

At e, — “*Form eights!*”

At b, — “Four to the left, four to the right — *run!*”

At e, — “*Form fours!*” etc.

FREE EXERCISES IN COMBINATION WITH TACTICAL MOVEMENTS.

166. These exercises are done generally by a number of men placed in column, and moving in regular cadence and rythm. We adopt for our examples common or four quarter time. Music may accompany these exercises (a beat on the drum properly accentuated will suffice), or the time is counted by the leader, . . . 1, 2, 3, 4 etc.

○ ○ ○ ○ Our men are placed in four lines of four men
○ ○ ○ ○ each, but each line may contain six, eight or more
○ ○ ○ ○ men. They are in open orders.

FIRST EXAMPLE.

Introduction.

167. a. *16 quarters* (1 to 16). The men place their arms side-wards upon each others shoulders, and make four testing steps to the front (described par. 109).

b. *16 quarters.* Four testing steps to the rear.

First Part.

c. *16 quarters.* Grasp hands, place left foot astride forwards, swing arms forwards and backwards bending the back, and stamp with the left foot with each forward swing.

d. *16 quarters.* Sink and rise squatting on heels 8 times, thrusting arms upwards. On the 16th. quarter face to the right and again grasp hands of next men (par. 103).

e. *16 quarters.* Swing arms forwards and backwards as before.

f. *16 quarters.* Circular motion of the arms in front and clap behind (see fig. 6, par. 97). Face to the left and grasp hands.

g. *16 quarters.* Swing arms as before.

h. *16 quarters.* Raise and lower legs diagonally forwards (fig. 3, par. 82). Face to the left and grasp hands.

i. *16 quarters.* Swing arms as before.

k. *16 quarters.* Lunge out and thrust to the left and right, four times. Face to the left (par. 104).

Second Part.

Our men now find themselves again in their original position, and the first part of our exercise is completed. The second part is done in the same manner, as the first, and contains therefore 8 times 16 or 128 quarters, but instead of facing to the left, we face to the right, and instead of the exercises mentioned above we introduce the following four, —

Kick thighs jumping, grasping hands of next men (par. 122).

Twist body, bend back and swing arms upwards (fig. 6, par. 105).

Raise knees to chest (fig. 15, par. 88).

Gladiators position (par. 104, d).

Conclusion.

16 quarters. Four testing steps to the front; on the last step face to the left about on the ball of the left foot.

16 quarters. Four testing steps to the front, beginning with the right foot, face to the left about as above.

We have now our men in their original position. The entire

set of exercises contains 320 quarters, and can be done in less than five minutes.

SECOND EXAMPLE.

168. The men are placed as before.

Introduction.

8 quarters. In each rank form to the left of the last man! This is done in eight paces, the last of which is accentuated by a stamp on the ground (fig. 3, par. 158).

8 quarters. In each file, form in front of the first man (fig. 1, par. 158).

8 quarters. In each rank form to the right of the first man (fig. 3, par. 158).

8 quarters. In each file form to the rear of the last man. The last man remains, the others face about and go to their places (fig. 5, par. 158).

The original position having thus been regained we proceed to the

Principal Part.

8 quarters. In each file form in front of the first man, $\begin{matrix} 1 \circ 4 \\ 2 \circ 3 \\ 3 \circ 2 \\ 4 \circ 1 \end{matrix}$ without gaining ground. By this manoeuvre 4 takes the place of 1, 3 of 2, 2 of 3 and 1 of 4. Nos. 1 to 3 walk in succession backwards to their new places.

8 quarters. The first of the Free Exercises introduced into our first example, or some other suitable exercise.

8 quarters. In each file form in front of the first man, without gaining ground.

This is succeeded by the second exercise, and so on, until all the exercises are done.

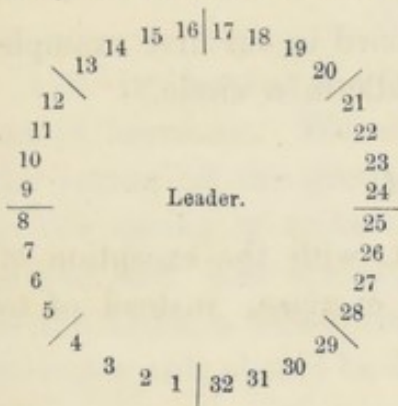
Conclusion.

32 quarters. The men march four times eight paces to the front, facing to the left after each eight paces, and stamping every 1st. and 4th. pace.

THIRD EXAMPLE.

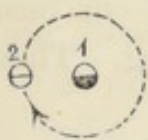
169. We require 32 men who are placed in one line abreast and told off in fours (1 to 4, 5 to 8 etc. of our diagrams).

They are then ordered to form a ring. All grasp hands. The



men in the centre (16 and 17) remain in their places, and both flanks advance forwards. Before the exercise is begun the men must be well dressed by the leader, who takes his position in the centre. They are to stand at arm's length from each other.

Introduction.



8 quarters. Even numbers (2, 4 etc.) walk round their right hand man in eight paces. On the last pace a stamp.

8 quarters. Twirl step to the left, in 4 quarters and back to the right in four quarters (see par. 114).

8 quarters. Odd numbers walk round their right hand man as above.

8 quarters. Twirl step as above.

8 quarters. Fours close upon centre (see par. 152) and arm in arm four-quarter right wheel (par. 156).



8 quarters. In fours 4 paces backwards, and four-quarter wheel in pairs.

8 quarters. In fours, 4 paces forwards, and four-quarter wheel in pairs.

8 quarters. In fours, four-quarter wheel to the left, at the close of which the men have their original places in the ring, grasp hands, and raise their fists to the shoulders.

First Part.

8 quarters. Thrust arms to the left and right, bending the knee in the direction of the thrust. On the last quarter let go hands and face to the right.



8 quarters. In fours walk a circle, as indicated in the annexed wood-cut.

8 quarters. The first of the free exercises described in our first example.

8 quarters. The circles, as before.

The remaining three exercises mentioned in our first example follow now in alternation with the walk in a circle.

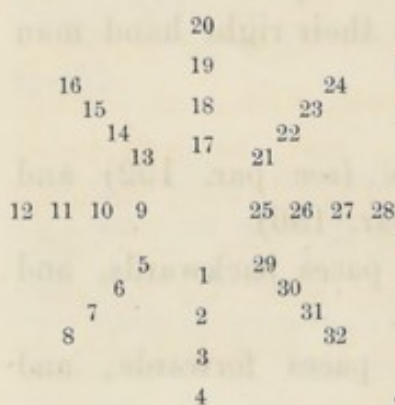
The Second Part

is in all respects similar to the first, with the exception of the men facing to the left after each exercise, instead of to the right.

Conclusion.

After having done the last of the free exercises our men find themselves in their original positions in the ring. They then finish in the following manner.

16 quarters. Face to the right and walk in the ring.



8 quarters. In fours to the centre, forming the star. The last four quarters mark time.

16 quarters. Face to the left and wheel round the centre of the star forwards.

16 quarters. Face to the right about and wheel round the centre of the star.

8 quarters. In fours, countermarch to the right and back to the original position in the ring.

These three examples sufficiently indicate a method of combining free and tactical exercises, which is of great value for boys' and ladies' classes, and which ought not to be entirely neglected by men.

We need hardly add that, instead of introducing free exercises, dumb-bell, wand or ball-bar exercises, or swords and lances may be introduced, without depriving these rhythmical movements of their distinctive character.

XII. LEAPING.

170. IN leaping the joints of the hips, knees and feet should act in harmony. We divide each leap into three motions, the spring off the ground, the flight, and the landing.

We *spring off* (take off) with the toes or balls of both or of one foot. The springing off may be assisted by a swinging of the arms, a fore-spring on the spot, or by a run. Elastic spring-boards should be discarded. Stiff spring-boards, however, may prove of service, especially with beginners, though gymnasts should accustom themselves to spring off the floor or the bare ground.

The *flight*. The position of the arms should be calculated to assist in keeping the leapers equilibrium and to insure his reaching the ground in a proper manner. When it is proposed to turn or face about during the leap, the arms give the impulse. A great number of movements, such as clapping of hands, throwing up and catching a ball, tilting at a ring, throwing the javelin at a target etc., may be introduced during the flight advantageously, for they all tend towards rendering the movements of the gymnast free and easy. The legs are bent less or more, but it is optional, for the sake of practice and variety, to order them to be kept straight, to straddle etc.

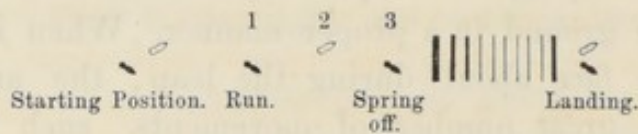
The *landing*. The first consideration is preservation from injury, and in this respect soft ground or a mattress will do good service. Nevertheless our men should be taught to come down on the natural ground, after some preliminary practice, and to seek safety in a correct manner of springing down. The balls of the feet touch first, and as soon as they do so, the legs yield by bending the joints of the feet, legs, and hip, and immediately afterwards they are again extended. This action breaks the force of the shock.

Attention is next to be directed to beauty and steadiness of execution. The gymnast must manage to come down steadily, without being forced to step forwards, still less to fall on his hands.

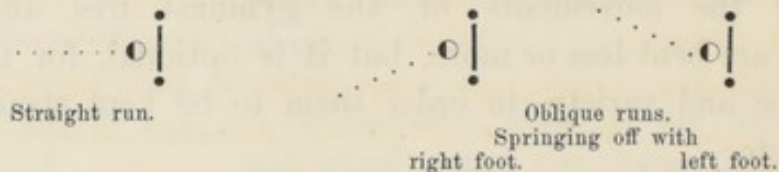
As a rule we come down on both feet; springing down on one foot, however, may be practised, and having sprung off with the right, we come down on the left and vice-versa.

171. A *Run* is of great advantage in the long leap, of less in the high leap and of none at all in the deep leap. Very long runs should be discountenanced; six or eight paces are amply sufficient. On approaching the obstacle to be cleared the paces are shortened and accelerated; the leaper keeps his eye directed to the spot from which he intends to spring off, but the moment he has reached it, he looks to the obstacle to be cleared.

Beginners should be carefully practised in taking a run, beginning with a short run of three paces, as shown in our diagram.



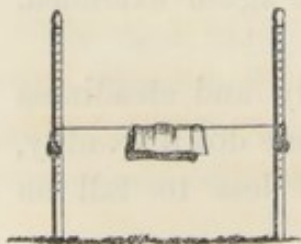
The run, with reference to the obstacle to be cleared, is either straight or oblique, the former being most advantageous for a long leap, the latter for a high leap.



A leader of a squad should pay the greatest attention to correct and graceful execution of each leap. On starting, the rope must be placed low, so that even the worst leaper of the squad may be able to clear it with ease.

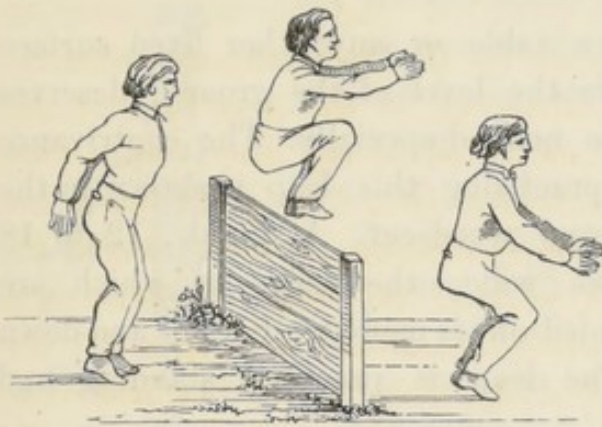
HIGH LEAP.

Apparatus. A leaping stand, two uprights, 7 feet high, perforated for pins from 2 to 2 inches, placed on or in the ground 6 to 8 feet apart. — A rope 10 to 12 feet long, having a canvass bag at each end and a stripe of red cloth in the centre. A stick may be substituted for the rope.



Hurdles, a barrier or a wall should be used occasionally, the latter with great care.

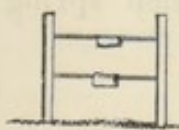
172. After having sprung off the ground the knees are drawn up to the chest and the arms thrown up. On coming down the legs are straightened, but on touching the ground (with the balls of the feet) they are bent again, yielding thus to break the shock.



We begin the exercises by clearing the rope from a standing position. A fore-spring or preliminary spring may be introduced advantageously. We thus leap forwards, sideways and backwards. We then turn during the leap, straddle the legs, raise the arms sideways or forwards etc. The rope is next cleared with a run, but still springing off with both feet.

Having sufficiently practised springing off with both feet we practise springing off with one only. This is the usual mode when leaping with a run. A well trained leaper should be able without difficulty, to spring off equally well with the left and right foot.

The "window leap" is a leap between two ropes, placed one above the other, as indicated in the annexed woodcut, or through a hoop held by a comrade.



Long leaps may be combined with high leaps. One of the most attractive modes of doing this is by placing two sets of leaping stands behind each other.

In the striding leap we spring off with one foot, and come down on the other. It is the usual method of leaping in a hurdle-race.

Hopping over the rope on one foot will be understood without any further explanation.

More advanced leapers should practise carrying weights whilst leaping. Dumb-bells are generally thrown away before springing down. — A musket is carried in the right hand, muzzle upwards, when springing off with the left foot.

Tilting is an amusing practice. The rings to tilt at, are

suspended by a bracket attached to one of the stands 8 to 12 feet above the ground.

173. The *high leap* on a table or any other fixed surface

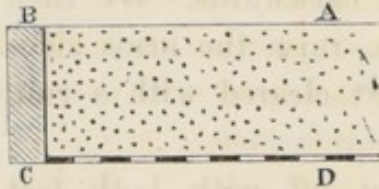


above the level of the ground, deserves to be noticed specially. The contrivance for practising this leap is shown in the annexed wood-cut. A plank, 12 to 18 inches wide, the edges of which are rounded off, is made to slide up and down

between two uprights. The leap is practised standing and with a run.

LONG LEAP.

When there is no regular leaping ditch, a stiff spring board, placed on the ground, and a scale, are sufficient. Our woodcut shows the arrangement of a leaping ditch.



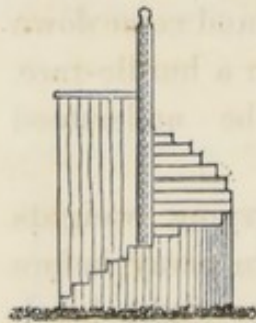
174. The long leap is practised in the same manner as the high leap. Carrying a dumb-bell or other weight in each hand proves of great

assistance to some leapers.

The long leap should occasionally be practised to predetermined distances. A hoop, for instance, is placed on the ground, say ten feet from the place where the men spring off, and they are then told to take a leap into it.

DEEP LEAP.

Apparatus. A set of stairs, straight or circular, or a platform fixed to a slanting ladder.



175. The deep leap should be practised with great care. Beginners must not be allowed to leap deeper than 6 feet, middling men ten feet.

Having fixed upon a certain height, the men leap down from a sitting position, pushing themselves off with the hands. They next leap off from a squatting position, and finally, the most daring, from a standing

position. In every instance the legs must be stretched, though not stiffly, before the feet reach the ground; but as soon as they touch, the ground the legs bend gradually, and where the leap is very deep, the leaper drops forwards upon his hands. The legs must not yield suddenly or too much, or the leaper may knock his jaws upon his knees, especially if he does not turn his toes slightly outwards.



When leaping from a wall the leap from hanging by one or both hands is advantageous. The disengaged hand or the feet push the body off the wall.

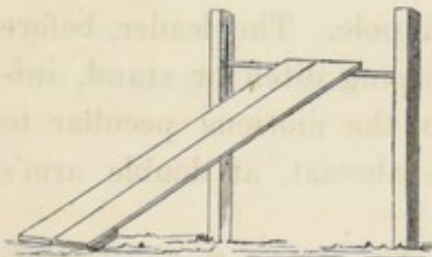


The leap into a blanket forms part of the German Fire brigade exercise. The blanket is about 10 feet square. It is made of the stoutest canvass, and sixteen to twenty-four men must hold it firmly stretched. The gymnast leaps down into it, strictly observing the rule laid down above as regards keeping the legs straight. Leaps of fifty and sixty feet have been accomplished

in this manner.

STORM LEAPING.

Apparatus. The storming board is 8 to 12 feet long, $2\frac{1}{2}$ feet wide, and $1\frac{1}{2}$ in thickness. This board if placed with one end upon a bar which can be moved up and down, thus may be made to slant from 20 to 80 degrees. If two boards are placed side by side two men can practise at one and the same time.



176. The exercises at this attractive piece of apparatus are sufficiently simple. Running and walking up the board, facing to the left or right about on reaching the top, halting for a moment, and then running or walking down again, are practised first. The leader should fix the number of paces.

Running or walking up the board and jumping down side-

wards is practised next, at first with three steps, then with two, and lastly with only one step on the board. Turning whilst jumping down to the left or right, to the left or right about, is added to this exercise after some practice.

The "storm-leap" is the most attractive exercise of the series. At first the gymnast runs or walks to the top of the board, halts, and then jumps down. He then takes his leap without halting at the top, and making two or only one step upon the board.

Having got thus far, a leaping stand is placed beyond the board, and the leap taken over the rope. This exercise can be varied by increasing the height of the rope, or by removing the leaping stand further away from the board.

It stands to reason, that although none of these exercises are difficult as long as the board slants but little, they are by no means to be despised with a steep board.

177. In former times a leap up against a wall used to be much in vogue. Experts even succeeded in springing against the wall, and then running up it two or three paces, reaching a height of some twelve feet.

POLE LEAPING.

Apparatus. Leaping poles, of good pine; iron-shod at one end from ten to twelve feet long, and $1\frac{1}{2}$ inch thick.

178. Only men able to clear 50 inches with a run should be allowed to leap with the aid of a pole. The leader, before taking his men to practise at the leaping ditch or stand, initiates them on the flat ground into the motions peculiar to pole leaping. The men form in line abreast, at double arm's length from each other (fig. 1).

They then face to the right and place the left foot astride sideways. On the word "*Pole up!*" the pole is raised as shown fig. 2. (Both hands have reversed grasp; some leapers take ordinary grasp with the lower hand, but we do not recommend this practice.) — On the words "*Rock to the left and right — rock!*" 1, 2, . . . the men alternately raise the left and right foot, rocking to and fro. "*Pole — on ground!*"

Rock to the left and right, putting pole on ground — rock!” are words of command easily understood on reference to fig. 3.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

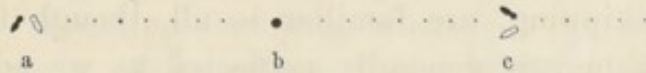


Fig. 5.



Fig. 6.

The men are then told to put the poles on the ground, to raise the right leg (fig. 4) and to turn to the left (that is, to look in the direction in which they wish to leap). In conclusion they are ordered to leap forwards, figs. 5 and 6. When leaping, the place where the leaper springs off (a), the



place where he puts down his pole (b), and where he lands (c) should be in a straight line.

179. After having thus gained some experience in handling the pole the men are taken to the ditch to practise the long leap, and subsequently to the leaping stand for the high leap. The pole in the latter case is either thrown back by the leaper, or it is carried over the rope. Having sufficiently mastered

these simple kinds of leaping, the circular leap may be tried until the leaper is able to return to the place whence he sprang from (fig. 7). A leap of this kind is eminently calculated to make the leaper perfect in handling the pole, and in keeping his balance.



Fig. 7.



Fig. 8.

The deep leap is practised first turning round (that is turning round during the leap so as to face towards the place leapt from, on reaching the ground), and then without facing round. When the depth to be leapt is great, the leaper glides down the pole during the leap.

Another mode of leaping, with the aid of two poles, and leaning upon the top of the pole, is shown in figs. 8 and 9. The top of the pole, for the last kind of leaping, must be provided with a knob.



Fig. 9.

Fig. 10 shows a pole useful for leaping wet ditches, as the cross-piece at the bottom prevents the pole from sinking in the mud.

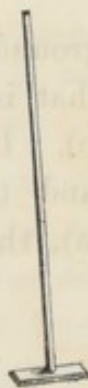


Fig. 10.

SKIPPING.

180. Short and long ropes, canes and hoops, for skipping, are familiar to all, though the use of these things is generally neglected as we advance in years. But a skipping rope affords some of the most healthful exercise, and even expert gymnasts should not despise it.

XIII. VAULTING BUCK.

Apparatus. A square box, 18 inches wide, and 24 in. long, stuffed and placed on four telescopic legs. A Buck with one leg, moving in a tube fixed in the ground, offers many advantages.



181. The Exercises at the Buck form an introduction to the more difficult exercises of the Horse. They enable a leader to accustom his men to spring off correctly and to carry themselves with ease. The leading exercise at the Buck is the "straddle Vault" or simply "the vault", and the difficulty of this exercise is increased by raising the buck from the height of the chest to that of the shoulders or head.



Fig. 1.

182. The *Vault into the Rest*. Place yourself in front of the buck, spring off, place hands upon the buck and go into the position shown fig. 1. — Raising the legs to the left or right, straddling, raising the knees etc. can be combined with going into the rest (I).

combined with going into the rest (I).

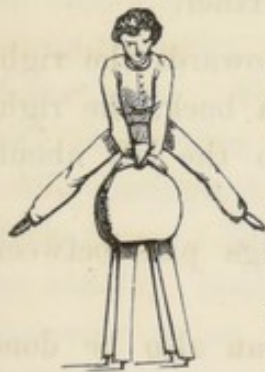


Fig. 2.

183. The *Balance Rest*, fig. 2, is a capital exercise. The legs must be kept straight.

184. *Mounting the buck* can be effected in various ways. The simplest is mounting forwards, when you spring off, and seat yourself as in fig. 3. Once mounted, you may try to keep yourself in a balancing position by fixing the buck between your thighs, fig. 4.



Fig. 3.

Fig. 4.

185. The exercises of the Rear-mount and Front-mount can be done also at the Buck (see Horse par. 197 and 202).

The mount backwards is easily understood. You face about

immediately after having sprung off the ground and placed your hands upon the back.



Fig. 5.

186. *Dismounting* is done sideways, backwards ("swing off") or forwards, by straddling off from the balance rest, (fig. 47 par. 275).

187. *Vault into a kneeling position and Knee-leap*, fig. 5.

188. The *Straddle vault*, ordinarily called the vault, simply corresponds to the exercise called leap-frog, and is the favourite exercise at the buck. Two men should stand on the off-side to catch the gymnast in case of failure; the strap which they hold between them in our illustration, is not indispensable.

The vault is practised according to height, the buck being raised by degrees.



Fig. 6.

It is then practised as a long vault, the gymnast springing off at an increasing distance from the buck.

Lastly, by placing a leaping stand behind the buck or before it, we vary this exercise further.

189. The *Vault backwards*. Run straight towards the right leg of the buck, spring off, place hands upon buck, the right hand a little in advance, face to the left about, and clear the buck.



Fig. 7.

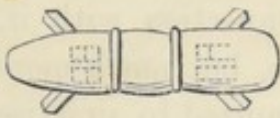
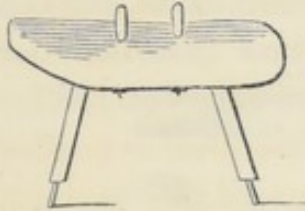
190. *Squatting vault*. The legs pass between the arms. Fig. 7.

Most of the above exercises can also be done by using only one hand.

Many exercises described in the following chapter can be done also at the Buck, but we may safely leave it to the leaders of more advanced squads to pick these out.

XIV. VAULTING HORSE.

The vaulting horse must be covered with leather and stuffed with horse-hair. Wooden horses without this covering can be allowed only where societies are very poor. The pommels ought to be moveable, and the legs provided with slides to raise the horse from $3\frac{1}{2}$ to 6 feet.



191. We divide the exercises at the horse into two great groups, "*Exercises from the side*" and "*Exercises from the croup*". All exercises are done with a run, without a run or from the rest, and every

one of them, must be done to the left as well as to the right, though in our descriptions and tables we have confined ourselves to the latter.

Increasing the height of the horse renders some exercises more difficult, and a thoughtful leader, having the command of an advanced squad, should avail himself of this fact.

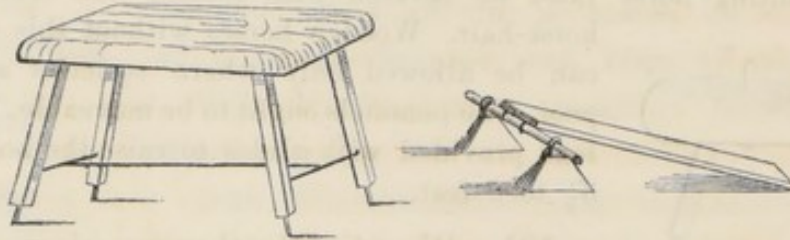
The terms crossways and sideways are used here in the same sense as elsewhere. Sitting astride upon the horse you are crossways, for a line passing through your shoulders crosses at right angles a line passing through the longitudinal axis of the horse. You are sideways when both lines run parallel with each other.

We distinguish between neck, saddle and croup. That part of the horse, between the front and back pommel is called the saddle. Looking along the horse, towards the neck, the *near-side* is on your left hand, the *off-side* on your right. You should always take your run towards the near-side.

Sometimes we find a real horse stuffed in a gymnasium. Such a horse is not so useful, upon the whole, as a regular vaulting horse, but it admits of a variety of exercises in which one or both hands grasp the mane.

Mr. Lion of Leipzig has introduced a horse with a longitudinal pommel, to the top of which three or four straps are attached, and this horse also admits of a variety of fresh exercises.

We advise societies, however, to be content with the ordinary vaulting horse, unless the space at their command is large, and the proficiency of their members great.



A vaulting table is occasionally found in gymnasia. An elastic spring-board is generally used in connection with it. The exercises are similar to those of the horse, but much more difficult, and advanced men only should be permitted to practise at the Table.

EXERCISES FROM THE SIDE OF THE HORSE.

192. *Vault into the Rest* from a standing position. Place both hands upon the pommels, spring off and go into the rest (fig. 1). Head up, legs and body straight, heels locked and feet turned slightly outwards. Repeat six times, in regular cadence, and without removing the hands from the pommels (I).



Fig. 1.

Vault into the rest and face to the right (left). You thus lean with one thigh against the horse, and look towards the croup (neck).

Vault into the rest, raising the right leg sideways. Repeat six times, in regular cadence, as above.

Vault into the rest raising right leg sideways to the left (legs crossed).

The same, straddling legs.

Vaulting into the rest is also done raising the right or left knee; both knees (the knees can be outside the arms or inside, locked); raising the right (left) knee whilst the left (right) leg is extended sideways, and arching the back.

193. *Vault into the Rest with a run.* The whole of the preceding exercises are also done with a run. They cannot,

as a matter of course, be done in that case repeatedly in succession. For instance, you take a run, spring off, place the hands upon the pommels, raise the right leg sideways, and, without remaining in the rest, spring down backwards into the fundamental position. You should try to get off the horse without knocking your legs against its side (I).

194. *Swing-off backwards.* Get up into the rest, and, slightly bending the arms and pushing off with the legs, swing yourself off backwards (fig. 2), coming to the ground at a considerable distance from the horse.



Fig. 2.

This swinging off serves as a finish to many exercises. Those described par. 192, for instance, can be done in this manner.

Whilst in the act of swinging off we can face to the left or right, to the left or right about, coming down in the latter case with back turned towards the horse (II — III).

195. *The Back-swing in the rest sideways* is effected in the same manner as described par. 194, but instead of swinging yourself off the horse, you go back into the rest after each swing (II). If done sufficiently high you get to stand on your hands.

196. *The Rest, horse behind.* Having sprung off the ground you face about, and go into the rest, horse behind (II). You can then swing yourself off forwards, in the manner explained par. 194.

MOUNTING.

We mount in the gymnasium in a far greater variety of ways than in the riding-school. We mount the croup, the saddle, the neck; we mount so as to sit astride or upon one side of the horse.

197. *Mount in the saddle, shifting one hand.* There are various ways of mounting in the saddle, but amongst these the following is the most usual. Place hands upon pommels; spring up into the rest; raise right leg, throw it over the

croup; let go with the right hand and place it on the saddle,



Fig. 3.

or on the front pommel, and come down into the seat astride (fig. 3). The legs are straight the head is held up, and you keep the horse well between your thighs.

When about to dismount change the position of the hands (that is place the left hand on the saddle, the right on the pommel); throw the left leg, which must be kept straight, backwards over the croup, at the same time moving your left hand to the back pommel. You thus find yourself in the rest on the off side of the horse. Spring to the ground.

This way of mounting is done in two motions viz. — rest, sit; sit, down!

198. *Mount in the saddle, lifting up one hand.* Go into the rest as before, throw over the right leg, but instead of



Fig. 4.

moving your right hand only lift it up for a moment to allow the leg to pass through, and you find yourself in the position shown fig. 4. —

There are two ways of dismounting. The most legitimate one is to change hands (left hand on back, right on front pommel) and to throw over the left leg backwards. — You will find it easier, however, to keep your hands as they are, and to throw over the right leg forwards.



Fig. 5.

199. *Mounting the croup.* Go into the rest, throw both legs up to the right, and when they are over the croup, open them, and come down into the seat astride. — In order to dismount, change hands, throw up both legs backwards and come down on the off-side of the horse (I). With a run you mount in this manner in one motion.

200. *Mounting the neck, over the saddle.* You start from the rest on the pommels as before, throw your right leg over croup and saddle, and, letting go with both hands, you come down astride on the neck (II). Dismount backwards.

201. *Mount in the saddle,* both hands on the same pommel, need be mentioned only to be understood (II).

202. *The rear-mount.* Go into the rest; throw up your right leg sideways to the left, for a moment lift your left hand to allow its passing through (fig. 6) and drop down into the seat (as in fig. 4). — Beginners will find this rather awkward work, and they should be allowed therefore to sit down on the right thigh, previously to throwing over the right leg.



Fig. 6.

In dismounting throw back the right leg, and come down by the near-side of the horse, your right hand placed upon the

front pommel.

203. *The Screw-mount.* Beginners spring up into the rest; place their left thigh firmly against the side of the horse; raise the right leg backwards and to the left, crossing it behind the left leg; and throw it over the neck (fig. 7). The hands are then placed in front, and you get off any way you like (I).



Fig. 7.

The screw-mount in the saddle will be understood easily after this explanation (II).

204. The *Screw-mount* is done also from the rest horse behind. Raise the right leg sideways to the left, throw it over the croup, turning round on the left hand as on a pivot; and get into the seat looking to the head of the horse (II).

205. *The Shear-mount.* The exercise known as the shears is described par. 235, and it should, in practice, precede the shear-mount. In the latter both legs are thrown up high to the left, the legs are crossed rapidly, and the gymnast, facing

to the right about, comes down astride on the neck, saddle behind (III). (One man on each side of the horse to assist.)

206. *Side-mounts.* We have confined ourselves hitherto to mounting the horse astride. We will now explain some ways of mounting it on one side.

Side-mount backwards. Spring up into the rest horse behind, and sit down (I). Swing-off forwards.

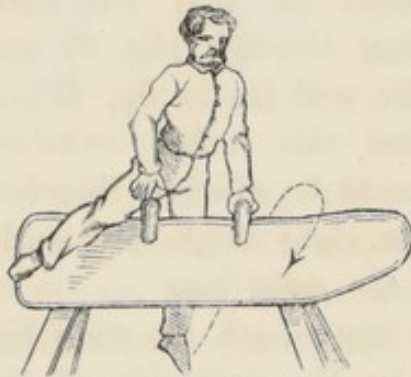


Fig. 9.

207. *Side-mount forwards,* throwing over one leg after the other. Go up into the rest; throw over the right leg, lifting the right hand to allow it to pass; throw over the left leg in the same manner, and sit down (I). You are now in a position to swing yourself off forwards, or to go back the same way you came (II).

208. *Side-mount forwards,* passing legs between arms (squatt-ing). First pass over the right leg, then the left, without touching the saddle (II). Try next to pass over both legs together (II). Swing-off forwards, or go back the way you came (III).



Fig. 10.

These side-mounts to the off-side of the horse can be done in various other ways, but these we shall explain in connection with the vaults over the horse.

209. *Side-mounts on one thigh* can be done on near and on the off-side of the horse. The first are very easy. Place

your hands upon the pommels, spring off, and seat yourself on the right thigh upon the near-side of the croup, facing towards the head of the horse (I).



Fig. 11.

The side-mount on one thigh, on the off-side of the horse, is shown in our illustration. You must spring off with vigour and throw up your legs high, keeping them straight and locked (III). Return

by the same movement.

FEINTS.

210. IN mounting the horse we generally throw one leg over and then seat ourselves. In these feints, however, we throw the leg over but instead of seating ourselves we throw or swing the same leg back again and return to our starting position. These feints are done from the rest as well as with a spring off the ground. There is a "feint" to most of the ways of mounting the horse.



Fig. 12.

211. The *feint over the croup* (neck). Throw over the right leg, and without changing grasp or sitting down, throw it back again. The right hand is not placed on the middle of the pommel but nearer to the off-side of the horse (I). Compare par. 199.

212. *Feint to the mount in the saddle*, shifting one hand. Compare par. 197 and fig. 3 (II).

213. *Feint to the mount in the saddle*, lifting up one hand. Compare par. 198 and fig. 4.

214. *Feint to the rear-mount*, compare par. 202 and fig. 13. Always remember that you must not sit down, and that the



Fig. 13.

legs must be swung back without stopping in the balance rest (II).

The *feint to the screw-mount* is done in a similar manner (II).

215. The whole of the above *feints* can be done alternately to the left and right without coming to the ground. The feint over the croup, for instance, may be followed immediately by a feint over the neck; the feint to the mount in the saddle with the right leg, by a similar feint with the left leg, etc. (III).

CIRCLES.

216. *Circle forwards with the right leg.* Throw the right leg over the croup, pass it over the saddle, for a moment lifting the right, and then the left hand, to allow it to pass; throw it over the neck and bring it back to the starting position (II). Beginners are allowed to sit down on the saddle, but more advanced gymnasts must do without this aid, and there must be no jerk or stoppage. Compare par. 198, fig. 4.

217. *Rear circle with the right leg.* This is a circle in the reverse direction. Throw up the right leg over the neck, pass it over saddle and croup, and go back to your starting position (II). Compare par. 202.

218. *Circle forwards with the right leg from the seat astride.* Mount astride in the saddle, grasp front pommel with both hands; swing both legs backwards, throw the right leg over the croup and passing it forwards along the near-side of the horse, throw it over the neck; for a moment lift your hands, and return to your starting position (III).

Instead of grasping the front pommel with both hands you may grasp the front pommel with left hand, the back pommel with the right hand, the latter reversed.

219. *Circle backwards with the right leg from the seat astride.* Is done in the same way as the preceding circle, but in the contrary direction (III).

BALANCE REST.

220. IN all Balancing exercises the hands are the only part of the body which touch the horse.

Going up into the rest sideways (fig. 1 page 110) raise the knees above the saddle (fig. 14); then extend them forwards (dotted lines in fig. 14), and go back again to the rest sideways, all this without touching the horse with the feet (II).

221. *Standing on the hands* is another balance exercise from

the rest sideways for more expert men. At first you may be allowed to bend your arms, raising yourself slowly (III); but after some practice you should be able to stand on the hands with arms straight, and to combine with it the exercises of the preceding par. (compare fig. 14). (IV.) Two comrades should stand on the off-side of the horse, ready to give their assistance.



Fig. 14.

222. *Balance rest crossways.* Mount in the saddle, astride, place both hands upon the front pommel, and



Fig. 15.

raise your legs slightly forwards (I). The same exercise is done resting on one arm (III), fig. 15.

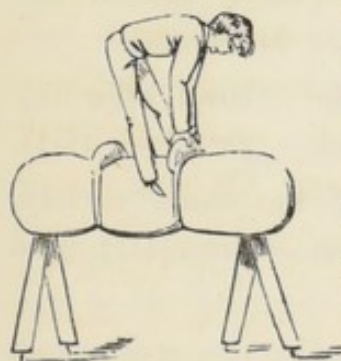


Fig. 16.

223. *Raise the back,* in the balance rest crossways, fig. 16 (II). By bending your arms you can bring your head on the horse, raise your legs, and thus stand on your head; or you can get to stand freely on your hands (III).

224. *Swinging forwards and backwards* in the balance rest crossways, I to II, according to height of swing. The backward swing, may be used to get to stand on the head or the hands (III).

225. *The Turnspit.* Go into the balance rest from the seat astride, both hands on the same pommel. Raise both legs forwards, and, keeping them up horizontally without touching the horse, turn round to the left or right. The hands are shifted as required (III).

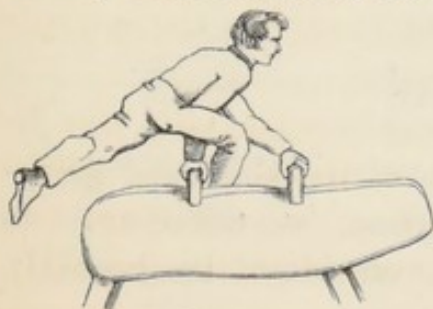


Fig. 17.

226. *Threading a needle.* Go into the rest. Throw the right leg over the croup, pass it between

the arms, the hands retaining their hold as long as possible, and go into the seat astride, looking towards the croup (III).

227. *Levers* are done from the seat astride and from the rest sideways. The levers are easier from the seat.

The *lever upon one elbow*, shown fig. 18, is easy enough, as

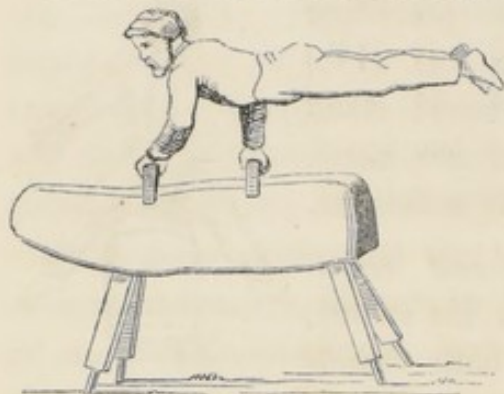


Fig. 18.

long as you support your balance by placing the left hand on the front pommel (II). But an expert gymnast is able to extend his left arm horizontally forwards whilst supporting himself upon the right elbow.

228. In the *lever upon both elbows* the hands grasp the back

pommel, reversed, the elbows are securely placed against the loins, and legs raised until you are perfectly horizontal.

This same lever can be done without the elbows affording any support, mainly by the force of the arms — *free lever* (III).

Levers from the rest sideways admit of the same variety, viz. lever upon one elbow, lever upon both elbows (II), and free lever (III).

229. When in the lever upon one elbow, you can spin round in a horizontal plane, to the left and right (II). When supporting yourself on the right elbow the right hand remains stationary but the left shifts its position by degrees, as you move round.

230. *Change of lever.* — When in the lever upon the right arm you transfer yourself to the left elbow, all the while keeping in the horizontal position (III).

CHANGES OF SEAT.

231. Sitting astride upon the croup of the horse, and grasping the back-pommel with reversed grasp, we can change to the seat upon one thigh on the near or off-side of the horse (I). See fig. 19.

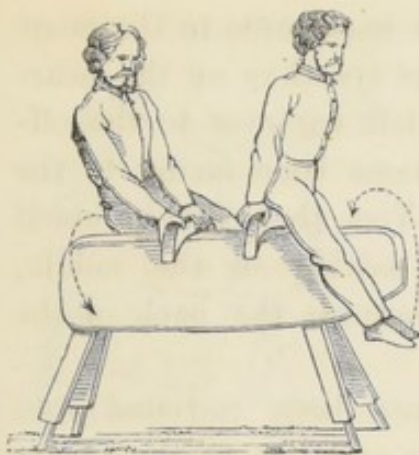


Fig. 19.

Fig. 20.

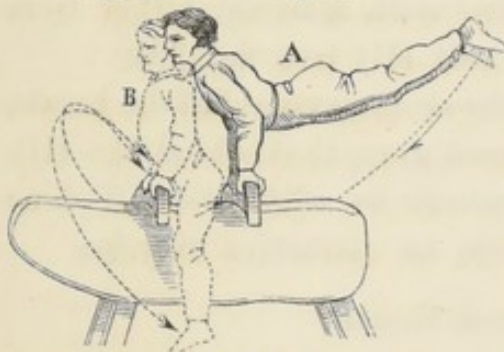


Fig. 21.

the saddle and croup (III).

233. Sitting astride upon the croup, grasp the back pommel with the right hand, the front pommel with the left hand. Lean forwards; throw up legs behind, swing them along the near-side of the horse, and come down into the seat on the neck, looking towards the tail. This change is called the "*Mill*". It is done repeatedly in succession, to the right as well as left about, and in regular cadence (I).

234. Another mode of changing seat, from the croup to the neck, sitting upon one thigh, is shown fig. 22 (III). ("*Mill on one thigh*".)



Fig. 22.

235. *The shears*. Changes of seat in which the legs are crossed, are called "shears". Beginners do the shears at first slowly, and without a swing.

The shears backwards, for instance, are done in the following manner. Mount in the saddle astride; grasp front-pommel

Sitting on the neck of the horse, looking towards the head, and grasping the pommel in rear, we change seat in a similar manner. See fig. 20.

232. Sitting astride on the croup of the horse we change into the saddle in the following manner. Grasp back-pommel with both hands, the right reversed; throw up legs backwards and lock them (A fig. 21); swing both legs forwards on the off-side of the horse; open them, and throw the left leg over the saddle; place hands on the front pommel, and you find yourself in the position B fig. 21.

You can then change seat to the neck, and then back to

with both hands; throw right leg over backwards to the near-side (both legs are thus on the near-side); throw left leg over to the off-side, at the same time facing to the left about. You then find yourself again sitting astride on the saddle, but looking towards the back of the horse (I).



Fig. 23.

Having thus been initiated into the movement peculiar to the shears backwards, you do the same exercise with a swing, either from the seat (I) or from the balance rest (II) (see fig. 23).

The shears forwards are done in the same manner, but the hands, instead of grasping the pommel in front, grasp that behind (II—III).

The shears forwards and backwards in alternation, if done rapidly and in regular cadence, are an attractive exercise.

VAULTS OVER THE HORSE.

236. *Flank-vault.* The horse is cleared without turning to the left or right, the gymnast coming down on the other side, back towards it. This vault is done with a run (I), from a standing position, and from the rest (II). The legs remain locked.

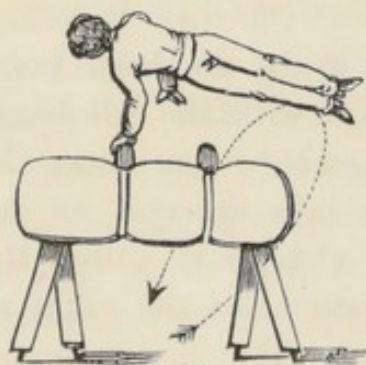


Fig. 24.

237. *Monkey-vault.* Grasp both pommels; vault into a squatting position on the croup, knees open; change hands (left hand on back pommel, right on front pommel) and jump down on the other side, retaining your grasp (I).



Fig. 25.

This can be done also without standing on the horse (II).

238. *Front-vault.* In the front vault we turn the face towards the horse; the legs remain locked, and should be swung

up to a horizontal position.

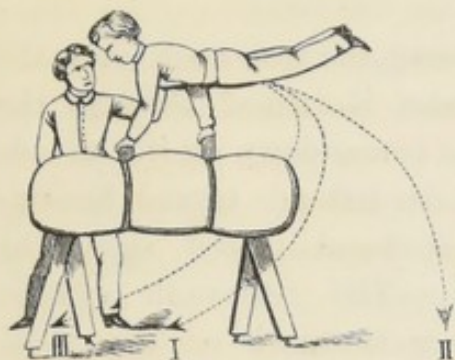


Fig. 26.

This vault is easiest if we grasp the back-pommel with the left hand and place the right hand upon the croup, though the usual way is to grasp both pommels (I). As a rule the gymnast should reach the ground at I, his left side turned towards the horse and the left hand placed upon the front-pommel. But the place for springing down may, as a matter of practice, be transferred to II (front-vault, springing down backwards), to III (springing down forwards) or to IV (front-vault, pushing off backwards). The front-vault from a standing position or from the rest (II) is done in the same manner.

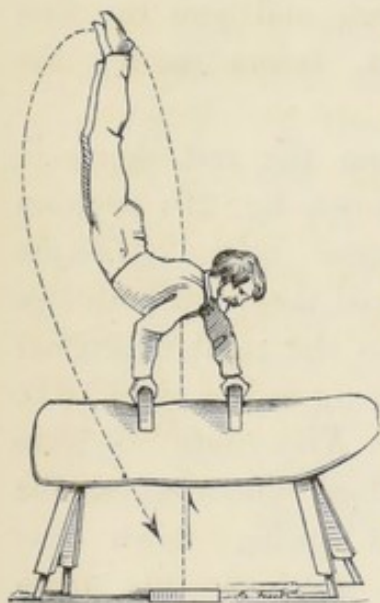


Fig. 27.

The front-vault into the seat on one thigh on the off side of the horse, has been explained par. 207.

It can also be done into the rest on the off side of the horse, changing the position of the hands (III).

240. The *double front-vault* is a circle forwards with both legs. Go into the rest sideways grasping both pommels, swing legs over the croup (front-vault), rapidly change hands, and swing legs over the neck (second front-vault). All this must be done without stopping (III). Beginners should be required to do the front-vault into the rest on the off side, horse in

front; and having done this, the front-vault over the neck to the starting position (II).

241. The *Rear-vault*. Fig. 28 shows the rear-vault over the saddle (II). The back of the gymnast is turned towards the



Fig. 28.

horse, and he comes down on the off-side of the horse, his left side turned towards it and the left hand placed upon the front-pommel. The rear-vault can be done also over the neck or the croup, and a cushion may be placed on the horse to render it more difficult.

The rear-vault, similarly to the front-vault, is done also from the standing position or the rest, and you can face to the left or face about to the right, before coming the ground (II).

242. The *Screw-vault* can be done from the rest, horse in

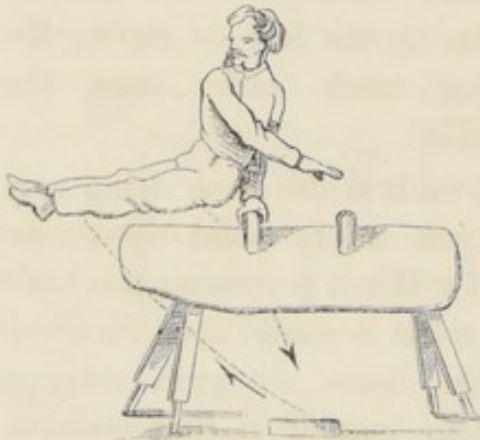


Fig. 29.

front, as shown fig. 29; or from the rest horse behind. In the latter case you throw up both legs sideways to the right, and clear the horse facing to the right (III).

243. The *Knee-vault*. Go into the rest, place knees upon the saddle, and spring down forwards (I). Beginners are sometimes timid, and should be allowed

to grasp the leader's hand when springing down.

More expert men may turn to the left or right about whilst springing down, thus coming to the ground facing the horse; or they may spring up into a standing position on the saddle of the horse, or to the side-seat upon it (II). The same exercise can be done also, kneeling on one knee.

244. The *Double rear-vault*. Go into the rest sideways, horse behind. Rear-vault over the croup, immediately followed by a rear-vault over the neck (III).

245. The *Squatting-vault* is usually done with a run, the

hands resting a moment on the pommels, the knees drawn up to the chest, fig. 30 (I).



Fig. 30.

Beginners should first practise the squatting-vault into a standing position on the saddle; pass one or both legs between the arms, forwards over the saddle, and then spring down (compare par. 158).

Having gained proficiency in the ordinary squatting-vault the same may be varied in different ways. The hands, instead of grasping the pommels, are placed upon the croup, the neck, or inside the saddle.

The squatting-vault is then done from the rest, and instead of springing at once to the ground, the gymnast may be required to go first into the rest on the off-side, horse behind, or into the side-seat (II).



Fig. 31.

The squatting-vault is also done backwards, the gymnast either facing about immediately after having sprung off the ground; or going first into the rest horse behind (III).

246. The *Sheep-vault* (IV) is similar to the squatting-vault, but instead of raising the knees the heels are raised (fig. 31).

247. The *Straddle-vault*. Beginners first go into the straddling position on the horse, knees bent, feet close outside the pommels, and spring down forwards (I). The same is then done with legs straight (I).



Fig. 32.

The straddle-vaults with knees bent or straight follow next. They are practised first with a run (II), then from a standing position or from the rest (III). Instead of springing at once to the ground the gymnast can go into the side seat or the rest on the off-side, horse behind (III).

The straddle-vault can be done also backwards in the same manner as the squatting-vault (IV). The most careful assistance should be given, one man, at least, standing on each side of the horse.



Fig. 33.

248. The *Wolf-vault* is a combination of the two preceding exercises, one leg squatting the other straddling (II). This exercise is easiest over the croup or neck, for the outer leg need not then be raised very high. The wolf-vault is done also from the rest (III).

249. The *Somerset*. The *back-swing* (par. 195) and exercises in the balance rest, par. 222, should be well practised before attempting the somerset. — The somerset is done first with bent arms from the rest, from a standing position, and with a run; and then with arms straight (III). It can be done also

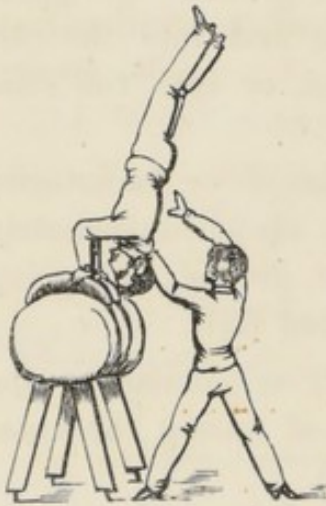


Fig. 34.

ways, par. 230, etc.

250. The *Roll-over backwards* is done from the rest, horse behind. You drop down backwards, holding the pommels firmly; and turn over, fig. 35 (II).

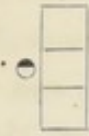


Fig. 35.

VAULTING WITH THE USE OF ONE HAND.

251. IN vaults of this kind we only make use of one hand. When using the left hand we spring off with the left foot, when using the right hand with the right foot. Some of the principal of these "vaults" are as follows: —

Front-mount in the saddle. Run obliquely, spring off with the left foot and place left hand on the front pommel, vault into the saddle throwing over the right leg (III).



Rear-mount in the saddle. Run obliquely, but in a direction contrary to that shown above, spring off with the left foot, grasp back-pommel with the right hand, and throw over right leg forwards (III).

Squatting, straddle and other vaults over the horse are done after a straight run; the *front* and *rear vaults*, however, are done with an oblique run as explained above.

FREE LEAPS OVER THE HORSE.

252. IN these exercises the horse is cleared by a leap, and the hands do not touch it at all, or only after the legs have got safely over. The practice of these leaps is initiated by a leap on the saddle of the horse, springing off with one foot. This is succeeded by the *Thief's leap*. You leap clear over the horse, but put your hands on the pommels and push yourself off after you have cleared it (IV), fig. 36.

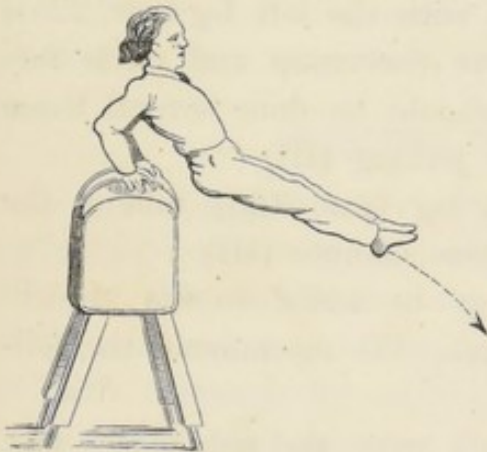


Fig. 36.

The *Squatting-leap*, *Straddle-leap*, etc. are done without touching the horse at all (III—IV).

The *Tiger-leap* is a daring feat. Spring off the ground, leap over the horse, head foremost, and arms extended. A comrade stands on the off-side of the horse, ready to give the leaper his arms or shoulders as a support, and to prevent his falling in case of need. The leaper thus

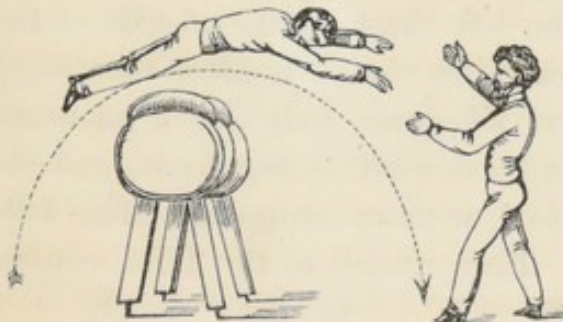


Fig. 37.

comes to the ground in front of this comrade.

COMBINED EXERCISES.

By combining some of the preceding exercises we obtain a greater variety, from which our more expert gymnasts can choose. We confine ourselves to a description of some of the more usual combinations, leaving it to the inventive genius of our readers to find out others.

253. Feints combined with various ways of mounting the horse form an attractive series. The feint over the croup (par. 210) may thus be followed by the mount on the neck (198), in the saddle (167 or 197), the rear-mount (211), the screw-mount (212) or shear-mount (145). When "feinting" towards the right, you mount on the left.

254. The feint over the croup can be combined also with circles; — for instance, feint over the croup (par. 220); feint over the neck and circle forwards with the left leg (par. 225); then feint over the neck, feint over the croup and circle forwards with the right leg. This should be done several times in repetition, without stopping or jerking (III).

The rear-circle with the right leg (par. 226) follows the feint over the croup in an analogous manner (III).

255. Vaults over the horse may be added to the "Feint" over the croup in a similar manner. We recommend the following combinations: —

Feint over croup, squatting-vault over the saddle (see par. 245). (III.)

Feint over croup, front-vault over the neck (see par. 238). (III.)

Feint over croup, rear-vault over neck (par. 241). (III.) •

256. The side-mount on the left thigh on the off-side of the croup (par. 209) may precede exercises similar to those mentioned above. You should, however, sit down only for a moment, keeping your legs straight and extended to the front, and do the exercise which is to follow without stopping. The following exercises are suitable. They are all of the IIIrd. course.

Front-mount on neck (199).

Mount in the saddle (197 or 198).

Rear-mount on neck (202).

Screw-mount (203).

Shear-mount (205).

Front-vault over the neck (238).

Rear-vault over the neck (242).

257. *The Clockwork.* This complicated exercises will be understood easily on reference to our illustration.



Fig. 38.

A flank-vault over the croup brings you into the balance rest shown fig. 38, with legs astride, and the weight of the body resting mainly upon the right hand. Without stopping in this position you raise your left hand, throw your left leg backwards over the horse, again grasp with the left hand, and, facing to the left you find yourself in a balance rest cross-ways, looking towards the neck of the horse. — You finish the clockwork by a rear-vault over the saddle (III).

EXERCISES FROM THE CROUP.

258. The gymnast springs off behind the horse. In many cases it is desirable to remove the pommels; with expert gymnasts, however, they should form no obstacle. We arrange the exercises in the same manner as those from the side, and are able to refer in many instances for an explanation to preceding paragraphs.

259. *The vault into the rest* is done from a standing position and with a run. The hands are placed upon the croup, instead of grasping the pommels, but in all other respects the rules laid down par. 192 and 193 should be followed (I).

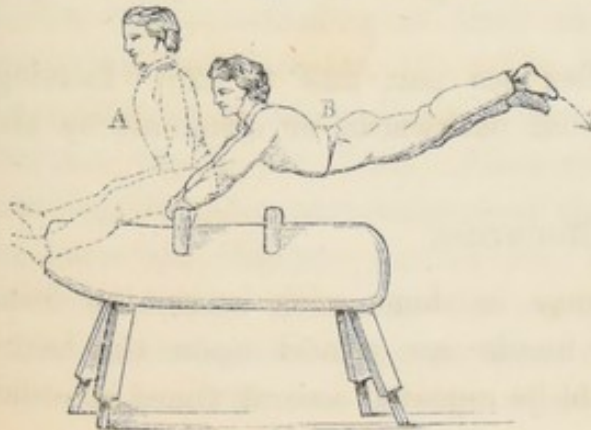


Fig. 39.

260. *Swing-off backwards.* This exercise is the same as described par. 194, but it admits of further variations, for we can swing ourselves off from the back-pommel (II), from the front-pommel (III) and even the neck (fig. 39).

261. *The rest, horse behind*, is done in the manner described par. 196.



Fig. 40.

Fig. 41.

262. *Rest crossways on the off-side of the horse*. You spring off close to the right hind-leg of the horse, place your right hand on the back-pommel, your left on the croup, and go into the position shown fig. 40 (I). After some practice you will be able to place the right hand upon the front-pommel, the left on the rear-pommel (II), or the right on the neck, the left on the front-pommel (III).

263. *Rest sideways on the off-side of the horse*. This exercise is done in the same manner as the preceding, but you face the croup (I), the saddle (II), or the neck (III, fig. 41).

BALANCE REST.

264. *The Vault into the balance rest* is done on the croup (I), the back or front pommel (II), or the neck (III). Here as elsewhere it is the rule to spring off the ground before placing the hands on the horse. The legs are kept straight and must not touch the horse.

The vault into the balance rest can be done also backwards (II—III).

265. Once in the balance rest you can *travel* over the horse forwards and backwards, moving hand after hand (I), or hopping along (II). The latter exercise can be done swinging with the legs, each backward swing being accompanied by a hop forwards (III).

For some further exercises see par. 224 to 226. Leaving the horse you either swing off backwards or dismount by the side of the horse.

MOUNTING.

266. *Mounting the croup* is done with a run or from a standing position. The hands are placed upon the back-pommel. This exercise should be repeated several times in order

to practice different ways of dismounting (compare pars. 197 to 202).

267. The *Mount in the saddle or on the neck*, is done in the same manner. Beginners first place the hands upon the croup and then upon the front pommel (I). More expert men spring off with vigour, and at once place their hands upon the pommel (II).

268. *Mount backwards*. You spring off, face about, and then place your hands upon the croup, open your legs and sit down, looking towards the tail of the horse (I). You can mount in this manner also in the saddle or on the neck (II—III).

269. The *Shear-mount*. Spring off, grasp the back (or front) pommel, cross the legs above the horse at the same time facing about, and alight upon the seat, looking towards the tail of the horse (II). This is the shear-mount backwards. In the shear-mount forwards the legs must be swung forwards before they cross above the horse, and you alight looking towards the head (III).

270. *Front-mount* on the croup (I), the saddle (II) or neck (III). Beginners first go into the rest sideways on the off-side of the horse (see par. 263), they then raise the right leg, throw it over the horse, shifting at the same time the right hand to the croup, close to the left. They get thus to sit astride upon the horse, looking towards the tail. The dismounting is done in the same manner. More expert gymnasts throw up both legs by the side of the horse, and only open them when they are above it. Compare par. 199.

271. *Rear-mount*. Beginners first mount on the near-side of the horse, sitting upon their right thigh and looking towards the neck (see fig. 40). The left hand is then lifted up for a moment to allow the right leg to pass over the horse (I. Compare fig. 6. par. 202). More expert gymnasts throw up both legs together and only open them, when they are above the horse (II. Compare fig. 45 par. 276). You can mount in this manner the croup (I), the saddle (II), or the neck (III).

272. *Screw-mount*. This is the exercise explained par. 203. You go into the rest on the near-side of the horse (fig. 41

par. 262) and proceed exactly as described in the paragraph alluded to (I—II).

The "screw" is a repetition of the screw-mount in the same direction. For instance, screw-mount on the croup, is succeeded by a screw-mount in the saddle, and the latter by a screw-mount on the neck (II).

FEINTS.

273. THESE are similar in character to the feints with a run from the side. We practise, however, only the *feint to the*

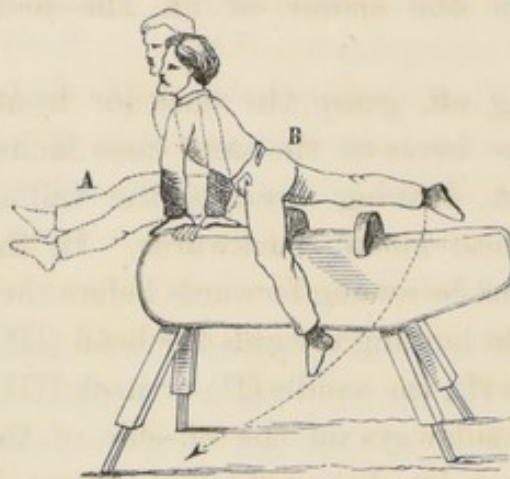


Fig. 42.

front-mount (II) and the *feint to the rear-mount* (III). The movements are the same as for the mounts bearing the same names (pars. 270 and 271) but instead of sitting down on the horse, you only go into the balance rest, and immediately leave the horse by throwing over one leg backwards or forwards. Fig. 42 shows the

feint to the front-mount, viz. A the balance rest, B the manner of leaving the horse.

VAULTS OVER THE HORSE.

274. THE *Front-vault* corresponds in character to the front-

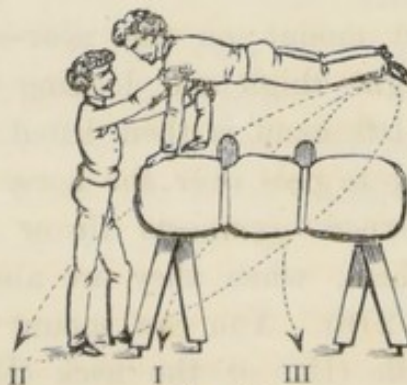


Fig. 43.

vault from the side of the horse. Spring up, place hands upon croup, and swing yourself over the horse as shown fig. 43. — You spring down at I, II or III.

Instead of jumping to the ground by the side of the horse, you can *straddle* off forwards, a very pretty way of leaving the horse, and by no means diffi-

cult (III). Compare fig. 47, B.

275. *Rear-vault with one leg* (fig. 44). Run towards the

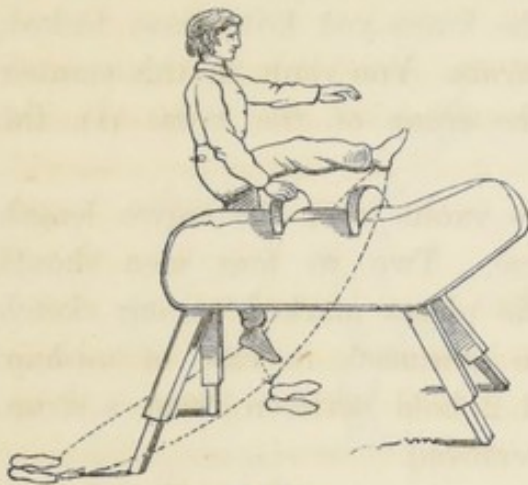


Fig. 44.

croup, place the right hand on the back-pommel, the left on the croup; throw your right leg over the horse forwards, without sitting down, lifting in succession your right and your left hand to allow it to pass; spring down on the near (left) side of the horse, with your right hand placed on the croup or back-pommel (II).



Fig. 45.

276. *Rear-vault*. It corresponds in character to the rear vault described par. 241 (II). fig. 45.

277. *Cats-vault*. — Take a run, spring off, place hands upon croup, throw up your legs, bending and opening the knees, and go into the standing position shown fig. 25 par. 237. This vault can be done on the croup (I), the saddle (II), or the neck of the horse (III).

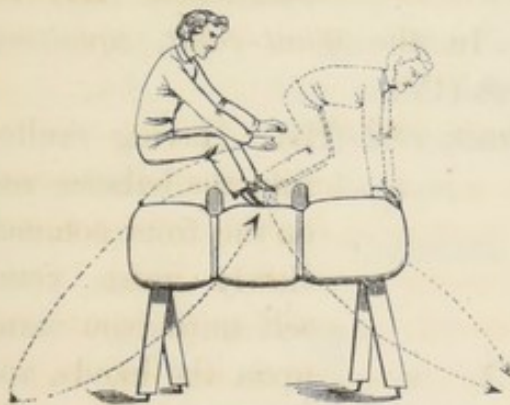


Fig. 46.

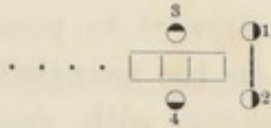
The manner of leaving the horse can be varied at pleasure. The simplest way is to jump down sideways. Our illustration shows a *straddle off forwards*. You rise into a standing position, then stoop down and place hands upon the neck and straddle off

(compare fig. 47). Or you can swing yourself off backwards, etc.

278. *Monkey-vault*. This exercise may be explained as a front-vault into a squatting position, with knees open. The position on the horse is the same as shown fig. 25, but instead of looking towards the neck you look towards the tail (II).

279. *Squatting vault.* This vault is very similar to the cats vault, but instead of opening the knees you keep them locked, passing your legs between the arms. You vault in this manner into a squatting position on the croup of the horse (I), the saddle (II) or the neck (III).

280. *Giant-vaults.* These are vaults over the entire length of the horse. Two to four men should stand at the places marked on our sketch to catch the gymnast in case of mishap. Nos. 1 and 2 hold between them a strap.



Pommels should generally be removed.

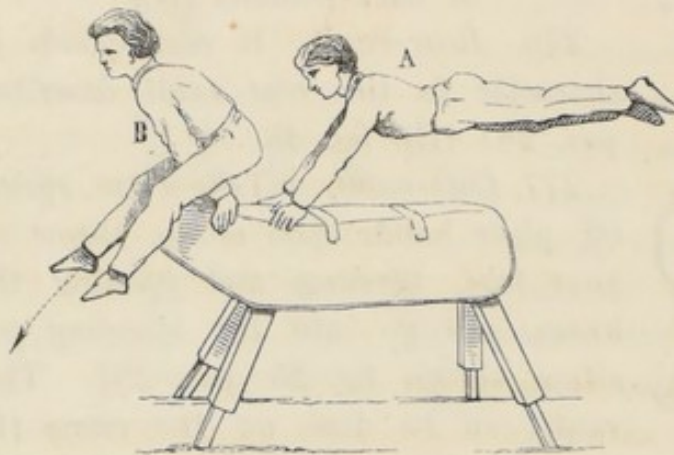


Fig. 47.

The ordinary giant vault is shown fig. 47, and you may either support yourself in rapid succession upon the croup and neck of the horse, or upon the saddle or the neck alone (III). In the *giant-vault, squatting*, the knees are raised to the chest (IV).

The *Giant-vault backwards* (III) re-

quires no further explanation. In the *giant-vault, squatting*, the knees are raised to the chest (IV).

281. *Somersets from the balance rest* (III). Having vaulted into the balance rest on the front pommel, slowly raise yourself until you stand upon the hands, and then turn over as in fig. 48. A comrade should stand on each side to assist. At first this somerset may be practised to the seat on the neck or saddle.

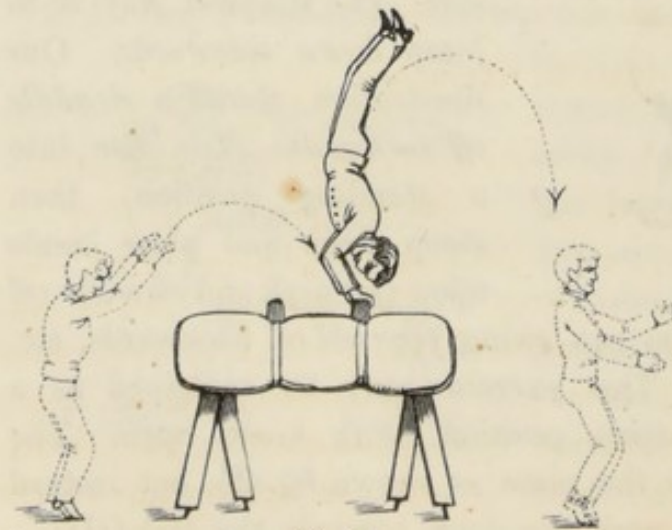


Fig. 48.

282. The *Somerset* from a standing position is shown fig. 49, and requires no further explanation (III).

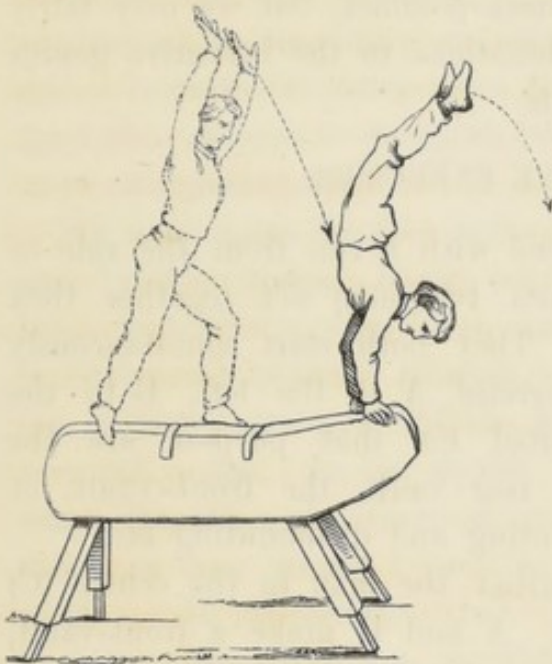


Fig. 49.

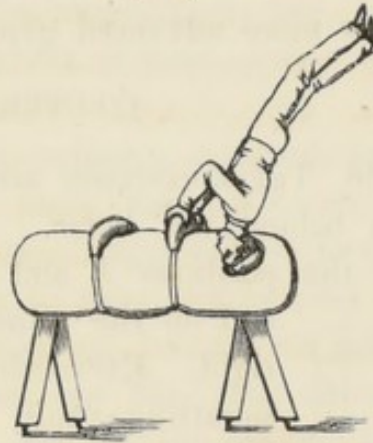


Fig. 50.

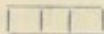
283. The *Bear's somerset*. We support ourselves on one shoulder whilst turning over.

You start from the seat in the saddle, and hold the front pommel with reversed grasp (III). Fig. 50.

VAULTS USING ONE HAND.

284. WHEN vaulting with the aid of the right hand spring off with the right foot, when using your left hand spring off with the left foot.

The run is generally taken in a straight line from behind, but when doing the front or rear-vaults, the run is taken obliquely, as indicated in the diagram.



COMBINED EXERCISES.

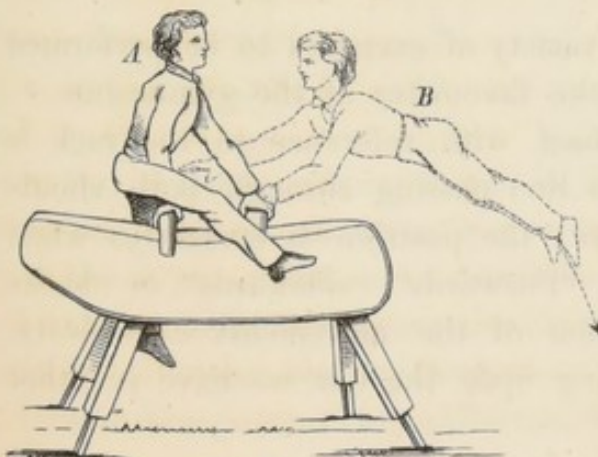


Fig. 51.

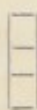
285. THE *Feint to the front-mount*, described par. 273, affords a good opportunity for tagging on some other exercise, for instance, having made this feint over the neck (A), you can swing yourself off backwards (B); or you can do any of the exercises mentioned pars. 253 to 255.

The same or similar exercises can be performed after a vault into the balance rest on the back-pommel, but we may fairly be allowed to leave these combinations to the inventive genius of our more advanced gymnasts.

CO-OPERATIVE EXERCISES.

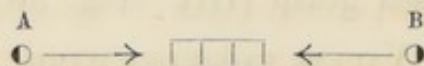
286. THESE exercises are done with a run from the side or from behind the horse. When two men act together they take the positions A and B. They both start simultaneously and do the same exercise, A to the left, B to the right. Exercises suited for that purpose are the squatting-vault, the rear-vault, the front-vault, or easier exercises, such as mounting and dismounting etc.

A. ○
B. ○



When three men work together the man in the centre (C) confines himself to the saddle. A and B make a front-vault, C a somerset etc.

287. Vaults from behind are done in a similar manner; the men, fall in thus, —



These co-operative exercises, when well done, are capitally suited for a gymnastic Display, and we only warn against choosing too difficult exercises. Neatness and exactness in the execution will have a greater effect than feats of agility performed without these.

XV. THE RACK OR HORIZONTAL BAR.

288. THE rack, from the variety of exercises to be performed at it, is deservedly one of the favourites of the gymnasium.

The position of the gymnast with reference to the rack is said to be *sideways* when a line passing through both shoulders runs parallel to the bar; the position is *crossways* when such line intersects the bar. "Forwards", "sideways", or "backwards" refer to the direction of the movements exclusively. Whilst hanging at, or resting upon the bar, we have it either "in front" or "behind".

In grasping the bar we can either place the fingers upon one side and the thumb on the other — fingers and thumb meeting — or we can place fingers and thumb upon the same side. It depends partly upon the thickness of the bar, partly upon the exercise to be performed, which of these grasps is the more advantageous.

We distinguish further between an ordinary, reversed, double and twisted grasp. If we let our arms hang down by the sides, knuckles to the front, and raise them either forwards or backwards, without turning them, to grasp the bar, we have the *ordinary grasp*. — If the knuckles are behind, we get the *reversed grasp*. In the double grasp one hand has the ordinary, the other the reversed grasp, and in the *twisted grasp* the arms are turned round, so that the thumbs are on the outside. It is evident that in all these cases the hands grasping, may be close together or more or less spread out. Unless anything to the contrary is stated, the hands grasping the bars are supposed to be apart a distance equal to the width of the shoulders.

The following woodcuts will aid in rendering clear the above explanations.

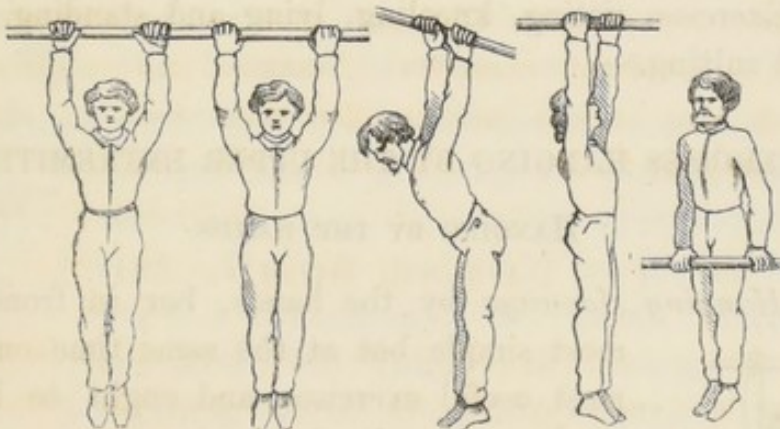


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

No. 1 hangs sideways, bar in front, ordinary grasp.

No. 2 hangs sideways, bar in front, reversed grasp.

No. 3 hangs sideways, bar behind, ordinary grasp.

No. 4 hangs crossways, double grasp, hands in front of each other, bar in front.

No. 5 is in the rest sideways, bar in front, ordinary grasp.

Moving along the bar from end to end, whether hanging at or resting upon it, is called "*Travelling*". *Twirls* are continued revolutions round the bar whilst hanging by hands and legs. Our illustrations, and some practical experiment, will soon elucidate every such expression used, as may seem obscure at first sight.

289. At the Rack, as elsewhere, every exercise must be gone through, left and right, whenever feasible, though, in order to save space, we have confined ourselves to explaining the exercises with the right only. The bar should never be placed higher than needful. Twirls especially, and all exercises in the rest, should be performed by beginners at a bar say about the height of the shoulders, for otherwise the leader will not be able to afford the requisite assistance. The greatest attention must be paid to the manner of getting upon the rack and leaving it. We can scarcely sufficiently impress upon the minds of gymnasts that this should be done regularly and neatly.

We divide the exercises at the Rack into six great groups, viz

- 1st. Exercises hanging by the upper extremities.
- 2nd. Exercises hanging by upper and lower extremities.
- 3rd. Exercises hanging by the lower extremities.
- 4th. Exercises in the rest.
- 5th. Exercises sitting, kneeling, lying and standing.
- 6th. Vaulting.

EXERCISES HANGING BY THE UPPER EXTREMITIES.

HANGING BY THE HANDS.

290. *Hanging sideways* by the hands, bar in front, is the most simple but at the same time one of the most useful exercises, and ought to be practised occasionally by beginners as an exercise of endurance. The bar is to be grasped in all the various ways mentioned on the preceding page. Movements of the legs may be combined with this simple exercise, such as straddling, holding them out forwards, pulling up knees and kicking downwards (fig. 6).



Fig. 6.

We can hang also with arms spread out sideways, or with arms crossed (I).

We travel along the bar sideways either one hand leading, the other following; hand over hand, or hand under hand; or both hands moving together (I).

Hanging by one hand should also be practised frequently, for a sure grasp with one hand often preserves from danger in the more advanced exercises (I).

291. *Hanging crossways, bar in front.* The hands are either

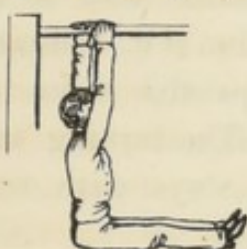


Fig. 7.

folded or placed one above the other. They can also be placed in front of each other, but the body must not then be allowed to sway round. Hanging crossways we travel along the bar forwards and backwards, and combine it with movements of the legs (I).

Hanging crossways with twisted grasp, and travelling along the bar is a very inconvenient mode of locomotion (II—III).

292. *Hanging sideways or crossways, bar behind.* The gymnast places himself back towards the bar, and raising arms behind grasps it (I). Travelling in this position is possible but difficult (III). Fig. 3 hangs sideways, bar behind.

293. *Hanging with bent arms, sideways or crossways, by one*



Fig. 8.

or both hands, grasping in various ways, and travelling along the bar are strengthening exercises. We "*rise and sink*" by alternately bending and straightening the arms. Hanging by one arm this rising and sinking is a feat requiring great strength (IV) unless we grasp the wrist with our disengaged hand (II).

294. *Changing grasp.* The easiest way is passing from ordinary to reversed grasp, by moving one hand after the other (I). Changing with both hands at once is rather more difficult (II); slightly bending the arms will greatly assist. The change may be combined with turnings or facings. As for instance, —

hang sideways, double grasp (fig. 9 a); let go right hand,

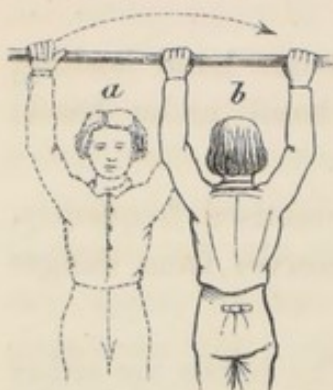


Fig. 9.

turn to the left about and again grasp the bar with the right hand in the ordinary grasp (fig. 9 b). You then hang sideways on the opposite side of bar, having the ordinary grasp (I). The same exercise might be performed both hands moving together (II).

Hanging sideways, bar in front, we can turn to the left or right about, and again grasp the bar upon the same side, so as to hang sideways, bar behind (IV, compare

figs. 1 and 3). By introducing twisted grasps this series of exercises may be rendered extremely difficult. The turning and changing grasp, may be combined in various ways with travelling forwards or backwards.

295. *Swinging* should be practised by beginners with great care. Hanging sideways we set ourselves in motion by slightly bending the arms and raising the legs. We can swing also hanging crossways, but the swinging of the legs in a circle is better suited for the rings than the bar. At first, beginners

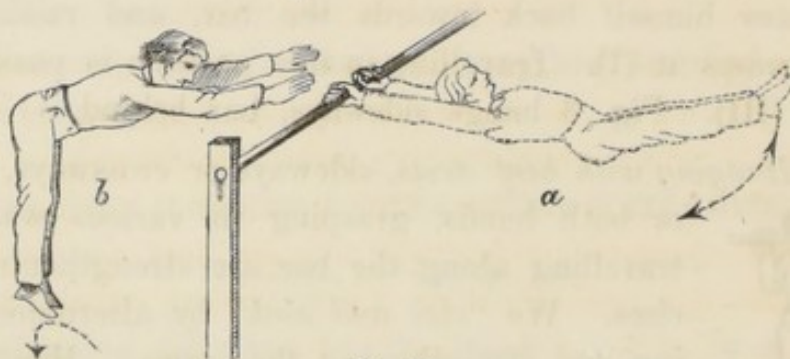


Fig. 10.

should not exceed an angle of 45 degrees whilst swinging; they are to retain a firm hold of the bar, and jump to the ground at the moment the legs are about to swing forwards, coming down upon the balls of the feet, knees yielding. More expert gymnasts may swing themselves off the bar either with the backward (fig. 10) or forward swing, well bending the back (II to III according to distance); but were a beginner to attempt this he would be almost certain to come down upon his face or back.

After some practice the hands may be momentarily lifted off the bar with the backward swing (II), clapped, or struck against the thighs (III), or even feet (IV). Whilst swinging we can also change grasp, first hand after hand (II), then both hands together (III), and this change can take place during the forward or backward swing. The change can also be combined with turning to the right or left (II) or right or left about (III) at the end of the forward swing.

296. *Changes in the manner of hanging.* The simplest of these exercises is to change from hanging bar in front to bar behind, by a wrench in the shoulder joint (II). This exercise is easiest if we hang with arms spread out. Other changes are, from hanging by the hands to hanging by the fore-arms or arm-pits, bar in front or behind. And changes of this kind may be combined with turning, as for instance: — hang sideways, swing, turn to the right about with the backward swing, bring your arms to the rear and throw them over the bar, and you will find yourself hanging by the arms, bar behind (fig. 34).

THE RISE INTO THE REST.

WE understand by this the passing over from hanging at the bar (fig. 1) to the rest upon the bar (fig. 5). This transition can be effected either with a jerk, a steady pull, or a swing.

297. *Rising and sinking* is the preparatory exercise of this group. We hang sideways or crossways, and by bending the arms raise ourselves until we touch it with the mouth, chin or breast ("breasting the bar") when hanging sideways; or until we touch it with the shoulder (alternately the left and right shoulder) when hanging crossways. The easiest way to rise and sink is to hang sideways with reversed grasp (I). When used as a test the gymnast is to hang sideways, ordinary grasp, and is to rise until able to touch the bar with the chin the mouth being above it.

Rising and sinking, hanging by one hand, is a feat but rarely accomplished. On first practising it, the disengaged hand grasps the wrist, the fore arm or upper arm.

Rising and sinking, hanging sideways, bar behind, or hanging sideways with twisted grasp, are difficult exercises (III).

298. The easiest way of *rising into the rest* is as follows. Hang sidewise, doublegrasp (figs. 1 and 4). Bend the arms, and with a jerk and corresponding kick of legs place one forearm upon the bar; then bring up your other forearm, and push yourself up into the rest (II). Having accomplished this, take the ordinary grasp, and try to bring up both forearms together, without jerking the legs (II).

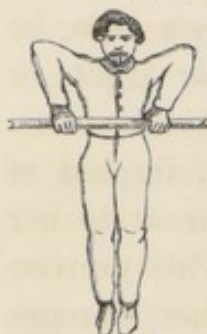


Fig. 11.

299. Instead of placing our arms upon the bar, we can go into the drop rest (fig. 11), either one arm after the other or both together, before rising into the rest (II).

300. The *Up-rise*, when performed as it ought to be by a practised gymnast, is effected without any pause, and can be done either quickly with a jerk (II), or slowly with a steady pull (III). The difficulty of the exercise is increased by grasping reversed (IV). On the other hand some advantage is gained by merely bending the wrists over the bar. The up-rise, grasping with one hand only, is a feat but rarely accomplished.



Fig. 12.

We can also rise into the rest without bending the arms. In order to accomplish this, the back is bent and the chest thrown forward, whilst hanging (IV).



Fig. 13.

The up-rise bar behind is much less of a favourite than the preceding exercises: Hanging sideways bar behind, reversed grasp (compare fig. 3), we go into the drop rest, first with one arm, then with the other (fig. 13), and then push ourselves completely up into the rest. Having accomplished this we try to bring both arms together into the drop rest, and do this either with a jerk (III) or with a steady pull (IV). —

A pleasing and at the same time easier variety of this exercise is as follows, — having gone into the drop rest with one arm, we give up the grasp with the other hand, and turning to the left or right about, as the case may be, grasp the bar in front. We thus find ourselves in the drop rest, bar in front (fig. 11), whence it is easy to rise completely into the rest (III).

A similar exercise can be performed hanging crossways. Suppose we hang crossways, bar in front (fig. 4); we rise to the drop rest upon the right arm, let go with the left, turn to the left about, and again grasp with the left to the rear. We then find ourselves in the drop rest, bar behind (fig. 13), and the remainder of the task is comparatively easy (III). Hanging crossways, bar behind, this up-rise is no trifling matter (IV).

301. The *Up-swing* is a rise into the rest with the aid of a swing. Hanging sideways we swing forwards and backwards, bending the arms, and raise ourselves into the rest with the backward swing (II). After some practice the arms, may be kept straight.

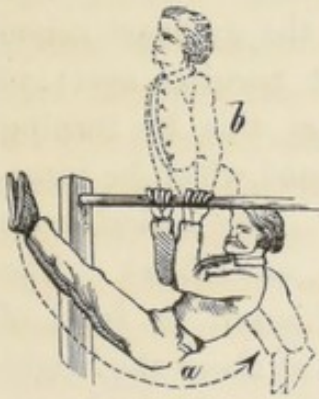


Fig. 14.

Learners desirous of soon accomplishing this fine exercise, are first to swing themselves up so as to hang by one or both forearms (I), next up into the rest upon one or both forearms, then up into the drop-rest upon one or both arms, and finally into the rest upon both arms, but leaning with the stomach upon the bar (II). The up-swing is easiest with reversed or double grasp (II), more difficult with ordinary grasp (III). Keeping the arms bent is of great use to learners.



Fig. 15.

302. The *Up-start* is an exercise similar to the preceding. Hanging sideways we swing our legs up forwards until the shins touch the bar, the arms being kept straight. With the backward swing we rise into the rest, bending the arms (II)

or keeping them straight (III). The "up-start" is easiest with ordinary or double grasp (II), more difficult with reversed grasp (III). The "up-start" is also practised merely raising the legs forwards to a horizontal position (IV).

The preparatory exercises for learners are the same as for the up-swing.

Having succeeded in rising into the rest once, we must try to perform these exercises several times in succession, by again sinking down to a hanging position after every rise, with a swing or without. We may also state that this series of exercises, offers some of the most pleasing modes of getting into the rest preparatory to performing some other exercise, such as swinging round the bar, vaulting etc.

CIRCLING THE BAR.

303. IN the preceding series of exercises the gymnast raised himself into the rest upon the bar without turning over; in the series which now follows he accomplishes this by turning head over heels, the bar being the axis around which he turns. We call this performance "*circling the bar*". The easiest mode

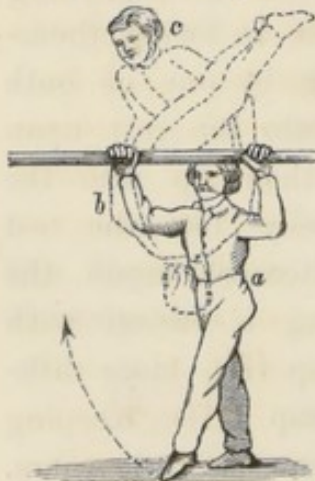


Fig. 16.

of accomplishing it is as follows. The young beginner places himself in front of the rack, which is fixed at about the height of his shoulders. He grasps the bar with both hands (reversed grasp is easiest), springs off the ground, throws up his legs forwards, at the same time bending the arms, and turning over, pulls himself up into the rest upon the bar. (Fig. 16.) Beginners may be allowed to bend the legs.

304. We can also circle the bar by starting from a hanging position: — swing moderately, bend the arms with the backward swing, throw up the legs and circle the bar with the forward swing (II). This exercise is rendered more difficult if we discard the aid of a slight swing, and raise our shins

slowly to the bar (see fig. 15 a), without bending the arms, and then turn-over (III); or by taking a full swing (III).

305. *Clear circle and over-swing.* This exercise is first practised from a standing position, the bar having the height of the chest or shoulders. The gymnast grasps the bar, springs off the ground and bending the arms swings himself round and over it, without touching it with the body, and thus again comes into the standing position (II). By degrees the height of the bar above the ground is increased, until the gym-

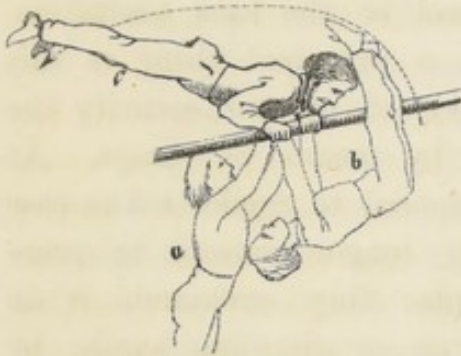


Fig. 17.

nast is able to hang at it freely, and to circle and swing over it by means of a full swing (III). Expert gymnasts after having cleared the bar can push themselves off it backwards, coming down upon the ground at a greater or lesser distance from the rack (II—IV).

306. *Circle, from the rest, bar in front.* This is most easily accomplished backwards. The gymnast being in the rest, bends his arms and leans upon the stomach, throws up his legs forwards, and following the impulse given turns over backwards (keeping the body all the while close to the bar) and thus again gets into the rest (II). The same exercise can be accom-



Fig. 18.

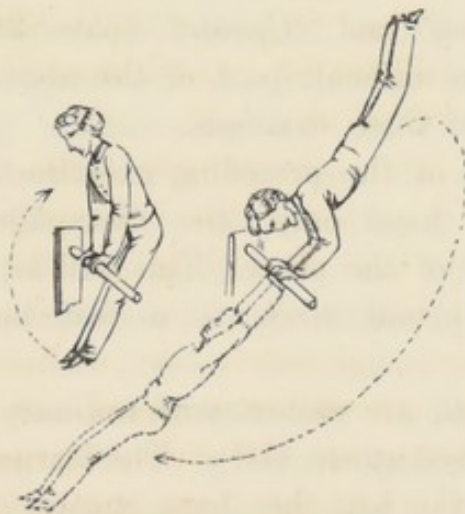


Fig. 19.

plished without touching the bar with the body, as a clear circle (III). Our illustration shows the starting position for the latter mode, a frequent practice of which will enable the learner to accomplish the feat

known as the "*Grand circle backwards*" (III). In the grand circle the arms are more or less straight. On starting, the gymnast throws back his legs and rises until he nearly stands upon his hands (ordinary grasp!).

On swinging round there must not be the least hesitation. Having a firm hold of the bar is a principal thing in this and similar exercises. For the sake of greater security the wrists may be attached to the bar by means of straps. At all events the leaders should be prepared to render aid in case of accident. Gymnasts are not any longer content to practise this grand circle pure and simple: they ornament it in various ways, by momentarily raising or clapping hands, by combining it with the lever resting upon the arms (see further on, par. 373) etc. (IV). —

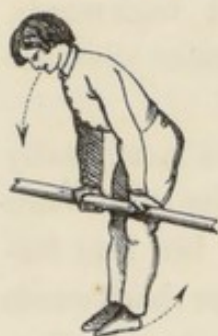


Fig. 20.

307. The *Circle forwards*, from the rest sideways, is more difficult than the circle backwards. Fig. 20 shows the starting position. The exercise is easiest with ordinary grasp; whilst turning, the hands are skilfully moved round the bar (II).

We can also circle the bar forwards without touching it with the body (Clear circle forwards, III), or perform the *Grand Circle forwards* (IV), the hands having in both cases *reversed grasp!* Both these exercises are comparatively easy to those who are able to perform with ease the exercises described as "*Upswing*" and "*Upstart*" (pars. 301 and 302), for the latter and more difficult part of the above circles is nothing else but one of these exercises.

308. The whole of the preceding exercises can be performed grasping with one hand only, the disengaged hand usually grasping the wrist of the other. This will be found extremely difficult, and the *grand circle* is a feat but rarely accomplished.

309. *Back-circles*, are easiest with ordinary grasp (II), more difficult with reversed grasp (III). The learner takes his position sideways to the bar, his back turned towards it. He then raises his arms backwards, grasps the bar and hangs as

in fig. 3. He now brings up his legs backwards, until they touch the bar (fig. 21), and by a powerful effort of the arms, raises himself and turns over it, so as to get into the rest upon it, bar behind, or into a sitting position.



Fig. 21.

This exercise can be done either with a steady pull, or with the aid of a swing (II).

310. If the gymnast is possessed of the necessary strength he can do the *back-circle clear*, and swing himself over the bar, without touching it with the body, so as to come to a standing position (compare par. 308). Learners should first try to swing themselves over into the drop rest (see fig. 13), then so as to hang by their arms (fig. 34), and finally into a standing position (III).

311. *Back-circle forwards from the rest, bar behind.* This exercise again is kindred to those described par. 306. The Back-circle forwards is a favourite exercise (II). The gymnast drops down from the rest into the drop rest, bringing up his legs forwards, and circles the bar with the backward swing, keeping his back close to it. The hands have the reversed grasp.



Fig. 22.

The same exercise may be done by main strength, without a swing, the gymnast passing in the course of his circuit through the lever described par. 320.

A *grand Back-circle* (bar behind), cannot properly be accomplished; but the gymnast, by dropping down from the rest into the hanging position (fig. 3), and finishing by circling the bar as described in par. 310 can do an exercise nearly approaching it. The swing must not to be broken (IV).

312. The *Back-circle backwards* (bar behind) (III), is an exercise easily understood though difficult to perform. The hands having reversed grasp, are moved round the bar, the back being bent as much as possible. — This exercise can be done with a swing (III) or by main strength (IV).

313. *Back-circle outside the hands.* We have hitherto circled the bar between the hands, but we can also circle it

outside of them. We take the double grasp for that purpose.

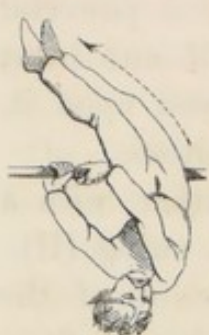


Fig. 23.

Learners may be allowed to hitch in the instep of the outer legs, whilst swinging with the other (III).

314. Another variation in circling, is effected by facing to the left or right about whilst circling. Thus, if we face to the right about, whilst circling the bar as described par. 304 or 306, we find ourselves at the conclusion of the circling seated upon the bar, or in the rest upon it, bar behind (II—III).

315. Lastly, we have to mention the various modes of leaving the bar, as far as they belong to this series. Being in the rest sideways, bar in front (see fig. 5), grasp reversed, we swing ourselves off forwards by turning over. The body ought to be kept perfectly stiff (I), but beginners may be allowed to lean upon the bar, and to bend the arms and legs (I). In a similar manner we turn over backwards, from the rest sideways, bar behind. In this case also the body is kept stiff, and the hands let go the moment the legs are in a suitable position for jumping to the ground (I). Beginners are allowed to sit upon the bar whilst turning over (I).

HANGING HEAD DOWNMOST.

316. *Hanging sideways, head-downmost, and bar in front* is by



Fig. 24.



Fig. 25.

no means one of the easiest exercises, if the legs are straight and the thighs touch the bar but slightly (II, fig. 24). Beginners are therefore allowed to bend the back and either to place their insteps against the bar, or to assume a squatting position, the soles of the feet being beneath the bar (fig. 25, I—II).

We can also pass one leg between the arms and *hang* then *sideways, head downmost, astraddle* (II).

We travel in the above positions, moving hand after hand (II) or both hands together.

317. *Hang sideways, head downmost, bar behind, either with legs extended upwards (fig. 26 a) or forwards (b) (II).* In this position we can also travel along the bar (II—III).

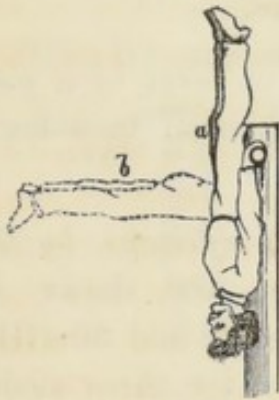


Fig. 26.

318. *Hang crossways, head downmost.* It can be done either with legs extended forwards (I) or extended upwards (II), and in the latter case the legs may either be locked or astraddle, as in our illustration.



Fig. 27.

If we hang in this position with legs extended forwards as in fig. 26 b, we can sway or spin to the left and right, without giving up the grasp, but if we change grasp, one hand after the other, we can turn round completely, an exercise known as the "*Roasting jack*" (II).

Travelling in this position is also to be done (II—III). —

319. The *Turn-over, passing legs between arms* can be done steadily or with a swing. Beginners do it from the stand (I), more expert performers from a hanging position. The legs are thrown up and brought into the position shown in fig. 25. The turn is then continued until the gymnast hangs sideways, bar behind (fig. 3). The way back is found easily. The legs should not be crossed.

The same exercise may be done hanging or standing crossways, though it is difficult, especially for a stout man (III).

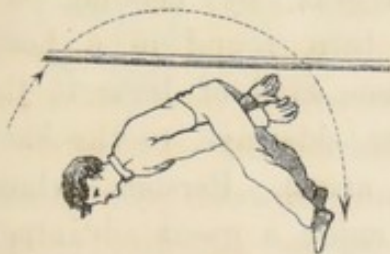


Fig. 28.

320. *Turn-over and cut-away.* A more attractive mode of turning over crossways is shown in fig. 28. The legs are straddled, and after three quarter turns have been accomplished,

with the aid of an unhesitatingly strong spring and swing, the hands yield their grasp, and the gymnast finds himself on his legs (III). Careful assistance must be rendered for this feat.

LEVERS HANGING BY THE HANDS.

The term "lever" is taken from the beam or lever of a pair of scales. The gymnast in all levers finds himself in a horizontal position.

321. The *Back and Front levers, hanging sideways, by the hands*, are shown in

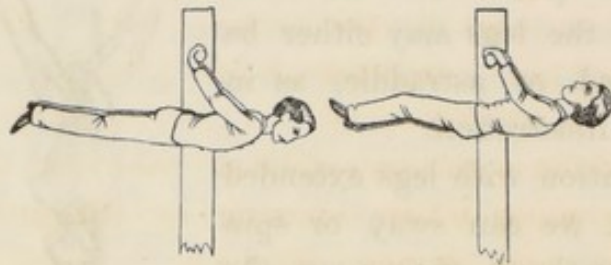


Fig. 29.

Fig. 30.

figures 29 and 30 (III).

There are three modes of getting into this horizontal position: — either we hang sideways, bar in front or behind, and raise our

legs, keeping the body stiff; or we start from hanging head downmost (an easier mode); or we start from the rest, the latter especially when a back lever (bar behind) with reversed grasp, is to be accomplished.

322. *Back and Front levers, hanging crossways*, are accom-

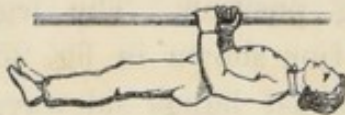


Fig. 31.

plished in a similar manner (III). Fig. 31 shows the front lever.

323. Levers are rendered less difficult

if we shorten the length of the gymnast by allowing him to bend or raise his legs or to straddle. On the other hand they can be rendered more difficult by requiring the performer to rise and sink by bending the arms, to travel along the bar, to turn round in a horizontal direction, or to change from one kind of lever to the other (as for instance from front lever sideways, to the back lever, the legs passing between the arms). Persons, whose lower extremities are badly developed enjoy a great advantage in these and similar exercises, — though at what a cost!

324. The *Side lever* (III). You hang by one hand only, and turn one side towards the bar as explained par. 529 (III).

HANGING BY THE ARMS.

325. We can hang either by the elbow joints, or by the arm-pits (upper arms). Fig. 32 hangs sideways by both fore-arms, bar in front; fig. 33 in the same manner by the arm-pits. We can also hang by the arms, bar behind (compare fig. 34), or by one arm (I).

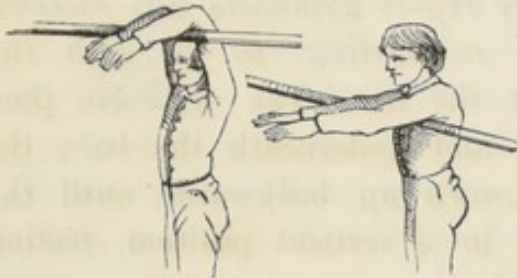


Fig. 32.

Fig. 33.

326. Having mastered these not very difficult exercises, the leader will introduce swinging whilst hanging by the arms, travelling along the bar, and changes between the various modes of hanging. These last afford some excellent practice; such as changes between hanging by the hands and fore-arms, or between fore-arms and arm-pits.

One mode of travelling deserves to be specially mentioned. Suppose you hang by the fore-arms, bar behind; let go the right arm, face to the left about, and throw it over the bar. You thus hang by the fore-arms bar in front. Now let go the left arm, face, again to the left about, and throw your left arm over the bar behind you, and you hang bar behind, as at first (II).

327. *Arm-Circle, bar behind* (muscle-grind). This exercise is easiest forwards (I), more difficult backwards (II, fig. 34). The arms should close firmly round the bar in order to render the friction less painful.



Fig. 34.

You start from the rest, bar behind, raise legs forwards, drop down in your arms, and circle round with the impetus thus obtained.

This exercise may be rendered more difficult by extending one or both arms sideways (fig. 35); by going with one arm into the drop rest etc. (III).

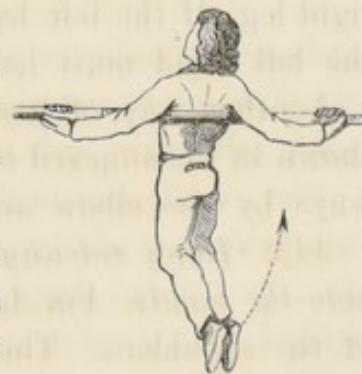


Fig. 35.

328. *Arm-Circle backwards, bar in front* (II). Our illustration requires no further explanation.

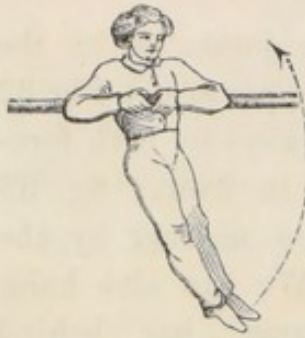


Fig. 36.

Arm-Circle forwards, bar in front (III). In this, only expert gymnasts will succeed. It is best, on starting, to lie with the stomach on the bar. The arms are then passed over and underneath the bar; the legs are thrown up backwards, until the gymnast is in a vertical position, resting upon his fore-arms.

329. *Arm-Circle sideways* (III). We hang by the pit of one arm whilst the hand of the other grasps the bar. Our position towards the bar is, of course, crossways.

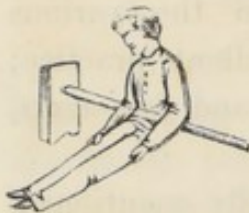


Fig. 37.

330. *Arm-Circle, resting upon the elbows* (II). The gymnast, on beginning this exercise, leans upon his stomach and rests on the elbows. He then swings his legs forwards, the hands are placed against the thighs or grasp the trousers, and he revolves forwards or backwards.

wards.

HANGING BY UPPER AND LOWER EXTREMITIES.

331. *Hang crossways by both hands and one leg.* The



Fig. 38.

gymnast places himself crossways beneath the bar; takes double grasp, right hand in front; springs off the ground, and hangs in his right leg. If the left leg is to be hooked the left hand must be in front (I). —

Another way of hanging crossways is shown in the annexed cut: hanging crossways by one elbow and one leg (I).



Fig. 39.

332. *Hang sideways by both hands and one leg, knee outside the hands.* For beginners the rack is placed at the height of the shoulders. The gymnast places himself crossways beneath the bar takes double grasp, right hand in front, brings

up his right leg and hooks it over the bar. He then sways round to the right, so as to hang sideways to the bar, and changes grasp with the left hand. The left leg is to be extended rather sideways, in order to maintain the sideways position. It must, be kept straight, with toes turned out. The arms are straight also.



Fig. 40.

When once in this position, the beginner can *travel* along the bar, or *swing*, the left leg giving the impulse by being raised forwards and backwards. If the impulse imparted is strong enough, it will bring the gymnast into the seat upon the bar (I). We may here state, once for all, that in swinging and twirling (that is repeatedly swinging round the bar) the disengaged leg should be kept perfectly straight, and the centre of gravity of the body should be removed as far as possible from the axis formed by the bar.

333. *Slanting swing-up, and twirl.* Beginners do not always succeed in the swing-up to the seat explained in the preceding paragraph. They are therefore allowed to place the left elbow over the bar, the hands grasping it firmly. They then give themselves an impulse with the left leg, by first raising it in the direction of *a*, and then bringing it back in the direction of *b*. This swing, if done properly, will carry them into a leaning position upon the bar, from which they can rise into the seat or rest (I). This swing-up is also practised backwards, and can be continued as a "*Twirl*" (I).

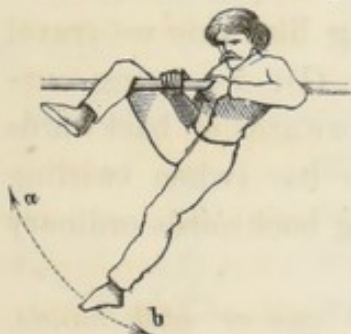


Fig. 41.

334. The *Twirl*, hanging by both hands and one leg, knee outside the hands, is similar to the preceding exercise, with this exception, that the gymnast grasps the bar with the hands only (see fig. 40) instead of putting his one elbow over it (fig. 41). The start for this and similar twirls is easiest from a sitting position. Raise yourself on your hands until the sitting leg is clear off the bar; raise your other leg backwards, and then throw yourself backwards with all your might. When

twirling backwards (which is the easier mode, I) the hands have the ordinary grasp, when twirling forwards they have the reversed grasp (II). We can also twirl holding by one hand only (III).

335. *Hang sideways by both hands and one leg, knee between the hands.* This mode of hanging ap-



Fig. 42.

pears the most suitable for most purposes, and gymnasts avail themselves of it most frequently. For beginners, the bar is placed at the height of the shoulders, and the exercise is accomplished

according to the rules given par. 332.

More expert gymnasts get into this position by passing the leg between their hands, though unless this be done very neatly, it scarcely deserves commendation.

Travelling, swinging and twirling in this position are easily understood on referring to pars. 332 to 334.

336. *Hang by both hands and one leg, knee inside both hands.*



Fig. 43.

This rather incommodious way of hanging is shown in fig. 43. Hanging like this we travel along the bar and swing (I); we swing ourselves up into the seat, forwards or backwards (II), and twirl round the bar (when twirling

forwards we take double grasp, when going backwards ordinary grasp).

337. *Hang sideways by both legs and one or both hands.*

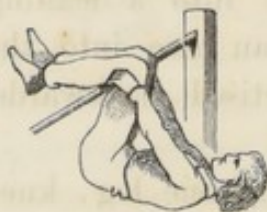


Fig. 44.

There are several modes of hanging in the manner described in the heading.

a. We can *hang sideways by both legs and both hands, knees between the hands*: — Grasp the bar, throw up your legs forwards, pass them between the arms (see par. 319),

hook them over the bar.

b. We can also hang in a similar manner, but with both *hands between the legs*: — grasp bar, hands close together, throw up your legs forwards, straddle and pass them beneath the bar, and hook them in outside the hands (look at fig. 45 turned upside down).

c. We can further hang in the above manner, having *both hands on the same side of the legs*: — Grasp the bar (double grasp is the handiest), and swing up both legs, hooking them on, to the right or left of the hands. The hands are close together.

d. Lastly we can hang, having only one hand between the legs, the other outside.

Changes between these various modes of hanging are brought about easily, either by changing grasp, or by changing the position of the legs; and by turning round we can change from one side of the bar to the other (II).



Fig. 45.

338. Whilst hanging in any of the above positions, we can by means of a vigorous swing, raise ourselves into a sitting position upon the bar. (Up-swings) fig. 45 illustrates one of the more attractive modes of swinging

up (III).

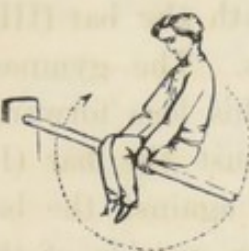


Fig. 46.

339. *Sitting Twirls.* Twirling whilst holding to the bar with one or both hands and both legs, is easier than the swinging up. We always start from a sitting position. When going round backwards we have the ordinary grasp, when going round forwards the reversed grasp, excepting when both hands are on the same side of the legs, when we take the double grasp (outer hand reversed grasp).

The twirl may be varied by changing the grasp with each revolution, for instance, we start with legs between the hands, with the second revolution we place one hand between the legs, with the third the other hand also, and so forth (III).

The sitting twirl both hands on the same side of the legs, is also done from the rest bar in front. From the rest (double grasp), face about, sit on the bar, and twirl once round backwards, until you are again in the rest (III).

The *Twirl* holding by one hand only, is a good preparatory exercise for the hock circle (par. 359). The hand grasps first between the legs, then on the outside (III).

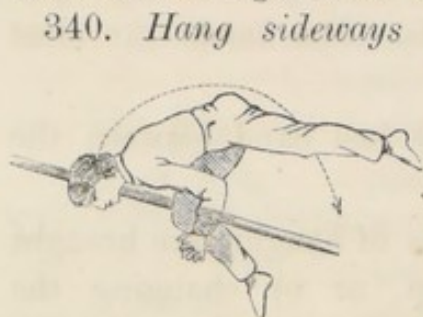


Fig. 47.

340. *Hang sideways by one leg, the hands grasping the shin* (I). There is little danger in hanging in this way, though swinging occasions some pain, especially if the arms do not firmly enclose the bar. Swinging up into a sitting position and twirling (*tumbler twirl with one leg*) are exercises of the II. course.

There is also a twirl in which one hand grasps the shin, whilst the other grasps the bar. Fig. 47 shows the starting position for the twirl backwards.



Fig. 48.

341. *Hang sideways by both legs the hands grasping the shins* (I). The hands may be folded or not. The twirling in this position (*Tumbler Twirl*) is by no means easy; contrary to the general rule it is considered easiest forwards (II).

We can twirl also while grasping only one shin with both hands, in which case one arm is passed between the legs beneath the bar (III).

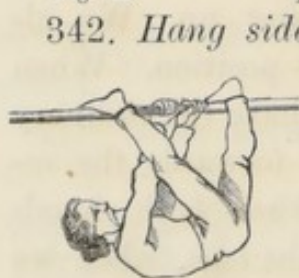


Fig. 49.

342. *Hang sideways by hands and insteps.* The gymnast grasps the bar, brings up his legs forwards and places his insteps against the bar (I). The insteps can be placed against the bar either between the hands or outside of the hands, as in fig. 49 (I).



Fig. 50.

343. *The lovers knot.* The gymnast grasps the bar, raises his legs as in fig. 49, slings them from the outside round the arms, passes his feet beneath the bar and hooks in his insteps between the hands (II).

344. *The nest* (hanging sideways by hands and insteps, bar behind). The gymnast grasps the bar, places his insteps against it between the hands, and then squeezes his body through until he is in the position shown in fig. 50 (I).

Instead of hooking in the insteps between the hands, they can be hooked in outside of them, the legs straddling. The nest can also be made hanging by both hands and one instep; hanging by both insteps and one hand; or hanging by one hand and one instep (II). The stomach being exposed to a considerable strain whilst doing the nest, the leader must carefully support beginners.

345. *Instep swings off.* If we go into the rest upon the bar, and place one or both our insteps against it we can swing ourselves off forwards, either so as to get to hang by the hands; or turning over come to the ground, the latter being



Fig. 51.

easier. We can thus place one instep between the hands (I); one between, the other outside the hands (II); both insteps outside the hands, the legs straddling, as in fig. 51 (II); both insteps between the hands (squatting) (III). If we do not remove our insteps from the bar whilst turning over forwards, we get to hang as shown in fig. 50 (the nest). This exercise requires however very much care (IV).

346. *Swing off kneeling.* Previously to swinging themselves off the bar with insteps placed against it beginners should be taught to swing themselves off kneeling, which is much easier (I).



Fig. 52.

Expert gymnasts swing themselves off also with soles placed upon the bar (III).

347. *Instep-Twirls.* If the exercises describes in par. 345 are practised frequently, gymnasts will soon learn to swing themselves completely round the bar without the insteps loosing hold of them. These *instep twirls* are of course only done forwards. The easiest mode is to place only the instep of one leg against the bar whilst hanging by the hock of the other leg (compare fig. 42) (II). Next follows the instep twirl straddling (fig. 51) (III), and finally the instep twirl squatting (III). These twirls require a very superior swing and firm grasp, and should be practised with great care.

348. The *Hammock* (hang crossways by hands and insteps, bar behind). This exercise is shown in fig. 53. The gymnast,

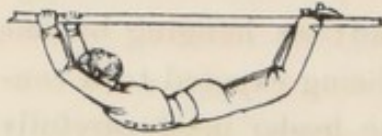


Fig. 53.

in order to get into this position places himself crossways beneath the bar, grasps it (double grasp) swings up his legs and fastens them with the heels upon the bar. This is the

first and easiest part of the exercise: he now hangs crossways, bar in front. In order to get the bar behind, he has to turn round, changing the grasp of the hands and in a corresponding manner the hold of the feet. On again leaving the rack, the gymnast is not to let go his feet, for that is attended with danger, but he is to turn round in the same way he came. Careful assistance is required for this exercise.

349. The *Turnspit*. By slightly varying the position delineated in fig. 53, we are enabled to swing ourselves up into the rest

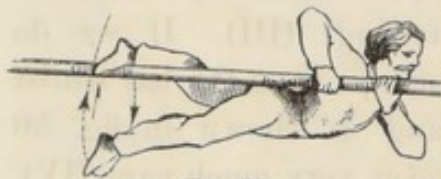


Fig. 54.

upon the bar, or even to twirl round it. Instead of hanging by both hands, we go into the drop rest with the right, and instead of holding fast with both insteps we only hold

by the instep of the left leg, whilst using the other leg to swing (III).

MILLS.

350. Mills are swings round the bar, during which we are astride with straight legs, and hold to the bar with one or both



Fig. 55.

hands only. Fig. 55 shows the mill side-wards, holding by one hand. On starting the gymnast raises his right arm and the right leg. He gives himself a swing by forcibly bringing down his arm, and closing with the right leg upon the left. If he yields to this swing, keeping the body perfectly straight, it will carry him round the bar (II). Instead of the left hand only

grasping in front, both hands may grasp there (II), or one hand may grasp behind the other in front (III).

351. Much more difficult than the mill itself is the swing-up into the seat whilst in the position peculiar to the mill. (*Swing-up to the mill sideways*) (III). If we look at the preceding figure upside down, and imagine both hands grasping the bar instead of one, we have the starting position for this exercise. The swing is given by opening (straddling) and closing (locking) the legs, whilst the arms keep the gymnast close to the bar. Neither the legs nor the body are to be bent.

352. The *Mill forwards or backwards*. We sit astride upon the bar, sideways. Going round forwards we take reversed grasp, going round backwards ordinary grasp. The impetus is given by opening and closing the legs. The body is kept perfectly straight (II).



Fig. 56.

A neat way of swinging up into the bar in the position peculiar to the mill. (*Swing-up to the mill forwards*) forwards or backwards is as follows. Hang sideways by the rack, ordinary grasp; swing both legs up forwards; with the backwards swing pass the right leg between your arms, again extend it, and pulling yourself up to the bar by bending the arms swing yourself into the seat upon it (III).

353. It may be stated here for the satisfaction of expert gymnasts that the mill backwards has been done without the bar having been touched with the fork of the legs.

HANGING BY THE LOWER EXTREMITIES.

HANGING BY THE HOCKS

(or bends of the knee).

In practice, the exercises in which we hang by the hocks or bends of the knees are to be preceded by some in which we hang by arms *and* legs. There are few beginners, however, not able to hang by the hocks. More frequently they feel timid in a position to which they are not accustomed, or they suffer from an unusual rush of blood towards the head. Leaders should take special regard to the latter circumstance. Careful help should not be wanting.

354. *Hang by the hocks, sideways (I).* This can be done freely or hands grasping the toes as in fig. 57. There are various neat ways of getting into this position (see par. 337).



Fig. 57. *To hang by one hock, alternately the left and right, is rather more difficult (II).*

Travelling along the bar, hanging by the hocks, is easily understood (II).

355. *Swing, hanging by one or both hocks, sideways or crossways (II or III according to manner of hanging and length of swing).*

356. *The hock swing-up, on the bar.* The gymnast hangs as described in par. 354 and by a full swing to forwards or backwards raises himself into a sitting posture upon the bar (III). At first the gymnast may be allowed to steady himself, when nearly up, by grasping the bar with his hands. If this exercise is done hanging by one hock, the hock of the disengaged leg is placed over the instep of the leg by which you hang (look at fig. 60 turned upside down).

357. *The hock-swing off the bar.* This is first attempted hanging by the hocks. The gymnast swings, until nearly in a horizontal position, when he lets go with the legs and jumps down to the ground (II). The arms are extended forwards and materially aid in giving the swing. Beginners should be held by the hands or by a strap passed round the waist.



Fig. 58.

Having accomplished with ease the above exercise, the gymnast may attempt to swing himself off, hanging by one hock (III).

A daring, though not very difficult exercise is the hock swing off the bar from a sitting posture (III). Previous to attempting this the gymnasts should drop from the seat sideways so as to hang by the hocks. In order to do this he

extends his arms forwards, doubles up his body, drops down backwards (the knees being well bent), and breaks the force of the swing by suddenly straightening (stiffening) his body. (*Hock-drop from the seat.*)

358. *The hock-spring off the bar* is an exercise similar to the preceding, but the gymnast passes from a hanging to a standing position without the aid of a swing, simply by a clever jerk. The higher the bar the easier this exercise (IV).

359. *The Hock-circle* is an exercise suitable only for very expert performers. The gymnast sits upon the bar sideways, doubles up, extending the arms forwards or downwards;

and then throws himself backwards without hesitation, well straightening his body, and revolving with the swing until he again finds himself in the seat (III). At the end of the revolution and before he sits down the gymnast may face about and go into the rest upon the bar (III).

The same exercise can be performed hanging by one hock (see fig. 60), forwards or backwards (III).

360. *The Lever, hanging by one hock.* This can be done hanging sideways or crossways. Fig. 61 hangs crossways, keeping his balance by placing the left foot against the bar. Whilst in this position we can sink and rise by bending the back (III).



Fig. 59.

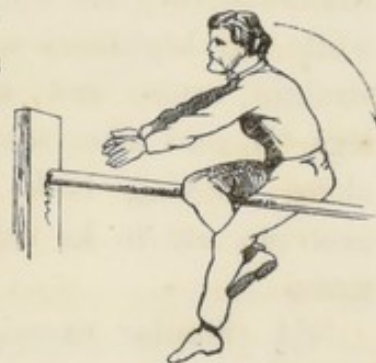


Fig. 60.

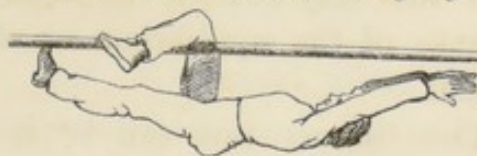


Fig. 61.

HANGING BY THE INSTEPS OR HEELS.

361. *Hanging by the insteps* is easiest if we open the legs (straddle) (II), more difficult when they are locked (III). To hang by the instep of one foot is rarely accomplished (IV). Beginners must not practise this exercise at a rack higher than their heads, nor others without assistance, unless they

are able to work themselves up to the bar with their hands by "travelling" along their legs.

362. *Hanging by the heels* is done in a similar manner. The feet and knees must be bent well (III).

EXERCISES IN THE REST.

REST WITH STRAIGHT ARMS.

363. The rack is placed about the height of the chest. Beginners are rarely unable to spring into the *rest sideways, bar in front*, and to travel along the bar to the right and left, bending the arms, and supporting themselves upon the stomach whenever they are obliged to give up the grasp. After a little while our beginners will be able to walk along the bar with straight arms, and without wriggling, or jerking with the legs (I), and after some further practice they will learn to hop along, moving both hands at once (II). The above simple exercises are to be done with ordinary, reversed, and double grasp.

364. Similar exercises are done in the *rest sideways, bar behind*.

Travelling may also be combined with facings, and we are then alternately in the rest bar in front and bar behind (II).

BALANCE REST.

In the balance rests no part of the body except the hands touches the bar, and the maintenance of the equilibrium or of the balance is thus rendered difficult.

365. *Balance rest sideways*. This balance rest can be accomplished in various modes. We start from the rest sideways. By arching the back we find ourselves in a balance rest (see



Fig. 62.

fig. 15, turned upside down) (II). Instead of this we can raise our knees so as to bring the soles of the feet between the arms (*Squatting balance rest*, see fig. 25 turned upside down) (II). Or we can extend both legs forwards between the hands, as in fig. 62 (III).

We can also extend one or both legs over

the bar, outside the hands (II and III). The latter position is shown in fig. 63.



Fig. 63.

Travelling along the bar, and turning, whilst in the balance rest (*Roasting Jack*), are difficult exercises (III). The turning leads us to —

366. *The Balance Rest crossways*, which can be done also upon one hand, and which admits of similar variations to those described in connection with the balance rest sideways (II—III).



Fig. 64.

DROP REST.

367. THE drop rest, as has been explained previously, is a rest upon the bent arms. It can be accomplished, with the bar in front or behind, and to sink from the rest with straight arms to the drop rest, and again rise to the former, touching the bar with the shoulders (II) or with the chin (III), according to the position of the gymnast. These are strengthening exercises. A slight swing will be found to facilitate their execution (see figs. 11 and 13).

368. We travel along the bar, whilst in the drop rest bar in front or behind, and can combine this travelling with turning; and whilst doing the latter find ourselves alternately in the drop rest bar behind, in the drop rest upon one arm, and in the drop rest bar in front (II). Travelling in the drop rest upon one arm is very difficult (III).

369. Changes of the grasp whilst in the drop rest, one hand moving after the other (II) or both together (III), require no further explanation, unless it be to draw the attention of the gymnast to the fact, that the change is facilitated by a springy motion of the arms.

370. *Stretching out the arms whilst in the drop rest.* This exercise is usually done bar behind (II), but can also be done bar in front (II—III). The hands grasp at a suitable distance from each other, and the left and right arms are stretched out alternately, without the hands giving up their grasp.

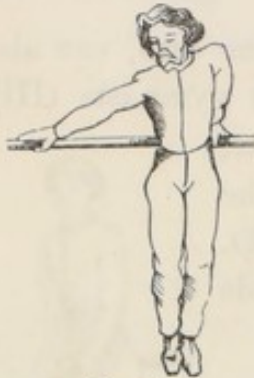


Fig. 65.

371. *Changes from the drop rest on one side of the bar, to that on the other side.* The change can be effected keeping the bar in front or keeping it behind.

Hang crossways, double grasp (fig. 4); rise to the drop rest on the left arm; again lower yourself to the position from which you started; change the relative position of the hands, and rise to the drop rest on the right arm, and so forth (II).

The change, keeping the bar behind, is much more difficult. Hang sideways, double grasp, arms apart. Turn-over, passing the legs between the arms. You thus hang bar behind, and accomplish the exercise proposed, by alternately rising to the drop rest on the left and the right arm.

The same exercise is accomplished as follows: — drop rest on the right arm; face to the left and grasp the bar with the left hand close to the right; sink, so as to hang with bent or straight arms, bar behind; and by a powerful effort raise yourself to the drop rest on the left arm, as indicated fig. 66. You are then in a position to change back from the side from which you came originally (III).

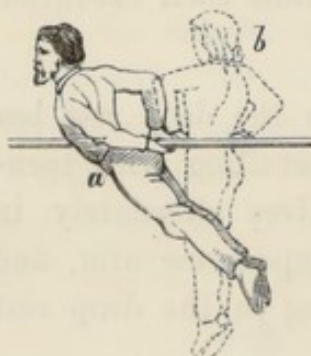


Fig. 66.

372. Our space does not admit of entering into a description of all the various exercises in the drop rest achieved by clever gymnasts. We confine ourselves simply to mentioning that a lever in the drop rest upon one arm has been accomplished; and that it is a task worthy of any gymnast slowly to sink from the drop rest upon one arm into a hanging position, and thence again to rise to the drop rest.

LEVERS IN THE REST.

373. THE gymnast starts from the rest sideways, having reversed grasp. The Levers are accomplished in various ways. We have a lever resting upon both elbows (II), the elbows



Fig. 67.

being turned inwards and placed against the loins or hips; a lever upon one elbow, the other hand, however, grasping, the bar (II); a lever resting upon one elbow, the

other arm being extended forwards (III).

A lever can also be accomplished by keeping the body in a horizontal position between both arms, without resting upon the elbows (*Free Lever*). (III.)

The levers thus described are sideways to the bar; by turning to the right or left whilst doing a lever, with or without changing grasp, our position gets crossways to the bar. We can also change from the lever upon one arm to the lever upon the other (III) and many other modifications are introduced by expert gymnasts. A very fine exercise is the free lever sideways (reversed grasp), turn over forwards, keeping the body perfectly straight, and making use of the impetus of the swing, again to rise into the rest or lever sideways. (Clear circle forwards from the lever.)

SITTING.

374. IF we go into the rest, throw one leg over the bar, then change the position of the hands, so as to bring our



Fig. 68.

leg between the hands, we sit sideways upon one thigh (fig. 68). If we now throw over our left leg, having first placed our left hand close to the right leg, we sit sideways upon both thighs. In a similar manner we sit astride upon the bar, having both leg perfectly straight (I).

If we are once seated upon the bar, we can travel along it with the aid of the hands, which is very easy (I), or without their aid, which is very difficult (III).

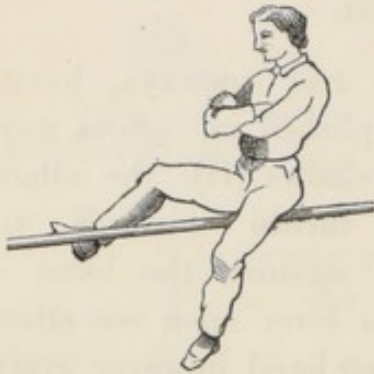


Fig. 69.

375. *Changing seat.* When sitting astride upon the bar, holding on behind (II), or not (III), throw over first one leg, then the other, then both legs at once.

LYING.

376. WE can lie at full length upon the bar, either upon the stomach, or upon the back. The former mode is comparatively easy, especially when the bar is grasped with the hands (II). Lying upon the back requires more care (III). The hands grasp behind the head, and the gymnast can turn over backwards, so as to sit astride upon the bar, or to a standing position (IV).

377. Levers, lying upon the stomach (II) or back (III), will be understood by a reference to the annexed cut. Learners should have their hands ready to catch hold of the bar in case they lose their balance. The swing off the bar, from these levers, without using the hands, is a daring feat (IV).



Fig. 70.

The back must be well bent, and it is advisable to practice first the drop backwards into the hocks (III).

KNEELING.

378. WE can kneel upon the bar, upon one or both knees, holding fast with the hands (I) or without them (II). A Lever, kneeling, (III) is accomplished by bringing the body and free leg into a horizontal position whilst kneeling upon the other leg. The swing off the bar forwards (reversed grasp!) has been mentioned previously (see par. 346).

STANDING.

379. THE Rack in small establishments may serve many of the purposes of the balancing pole. In the rest sideways we raise our knees and go into the standing position sideways or crossways (II).

380. The *Leaning position* in its various modifications can also be assumed on the Rack (II), compare par. 106.

381. *Standing upon a shoulder.* The gymnast sits astride, grasping the bar in front; he then kneels with one leg upon the bar, bends his back; places one shoulder upon the bar, and raises himself to the upright position (III).

382. *Standing upon the hands*, arms bent or straight (III), is done from the rest sideways, either steadily or with a swing. If once secure in this position, the gymnast may attempt to walk along the bar, to rise and sink (kissing the bar) etc. (IV).

VAULTING.

383. THE horizontal bar or rack may be used advantageously for many exercises described for the vaulting horse. At the bar these exercises offer some peculiarities, and to these we will principally confine ourselves.

Vaults into the rest (see pars. 192 to 196). The hands grasp the bar either before you spring off, or afterwards, as may be arranged by your leader.

384. *Mounting* is done in the same way as at the horse. The most careful aid should be given.

385. *Fcints, circles, exercises in the balance rest and changes of seat* are partly easier than on the horse, because the hands have a surer grasp.

386. *Vaults over the bar*, on the contrary, are more difficult, and some of them require a good deal of daring.

387. The bar offers peculiar facilities for practising the *somerset*. Spring up into the rest sideways, arch your back,

and turn over, as shown in fig. 71, without giving up the grasp until you touch the ground at *a*.



Fig. 71. a. b.

as shown fig. 72. The height of the rope, or its distance from the bar, are increased by degrees.

The same exercise can be done from a hanging position (when the bar is high), or from the rest sideways. The latter is a capital exercise.

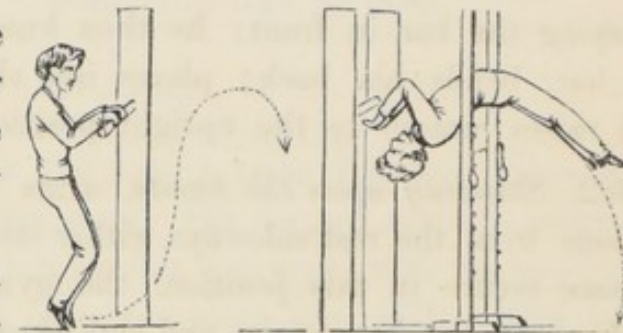


Fig. 72.

XVI. PARALLEL BARS.

Two bars, egg-shaped and easy to the grasp, are fixed on four posts parallel to each other. The distance from bar to bar should be equal to the breadth of the shoulders of the persons using them (say 18 in.). The ordinary height is that of the shoulders, but bars should be provided of less height. Bars which can be raised and lowered will prove of advantage. Our illustration shows a set of portable bars.

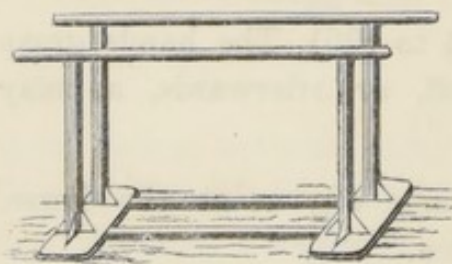


Fig. 1.

389. The exercises at the parallel bars are extremely useful for expanding the chest, but they should be practised in moderation, or they will do more harm than good.

The usual starting position for all exercises at the parallel bars, is the rest between the bars, crossways, as we should call it, with reference to the position of the gymnast towards the bars.

The rest with arms bent (fig. 3) is called drop rest. We

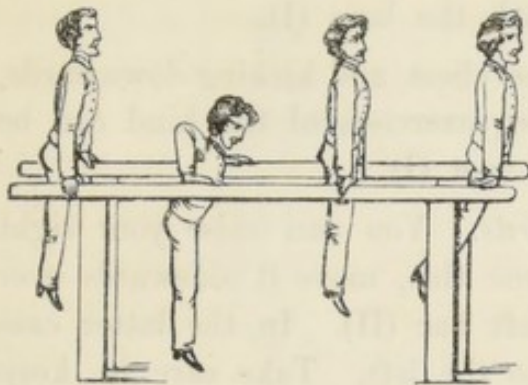


Fig. 2. Fig. 3. Fig. 4. Fig. 5.

distinguish between outside grasp (the knuckles are outside) fig. 2 and inside grasp, fig. 4. Or we place the hands on the tops of the bars as in figs. 3 and 5.

All exercises should be done left and right, as far as they admit of it.

The ordinary height of the bars is that of the shoulders, but when vaulting, swinging, turning over, etc. the bars should be lowered, in order that efficient assistance can be rendered to beginners. The leader generally stands outside the bars, and he passes his arms *underneath* them when giving assistance.

The squad is placed in the manner indicated in fig. 6, and when the squad is large, one man exercises at each end. This will prove of advantage, as many exercises at the bars

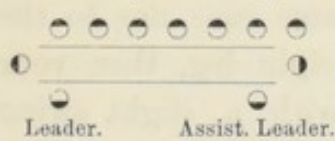


Fig. 6.

require a good deal of time in their execution. No one should be allowed to creep underneath the bars. The men must leave the bars in the manner shown by the leader, who is at liberty to introduce various vaulting exercises suitable for that purpose (see par. 463).

EXERCISES IN THE REST.

390. *The rest.* Place your hands upon the ends of the bars, spring off the ground, and go into the rest with straight arms (I, fig. 2). The heels are locked, the toes turned slightly out, the back concave and the head erect.

A neater way of going into the rest is as follows. Place yourself at the end of the bars; spring off the ground, swinging your arms forwards; and then grasp the bars (I — III, according to height).

391. *Face to the left or right.* You go up into the rest as before, and without giving up your grasp, you face or turn

to the left and right, until a line supposed to pass through your shoulders runs parallel with the bars (I).

392. Raising the knees to the chest and kicking downwards, kicking the thighs and other leg exercises of the kind can be done whilst you remain in the rest (I).

393. *Raising the legs, forwards.* You can raise your right leg forwards (I) and having done this, move it sideways over the right or left bar (II). In the latter case you may face to the left. Take care to keep your leg perfectly horizontal and straight, and do not touch the bar with it. Toes turned out!



Fig. 7.

You may next endeavour to raise both legs forwards as in fig. 7 (II). Having succeeded in this, open your legs (straddle), still keeping them free from contact with the bars (III).

394. *Raising the legs backwards.* One or both legs can be raised backwards, though not with the same ease nor to the same extent as forwards. First raise your right leg, then your left (I). Then raise your right leg and with a slight swing carry it over the bar behind, without however touching the bar. Lastly raise both legs — to enable you to do so lean



Fig. 8.

forwards (fig. 17) — open them, and carry them over the bars behind you. Remain in this position for some time without touching the bars with your legs (II).

395. *Arching the back* is shown fig. 8 (I). Instead of keeping your legs locked within the bars, you can open them and raise them over the bars (II).

396. *Drop rest.* This is a rest with arms bent, fig. 3. Beginners go into this rest at once (I), but more advanced men sink down into it from the rest with straight arms. You should lower yourself until your shoulders are on a level with the bars. *Sinking and rising* is an alternation between the rest with straight arms and the drop rest. Every time you sink, kiss one of your hands, or kiss the bar behind the hand, lowering for that purpose the elbow (II). —

397. *Rest on the fore-arms.* The elbows are inside the bars.



Fig. 9.

— We rise from this rest into the drop rest, or the rest with straight arms, either by raising arm after arm (I), or by raising both at once (II). Lower yourself in the same manner (*sink and rise*).

TRAVELLING.

THE term "travelling" is used to express locomotion. We can travel, moving hand after hand (walking), moving both hands together (hopping), and gliding along whilst in the rest upon the forearms.

398. *Walking* forwards and backwards. This is done at first with outside grasp (I), subsequently with inside grasp. The steps should be made in regular cadence and of equal length. The legs must remain perfectly quiet.

The *Stork walk* is a variation of this exercise in which the hand, before it completes the step, is lifted up high and made to touch the shoulder (II).

Walking may be combined with exercises of the legs. You can walk, for instance, extending one leg forwards (II), extending both legs forwards (III) etc.

399. *Walking sideways* is done between the bars (II). The hand in front grasps outside, that behind inside. Endeavour to maintain your sideways position to the bars.

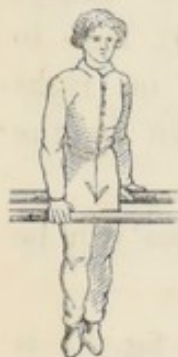


Fig. 10.

400. *Hopping* along the bars is done forwards, backwards and sideways, in the same manner as walking. Hop follows hop in regular cadence, Legs steady (I — II).

401. *Travelling in the drop rest*, is done forwards (I), backwards (II) and sideways (III).

The *Lion stride*, is a walk in the drop rest with very long strides. Go into the drop rest; give up the grasp with the right hand; swing the right arm in a low circle to

the front, resting meanwhile upon the left arm; and grasp again, with the arm at its full reach. Then transfer your weight to the right arm; give up your hold with the left hand, etc. (II).

402. *Waltzing* is a sort of travelling in which we keep continuously turning round. The preparatory exercises are as follows, —

- a. Go up into the rest between the bars. Face to the right and go into the rest sideways upon the bar on the right (fig. 11). Go back to your original position (I). The same exercise is done facing to the left.

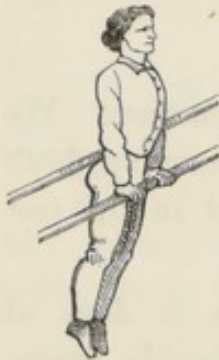


Fig. 11.

- b. Go up into the rest as before. Face backwards to the right into the rest sideways upon the left bar, which is then behind you. The left hand retains its grasp.

c. *Waltzing without gaining ground*, is done forwards and backwards, and if done rapidly it is a pleasing exercise. You keep on facing to the left or right, going successively into the rest sideways upon the left bar or upon the right bar. — When waltzing forwards you have the bar in front, when waltzing backwards behind (II).

- d. *Waltzing, gaining ground*. Go up into the rest, and successively face to the left (rest sideways on left bar, bar in front); face to the left (the right hand retains grasp; rest crossways between bars); face to the right (left hand retains grasp; rest sideways on right bar, bar behind); face to the right etc. as shown in the annexed diagram (II).



Fig. 12.

e. We need hardly mention that the above exercises can be done also in the drop rest (III).

403. *Travelling in the rest on the fore-arms* (see fig. 9) is done at first by simply gliding along the bars, arm being moved after arm. But it can be combined also with sinking and rising (II).

a. Rest on fore-arms; rise into the drop rest on the left arm; left hand a step in advance; sink to rest on left fore-arm; rise into drop rest on right arm etc. (II).

b. The "lion stride" with rest on fore-arms. — Rest on fore-arms; rise into drop rest on left arm; let go with the right hand and swing your right arm in a wide circle to the front, grasp the bar, and go into the rest upon the right fore-arm, etc. (III).

Other combinations we leave to the inventive genius of our readers.

SWINGING IN THE REST.

THE exercises of this group must be practised with due care. Beginners must not be allowed to swing high; they will have to practise assiduously for a long time before they are able to rival their older comrades. Swinging is one of the best exercises at the parallel bars, if done in reason.

404. *Swinging in the rest with straight arms.* Beginners swing as high as the bars (I), more advanced men swing to the extent shown in our woodcut (II), and expert ones until they stand head downmost upon the hands (III).



Fig. 13.

Swinging is done also in the rest sideways between the bars (fig. 10). (II.)

405. Swinging, keeping the body perfectly stiff (II). The body remains perfectly straight whilst swinging.

406. *Swinging* may be combined with movements of the legs. For instance, — straddle with every forward swing; with every backward swing; with every forward and backward swing (the legs are opened above the bars); or raise and lower one of your legs with each swing; or kick (II) etc.

407. *Travel, swinging.* These are attractive exercises. You hop forwards or backwards with every forward swing, backward swing or with both (II).

408. *Swinging in the drop rest.* The whole of the exercises described pars. 404 to 407 can be done also in the drop rest (II—III).

409. *Grasshopper swings.* In these swings you alternate

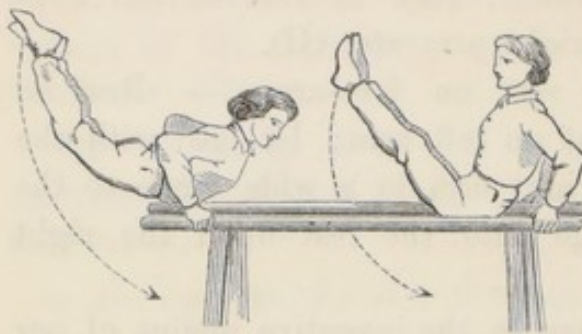


Fig. 14.

Fig. 15.

between the rest with straight arms and the drop rest. You can start from the drop rest or from the rest with straight arms, the latter mode being the more usual. In either case you can sink (or rise) with the forward swing (fig. 14),

the backward swing (fig. 15) or with both (II — III).

410. *Grasshopper Jumps* are done travelling along the bars forwards or backwards (II). You start from the rest with straight arms; swing your legs up behind, sink into the drop rest as they descend (fig. 14); hop forwards and go up again into the rest (fig. 15) with straight arms as the legs rise in front, etc. When travelling with the backward swing you begin to sink into the drop rest when your legs are up in front. These exercises should not be done to excess, but having attended the gymnasium for some time, you should travel along the bar in this manner at least once every time you visit it (II).

411. *Swinging in the rest upon the fore-arms* (I), if done sufficiently high leads to the position shown fig. 16 (standing upon the fore-arms). (III).

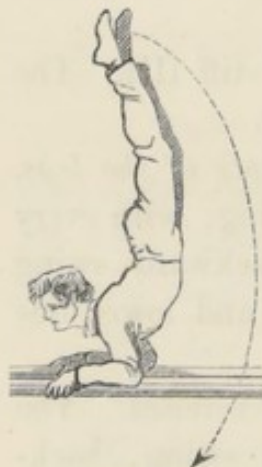


Fig. 16.

412. We can rise from the rest on the fore-arms to the drop rest, with the backward swing, the forward swing (II) or with both (III). For instance, — you are in the rest on the fore-arms; swing; when your legs rise behind you rise into the drop rest; and as the legs swing again forwards you go down again into the rest on the fore-arms, etc.

413. *Gliding along the bars* in the rest upon the fore-arms is done forwards and backwards, with the forward swing or the backward swing (II).

414. The change between the rest upon the fore-arms and the drop rest, as described par. 412, can be followed by hopping along the bars, forwards and backwards, a sort of grasshopper jump (par. 410). (III).

LEVERS IN THE REST.

415. THE levers at the bars resemble those described par. 373 for the rack. Beginners may be allowed to kneel on the bars, previous to going into the lever, but more expert gymnasts should raise or swing themselves into the lever at once.

Lever on two supporting elbows. Go into the rest; place the elbows against the hips; and go into the horizontal position (II).

Lever on one supporting elbow. Go into the rest; put your right elbow against the hip, and raise yourself into the lever (II). This lever can be done either lengthways along the bars or across them.

Change from the lever upon the right elbow to that on the left elbow. This is a difficult feat. Whilst transferring your

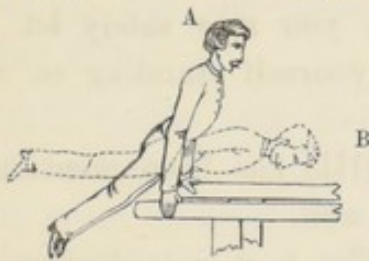


Fig. 17.

body from one elbow to the other you lean forwards, but keep yourself perfectly stiff (III).

The *Free lever* lengthways is shown fig. 17 B (III).

The *Lever on one arm* is the same described par. 373 of the rack (IV).

Travelling whilst in the lever, may be done in the following manner, — lever on right elbow; left hand a step in advance; change of lever to the left elbow; right hand a step in advance, etc. (III).

Spinning in the lever (turning in a horizontal plane) is done by changing grasp in a suitable manner (IV).

STANDING HEAD DOWNMOST.

416. *Standing upon a shoulder.* Beginners kneel upon the bars; place a shoulder upon the bar, close to the hand, head inside, and then raise themselves into the head-downmost

position (II). More advanced men raise themselves thro this

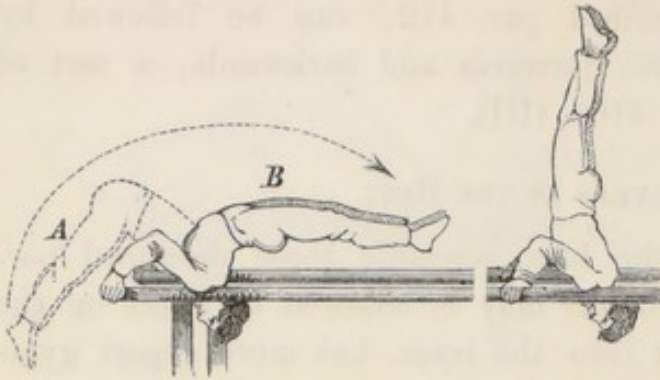


Fig. 19.

Fig. 18.

position from the rest.

Changing from one bar to the other, from the right to the left shoulder, will be understood easily (III).

A lever standing upon one shoulder is shown fig. 19 (IV).

417. *Standing on the neck.* Sit down on bar *a*, your legs outside. Grasp bar *a* with both hands. Lean backwards, until you lie with the nape of the neck on bar *b*. — Then, with a short swing, raise yourself until you stand head downmost (II).

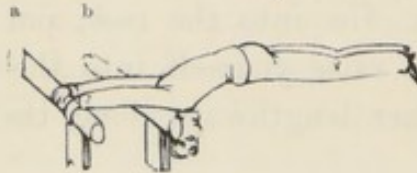


Fig. 20.

By turning over you get into a horizontal position

(fig. 20) — a sort of lever (III).

Once beyond the upright position, you may safely let go with the hands, and you then find yourself standing on the ground (II).

418. *Standing upon the fore-arms* (III) has been mentioned par. 411. — The back must be bent well.

419. *Standing upon the hands.* The best introduction to this exercise, is swinging of all descriptions.

First learn to stand upon your hands with arms bent; next swing yourself up with arms straight (III). The head should be bent backwards to keep the balance. The leader may support the shoulder and back, passing his hands underneath the bars. If you feel you are turning over, bend the arms and legs, and open your arms, and you thus fall into your fore-arms.

Having gained some proficiency in standing upon the hands, you may endeavour to sink and rise, by alternately bending and stretching your arms (IV).

Walking along the bars, standing upon the hands is done forwards (III) and backwards (IV).

Expert gymnasts frequently combine standing upon the hands with other exercises. Standing upon the hands, they lower themselves into one of the levers (IV), or straddle off at the end of the bars (III) etc.

CIRCLES.

The circles at the parallel bars are similar to those at the horse (pars. 210 to 221). At the bars also they are done with one or both legs.

420. *Circle forwards with one leg.* Go up into the rest in the middle of the bars. Raise the right leg backwards, and over the right bar; lift up your right hand for a moment to allow it to pass to the front; the leg then resumes its original position (II). All this must be done quickly and without any jerking, nor must the leg, which describes the circle, touch the bar.

Circle backwards with one leg. The leg is raised forwards over the bar and passed backwards, the hand being lifted as above (II). —

421. *Circles with both legs over one bar* are done forwards and backwards in the same way as with one leg. A swing will prove of much service on starting (III).

422. *Circle with both legs over both bars forwards.* Go up into the rest in the middle of the bars. Throw both legs over the right bar behind the right hand, fig. 21 A. Take a good swing and clear in succession the left and right bars, momentarily lifting up the hands to allow your legs to pass, and you find yourself in the rest (III).

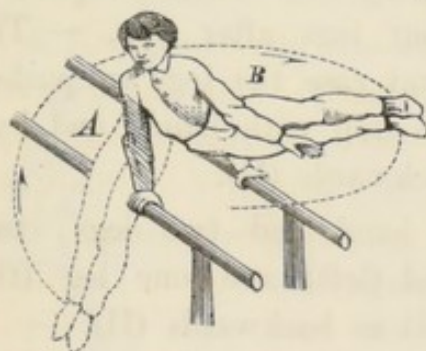


Fig. 21.

423. *Circle with both legs over both bars, backwards.* You start sitting in front of the right or the left hand (III).

EXERCISES IN THE LEANING POSITION.

424. THE parallel bars afford an excellent means of doing the exercises in the leaning position, in a cleaner manner than on the bare ground.

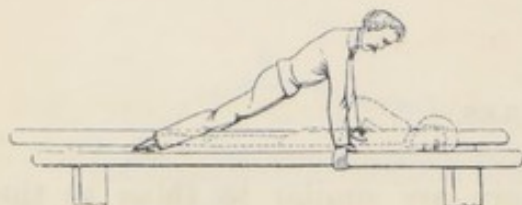


Fig. 22.

You sink and rise in this position, an excellent exercise for beginners. The body must be kept perfectly stiff.

The *Leaning position forwards* (I) is shown fig. 22.

You sink and rise in this

425. In the *Leaning position, backwards* your back is turned towards the bars and you look up to the ceiling (I). An alternation between the two is effected, by swinging forwards and backwards and placing your feet upon the bars alternately in front and behind your hands. The body must be kept perfectly stiff.

426. *Leaning position, resting upon the fore-arms.* Go into the rest upon the fore-arms; swing your legs up behind and place them upon the bars, body stiff (I).

An alternation or change between the rest upon the fore-arms, the drop rest and the rest with straight arms, can be recommended (I).

427. *Travelling in the leaning position.* The bars should be long. You can travel in different ways. Walk or hop forwards with the hands and drag your legs after you. — The same is done backwards: but in that case the legs are pushed along the bars (I). Lastly you can hop with hands and legs at the same time, forwards and backwards (II).

428. *Leaning positions* on one hand and two legs, two hands and one leg, or on one hand (left) and one leg (the right) are done forwards (I), as well as backwards (II). —

429. The *Leaning position with arms spread out.* Go up into the leaning position. Gradually push your legs backwards (keeping the body perfectly stiff) until your arms are almost in a horizontal position (III). Having done this pull up to

your starting position (III—IV). This exercise should be practised with care, the leader standing by, ready to support the abdomen in case of a break-down.

CHANGES OF SEAT.

430. *Sitting within the bars.* Let the beginner place himself between the bars, which should not be higher than his chest, place his hands upon them, spring up, and sit down on the left bar, as shown fig. 23. — He then jumps down again, and sits on the right bar, etc. He should sit fairly upon both thighs, his

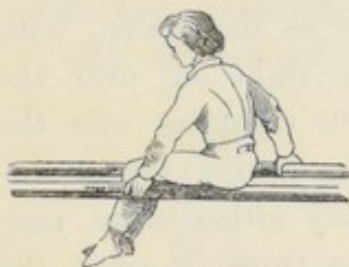


Fig. 23.

face turned inwards (I).

The change of seat may also be effected without the intermediate jumping down (I).

The change of seat may be accompanied by travelling along the bar in the following manner. — Place yourself at the end of the bars, grasp them, with the right hand rather in advance, spring up and sit on the right bar. Jump down, advance your left hand along the bar and spring into the seat on the left bar etc.

The same exercise can be done travelling backwards (I).

You can also travel in this manner without any intermediate jumping to the ground (I).

431. *Change seat, throwing over one leg.* This exercise admits of many variations, but we confine ourselves to the principal.



Fig. 24.

Go up into the rest, swing gently, and throw the right leg over the right bar (fig. 24). Lift it back again, swing and then throw the left leg over the left bar, and so on. — After a while you should accustom yourself to swing only once, and change seat in regular cadence, the leader counting 1 (forward swing), 2 (sit), 3 (lift out the leg), 4 (backward swing), 1 (forward swing) etc.

You then practise changing seat without this intermediate swing, by no means very easy if done gracefully. To sit down well in the fork is still more difficult (I).

Change seat, throwing the right leg over the left bar in front, the left leg over the right bar. This is done with, or without an intermediate swing (I—II), as explained above.

432. Changes of seat, throwing one leg over a bar behind the hands, are done in the same manner as the above, with and without an intermediate swing, viz right leg over the right bar, left leg over the left bar (I), or right leg over the left, left leg over the right bar (II). The latter exercise indeed, can be done in two ways. You may either cross your left leg in front of the right leg and then throw it over the right bar; or you can sit down first on the right thigh inside the right bar, and then throw your left leg over it backwards. This exercise, if done well, and with a rather high swing, is very graceful but difficult (III).

Changing from behind the hands to the front is done in two ways. Having thrown over the right leg over the bar behind the right hand, we can lift it out, swing forwards, and throw it over the right bar in front. This exercise is known as the "*Half-moon with one leg*" (I).

But if, instead of throwing the right leg over the right bar, we throw the left leg over the left bar, thus changing from one bar to the other, we have the "*Serpentine with one leg*" (I).

433. *Changes of seat with both legs locked* are done in a manner analogous to the preceding. We thus throw both legs over the right bar, in front of the hands, and then change to the left bar, with or without an intermediate swing (I). —

We change in a similar manner throwing the legs over behind the hands (I—II), fig. 25.

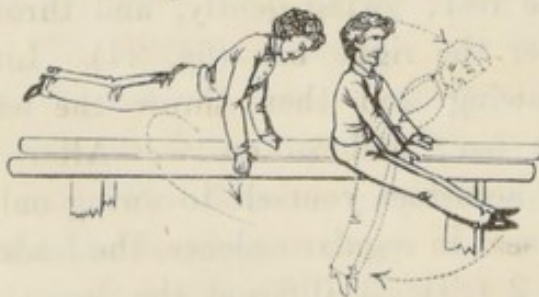


Fig. 25.

The half-moon and serpentine with two legs are changes from behind to the front as explained par. 432.

The change from behind to the front may be accompanied by a facing about. Having thrown both legs over the right bar in front of the hands, you face to the right about, shifting at the same time the position of your hands, that is, grasping the left bar with the right hand, and the right bar with the left (II).

The above exercises can be done also in the drop rest and with the grasshopper swing (III).

434. *Sitting astride on both bars.* You can sit in front of or behind your hands (fig. 26). A change from one position to the other, with hands stationary, is done with and without a swing between (I—II), and it is done also with a grasshopper swing (III).



Fig. 26.

If we continue changing from the rear to the front, placing our hands always in front again after each change, we travel along the bars. — In an analogous manner we are able to travel backwards. This travelling can be done with arms straight (II), and with a grasshopper swing (III).

Travelling forwards and backwards is done also by short hops, the hands being placed on the hips (II).

435. *The Shears backwards.* We have explained the characteristic features of the shears in par. 237 of the horse. Go up into the rest, in the middle of the bars. Swing, and

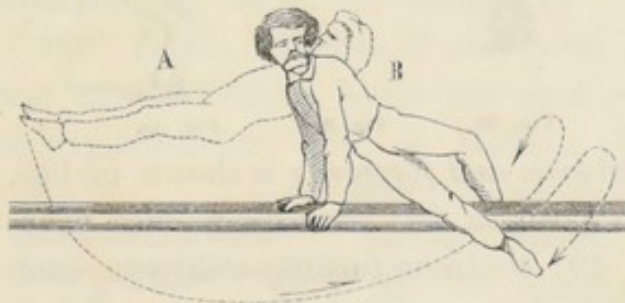


Fig. 27.

when your legs are up behind, cross them, face to the left or right and throw your left leg over the right bar, and your right leg over the left bar. Shift the position of your hands, complete your half face, and you sit with legs astride on both bars in front of your hands, ready to repeat the shears (fig. 27). (II.) — The shears are done also with a grasshopper swing (III).

The *Shears forwards* are done in an analogous manner, and you cross your legs with the forward swing. They are rather more difficult than the preceding, and care must be taken not to knock the shins against the bars.

HANGING.

436. *Hanging by the hands.* If the bars are sufficiently high, many of the exercises described for the horizontal ladder can be performed at them, such as travelling, changing grasp etc. Where a gymnasium is provided with so-called double-bars, that is four bars running parallel to each other, the leader can introduce several of the exercises from the rack, but as few gymnasia are fitted with this apparatus, we forbear introducing special exercises, which, after all, are of secondary value.

437. *Hanging by the fore-arms (elbows).* This position frequently occurs whilst executing some other exercise, but in itself is of inferior importance.

438. *Hanging by the arms.* The arms are either extended sideways, or they are extended forwards or backwards along the bars (I).

TURNING-OVER.

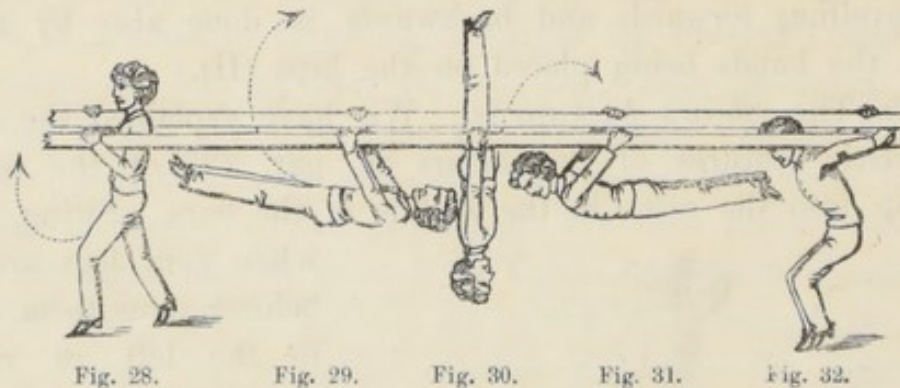


Fig. 28.

Fig. 29.

Fig. 30.

Fig. 31.

Fig. 32.

439. *The Turn-over backwards and forwards* is shown in figs. 28 to 32. You start from position fig. 28, slowly raise yourself to the front-lever, fig. 29; continue turning until you hang head-downmost, fig. 30; then lower yourself to the back-lever, fig. 31; and finally come to the ground, fig. 32. — Having thus turned over completely backwards, you start again and turn over forwards, successively passing through the positions

seen in figs. 31, 30, 29, 28. If done slowly and with body straight, this is by no means easy (III).

Beginners turn over backwards and forwards repeatedly in succession, bending the legs (I). This turning over is rendered more difficult by requiring it to be done without the aid of a spring off the ground (hanging), or by requiring the legs to be kept straight (II).

Turning over slowly can be done in the following ways, — a. with legs straight, arms bent (II), b. with arms straight, but legs bent (II); — c. with both arms and legs straight (III).

440. *Hanging head downmost.* Half a turn heels over head brings you to this position. Beginners hang with legs bent (I), more advanced men stretch them (fig. 30), or they extend them forwards at a right angle to the body (II).

Hanging in this manner you can kick upwards, leg after leg (I), or both together (II). You can bent your arms (rise and sink). (II.) — You can travel along the bar, walking (II) or hopping (III).

441. *The Hammock.* Take up the position shown fig. 28, turn over backwards, but instead of allowing your legs to descend between the bars place your insteps upon them. The leader supports the stomach (I). Fig. 33.

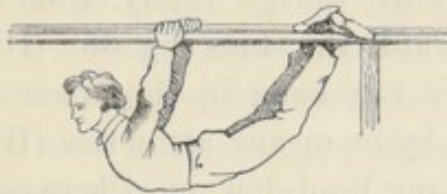


Fig. 33.

442. *The Nest.* You start in the same manner as for the sausage but hook your insteps over the bars close to the hands (compare fig. 50 of the rack). (I.)

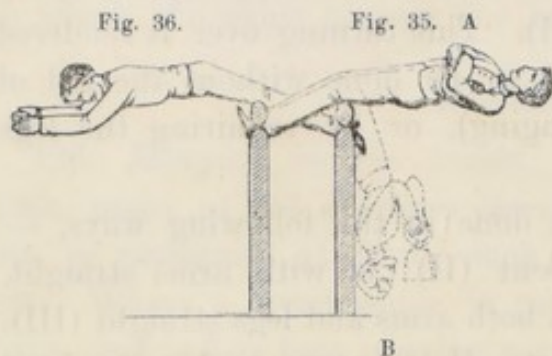
443. *Levers.* The back and front levers are shown figs. 31 and 29. — Similar levers are produced hanging by the arms, as explained par. 438. — Having placed your arms forwards along the bars, and firmly grasped them, you raise your legs forwards until the body is perfectly horizontal. This is the front-lever hanging by the arms (III). — The back-lever is similar, but you extend your arms backwards along the bars and raise your legs backwards (III) fig. 34.



Fig. 34.

HANGING BY THE LEGS.

444. *Hang down outside.* This exercise is generally done backwards. Sit inside on one of the bars, place your insteps



underneath the bar opposite, fold your arms, and lean backwards (fig. 35) until your body is horizontal. Keep a short time in that position, rise and sink again etc.

If you sink down-further you get to hang head down-most, fig. 35 B, and from this position you can rise again to the horizontal position or the seat, carrying a weight with you, and bending your back (II) or keeping it stiff (III).

The above exercise has a capital effect upon the muscles of the back and stomach, and should be practised frequently. Four or more men practise at the same time at one set of bars, half hanging down on one side, the other half on the other side.

A similar exercise is done forwards, though rarely, from a very proper feeling of tenderness towards the shins (fig. 36). (II.)

445. *Hanging by the hocks.* We can hang in this manner inside the bars, but the exercise is by no means attractive (II).

446. *Hanging by the thighs.* Hang head-downmost between

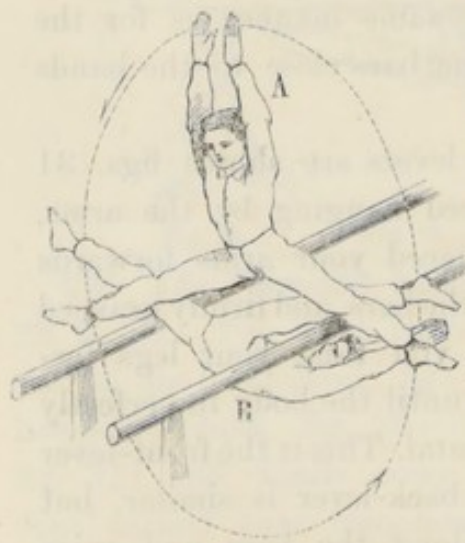


Fig. 37.

backwards (IV).

the bars, open your legs (straddle) place your thighs against the bars, firmly pressing against them; let go with the hands and you hang head-downmost by the thighs (II).

The *Plunge* forwards, hanging by the thighs (fig. 37) is a daring feat. You start from the seat on the bars (A), raise your hands, throw yourself unhesitatingly forwards and will then come back to your starting position (III). —

The same turn-over is done

ROLLS.

447. WE designate by this name all those turns heels over head, forwards or backwards, for which we start either from a sitting position, from the rest, or from hanging by the arms, and which can be done repeatedly in succession and in the same direction, along the bars. It is an advantage to have the bars rather long.

Rolls from the sitting position.

448. *Roll forwards, falling into the arms.* Sit astride, stoop down forwards (fig. 38 A) and turn-over quickly. This brings you to position B, from which you rise again into the sitting position and turn-over again (II).

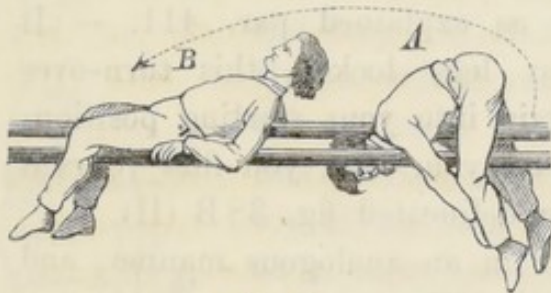


Fig. 38.

The *Roll backwards* is rather more difficult. You sit astride as before. Grasp the bars behind you, rock to and fro and suddenly throw yourself backwards. Whilst turning over the arms are spread out, as shown fig. 40, but the legs are kept astraddle, and you thus come down again into a sitting position (II).

449. *Roll forwards with drop rest.* This exercise is more showy than the preceding; and is a good introduction to the *somersets*, to which it is similar. You sit astride as before, grasp the bar in front of you; lean over forwards, bending the arms; and finally turn-over, keeping your legs well apart, so as to get again into a sitting position.

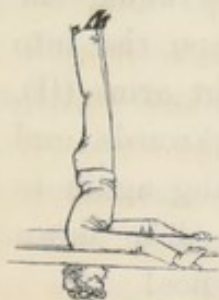


Fig. 39.

450. *Rolls hanging by the arms.* *Roll forwards.* The arms are extended backwards along the bars. You turn-over forwards, and when you are in the position shown fig. 39, you spread out your arms, complete the turn, and thus find yourself in the position from which you started. When done with a swing and

with legs bent, this exercise is not very difficult. The legs, however, should be kept straight (II). Advanced gymnasts turn over in this way without the aid of a swing, and whilst turning over they remain for a short time in the lever, par. 443 (III).

Roll backwards. This is done in the same manner as the preceding, but the arms, on starting, are extended forwards along the bars (II — III). See fig. 40.

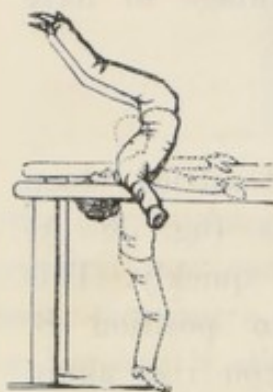


Fig. 40. A

451. *Rolls from the rest on the fore-arms.* Roll forwards, falling in the arms. Fig. 9 shows the starting position. Swing and turn over forwards as explained par. 411. — If you keep your legs locked, this turn-over brings you again into your starting position; but if you open your legs, you find yourself in the position delineated fig. 38 B (II).

Roll backwards. This is done in an analogous manner, and no further explanation is required (III).

452. *Rolls from the drop rest.* These rolls are done forwards as well as backwards, the latter roll calling for the aid of a good swing (III). You start from the drop rest.

CHANGES BETWEEN HANGING AND RESTING.

453. WE beg to refer our readers to pars. 300 to 302 of the rack for an explanation of the meaning of *up-rise*, *up-start*, and *up-swing*, for these three exercises are performed also at the parallel bars, though in a modified way, to suit the apparatus.

454. The *Up-swing*, *up-start* and *up-rise* are done from *hanging by the arms*, which are extended in front along the bars (see fig. 40 A). — Hanging in this position you rise into the drop rest, and then into the rest with straight arms (II).

To do the *up-swing*, you swing forwards and backwards, and when your legs are up behind, and about to swing again to the front you rise with a sudden effort. Then drop down again and repeat the exercise. Keep regular cadence!

To do the *up-start* you raise your legs in front, turn-over backwards until you hang nearly head downmost, with your feet close to the shoulders and the hands retaining a strong hold of the bars; you then suddenly swing back your legs and avail yourself of the impetus thus given to rise into the rest.

The *Up-rise* is done without the aid of a swing.

455. The same exercises are done from hanging by the hands, either in the middle of the bars or at their end.

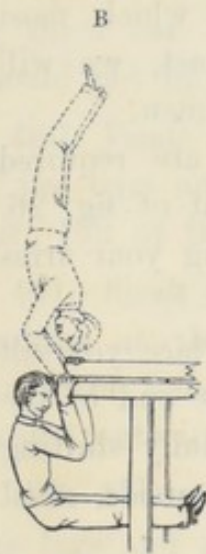


Fig. 41. A

The *Up-rise* at the end of the bars. Grasp both bars with knuckles uppermost, hang with arms straight, then rise by degrees into the drop rest or rest with straight arms (III). By extending your legs forwards you render this exercise easier. — You may follow up this exercise with some other exercise on the top of the bars such as standing on the hands, as indicated in our illustration.

Beginners will find this up-rise tough work. We recommend them to practise the following. Go into the drop rest; then lower yourself slowly until you hang with arms bent (see fig. 41 A); steadily continue the downward movement until you hang with arms straight (II).

The *Up-rise* is also done in the middle of the bars, and in that case you grasp them from the inside (III).

The *Up-swing* and *up-start* are done at the end as well as in the middle of the bars, with inside grasp in the latter case (III).

456. *Change from the leaning position to the "hammock" and the reverse.* Go up into the position shown fig. 22; sink to the drop rest; sink first with the left arm then with the right arm below the bar, and you find yourself in the position shown fig. 34 (I). — Then rise again to the drop rest and rest in the same manner (II).

Instead of sinking arm after arm, you can sink with both arms at once (II), and rise in the same manner (III).

The most elegant way of sinking down to the hammock, however, is that effected by passing through the leaning position with arms spread out (see par. 429). You must sink slowly and steadily, while the leader should be ready with assistance, for a sudden sinking down, may produce rupture, unless the stomach finds some support (III).

457. Having explained some of those modes of changing from a hanging to a resting or sitting position which most readily suggest themselves to the young gymnast, we will describe some other modes, suitable for advanced men.

The *Swing- or turn-over into the seat*. — You are required to change from the position shown fig. 28 to that of fig. 26. — You do this by turning over backwards, keeping your arms well bent (II).

The *Swing-over* is also done into the *rest*. Place yourself at the end of the bars, face outwards. Grasp the end of the bars from the inside. Turn-over backwards, gradually shifting your hands from the inside of the bars to the outside, until you find yourself in the rest (III).

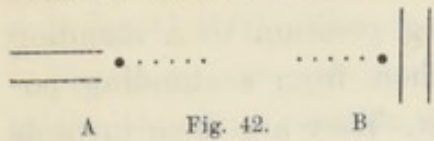
458. Combinations of exercises offer themselves readily to a fertile mind. We confine ourselves to one example. —

Back-lever hanging by the hands, which grasp the bars from the inside (fig. 31). — Turn-over forwards until you are in a hanging position. — Rise up into the rest. — Free lever in the rest on both arms (fig. 17). — Sink down to the front-lever hanging by the hands. — The whole of these exercises ought to be done steadily in succession (IV).

VAULTING.

459. THE parallel bars offer even more facilities for transferring exercises from the vaulting horse than the rack does. Some of the vaults are done from the rest, or the seat on the bars: and when directing a squad the leader should introduce these different ways of leaving the bar as an opportunity arises. Other vaults take us from the standing position back to the standing position, or from a standing position to the rest or seat on the bars.

These latter exercises are divided into those done from the end of the bars (fig. 42 A), and others done from the side (fig. 42 B).



VAULTS FROM THE END OF THE BARS.

THESE vaults are done generally without a run, but many of them can be done also with a run. The bars, at first, should not be higher than the hips.

460. *Vault into the rest.* Place both hands upon the end of the bars and jump into the rest (I). The exercises described par. 192 of the horse are also done at the bars.

461. *Vault into the rest bars behind* (backwards). Take your position at the end of the bars; jump up; face about and grasp the bars. You will then find yourself in the rest, face turned outwards (II).

462. *Swing-off.* You go into the rest as above, swing with the legs and push yourself off the bars either backwards or forwards, as described par. 194.

463. *Clear the bar in front.* Go up into the rest in the middle of the bars. Swing your legs over the right bar, in front, and jump to the ground. You must come to the ground with your left side turned towards the right bar, upon which you place your left hand (I).

The same exercise is done from the following starting positions

- a) from the seat on the left bar in front of the hand (I),
- b) from the seat on the left bar behind the hand (II),
- c) from the seat on the right bar behind the hand (II),
- d) from the seat astraddle on both bars, behind the hands (I),
- e) from the drop rest and rest on the fore-arms (II).

464. *Clear the bar behind.* Instead of swinging over the legs in front of the hands, you swing them over behind (I). — This exercise is varied in the same manner as the preceding one (I—II).

465. *Circles with one leg.* These circles are done at first from a standing position to a standing position, and then from a standing position to the rest. They are done inwards (from outside to inside), or outwards (from inside to outside). For instance.

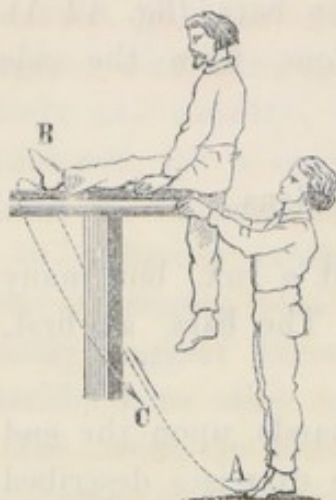


Fig. 43.

Take your position at the end of the bars and place your hands upon them. Spring off the ground, swing your left leg forwards between the bars and over the left bar, momentarily lift up the left hand to allow the leg to pass, and jump to the ground.

This is the circle outwards with one leg (II). Fig. 43.

Instead of jumping to the ground you may remain in the rest (II). —

466. *Circles with both legs.* Instead of passing one leg over the bar you pass over both, keeping the legs locked. These circles are done inwards and outwards from the standing position to the standing position, and inwards from the standing position to the rest (III). Compare fig. 21.

467. *Straddle-off forwards.* This is done over one bar or over both. Go up into the rest at the end of the bars, face outwards. Swing your legs over the left or right bar, let go the hands, and jump to the ground. The same exercise is done over both bars, as shown fig. 44 (II). You can only succeed in this exercise by resolution. The leader stands in front, ready to catch his



Fig. 44.

man, should the legs hang to the bars.

468. *Straddle-off backwards.* The same exercises, done backwards from the rest at the end of the bars, the face turned inwards (II—III).

469. *Straddle inwards.* Take your position at the end of the bars; jump up; straddle (open) your legs; lift up your

hands to allow them to pass, and sit down astraddle on both bars, as in fig. 45 B (II). The whole of this should be done in one motion.

The same exercise is then done to the rest, and also back to the standing position (III).

470. *Straddle outwards.* This straddle is first done to the seat. Grasp the bars, swing your legs up forwards, open them when they are above the bars, and sit down astraddle (I). — Instead of sitting down you can lift up your hands to allow the legs to pass, and return to the standing position. A, fig. 45, shows the position on starting and at the conclusion of the exercise; B shows the gymnast after

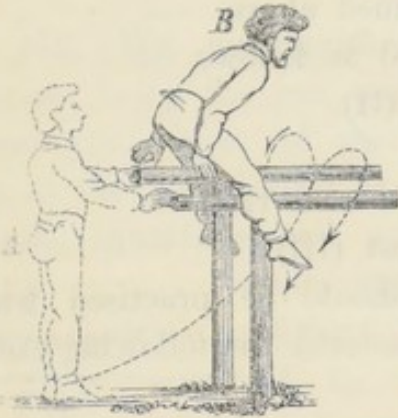


Fig. 45.

he has lifted the hands to allow the legs to pass through (III).

471. *The Shear-mount.* Jump up into the rest, swing the legs high up forwards, cross them above the bars, facing at the same time to the left or right about, and sit down with your right leg over the left bar, and your left leg over the right bar. The position of the hands is changed at the same time. See par. 435 (III).

472. *Somerset forwards.* This somerset is done in various ways, and generally at the end of the bars. It is done with a swing; or steadily, without a swing. The arms are either bent or kept straight. — Further varieties are introduced by varying the starting position.



Fig. 46.

473. *Somerset forwards, with a swing, arms bent* (II). Go up into the rest at the end of the bars, face outwards. Swing gently and turn over forwards as shown fig. 46. — Careful assistance should be rendered. The leader places himself on the right side of his man, grasps his right fore-arm from the outside with his left hand, and places his right hand upon the mans shoulder. As the man turns over, he shifts the position of the hands as required.

The same, arms straight (III). This should not be taken too literally, for the arms are bent to a small degree whilst turning over, to insure coming safely to the ground.

The same, steadily, without a swing (III). You start again from the rest, arch your back as shown fig. 8, and turn-over steadily, bending the arms, as explained above. —

The starting position can be varied as follows, —

Somerset, from the seat astraddle (II).

Somerset, from the drop rest (III).

Somerset, from the rest on the fore-arms (III).

Somerset, from the lever in the rest (III).

474. *Somerset backwards.* This should be practised with great care, and only after having mastered the following exercises.

a. Rest on the fore-arms in the middle of the bars hands

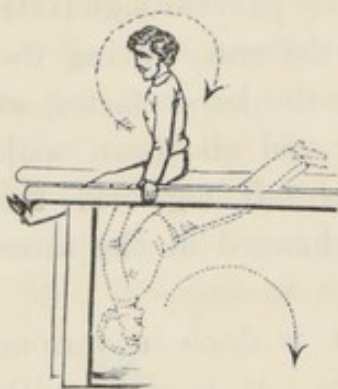


Fig. 47.

grasping the bars from the outside. — Retaining your hold of the bars, drop down backwards, below the bars, turning over at the same time until you hang head-downmost (compare figs. 9, 30 and 32). Complete the turn-over until you stand on the ground (II).

b. The same exercise is done starting from the rest with straight arms, as shown fig. 47.

c. You may now attempt the somerset in the middle of the bars. Go up into the rest; swing; when your legs are up in front turn-over backwards, let go your hold of the bars, spread out the arms, and as you come down, catch hold of the bars with your arms, as shown fig. 40 (III).

d. Having thus become acquainted with the motion peculiar to the somerset backwards, you may safely attempt that exercise at the end of the bars. Start from the rest with straight arms, facing inwards (III).

475. *Shoot over.* Take up your position at the end of the bars, face inwards. Grasp, knuckles outside. Throw both legs up forwards and clear the bar on the right. You must bend

your back, and not touch the bar with any part of the body (II). Beginners generally are not able to shoot over, so they shove themselves over (I). Expert men shoot over from a hanging position and without a spring off the ground (III). See fig. 50.

VAULTS FROM THE SIDE.

476. We distinguish between near-bar and off-bar, the former being the bar nearest to you, the other that furthest from you. Most of the vaults over both bars are the same as at the horse, such as the front- and rear-vault, the flank-vault, squatting-vault and straddle-vault. At the bars these

vaults should be practised with great care, an assistant standing on either side of the bars (AA fig. 48). — In vaulting, both hands can be placed on the near-bar (ordinary grasp), but the more characteristic way is to grasp the near-bar with one hand (reversed), the off-bar with the other. We give a series of exercises, leaving it to the ingenuity of more advanced men to invent others.

Vault into the rest sideways, both hands on near-bar, and swing off backwards (I).

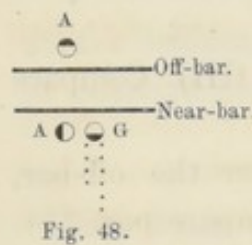
Vault into the rest, right (left) hand on near-bar, left (right) hand an off-bar, and swing-off backwards.

477. *Mounting*, one hand on near-bar, the other on off-bar, viz front-mount (II) rear-mount (II) screw-mount (II) and shear-mount (III) as explained pars. 199 to 205 of the horse. After each of these mounts you sit astraddle on the bars, as shown fig. 26. —

478. *Vaults into the rest between the bars*. These are done by the front-vault (II) and the rear-vault (III). — Instead of opening your legs, as you must do it you desire to mount, you keep them locked, and thus you get into the rest between the bars. Once in the rest you may finish with some other exercise, for instance, —

Front-vault into the rest between the bars, and clear off-bar in front (III).

Front-vault into the rest between the bars, and clear near-bar in front (III).



Rear-vault into the rest between the bars, and clear off-bar behind (III).

Rear-vault into the rest between the bars, and clear near-bar behind (III).

In all these vaults one hand grasps the near-bar, the other the off-bar.

479. *Vaults over the bars.* These vaults are dangerous if attempted by beginners, and even with expert men careful assistance should always be at hand.

Front-vault. The hands either grasp the near-bar, or one hand grasps the near, the other the off-bar (III). Compare par. 240.

The *Rear-vault* is done in a similar manner (III). Compare par. 242.

Knee-leap. Kneel on the near-bar, vault over the off-bar, in front of you, without using the hands (III). Compare par. 244.

Squatting-vaults. First attempt the squatting-vault into the seat on the near-bar (II). Then squat over the off-bar, as shown in fig. 49.



Fig. 49.

The squatting-vault is then done over both bars, both hands grasping the near-bar (III).

Straddle-vault. This is extremely difficult, and should be practised by degrees, first to the standing position on the near-bar (II), then to the rest sideways on the off-bar (III), and finally over both bars (IV).

Somerset. Stand on the near-bar; stoop down and grasp the off-bar with both hands, somerset (III).

It can be done also over both bars at once, with a run, the hands being placed on the off-bar (IV).

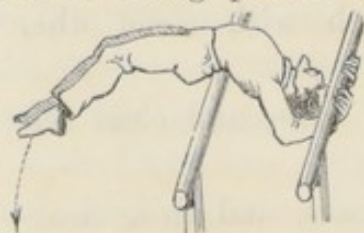


Fig. 50.

480. *Shoot over.* Grasp the near-bar with both hands, and shoot over the off-bar, as shown fig. 50. The arms are bent, and the off-bar should not be touched with the body (III); beginners, however, instead of shooting over, shove themselves over (II).

HANGING PARALLEL BARS.

481. THESE are rarely met with in a gymnasium. They consist of two bars, about 8 feet long, suspended by 4 wires, at a height varying from 3 to 7½ feet above the ground. The lateral movement of these bars is avoided if the ends are inserted into ears connected by an iron rod, figs. 51 and 52.

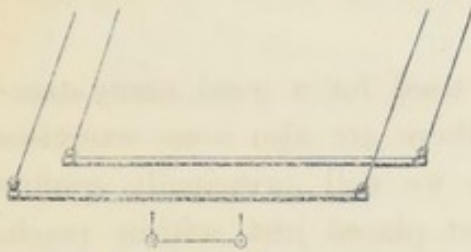


Fig. 51 and 52.

The exercises are the same as at the ordinary parallel bars, but their difficulty is increased in consequence of the oscillating motion.

DOUBLE PARALLELS.

482. FOUR bars running parallel to each other and supported on two bearers which can be raised and lowered in the same manner as a horizontal bar. — Thus, if one bearer is raised higher than the other, the bars are slanting.

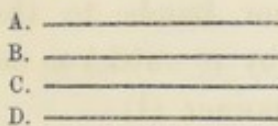


Fig. 53.

These double bars are of advantage if a large class is to practise under one leader, but the bearers are in the way for exercises at the end of the bars. On the other hand they admit of some exercises which cannot be done at the ordinary parallels. We will mention a few of these.

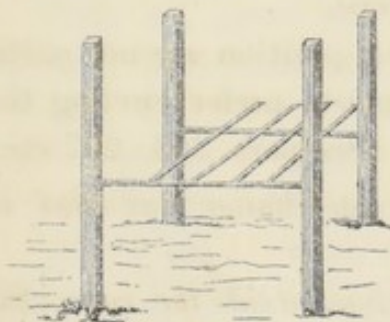


Fig. 54.

Change seat, travelling sideways.

Sit astraddle on bars A and B (see fig. 26). Throw your legs up backwards and sit down on bars B and C (I).

The same exercise is done sitting astraddle in front of the hands.

The *Hop sideways*. Go into the rest on bars A and B; swing, and when your legs are up behind hop, and go into the rest on bars B and C (III). This exercise should be practised first with the bars slanting (II).

XVII. THE HANGING BAR (TRAPEZE).

Apparatus. A bar, at least 3 feet long, and about 1 in. in diameter, is suspended by two ropes, which are attached to the ceiling or a cross-beam 15 to 18 feet above the ground. An arrangement for raising and lowering the bar is desirable.

483. *The Hanging Bar* can be used for a good many exercises described for the rack, but there are also some exercises peculiar to it, and to these latter we will principally confine ourselves. The hanging bar is best placed just within reach. The gymnasts first go through some of the simpler hanging exercises described pars. 290 to 293. They then proceed to the following exercises, the bar remaining stationary or nearly so.

484. *Travel up into the seat upon one thigh.* Place yourself crossways below the bar, grasp it close to one end with both hands (double grasp), right hand in front; throw your right leg over the bar (fig. 38, rack); transfer your hands to the rope nearest to them, and work yourself up by it until you sit upon one thigh. — Go down in the same manner (I).

Travel up into the seat upon both thighs. Instead of throwing over one leg, you throw over both (II). One hand grasps the rope, the other the bar close to the rope.

These modes of getting into a sitting position are not particularly graceful, and more expert gymnasts prefer circling the bar (II), or rising into the rest (III). (See pars. 303, 297 etc.)

485. Once seated upon the bar we can change our seat in various ways. —

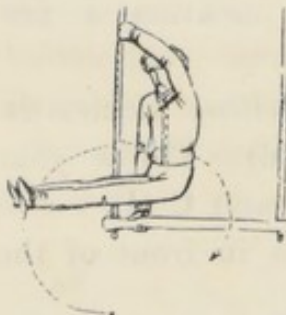


Fig. 1.

Change seat, passing outside the rope. Sit upon the bar as shown fig. 1, the right hand close to the rope. Lift yourself off the bar and, facing to the right about, swing yourself round the rope in the direction of the dotted line, until you are again in your original position, but with your right arm twisted considerably. With your right arm you must steady the bar (II).

Squat over the bar. Sit sideways upon the bar; with your right hand grasp the rope above your head with the left the bar by your side. Then squatt over the bar backwards. You thus find yourself in a peculiar position, hanging by the right hand, and resting upon the left. Squat back into the seat (II) fig. 2.



Fig. 2.

The same exercise is done holding a rope with each hand (II).

Change seat by turning over. You sit sideways upon the bar, holding the ropes. Turn-over backwards keeping your legs bent, until you are again in your original position; then turn back again (II).

486. *The Hammock.* Stand upon the bar, grasp the ropes about the height of your hips from the outside; lean forwards without bending the body, as in fig. 3 (II).

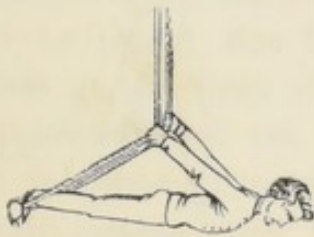


Fig. 3.

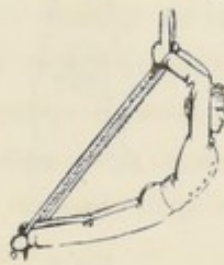


Fig. 4.

The hammock is done also grasping the ropes about the height of the head, as in fig. 4 (II).

Both the above can be done also with ropes in front, by leaning backwards (I).

487. *The Nest.* Kneel or squat upon the bar; grasp the ropes about the height of the shoulders; place your insteps against the bar, and drop down forwards, fig. 5 (II).



Fig. 5.

488. *Levers* can be done in great variety. Levers by the ropes, from a standing position, by turning over forwards or backwards.

The back-lever below the bar, fig. 6 B, is done from a lying position, A. You slowly turn over backwards, retaining your hold of the ropes. If able, go back the way you came (III).

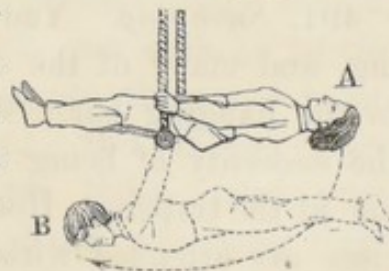


Fig. 6.

489. *Hanging by the hocks.* The ordinary way of hanging by the bar alone will be understood on referring to pars. 354 etc., but we can hang also, availing ourselves of the ropes.

There are two ways of doing this. In the first way the insteps are placed beneath the bar.

Hang sideways, raise legs forwards until you hang head-downmost; straddle; pass your legs round the ropes from the outside and place your insteps underneath the bar, and then hang as in fig. 7 (II).

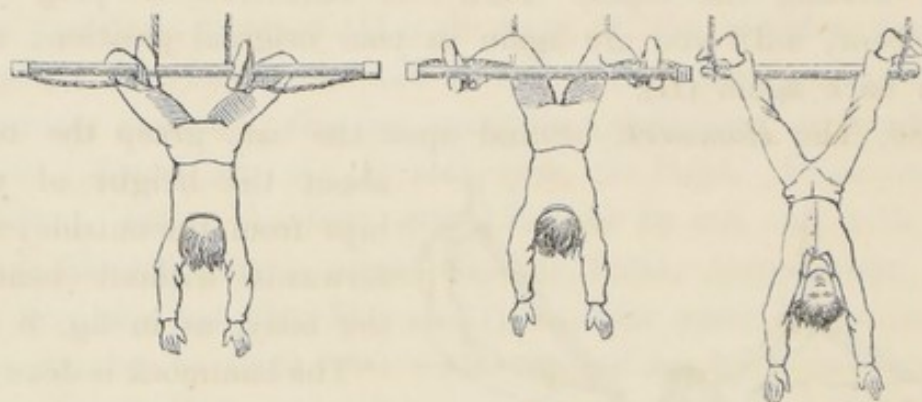


Fig. 7.

Fig. 8.

Fig. 9.

In the second way you hang by the ropes alone. Hang sideways as before. Pass your legs round the ropes from the inside, place insteps beneath ropes, and soles of feet against the bar; and hang as in fig. 8 (II).

490. *Hanging by the insteps.* This exercise is done at first from a hanging position. You place your insteps round the ropes, close to the bar, and thus you hang very securely (II). Expert gymnasts drop down to this position backwards from the seat (III). fig. 9.

491. *Swinging.* You can swing, sitting, standing or hanging, and many of the exercises of the rings can be transferred to the hanging bar. We most earnestly urge upon gymnasts the necessity of being most careful and attentive when practising at the trapeze. Hock-swings, cut-aways, and similar exercises are attended with exceptional danger. In Part III we have given a number of exercises which may be done with propriety and safety.

XVIII. THE RINGS.

A pair of rings, about 6 inches in diameter, is suspended by two ropes or straps attached to the ceiling or a cross-beam, and is a most useful apparatus. The rings are of iron and covered with leather, or they are made of hard wood. The most useful height of the rings is when they are just within reach, when standing on tip-toe, but the apparatus should admit of their being raised and lowered with facility.

492. The rings are deservedly a great favourite with gymnasts. They swing to the same extent as the trapeze or hanging bar, whilst allowing a safe and sure grasp, which the former does not. The exercises are partly done with the rings stationary or nearly so, partly swinging. — Two swings ought to be placed side by side in each gymnasium, for the exercises at the rings require more time than those at any other apparatus, and the men of a squad of ten required to swing at one pair of rings would find the time hang heavily upon their hands.

HANGING, THE RINGS STATIONARY.

493. WE begin with hanging by the hands, arms straight (I); — Hanging with bent arms is practised next. It is easier to hang in this manner when the arms form an acute angle, than when they form a right one (I). — Having done this, sink and rise in the way described par. 297, and finally hang with one hand, the arm bent (II).

494. *Shoulder wrench.* This exercise is difficult to describe and still more difficult to delineate. It is a change from hanging with rings in front to hanging with rings behind, without your turning head over heels. If you walk up to the rings, place yourself in front of them, grasp them and hang, you are said to hang rings in front. But if you place yourself with the back turned towards them, raise your arms backwards, grasp the rings and hang, you hang rings behind (see fig. 13 B). — Suppose you hang rings in front; raise yourself with a jerk and throw your arms backwards,

and you will find yourself hanging rings behind, the arms having turned in their sockets (II).



Fig. 1.

495. *Twisting the arms.* Whilst hanging with arms straight or bent we can twist the arms or in other words we can turn our knuckles to the front, outside, inside or to the back (I).

496. *Changing grasp.* Hang with arms bent, knuckles turned outside; give up your grasp with the left hand, taking care to keep the ring steady; again grasp the ring from the inside. Do the same with the right hand etc.

497. *Extending the arms sidwards.* Hang with arms bent; alternately extend the left and right arm sidwards (fig. 2).



Fig. 2.

Extending both arms simultaneously and pulling them back at once, is a difficult exercise (III); but to hang with both arms extended sidwards, is a feat rarely accom-

plished (IV).

498. *Hanging by the elbow joints.* We hang in this manner with rings in front (fig. 3) or rings behind. An alternation between these two is effected easily by a twist in shoulders (I).



Fig. 3.



Fig. 4.

Fig. 4 shows a gymnast hanging by his fore-arms rings behind, and grasping his toes (II).

499. *Hanging by the upper arms.* We can hang by the arm pits, the arms hanging down (fig. 5 B), or being extended sidwards (I); or we can hang by the upper arms, as shown fig. 5 A (II—III), or by the fore-arms, the rings being more or less close to the wrists (III).

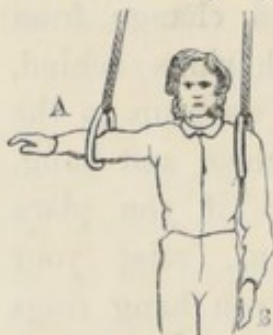


Fig. 5.

500. *Hanging by the fingers.* The rings offer a good opportunity for hanging by three, two or one fingers (I—III).

501. *Swinging, rings stationary.* Hanging by the hands we swing forwards and backwards, sidwards, and in a circle,

the latter especially a very wholesome exercise (I—II). The same exercises can be done hanging by the fore-arms or upper arms. —

HANGING AND SWINGING.

THE exercise of "swinging" affords an opportunity to the gymnast to exhibit strength, address and grace of motion. Beginners should not be allowed to swing high, and even expert gymnasts should not exceed a demi-circle or 180° , that is the ropes are never to rise above a horizontal line.

502. *Swing forwards and jump to the ground.* The rings are about the height of the chest. Grasp the rings; run or spring off the ground backwards, bending the arms; swing through forwards, keeping your arms bent, the legs extended forwards; and on coming to the end of your swing, jump to the ground (I). Instead of simply jumping down the gymnast may clear a leaping stand placed in a suitable position (II—III). Fig. 6.

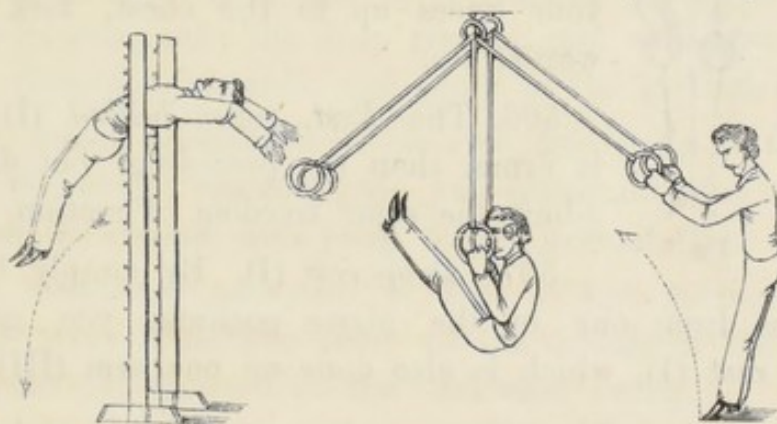


Fig. 6.

503. *Swing backwards and jump to the ground.* Having

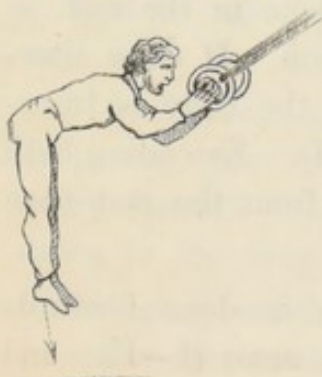


Fig. 7.

grasped the rings, run forwards, spring off bending the arms; swing through backwards, and jump to the ground (I). You let go your hold at the moment you are about to swing again forwards, and you come to the ground, as shown fig. 7.

504. *Continued Swinging* may be effected in various ways. Beginners spring off the ground with one or both feet every

time they come to the middle of the swing, or only with the forward or the backward swing (I).

Swinging, whilst hanging clear of the ground, is more difficult. Raise your legs with every forward swing and lower them with each backward swing (II); or bend your arms with each forward and backward swing (III).

Facing about at the end of each swing (the ropes get twisted) is also practised (III).

We need hardly add that swinging can be done also hanging by the fore- or upper-arms.

EXERCISES IN THE REST, RINGS STATIONARY.

505. *The Rest, ropes in front* (I). The rings are low. Spring



Fig. 8.



Fig. 9.

off the ground and go into the position shown fig. 8. Whilst in this position you can raise the legs forwards, straddle, bring your knees up to the chest, kick downwards, etc.

506. *The Rest, ropes behind* (I) fig. 9, is firmer than the preceding, but does not admit the same freedom of motion.

507. *Drop rest* (I). By simply bending your arms from one of the above positions you get into the drop rest (I), which is also done on one arm (III).

508. *Sink and Rise* (II), an alternation between drop rest and rest with straight arms (see par. 396).

509. *Extending the arms sideways* is done in the rest, in the same manner, as in the hanging position. If done alternately to the left and right, the weight of the body is transferred to the arm remaining in the rest (II). Extending both arms simultaneously (see par. 497) is easier from the rest than from the hanging position (III—IV).

510. *Swinging, rings stationary*. This is done forwards and backwards in the rest with straight arms (I—II); and

forwards and backwards, sideways, and in a circle from the drop rest (I—II).



Fig. 10.

511. *The grasshopper swings*, viz. Swinging and bending the arms, with the backward swing, and *sinking and rising* with the forward swing, the backward swing, or with both, are practised in the same manner as at the parallel bars, par. 409 (III).

512. The *Rest upon the fore-arms* (I) is shown fig. 10 A. The legs may be extended forwards.

EXERCISES IN THE REST, SWINGING.

513. Swinging in the rest is practised in the same manner as swinging in a hanging position.

Swing forwards in the rest, and jump to the ground. The rings are about the height of the chest; grasp them; spring up backwards, into the drop rest or rest with straight arms; swing through, forwards, and jump to the ground (II).

514. *Swing backwards in the rest, and jump to the ground.* Grasp the rings; run forwards, and spring into the rest; swing through backwards, and jump to the ground (II).

515. *Continued swinging* is done at first springing off the ground every time you come to the middle of the swing, or only with the forward or the backward swing.

Swinging in the rest, clear off the ground, is done in the same way as described par. 504.

This swinging is done in the rest with straight arms as well as in the drop rest.

516. *Sinking and Rising* (see par. 508). Swinging in the drop rest you rise into the rest with straight arms with every forward or backward swing, or with both, again sinking down to the drop rest immediately (III).

Swinging in the rest with straight arms you sink down into the drop rest in an analogous manner (III).

HANGING AND RESTING IN ALTERNATION, RINGS STATIONARY.

517. THE *Up-rise*. You hang with arms straight, and go up into the drop rest, first with the left arm, then with the right arm (I). Once in the drop rest you will find it easy to get into the rest with straight arms (II). The same exercise is then done with both arms at once (III).

518. The *Up-start* is done at the rings in the same way as at the rack (par. 302).

519. The *Up-swing* is also done in the same manner as at the rack (III).

520. The *Rise from hanging by the elbow joints to the rest upon the fore-arms* is shown fig. 10, par. 512. You hang by the fore-arms (B) and go up into the rest (A). (II.)

HANGING AND RESTING IN ALTERNATION, SWINGING.

521. THE *Up-start* and *up-swing* are also done swinging, and done in this manner; they are amongst the favourites of expert gymnasts. You can go up in this way into the rest with the backward swing, figs. 11 and 12 (III), with the forward swing, fig. 12 (III), or with both (IV), as shown in our illustration.

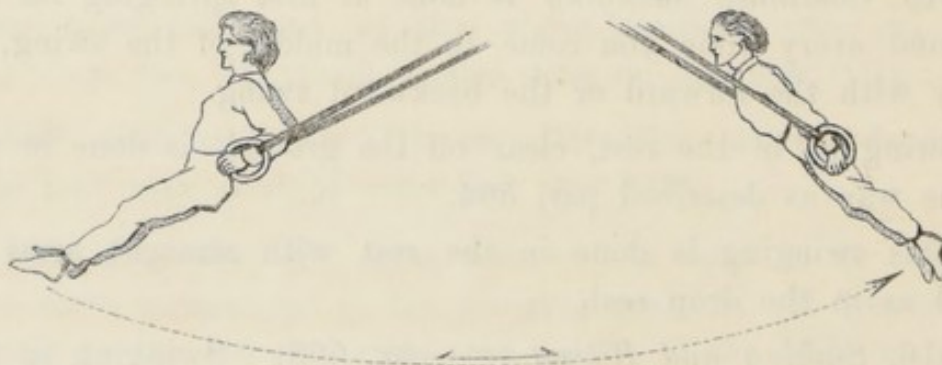


Fig. 11.

Fig. 12.

TURNING OVER, HANGING, RINGS STATIONARY.

522. *Turn-over forwards and backwards*. Grasp the rings from the outside and turn over backwards until you are in position B, fig. 13; then turn over forwards to your original

position. The legs should be kept straight (II), but beginners are allowed to bend them. The turning over is done at first with a spring off the ground, the rings being the height of the shoulders (I).



Fig. 13.

More advanced gymnast should endeavour to turn over slowly without bending arms or legs (III).

523. The *Swing-over*. Grasp the rings (which are about the height of the chest) and turn over backwards, as described par. 522. But instead of retaining your hold of the rings, you let go, when about half-way over, and swing yourself off backwards (compare rack, par. 305). (II.)

524. *Turn-over and shoulder-wrench*. We have explained par. 494 the shoulder-wrench. You grasp the rings as before, turn over backwards, but instead of returning to your starting position by turning over forwards, you do so by a wrench of the shoulders. This exercise should be done, at first, at low rings, to enable the beginner to place his feet on the ground, after he has turned over.



Fig. 14.

525. The *Cut-away turn* is a feat requiring some pluck. It is easiest with a spring off the ground and a short swing. The leader places the back of his hand upon the performers chest, to guard against a fall on the head (II — III). Fig. 14.

526. *Hanging head downmost*. Beginners are allowed to bend the legs (I), more advanced men keep them straight (II).



Fig. 15.

527. The *Nest*. Turn over, place the insteps into rings, and get into the position shown fig. 15 (I). — The left or right leg, left or right hand, may be disengaged.

528. The *Hammock* has been mentioned par. 538. Instead of doing it from the rest it can

be done also from a hanging position. Start as for the nest, but place both insteps into one of the rings, and grasp the other with both hands. You must hang face downwards, as in fig. 25 (II).

529. *Levers* are done face downwards (II) or face upwards

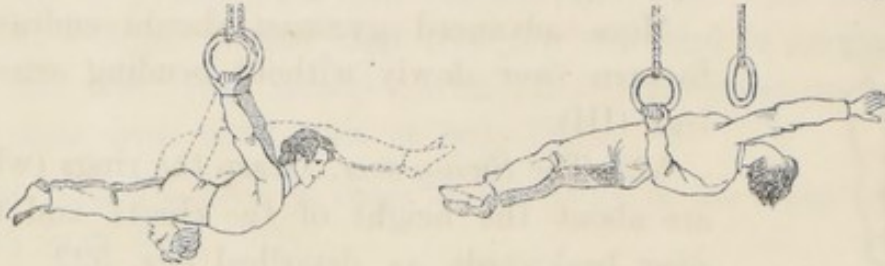


Fig. 16.

Fig. 17.

(III) fig. 16. — The *lever sideways* (III) is shown fig. 17. (Hang head downmost, and lower yourself to the position shown.)



Fig. 18.

530. The *Turn-over into the rest*. Grasp both rings, turn over backwards, fig. 18 A, and gradually bending your arms, go into the drop rest, B (II). Then sink down until you hang again with arms straight, turn over a second time into the rest. — This exercise, done

slowly and into the rest with straight arms, is more difficult (III).

TURNING OVER, HANGING AND SWINGING.

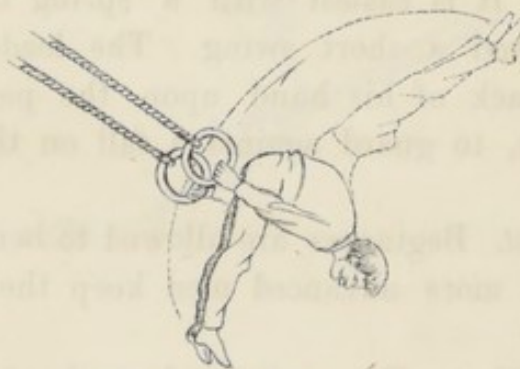


Fig. 19.

531. THE exercises described pars. 522, 523, 524, 525 and 530 are also done swinging, with the forward or backward swing (II — III). Fig. 19 will render sufficiently clear the character of this group of exercises.

TURNING OVER FROM THE REST.

532. THE leader puts the rings at first as high as the chest. As a preliminary practice he lets his men jump into the rest

six to twelve times in succession (I), swing in the rest with straight arms and in the drop rest as explained par. 510 (II), etc.

Arching the back. Compare par. 395 (II).

533. *Turn-over forwards, from the rest.* This exercise is done slowly or with a swing, and from the rest with straight arms or the drop rest (II). Having turned over once, you may rise again into the rest and turn over a second time (III). Beginners may be permitted to bend the legs (fig. 20).



Fig. 20.

Turn-over backwards, from the rest. Similar to the preceding (II).

534. *Somerset forwards.* Start as for turning over, but before coming to the ground let go the rings and push them away from you (III). The somerset is also done backwards, and whilst swinging.

535. *Levers in the rest* are done in a similar manner as at the rack and parallel bars (comp. pars. 373 and 415). (II—III.)

536. *Standing on the hands, head downmost,* is done at first with arms bent (II), then with arms straight (III). The rings offer peculiar facilities for this exercise, for by opening

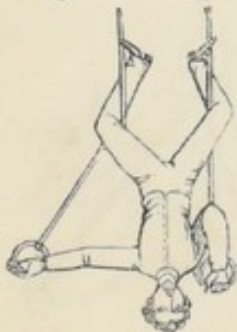


Fig. 21.

the legs and placing them round the ropes the position is made very secure, and enables us to introduce some exercises which can hardly be done at the bars or on the ground, for instance, —

Sink and rise. Alternately bent and stretch the arms (III).

Extend arms alternately sidwards (III), fig. 21.

Extend both arms sidwards (III) etc.

EXERCISES STANDING IN THE RINGS.

537. THESE exercises can be done at a swing having rings or stirrups, as used generally, the gymnast putting his feet through the rings and grasping the ropes, but it is better to attach to each ring a strap with stirrups reaching nearly to

the ground, or a miniature rope ladder, with rounds 6 inches long and about 8 apart. When stirrups are used the length of the straps must be adjusted to the height of the performer.

We confine ourselves to a few characteristic exercises, as this series does not generally prove very attractive. A description of others will be found in Schreber's "Pangymnasticon", translated by Dr. Lewis.



Fig. 22.

538. The starting position for the following exercises is shown fig. 22, but instead of the hands being about the height of the shoulders, they can be lowered to the height of the hips, and the exercises are thus varied.

Starting from this position we straddle sideways, longe out forwards with the left and right leg in alternation, and we imitate the walking or running movement, the whole of these being easily understood exercises (I).



Fig. 23.

Thrusting the arms out sideways is a capital exercise, requiring a certain amount of strength (I).

The longe to the left, accompanied by a thrust sideways with the right arm is shown fig. 23.

The leaning position, hanging, is done forwards and backwards, as shown fig. 24 A and B. The body should be kept perfectly straight. (Compare par. 486, Trapeze.)

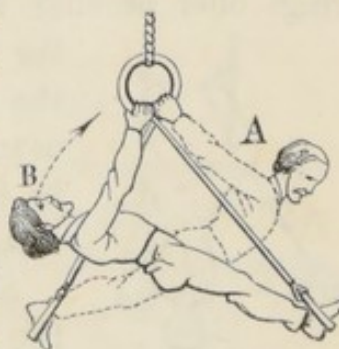


Fig. 24.

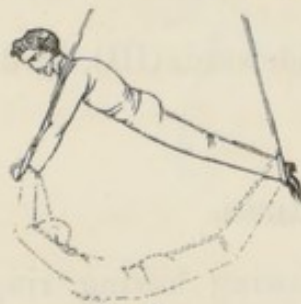


Fig. 25.

lines (II — III).

The leaning position, in the rest, the hands grasping one ring, whilst the feet are inserted in the other, is shown fig. 25. From this position we can lower ourselves to the "hammock", as indicated by the dotted

EXERCISES IN WHICH THE FEET ARE ON THE GROUND.

539. THE rings are as high as the chest. Grasp the rings and then drop forwards and backwards in alternation. Beginners keep their arms bent at first, as in fig. 26. — Be careful not to shift your feet.

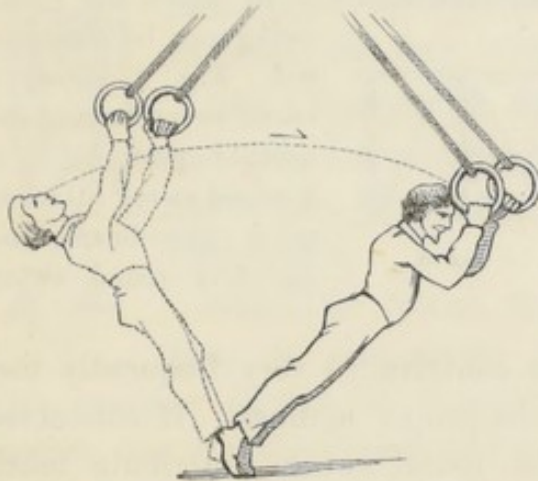


Fig. 26.

Drop sideways to the left and right, in the same manner (I).

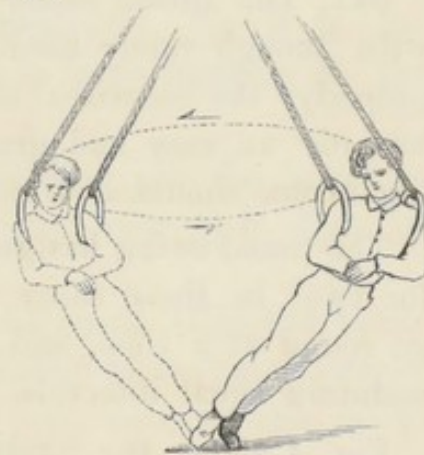


Fig. 27.

The "funnel" is a circular movement, as indicated fig. 27. — The funnel is done first hanging by the arms, and then hanging by the hands. The feet must remain stationary (I). The lower the rings, the more difficult the exercise.



Fig. 28.

540. The leaning position at the rings is the same as described par. 71. — The rings are about one foot above the floor. The leaning position is done face turned upwards or downwards. Sinking and rising in the leaning position (see par. 106) is a useful exercise. Extending both arms sideways, either from the leaning position face downwards, or from that face upwards, is a more difficult feat (II).

XIX. ROUND SWING.

Our illustrations show three different manners in which the round swing can be constructed.

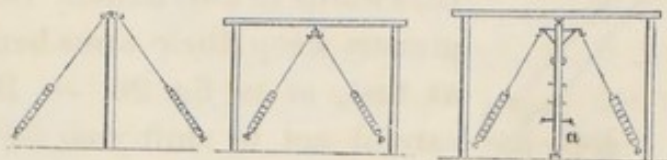


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 1 shows a round swing having one upright post, fig. 2 is a round swing attached to a cross-beam, and fig. 3 a round swing

having a revolving upright.

541. The *Round swing* is a contrivance very frequently met with, though rarely used in the proper manner. If conducted properly, the exercises at the round swing contribute much towards an easy and graceful bearing. A disorderly swinging about, should not be suffered.

The round swing has generally four ropes, and thus four men (or two, in those cases where each man uses two ropes) can go round at a time, and in doing so they must endeavour to maintain equal intervals.

Fig. 4 shows the fundamental starting position. The upper or inside arm is straight or nearly so, the other arm is bent. The centre of gravity of the body is not directly above the feet, but outside of them, and the gymnast sustains himself partly by hanging to the ropes, partly by standing on the ground.



Fig. 4.

Instead of holding on with two hands, you can hang by one hand (the other being placed on the hip), or by an elbow and a hand, or by an elbow only. Most of the following exercises can and should be done hanging in each of these different manners.

We need hardly add that you should run round by the right as well as left.

542. *Walking* is done forwards, sideways and backwards; the first and last in the fundamental position, hanging by

one hand or by the elbow. In walking sideways, you either confine yourself to one rope, or you take two ropes, as shown fig. 5. You can walk sideways with the face turned inwards, the usual and easier way (I); or with the face turned outwards (II).



Fig. 5.

543. *Trotting* is done forwards and backwards; and we distinguish between a slow trot and a quick one, the leaps in the latter being short, but very quick.

544. The *Giant stride* is practised with four, two, or one stride to each round (I, II, III). This exercise should be practised frequently, for it is the leading one for the round swing. It is done hanging in the various ways mentioned above.

545. *Running sideways*. The positions are the same as for the walk sideways. The legs rapidly cross each other, as indicated in fig. 5 (II—III).

Gallop. It is done forwards (I), sideways (II), and backwards (III). The “*giant gallop*”, similar to the giant stride, is done with long leaps, of which four, two, or one, go to each round (II—III).

546. Various fancy steps, such as are described pars. 108 etc., can be transferred to the round swing, for instance, running and raising the legs, the knees or heels, the rocking step, the Bask step, etc. (II—III).

547. *Hopping* on one leg is done forwards and backwards.

Leaping is done springing off with one foot or with both. High leaps as well as long leaps are practised, the latter resembling the giant stride or gallop. The high leaps are practised over wands, 2 or 4 of which are held up by obliging comrades.

548. *Flying round*. We thus term those long leaps which exceed the limits of one round. Flying round is practised in various ways, of which the principal are as follows, —

a. Flying round forwards, both legs raised horizontally forwards.

b. Flying round sideways (the run is taken forwards) legs astraddle.

c. Flying round backwards. You take the run forwards, and face to the left or right about, as soon as you have sprung off the ground.

549. *Exercises in the Rest.* Each man requires two ropes, and they should be furnished with small rope ladders, as indicated in our illustrations. The various ways of "resting" are as follows, —

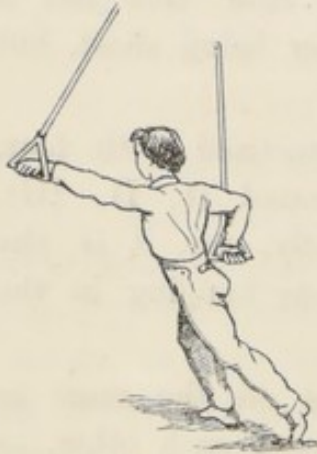


Fig. 6.

a. The inner arm drop rest, the outer arm straight.

b. Hang by the elbow of the inner arm, rest upon the outer arm.

c. Rest on the inner arm, hang by the elbow or arm-pit of the outer one.

d. Inner arm drop rest, outer arm extended sideways, fig. 6.

e. Rest or drop rest, face turned inwards or outwards.

550. In the above positions you can walk or trot forwards, gallop, etc., in fact, do most of the exercises explained above.



Fig. 7.

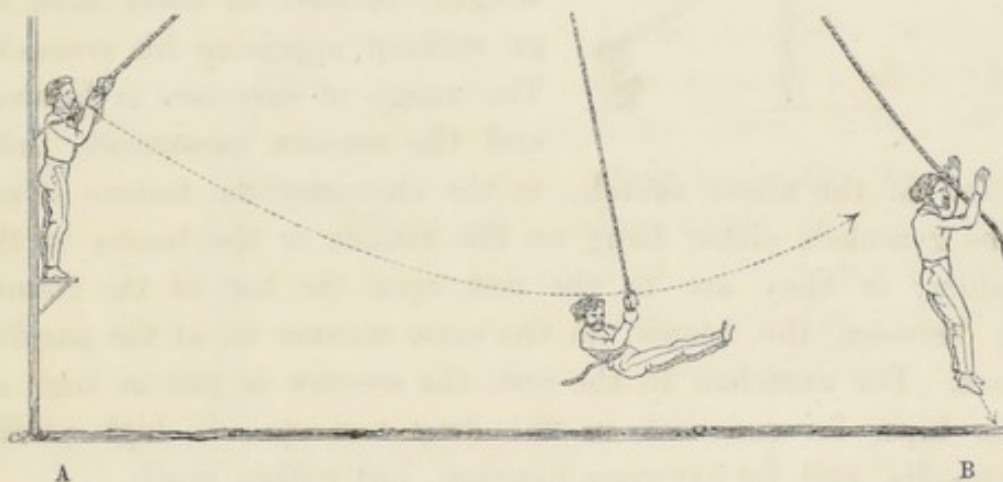
Flying round in the lever is shown fig. 7.

551. *Tilting* is an amusement easily connected with the round swing. Furnish each man with a tilter, fasten the rings to one of the uprights, and let the men run round hanging by one hand or the elbow.

XX. THE SWINGING ROPE.

552. The rope is fixed to the ceiling or to a cross-beam, fifteen to thirty feet above the ground. One of the ropes of the round swing may be used for that purpose, if fixed to a cross-beam. Ordinary climbing ropes, however, should not be permitted to be used unless fixed to a swivel, as they otherwise get untwisted.

The exercises at this rope are few in number, but they are attractive. Take hold of the rope and walk up to the platform* A; spring off, bend your arms and raise the legs, and come to the ground at B. This is the leading exercise. Instead of coming to the ground at B, the gymnast may endeavour to take a long leap, or a high leap, over a leaping stand placed at that point.



Next endeavour to return to the platform without touching the ground at all.

One way of turning head over heels is peculiar to the rope. Pass the rope's end between your legs, from behind; lay hold of it with both hands; run briskly forwards, and you will find yourself turning over in the air, without losing hold of the rope.

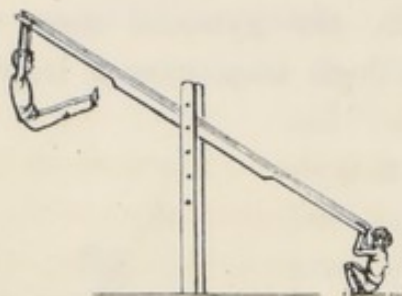
Many swinging exercises of the rings can be transferred to the rope, and amongst these we would mention the cut-away turn (par. 525), which is easier at the rope than elsewhere. Take hold of the rope, the end of which hangs down over the back; step back as far as you can (but do not at first stand on the platform) run forwards with vigour, and turn over as shown fig. 14 of the rings.

The cut-away can be done also from the platform, and without a run, on the ground (III).

* This platform is attached to an upright ladder, and can be raised and lowered.

XXI. THE SEE-SAW.

A ladder, about 15 feet in length, rests in the middle upon a bearer, which can be raised from 2 feet 6 in. to 7 feet 6 in.



553. The see-saw is used always by two men, of about the same weight. Neither of them must let go without apprising his comrade. The range of exercises is limited, and the see-saw movement, indi-

cated in the above sketch, is the characteristic feature of all. The gymnasts either hang on the rounds or the beams of the ladder; or they are in the rest upon the last of the rounds or between the beams, in the same manner as at the parallel bars. For exercises in the rest, the see-saw is put as high as the hips, for exercises in the drop rest etc., as high as the arm-pits, and for exercises hanging, just within reach.

554. The leading exercise is the see-saw, hanging at the end of the ladder, face turned inwards, i. e. looking towards the middle, as in our illustration (I).

This leading exercise can be varied in many ways. For instance — hang with the face turned outwards; hang with one side turned towards the middle (sideways); hang by one hand; swing the body forwards or backwards as you go up, etc. These and similar exercises, easily understood, will be found in Part III.

The see-saw movement, combined with a turn-over is more difficult than any of the preceding exercises. You hang on the last round, and as you go up, you place your insteps against that round, hanging head-downmost, as shown fig. 25 par. 316. — As you come down again, you lower your legs.

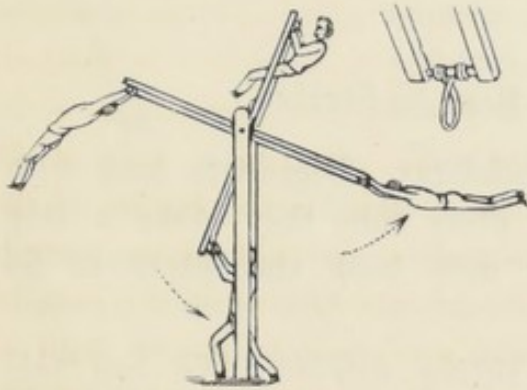
Still more difficult is the turn-over, passing your legs between the arms, as described par. 319. — As you go up the first time, you turn-over backwards, so as to hang having the round behind you. — In this position you spring off the ground

and, as you rise a second time, you turn back to your original position. Compare par. 319.

555. The exercises in the rest are arranged in a similar manner, but they must be done with great care, only men of some strength being admitted.

THE DOUBLE SEE-SAW,

[556.] introduced by Wassmannsdorff, is shown in our wood-cut.

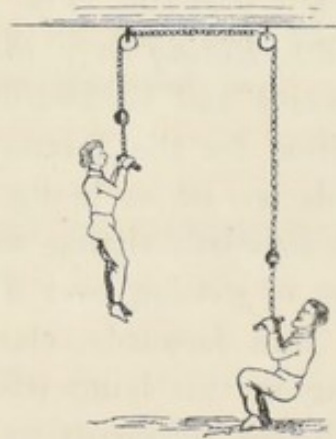


It is generally used by four men at a time who, after they have taken their positions, run round backwards or forwards. Two men of nearly equal weight can also run round

if they succeed in getting a fair start and swing.

THE ROPE SEE-SAW,

[557.] and the usual manner in which it is used, is shown in the annexed wood-cut.



XXII. THE CROSS-BEAM.

558. A beam or bar, 4 to 6 inches thick, and at least 20 feet

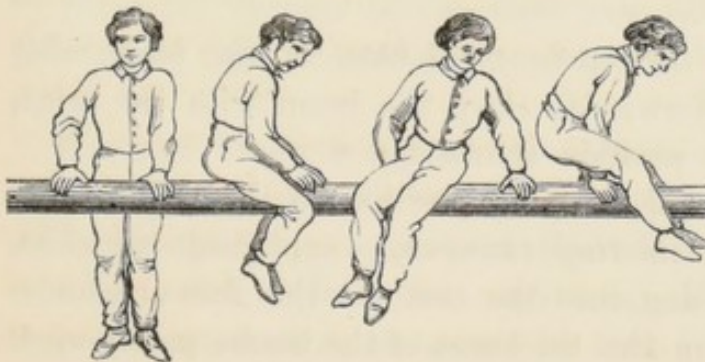


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

long, is fixed between two uprights. The uprights should be constructed in such a manner that the beam can be raised from 3 to 8 feet, and that a slanting position can be given

to it. A cross-beam, 20 and more feet above the ground, is desirable in a large gymnasium.

The low cross-beam enables us to perform many of the exercises of the rack, and it may be used at the same time for balancing and for vaulting. The exercises peculiar to it, however, are limited in number, but an intelligent leader, by transferring occasionally exercises from the rack and the balancing beam, will be able to occupy his squad in a profitable and appropriate manner.

EXERCISES IN THE REST OR SITTING.

559. *Travelling in the rest sideways.* Beginners lean with their stomach upon the beam, every time they make a step sideways (I), but more expert men keep themselves in an upright position. Fig. 1.

560. *Riding over the beam sitting astride.* We can ride forwards and backwards as well as sideways. The starting position for the former is shown fig. 2. When riding sideways we sit as in fig. 3, but one leg over the beam. — The ride forwards sitting astride is one of the most serviceable ways of getting over a high cross-beam. In case of giddiness you lean forwards, clasp the beam with your arms, and move along in this lying position (I).

Riding sideways in the side-seat is shown fig. 3.

561. *Travelling, in the balance rest, crossways,* is shown fig. 4 (II). Sitting sideways, with one leg over the beam, or in the side-seat (fig. 3), you can also rise to the balance rest and travel sideways (II).

562. *Passing from the top to the bottom of the beam.* Sit astride (fig. 2), lean forwards, clasp the beam with the arms, and turn over to the position shown fig. 6.

You can rise from the hanging position to the rest or seat on the beam by the *slanting swing-up*, explained par. 333, by circling, or by rising into the rest on the fore-arms etc. It depends partly upon the thickness of the beam, partly upon your strength, which of these modes is the most commodious.

EXERCISES HANGING.

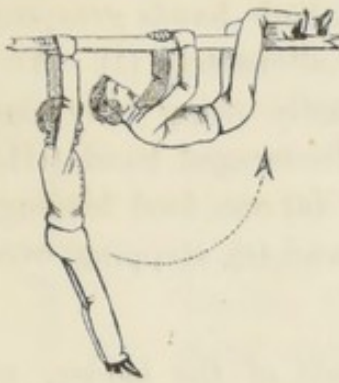


Fig. 5. Fig. 6.

563. The beginner places himself below the beam — which is about seven feet high — hangs cross-ways (fig. 5), raises his legs, bending the arms, and hangs as in fig. 6, one leg crossed over the other (I). This simple exercise should be practised frequently, and the beginner should be required to pass in repetition from the position fig. 5 to that fig. 6.

564. We travel forwards and backwards hanging by hands (arms, where the beam is thick) and legs, keeping the legs either locked as in fig. 6 (I), or moving them in unison with the hands (II).

565. The cross-beam can also be used for the whole of the travelling exercises described, Rack, pars. 290 and 291.

THE CROSS-ROPE.

566. A horizontal rope stretched across the gymnasium can be used for many of the above exercises.

XXIII. LADDERS.

567. LADDERS are one of the most useful gymnastic apparatus, and every gymnasium should be supplied at least with upright, slanting and horizontal ladders of wood, and with a rope ladder suspended on a cross-beam. It is advisable always to place two ladders of the same description side by side. One ladder can then be used for going up, the other for coming down.

We need hardly add that the ladders of a gymnasium must be made very carefully and strong. The rundles must be securely wedged in to prevent their turning. The beams are rounded off and free from splinters. Where a ladder is not to be depended on it is a rule to hold by the beams, and to step upon the rundles, close to the beams.

THE UPRIGHT WOODEN LADDER.

568. You go up first facing the ladder, both hands grasping the beams and hands and feet moving alternately (I). You then go up grasping the rundles, and lastly using only one hand (II) and carrying a burden in the disengaged hand (III). The feet step in the following manner — (a) one foot leading, — (b) foot over foot, the usual way, — and (c) stepping over one or more rundles.

569. You can also go up on the outside of the ladder, as shown fig. 1, varying step and grasp as indicated in the preceding paragraph.



Fig. 1.

570. Walking up the ladder, back towards it, is not intended for practical life, but it is a very useful exercise. The hands either grasp the beams about the height of the hips, or they grasp above the head (II). The hands grasp the beams from the outside, but they can also grasp the rundles, fig. 2.



Fig. 2.

571. We can go up the ladder using the hands only, the legs either hanging down straight, or being put round the beams (see fig. 17). We travel up in this manner, one hand leading (I), hand over hand (II), and hopping (III, both hands move together).



Fig. 3.

572. *Vanes.* The upright ladder offers great facilities for accomplishing vanes of various descriptions. The easiest vane is that where we sit upon one rundle, and place our insteps below the rundle beneath (see fig. 5).

The foot-vane, fig. 3, is much more difficult (II), and still more so is the hand-vane (see fig. 8, par. 608). (III)

THE RUNDLED POLE OR PARROTS LADDER

[573.] is a ladder with one beam. It is either fixed top and bottom, or suspended on a beam.



Fig. 4.

It admits of most of the exercises of the upright ladder, but in addition we can go up sitting upon the rundles. You sit as in fig. 4, open your legs, bend the arms, and sit down upon the rundle above. By passing over one or more rundles, this exercise is rendered more difficult.

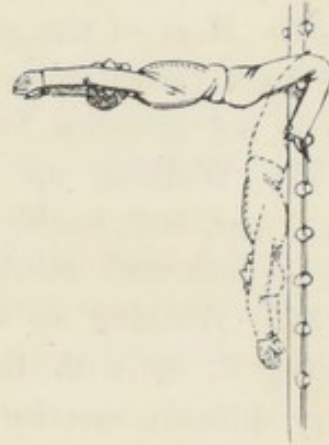


Fig. 5.

The annexed wood-cut, fig. 5, shows the *Vane* sitting upon a rundle, the insteps being placed beneath the rundle below (II). Sinking and rising in this position, as indicated by the dotted lines, is a very effective exercise.

SLANTING LADDER.

THE ladder has an inclination of about 60 degrees. We distinguish between the upper side of the ladder, the lower side, and the two outer sides.

Walking up the ladder.

574. We can walk up the upper or the lower side, the

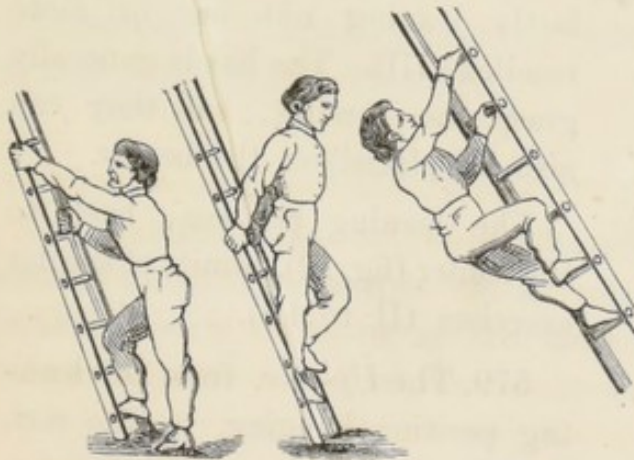


Fig. 6.

Fig. 7.

Fig. 8.

former being the most usual method. We walk up, one foot leading — generally when carrying a heavy burden — and foot over foot. The hands should be placed on the beams of the ladder, and each step with the left foot is followed immediately by

an advance of the right hand. When descending the same rule is observed. Fig. 6.

We next walk up using only one hand, at first without a burden (I) and subsequently carrying a burden.

Walking up is then practised leaving out one (I) two (II) or three (III) rundles, and finally we walk up freely, without using the hands at all (II). The latter exercise must be done with care. You should not run up the ladder, but walk steadily, without touching the rundles with your shins.

575. Most of the preceding exercises can be done also with the back turned towards the ladder, though this way of going up is not intended for practical application (II—III). Fig. 7.

576. Walking up on the outside of the ladder, as shown fig. 1 par. 569, enables two men to walk up the ladder together, or to pass each other, but is not otherwise of any service.

577. Walking up on the lower side of the ladder is done facing it, or with the back turned towards it, the latter a very difficult exercise (III). Fig. 8.

Travelling in the leaning position.

578. We can hang in the leaning position, — fig. 9 or 10, or rest in it — fig. 11 — and in either of these positions we can travel up or down the ladder. We do so, first, one hand leading, then hand over hand (II), and lastly leaving out one or more rundles (III). The hands generally grasp the rundles, but they can also be placed on the beams.

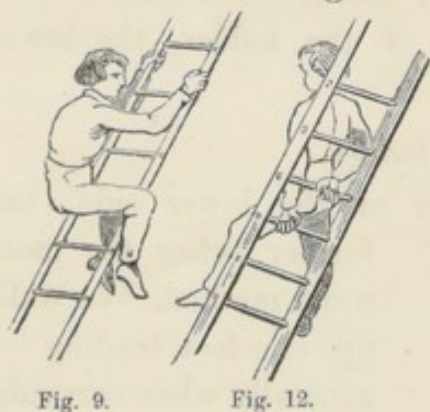


Fig. 9.

Fig. 12.

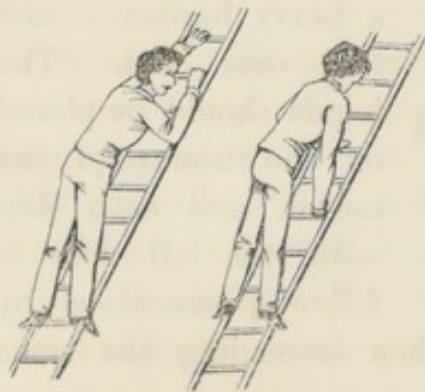


Fig. 10.

Fig. 11.

The leaning position, back to the ladder (fig. 12), admits of similar exercises (II to III).

579. The *Up-rise*, from the leaning position hanging, to the rest, is effected in the same manner as at the rack, but to do it well is much more difficult (IV).

Hanging on the lower side of the Ladder.

580. THE jump to the hanging position, the hands grasping the beams, the rundles, or one hand a beam the other a rundle, is practised first, and it is clear that the difficulty of this exercise increases if we endeavour to reach a high part of the ladder.

581. Once in the hanging position we travel up and down the ladder, one hand leading (I), hand over hand (II), leaving out one or more rundles (III), and hopping (both hands move together, II—III).



Fig. 13.

The legs, as a rule, should hang down, but as a matter of exercise they may be held out forwards, astraddle in an horizontal position (III).

582. We can also travel on the lower side, having the back to the ladder (III); and on the outside, as shown fig. 13 (I—II).

583. Hanging and standing on the lower side of the ladder, as shown fig. 14, we can sink and rise, bending the arms, or without bending them. The latter exercise is shown in our illustration. The number of rundles between hands and feet is variable (see Part III).



Fig. 14.

THE HORIZONTAL LADDER.

The ladder is 15 to 20 feet long; the beams are about 18 inches apart, the rundles 10 in. Sometimes the beams are provided with a groove for the fingers. The ladder is placed seven feet and a half above the ground.

Hanging with the hands.

584. We can hang either on the rundles or on the beams; we hang crossways, when a line passing through the shoulders

runs parallel with the rundles (fig. 15), sideways, when that line is parallel to the beams (fig. 16).

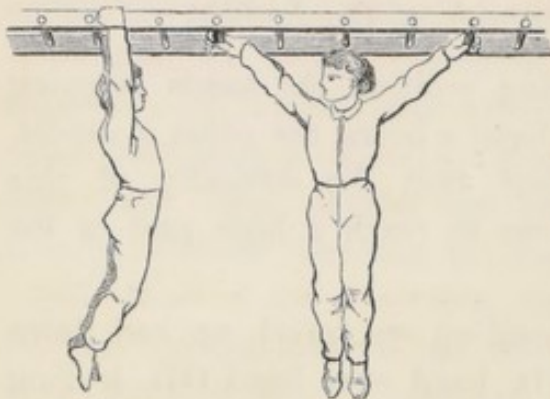


Fig. 15.

Fig. 16.

Hanging sideways on one beam we can have either ordinary grasp or reversed grasp, as explained par. 288, fig. 2.

Hanging sideways on two rundles you grasp either outside (knuckles turned from you) or inside (knuckles

turned towards you). Fig. 16.

Hanging crossways on the beams we distinguish between outside grasp (fig. 15) and inside grasp; and hanging crossways on one rundle we have ordinary or reversed grasp. —

585. Hanging sideways or crossways, on beams or rundles, we can swing forwards and backwards, sidwards, or in a circle. We can hang with arms bent, and rise and sink as at the horizontal bar. We can also hang with arms spread out, as shown fig. 16, one or more rundles being between the hands.

Changing Grasp.

586. In changing grasp we either move hand after hand, or we move both hands together, the latter being by far the more difficult. The following changes are the more usual, —

Hanging sideways on two rundles, change from outside to inside grasp, first moving hand after hand (I) then both hands together (II).

Hanging crossways on the beams, change from outside to inside grasp and back again (II).

Hanging crossways on a rundle, change from ordinary to reversed grasp and back, first hand after hand (I), then both hands together (II).

Hanging crossways on a rundle, ordinary or reversed grasp, change to the inside or outside grasp on both beams (II).

Hanging sideways on two rundles, change to a beam, and back (II).

Travelling.

587. Here, as at the parallel bars, we distinguish between walking (when hand moves after hand) and hopping (when both hands move together). — We travel forwards, backwards, and sidwards; and we can hang either on one of the beams, on both beams, on the rundles; or with one hand on a rundle, the other on a beam.

588. Hanging on one beam, sideways, we walk first sideways (to the left or right) one hand leading, viz. the right hand makes a step, the left follows. We then move hand over hand, that is, when the right hand has made its step, the left is passed over it, and grasps the beam beyond. — We next walk passing hand under hand. — Whilst walking in this manner the body and legs must be kept straight, the toes turned downwards, and there must not be any swaying about (I).

After some time the length of the steps taken may be increased (Walking with long strides). Instead of taking steps equal in length to the distance between the rundles, you take steps or strides of twice, three or four times that length (II).

Hitherto the body has been kept straight. You may now endeavour to walk with your knees drawn up to the chest, your legs extended forwards etc. (II).

The walk with arms bent is another variation of the same exercise (II).

Walking may be accompanied with swinging sidwards. When walking to the right you move a hand with each swing to the right, when walking to the left with each swing to the left. The steps are short at first (I), but they are gradually increased in length (II).

The walk can be accompanied also by turning. For instance, let go with your left hand, turn to the right about hanging by the right arm; grasp again with the left hand, etc.

589. Hopping sidwards is done without a swing and with a swing; with arms bent or straight; the knees can be drawn up to the chest or the legs extended forwards (II).

590. Hanging on the rundles, as in fig. 16, we can also travel sidwards in most of the ways described in the two

preceding paragraphs. The walk with long strides, swinging, is an attractive exercise. As you swing to the right, you make your stride with the right hand, and on swinging to the left you follow up with the left hand (I to III).

591. Hanging on the beams we can travel forwards and backwards (see fig. 15). Outside grasp is the easiest; inside grasp very incommodious and trying. You can walk and hop thus with arms straight or bent, without or with swinging, taking short or long strides or hops etc. When swinging, you hop forwards with each forward swing, backwards with each backward swing, but the backward swing should be very moderate.

592. Hanging on the rundles you walk and hop forwards and backwards. Long hops, passing over one or more rundles, generally with a swing, should be practised with due care. You hop forwards with a forward swing, backwards with a moderate backward swing (II — III).

The same exercises can be done with reversed grasp, but they are then much more difficult.

593. We can also travel forwards and backwards having one hand on a rundle the other on a beam.

Hanging with the fingers.

594. The horizontal ladder is frequently provided with a finger groove, and this groove affords an excellent opportunity for introducing some finger exercises. This is the more to be appreciated as the fingers do not generally get their due share of exercise. You can hang with the fingers of both hands placed in the groove of the same beam (sideways), or cross-ways. You then walk sideways, forwards or backwards, moving hand after hand or hopping.

Hanging by hands and legs.

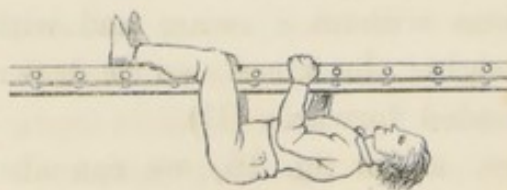


Fig. 17.

595. The legs are fastened round the outside of the ladder, as in fig. 17, and you travel in this position forwards and backwards.

Passing from the bottom to the top of the ladder.

596. This can be effected in various ways. It is most characteristic of the ladder to pass up between the rundles. For example, — hanging on a rundle you circle, as at the rack, and pass your legs through first (II). Or, starting from the same position, you rise up into the rest, as described par. 298, the head thus passing through first (III).

Once on the top of the ladder you can perform most of the exercises in the leaning position (par. 578), or you can stand up, and walk along the ladder, carefully stepping from rundle to rundle.

ROPE LADDERS.

597. A hanging rope ladder is generally to be found in each gymnasium. The whole of the rundles are either of wood or only part of them. Before using a rope ladder it should be carefully examined, for it happens frequently that one of the rundles is loose. It is safest to hold by the side-ropes. The arms should be kept as straight as possible, for by bending them we waste strength.

The exercises are the same as at the upright wooden ladder.

Slanting and horizontal rope ladders admit of the same exercises as similar ladders of wood.

PORTABLE LADDERS

[598.] are used by fire-brigades to escalate houses. A ladder of this kind is about 12 feet long, made light but strong, with square beams and rundles, and provided with two indented hooks, about 18 inches long. Two or more ladders are used in escalating a house. The first ladder is placed against the house, the hooks turned away; it is then lifted until the top is above the window sill of the first floor, when it is turned round and hooked in. The fire-man, having assured himself of its being steady, ascends to the first floor. He is followed by a second man, who remains standing on the window-sill, and whom he holds by the belt. A second ladder is then handed up and hung to the window of the second floor, etc.

XXIV. CLIMBING.

599. THE ladders and the apparatus for climbing are generally found in close proximity to each other, thus enabling a leader to use various kinds of apparatus in turn, during the same lesson. This is desirable, as the range of exercises at some of the apparatus is very limited.

The fundamental climbing position is shown fig. 1. Pole or rope is held tight between the instep of one foot and the

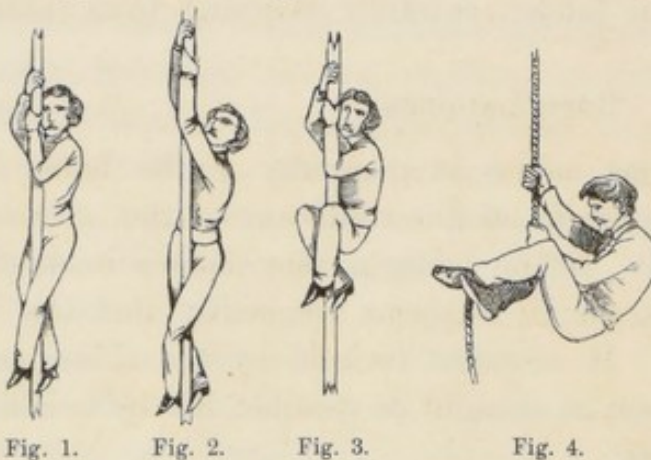


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

heel of the other. On beginning to climb the hands grasp as high above the head as possible (fig. 2); the knees are then raised as near to the hands as possible (figs. 3 and 4); the feet again take firmly hold of the pole or rope; the body is extended a second time, and so forth. The effort of the arms must be properly seconded by the legs, which must keep a firm hold of rope or pole whilst the hands take a fresh position. Climbers, as a rule, should always come down in the same manner they went up. Gliding down may be introduced as an exercise, the gymnast either coming down in jerks, catching hold every yard or so, during his descent, or he glides down holding on with the legs only, or with the hands.

Perspiring hands, though unpleasant, are a great advantage to a climber. Gymnasts suffering under the disadvantage of dry hands may moisten them with water.

Climbing, if carried on with moderate care, is much less dangerous than would appear at the first glance. The leader should however always have an eye upon the climber, and to be prepared to break the force of a fall. Beginner may be supported by the legs.

THE UPRIGHT POLE.

THE pole is either fixed top and bottom, or it is suspended on a cross-beam. Poles should be provided, varying in thickness from 2 to 4 inches. They are best placed side by side, about 20 inches apart.

600. *Climbing positions.* These should be practised first. Fig. 1 shows the fundamental position, which can be modified by letting go with one hand, one foot (I), both hands (III), or both feet (II). — The change in the hold of the feet should also be practised, the hands grasping firmly.

601. *Ordinary Climbing.* The easiest, though least expeditious and in the end most tiring way, is to climb with one hand leading; that is to say, the knees having been raised, the left or right hand takes a fresh grasp, the other follows suit, grasping close beneath it (I). A more advantageous mode is to climb hand over hand (I), but the quickest of all, moving both hands together or nearly so (II). In the latter case the hold of the feet and legs should be very firm, and not an inch of ground must be lost, whilst the hands are being moved onwards.

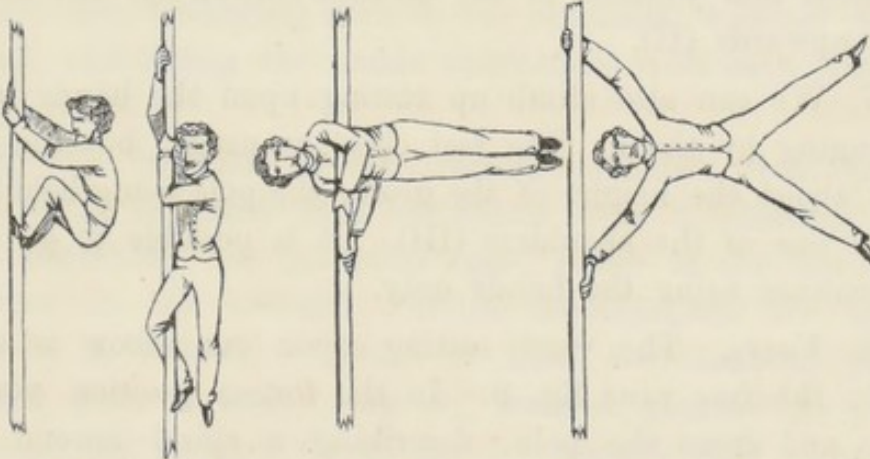


Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

You may now endeavour to climb, changing your hold with the feet after each step, viz. your left and right insteps are placed in alternation against the poles (II).

Now climb describing a spiral line around the pole (II).

602. Having mastered these ordinary modes of climbing you climb making use of one leg and both hands, fig. 6 (II); or of both legs and one hand (II).

You can also climb having the pole behind you, the feet clasping in the usual way (II).

603. *Climbing, using the hands only*, is done one hand leading (II), hand over hand (II) or hopping (III), both hands moving together in the latter case. The arms are bent, and the legs either hang down steadily, or they are held out horizontally forwards (III).

This mode of climbing is also done having the pole behind (III).

604. *Passing*. Two men, climbing at the same pole, A upwards, B downwards, can easily pass each other if B, on approaching A, lets go his legs, and only uses his hands until he is clear of A (II).

605. *Walking* up the pole is shown fig. 5 (III).

606. *Climbing, head downmost*. Take your position, back to the pole; grasp the pole with both hands above your head. Throw up your legs forwards, one shoulder acting as a pivot, and fasten upon the pole with the feet in the ordinary way. You then find yourself in the position shown fig. 12, and can climb upwards (II).

607. We can also climb up resting upon the hands instead of hanging by them. The feet clasp as usual, but the hands grasp about the height of the groin, the pole being held firmly behind one of the shoulders (III). It is possible to go up in this manner using the hands only.

608. *Vanes*. The vane resting upon one elbow is shown fig. 7, the free vane fig. 8. In the former position you can go up and down the pole, describing a spiral around it or not (III), in the latter you can bend and stretch the arms (III).

The *shoulder vane* is performed as follows. Place yourself close to the pole, back towards it; grasp the pole above the head, and pressing one shoulder firmly against it, raise the legs forwards until you are in an horizontal position (III).

THE PAIR OF UPRIGHT POLES.

THE poles are 18 to 22 inches apart. It is desirable to have one or two lines of such poles, eight in a line.

609. Hanging between the poles is the exercise practised



Fig. 9.

first. We can hang with the hands only, or with hands and legs. In the latter case the knees are either inside the poles or outside (fig. 9), and the insteps fasten upon the poles.

610. In climbing between the poles with the aid of hands and legs (knees inside or outside) the hands are moved either one after the other (I) or both together (II).

611. We can also climb using the hands only. The legs in that case either hang down straight, or they are raised forwards. The hands move one after the other (II) or both together, hopping (III). Swinging forwards and backwards can accompany the hopping upwards, and the change of grasp, in that case, always takes place with the backward swing (III). But before attempting this exercise, swinging should be practised without gaining ground, and lifting the hands alternately with each backward swing (I).

612. We "*wander*" if we transfer ourselves from pole to pole; we do so either in a horizontal or in a slanting direction, beginning, in the latter case, either at the top of the poles or at the bottom. Further modifications are brought about by as follows. — Start as from the climbing position between poles *a* and *b*, fig. 9; transfer yourself to pole *b*, assuming the position shown fig. 1; transfer your right hand and right leg to pole *c*, so as to hang again as in fig. 9 (I).

A more difficult mode is as follows; — you start as before; face or wheel to the right about, pole *b* being the pivot around which you move, and fasten with the left hand and leg upon pole *c* (III).

The same exercises can be done hanging with the hands only (II—III).

613. *Walking* up between the poles is done in the same manner as shown fig. 5, but each pole is used by a hand and a leg (III).

614. Travelling in the rest upon the hands, instead of hanging by them, and making use of the legs or not, is a most arduous exercise (III). The hands grasp about the height of the hips.

615. In conclusion we will mention that a number of exercises described for the *Rings* can be performed also at the double poles (see pars. 522 to 529). Amongst these we would specify the turn-over, the swing-over, hanging head downmost (and travelling in that position), the back- and the front-levers.

THE SLANTING POLES.

Two or more of these poles should be placed in a line, slanting at an angle of about 45 degrees. It is desirable that facilities should exist for varying the degree of slope. The poles are 18 to 22 in. apart.

Exercises hanging with the hands only.

616. TAKE up your position below the poles, face them, spring off the ground and hang. The hands, when hanging on two poles, either grasp outside or inside; when hanging on one pole, you have double grasp, as at the rack (I).

617. Once in this hanging position you can swing to and fro, viz. forwards and backwards, sideways, or in a circle (I). But a leader having a squad of beginners, or desirous of introducing a variety of exercises, can avail himself of the exercises described pars. 436 to 443 of the parallel bars.

618. *Travelling* is moving along the poles hanging with the hands, and is more or less difficult according to the slope of the poles. You travel with arms straight or bent, forwards and backwards, grasping outside or inside, and making use of a swing or not. The hands are either moved one after the other, or both together (hopping). When there is a line of poles you can travel sideways from pole to pole, in the same

manner as described 590 of the horizontal ladder, the poles in this instance, taking the place of the rundles (I—II).

619. Hanging on one pole only, either crossways or sideways, we can walk and hop, forwards, backwards and sideways, upwards and downwards, as explained pars. 290 and 291 (Rack), 565 (Cross-beam), 588 (Horizontal ladder).

When there is a series of poles we can travel from one to the other, forwards or backwards, either one hand leading (I), hand over hand (II) or hopping (II).

620. Travelling can be accompanied also by turning. You start hanging sideways at one pole; let go your right hand, face to the left and grasp the pole next to you. You then hang crossways on two poles. By repeating this change you may travel from pole to pole (II), an exercise admitting of various modifications.

Hanging by hands and legs.

621. The position for climbing is the same as shown fig. 1, but the pole slanting, you can climb either on the top of it, or underneath it (I).

622. Hanging by the hocks and the hands (par. 564, cross-beam), you travel forwards and backwards.

The same is done hanging on two poles, the knees being either inside or outside (compare fig. 17, Ladders). (I—II).

Exercises lying on the Poles.

623. If you lie on the top of the Poles, as shown fig. 10, you can travel up and down the poles, the main effort being made with the arms (I). The same exercise can be done head downwards in which position you push yourself up with the arms (III).



Fig. 10.

Exercises in the Rest.

624. A pair of slanting poles, forms a pair of slanting parallel bars, and many of the exercises described for the ordinary

parallel bars can be transferred to it. The steeper the slope, the more difficult are these exercises. Travelling up and down in the ordinary rest, the drop rest and in the leaning position are the handiest of these exercises (compare pars. 398 to 401, 424 to 429).

THE RUNDLED ROPE.

625. THIS is an ordinary rope with rundles 9 to 12 inches apart. It is of subordinate importance as a gymnastic appliance. The only characteristic exercises are going up or down sitting or standing on the rundles (compare par. 573).

THE KNOTTED ROPE.

626. THE knots are 9 to 12 in. apart. Frequently there are blocks instead of the knots.

The knotted rope enables us to perform all the exercises of the smooth rope, and they are rendered easier in consequence of the support afforded by the knots when climbing. For this reason the knotted rope has been introduced as part of the equipment of many fire-brigades. Beginners should be taken to the knotted rope before they proceed to the smooth rope.

THE ROPE.

ROPES varying in thickness should be provided in each gymnasium. The ropes hang about 20 in. apart.



Fig. 11.

627. The *Position for climbing* is the same as at the pole, but owing to the flexible nature of a rope it is more difficult (see fig. 1, par. 599).

Another climbing position, peculiar to sailors, is shown fig. 11. The rope passes behind the right leg and is held firmly between the right instep and the sole of the left foot. We do not consider this position very favourable for climbing up a rope, but, owing to the strong friction to which the rope is exposed, it deserves consideration for coming down a rope.

628. *Ordinary climbing*, using hands and legs, is done in both these positions, and in the same manner as at the pole, viz. first one hand leading, then hand over hand, and finally both hands moving together (II). The knees, after the feet have temporarily given up their hold, must be brought up close to the hands (see fig. 4).



Fig. 12.

629. *Climbing, using the hands only*, is done in the same manner as at the pole, par. 603.

630. Two gymnasts pass each other as explained par. 604.

631. *Climbing, head downwards*, is shown fig. 12 (III).

632. *Standing in the rope*. You go up into the climbing position; place your left sole against the rope, lift it up with the right instep and grasp it with the right hand. You will then find it an easy matter to remain for some time in the position shown fig. 13. — This exercise should be practised first near the ground, and then twelve or more feet above it.



Fig. 13.

Fig. 14.

633. *Sitting in the rope*. You go first into the position shown fig. 4; grasp the rope with one hand below the feet, sling it around one thigh, and go into the position shown fig. 14 (II).

If you sling the rope several times around your thighs, alternately the left and the right, you can let go with the hands, and hang head downwards with perfect ease. This feat you should try at first near the ground (III).

634. The *Vane* (fig. 8) can be done also at the rope, but imperfectly (III).

THE PAIR OF ROPES.

635. Two ropes hanging side by side can be used in the same manner as the pair of poles.

SLANTING ROPES.

636. THESE admit of most of the exercises described par. 616 etc.

THE PLANK.

637. THE plank is about 12 in. wide and 2 thick. Its length is at least 20 feet and it is fixed in such a manner against a wall or a cross-beam, that it can be shifted from a slanting position to an upright one.

The only characteristic exercise which can be performed at it, is the walk up and down, as shown in fig. 5.

THE MAST.

638. CLIMBING the mast does not differ materially from climbing a thick pole but it requires a much greater effort, as the hands are not able to grasp it.

A peculiar way of ascending a mast or tree is shown fig. 15. The rope, which should be stiff, passes completely round the back, and should be tied securely. A hoop may advantageously be substituted for the rope.



Fig. 15.

advantageously be substituted for the rope.

THE CLIMBING WALL.

639. THIS wall is prepared in various ways. There are either grooves, 1 deep, 3 in. apart, ledges 1 in. thick and 2 in. apart; square blocks of wood, 3 in. apart etc. A real wall of rough stones, having fissures sufficiently large to insert the fingers and toes, answers the same purpose, and is even preferable in some respects.



Fig. 16.

We climb up the wall using hands and feet, fig. 16, or using the hands only.

If a rope is attached securely to the top of the wall we can, by holding the rope with the hands, walk up the wall, our position being similar to that shown fig. 15.

THE TRUCK.

640. A small truck constructed similar to that shown

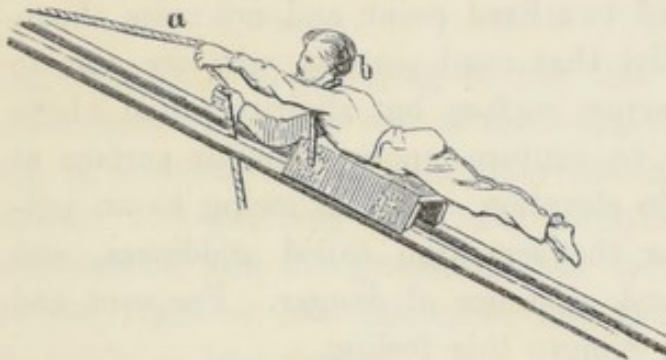


Fig. 17.

fig. 17 can be placed on a pair of double poles or ropes, slanting or horizontal, the exercises on the latter being much easier. The gymnast lies on the truck, on his stomach or on his

back; or he sits on it astride or with his legs between the poles. He then works himself along the poles or ropes, which he grasps; or he propels himself with the aid of a rope *a*, fixed to the wall or cross-beam, as shown fig. 17. The small rope *b* passed round the gymnast's neck, prevents the truck from slipping away from him. These exercises are exceedingly wholesome for strengthening the loins and the abdominal region.

XXV. BALANCING.

641. THE exercises in balancing are frequently neglected in gymnasia. They are looked upon as trifling, and more suited to women and children, than to men. But though these exercises call for skill rather, than for strength, they should nevertheless, not be neglected, especially as they are of real, practical value.

We are required to "balance" ourselves when the base of support, upon which we stand, is limited in extent or when it wavers or oscillates. We thus balance even on the level ground, when standing upon one foot or on tiptoe (compare par. 68).

It is an advantage, when balancing, to raise the arms sidwards, or to carry a long balancing wand weighted at the ends, as used by tight-rope dancers. A suitable

movement of the arms or of the wand restores the equilibrium. When required to keep the hands upon the hips, or the arms folded, the equilibrium must be maintained by other means: — when standing upon both legs the joints of the knees or feet are bent, when standing upon one leg the other leg is moved in any direction required. — When balancing, the eyes must be directed to a fixed point, and not roam about.

It is a well known fact that most persons, who are able to walk with ease on a narrow surface but slightly raised above the ground, are afraid to venture upon a similar surface at more or less considerable elevation. This is owing to an irritation of the nerves, or the sensation called giddiness, and produced by the supposed existence of danger. Frequent and progressive practice will remove this feeling.

These general remarks apply to all balancing exercises, and we will now proceed to describe the exercises at the different apparatus.

THE BALANCING BEAM.

Apparatus. A tapering spar, about 50 feet long, 12 in. diam. at one end, 6 in. at the other, rests upon two supports, so as to allow the lower end to waver. In a well fitted gymnasium arrangements should be made to allow the spar

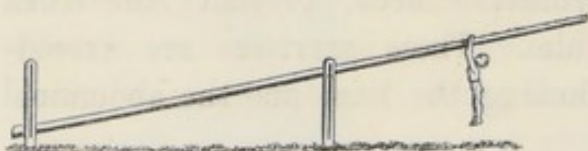


Fig. 1.

being raised and lowered, so as to give it a slanting direction (fig. 1).

642. Beginners, before they are allowed to go on the balancing beam, should be made to practise the balancing exercises on the ground, described par. 68.



Fig. 2.

it. Sit astride upon it; kneel, go into the squatting position (fig. 2) and then raise yourself upright (fig. 3). The feet are turned outwards (I). Going at once into the squatting position, without kneeling previously, is prac-

643. The first exercise to be practised on the beam is mounting



Fig. 3.

tised next. — Changing, between sitting and standing, should be done repeatedly in succession, and by word of command (I).

644. The facings are effected on the beam in the following manner. When facing to the left the right foot is put forwards (fig. 4), and it is turned to the left, the left foot follow-

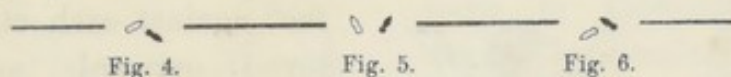


Fig. 4.

Fig. 5.

Fig. 6.

ing (fig. 5). When facing to the left about, the half face is made first, the right foot is then placed in the position shown fig. 6, and the left follows. Any one losing his balance jumps down. This jumping down can, however, be practised also as an exercise, and the gymnasts may be ordered to jump down to the right or left sideways, or, having made a half-face, forwards or backwards.

645. By raising one leg forwards, sideways or backwards (I), and by introducing other movements of the legs, as described pars. 82 to 92, the power of balancing may be improved and tested (II—III). The beam affords an excellent opportunity for trying the squatting position on one leg, the other hanging down by the side. Sinking to this position, alternately on the left and right leg, and again rising to the upright position, is a capital exercise (II).



Fig. 7.

646. Standing in the balancing position the, arms are ordered to be folded on the chest or back, the hands to be placed on the hips, arms thrust upwards and sideways etc. (I—II).

647. *Walking* is done forwards, backwards and sideways. The men get up at the thick end of the beam and walk right along to the wavering end; they can there face about and walk back again. In walking forwards or backwards the feet are turned outwards; when walking sideways the leading foot is placed lengthwise on the beam, the other across —. The steps, as a rule, should be short (I).

648. Having mastered the ordinary walk upon the beam, some of the fancy steps, described pars. 108 to 114 may be introduced, for instance, walk raising knees to chest, walk

raising legs forwards, walk throwing out legs, walk in the squatting position etc. (II—III).

649. Two men meeting on the beam should learn to pass each other. They can do so standing, in the following manner.

On meeting, the two men put the inner edges of their right

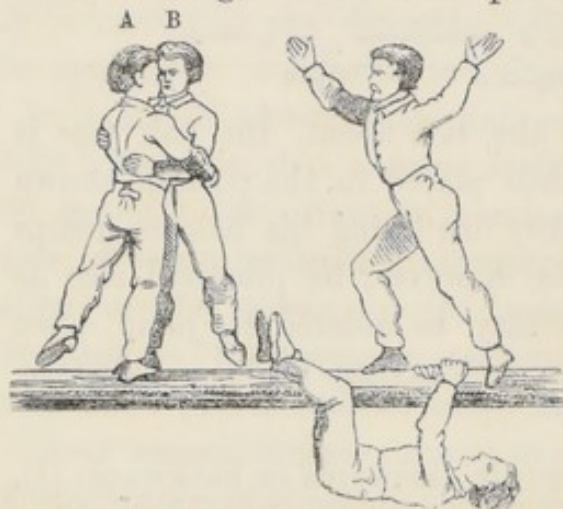


Fig. 8.

Fig. 9.

feet against each other, feet turned outwards, and grasp each other round the waist or by the upper arms (fig. 8). One of them counts, 1, 2, 3, and on *three* both twirl simultaneously on the right feet forwards, and A thus occupies the position previously occupied by B. — Beginners must practise this exercise at first on a beam placed close to

the ground.

650. Passing over obstacles is also practised. The obstacle can be placed upon the beam or held over it (a stick for instance). Or, when two men meet in the middle of the beam, one of them sits down astride and crouches down, or he lies across the beam, and hangs himself below it by hands and feet (fig. 9), whilst the second man steps over him.

651. Walking, carrying a burden, is also worthy of attention. In volunteer clubs the burden consists appropriately of knapsack, pouch and musket; in Engineer's companies, of bags (filled with wool), blocks of wood, gabions etc.

652. No squad should leave the balancing beam without an *Encounter* taking place on the thick or on the wavering end, the latter, however, only between more advanced gymnasts. The first man gets up at the thick end of the beam and walks to the top of the wavering part, where he turns round and places himself in the attitude of defence, one hand extended forwards. — The second man then walks towards him, and when near enough to touch his antagonist's hand with his own, he also places himself in the attitude of defence. — One man

now tries to get the other off the beam by striking his hand

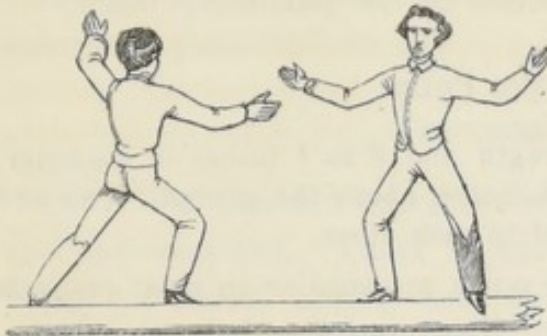


Fig. 10.

or fore-arm, and by causing the beam to waver. Pushing, or striking the body, are not permitted, but a stroke upon hand or fore-arm may be evaded by leaning backwards or by with drawing the hand. As soon as one man is got off,

the other takes the position at the top of the beam and a third man goes to meet him, and so on, until each man in the squad has had three or more turns.

THE BALANCING PLANK.

653. IT is an easy matter to walk over a plank placed across a ditch, it is more difficult to pass a plank crossing a running stream, and most difficult of all to walk over a plank at a considerable height above the ground.

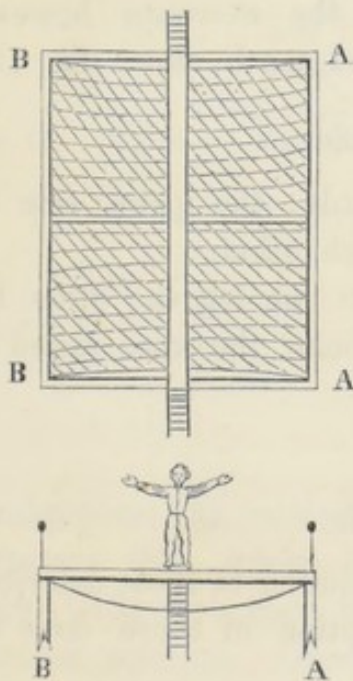


Fig. 11.

A high plank of this kind should be fixed in the open air, and not in a confined room or hall. It is constructed in the following manner. Four posts (A A B B), 12 to 15 feet high, are placed in the shape of a parallelogram of 13 by 24 feet. These posts are connected by cross-beams (AA, BB, and AB). The plank is placed in the middle of the cross-beams AB.

It is about 1 foot wide and 3 inches thick. An iron railing runs round ABBAA, and access is afforded to the plank by means of two ladders. A netting of rope or galvanized iron wire, with 6-inch meshes, is suspended below the plank in case of accidents. If this netting is removed during wet weather it will last a long time. We need hardly add that the scaffolding can be used for fixing ropes, poles, swings etc.

The exercises on this high balancing plank should be confined to the more simple exercises of the balancing beam.

BALANCING POLES.

These poles are 20 feet in length and 3 to 4 inches in diameter; they rest upon beares, 18 to 24 inches above the ground. Two and more poles can be placed parallel to each other.

654. THE exercises on these poles are similar in most respects to those on the balancing-beam, but they are more difficult on account of the basis of support being narrower. By placing two or three poles parallel to each other, and allowing the men walking upon them to lay hold of arms or hands, the exercises however are rendered much easier (fig. 12).



Fig. 12.

In Pairs on two poles.

655. We walk forwards and backwards, the pairs side by side; and sidwards, in pairs facing each other.

When in the balancing position upon one leg the other leg can be raised and lowered in all directions, the knee raised to the chest etc.

Fancy steps are introduced next.

Singly on one pole.

656. The exercises on one pole are similar to those described for the balancing beam, with the exception of those done on the wavering end.

Singly upon two and more poles.

657. The poles are parallel to each other, and the gymnast steps with one foot upon each pole.

The *Rocking step* is done on two poles, one foot on each (see par. 112).

The *Basque step* renders four parallel poles necessary (par. 111).

Other exercises for sets of two or more poles can be arranged easily by an intelligent leader referring to the Free Exercises described pars. 107 to 115.

THE TIGHT ROPE.

658. WE content ourselves with mentioning the tight rope and rope-dancing. There is but little chance of this exercise being introduced largely into our gymnasia, nor would their introduction appear desirable.

BALANCING STAKES etc.

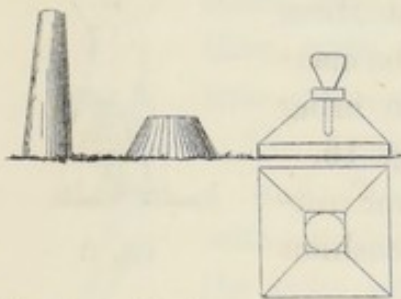


Fig. 13.

Fig. 14.

Fig. 15.

Stones or small blocks of hard wood, the latter about 4 inches high, 6 in. in diameter (fig. 14).

Stakes (fig. 13). These are driven into the ground or fixed on sleepers, and vary in height from 6 inches to 6 feet. Those 18 in. high are most serviceable.

Pyramids with revolving tops (fig. 15). The tops fit into a socket by means of an iron pin.

Stakes, stones etc. are arranged into lines, rings or other shapes.

659. THE apparatus thus described offers a single point as basis of support. We will begin our exercises by placing the stakes or blocks in a

straight line, at intervals of three feet. The men form in line abreast; they grasp hands or upper arms, and placing the right (left) foot upon the peg or block they rise into the balancing position. Once there, they are ordered to raise and lower the disengaged leg, to raise the knee to the chest, to sink into the squatting position etc.

660. Having stepped down, the men face to the right, and go again into the balancing position, but this time without holding each other.

661. In conclusion they walk from peg to peg, from block to block, along the entire line or round the ring. This is by

no means difficult as long as the pegs are only three feet apart; by increasing the intervals we increase the difficulty.

662. Pyramids with revolving tops admit of another set of exercises. Standing in the balancing position we can spin round to the left or right by giving the impulse with the leg upon which we stand, or by a swing of the disengaged leg. The turning round must be done steadily and without jerking (II — IV).



Fig. 16.

663. There are some other exercises which can be done on balancing stakes. Amongst these some levers may be mentioned. Standing upon one leg we can bring the body into a horizontal position, fig. 16.

We can furthermore accomplish a lever resting upon one arm (par. 130, fig. 11). A cushion is desirable, if we stand on the head.

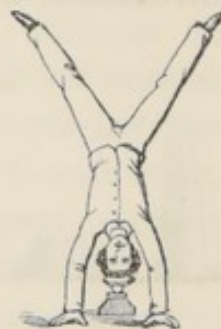


Fig. 17.

THE HANGING PLANK.

Apparatus. A plank 12 feet long, 2 feet wide, hangs suspended by four wire ropes, attached to hooks, about 12 feet above the ground. Height of plank above ground, 6 to 12 in.

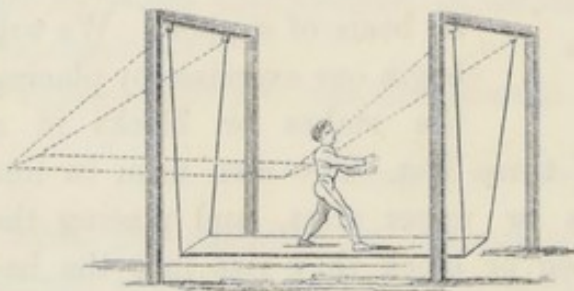


Fig. 18.

A beam may be substituted for more expert gymnasts.

664. THE exercises at the hanging plank should be practised with great care, and only those gymnasts should be admitted

to them, who have passed through the first course of exercises at the balancing beam and poles.

Beginners stand on the plank and walk along it with short steps, the plank being kept as steady as possible. In the III course the gymnast is taught to rock the plank to and

fro; by bending and stretching the knees, he learns to master this rocking movement and to walk along the plank. The leader also takes up his position on the plank, facing towards his pupil; and, holding his arms or hands, he guides his first, timid steps. The IIIrd course, lastly, introduces us to the more difficult and awkward steps and movements on the board. The exercises given in Part III (according to Wassmannsdorf) require no further explanation.

STILTS.

665. STILTS are a well known apparatus, and we mention them here rather for the sake of completeness, than with a hope of introducing them extensively into gymnasia used by men.



Fig. 19.

The beginner mounts, leaning his stilts against a wall; he will, however, soon be able to jump up without this aid. The balance is kept by raising the stilts alternately without gaining ground. We walk forwards, backwards and sidwards, in all the modes explained pars. 108 to 114. We jump, turn and hop (on one stilt) and walk up and down stairs. In fact, a good many of the free and tacto-

gymnastical exercises can be performed walking on stilts.

The stilts are usually kept under the arms, but they can also be brought to the front, the hands grasping from the outside, about the height of the chest.

SKATING

[666.] is one of the most invigorating and healthy of all manly exercises when carried on in the open air. It is one of those arts in which more progress is made in the course of a few minutes actual instruction, than by studying a thick volume, and we confine ourselves for this reason to a few hints.

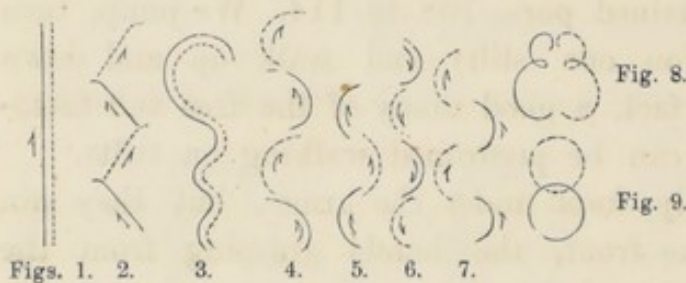
Skates. Beginners will find a grooved blade easiest, but more expert skaters discard the groove. The wood, to which the blade is attached, should be as long as the boot. The Oxford

club skate, which has only two straps, is recommended for its simplicity. The straps should not be drawn too tight.

The Ice. Before venturing upon the ice you should ascertain whether it will bear you. Whatever fascinations skating may possess, they should not induce you to run the risk of your life. A knowledge of swimming, which will enable you to keep above water for some time, may prove of great advantage on an emergency.

Balancing. Our balancing exercises, as explained previously, will enable you, after a few trials, to stand steadily on your skates, first on both legs (feet parallel to each other), then on one leg, whilst the other is raised sideways, forwards or backwards. Having managed to do this (at home, in your own room, if you like), get a friend to propel you slowly forwards, as shown fig. 1. (In these figures the plain line marks the course of the left skate, the broken line that of the right skate.)

The *Straight course* is used when mere speed is the object.



It is the most usual and, at the same time, the easiest mode of skating. On starting you place the feet at an angle of about sixty degrees.

The left and right foot glide along the ice and push off in alternation, as shown in fig. 2. If you desire to stop, you place the feet parallel to each other, and slightly lift the toes, so as to cause the heels to cut into the ice. Before you stop you can glide for some distance along the ice, as shown fig. 1, or, by turning the feet in the desired direction, you can describe the course shown fig. 3. From the very first, try to be graceful in your bearing; do not stoop forwards more than is necessary to prevent a fall backwards, or fling your arms about.

Outside Edge. The skates describe segments of circles having the concave side outwards. Fig. 4.



The *Inside Edge* is described on the inside edges of the skates, the concave side of the curves being inside. Fig. 5.

Skating backwards. Turn the toes in and slightly raise the heels, the skates describing semicircles as shown fig. 6.

The *Cross-roll* is done on the outside edge. One leg having described a segment of a circle, the other leg is crossed in front of it, put down on the ice, and describes a similar segment, as shown fig. 7.

The *Figure of 3.* The first part of the figure is done on the outside edge, the second part on the inside edge of the same skate, you having previously twisted round. After some practice two threes may be cut in succession, the first on the left foot, the second on the right foot. Fig. 8.

The *Figure of 8.* First cut the lower circle with your left foot, then cross over with your right, and cut the upper circle. Fig. 9.

The *Spread eagle or salute* is done in a curved line and in a straight line, the former being the easiest. Strike well out and suddenly place your feet thus: —  or thus: —  and you will glide along the ice in a curve or in a straight line. The knees are bent, and the arms akimbo.

In addition to the above there are a great variety of other figures which can be cut in the ice. Nor should expert skaters neglect manoeuvring in a body and "ice dancing".

Before we conclude we must draw attention to the skating halls, lately established in some of the larger towns, where skates running on rollers are used. Skates of that description were first introduced with the opera of the "Prophet", and in the absence of ice they afford capital practice.

The Barrel etc.

667. Standing on a barrel or a globe, and propelling it forwards or backwards, on level ground or up and down hill, is a favourite exercises with public performers.

XXVI. SWIMMING.

668. THERE is no gymnastic exercise deserving of equal encouragement, and yet it is sadly neglected in this sea-girt island. Neither soldiers nor sailors are taught to swim, and the scarcity of regular swimming schools, and paucity of efficient teachers are most surprising. A work on gymnastics could hardly be considered complete without a chapter on swimming, and though we do not flatter ourselves with a belief of any one being able to learn to swim by perusing our scanty remarks, we yet hope, that they may induce some of our readers to devote some time to the acquirement of that useful accomplishment.

669. First of all let us state that it is not well to bathe immediately before or after a meal. The early morning appears the most suitable time in many respects. You should not get into the water when hot from exercise and breathing hurriedly; nor should you cool yourself down to the temperature of the water. On the contrary, get into the water immediately you have undressed. Throw yourself in head foremost, or take a duck soon after you get in, to prevent the blood from accumulating in the head, which causes headache. Get out as soon as reaction sets in, rub yourself dry with a coarse towel, and take a brisk walk. If obliged to remain long in the water a glass of hot brandy and water will prove of benefit.

670. *Swimming on the breast.* Walk out from the shore until the water reaches the chest, then face the land and swim towards it. You propel yourself by simultaneous movements of the arms and legs. The arms are first extended forwards, the palms of the hands meeting, the fingers close together and the thumbs uppermost. The hands thus form a kind of wedge or cutwater. You then turn the backs of the hands towards each other, move the arms back in a semicircle, and bring the hands underneath the chin, the elbows being close to the body, and the palms together, as at first. You then extend the arms again forwards as on starting. — The legs,

on starting, are extended beneath the water, the heels together and the toes pointed; draw up the feet to the thighs, and then bend the feet, until they form a right angle with the legs; kick backwards and sidwards, keeping the feet bent; resume your original position. You breathe every time you draw up your legs.

671. *Swimming on the back.* The hands are placed on the hips, the head is throw back, the back kept hollow. You propel yourself by striking out with the legs, keeping the knees below the water. The hands can also be used for paddling.

Floating on the back. You lie on the water at full length, the arms extended beyond the head. The palms are turned downwards and assist by a slight movement in keeping the equilibrium.

Side-swimming is done on either side. Lying on your left side, mouth and nose above the water, you make use of your left hand as a cut-water and propeller, and of the right hand as a propeller. The legs are struck out every time the left hand is extended to the front.

Swimming hand-over-hand. By turns throw out your left and right hand to the front and then bring it back to the thigh underneath the water. Strike out with the legs every time a hand is thrown out to the front. These last two modes of swimming enable you to progress at considerable speed.

Swimming with one hand out of the water can be done according to either of the two preceding moders, only you must dispense with the use of one hand. Proficiency in this mode of swimming enables you to carry your clothes across a river without wetting them.

Swimming under the water is done in the same manner as ordinary swimming.

Swimming with the clothes on ought also to be practised frequently.

672. *Balancing.* You float in a perpendicular position. Get out of your depth, then throw the head back, fold the arms

on the chest, or place the hands on the hips, and cross your legs. You will then float.

Treading water. Assume the same position as in balancing, but kick downwards alternately with the left and right legs. When kicking downwards, the foot is bent, when drawing the leg up, it is stretched.

Upright swimming. You balance in a perpendicular position, move your legs as in walking; extend your arms sideways and then sweep them in a circle forwards and downwards.

673. *Plunging.* Stand on the bank, extend your arms forwards, palms together, and jump, head foremost, into the water. Your hands meet the water first.

The header is generally done from a leaping tower. The hands are held as in plunging, but the body should meet the water at a right angle, and disappear without causing a splash.

The leap is practised at first from a moderate height. You enter the water feet foremost. The legs are crossed, the arms are stretched above the head, the hands folded, and the body is kept stiff.

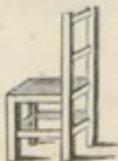
Diving. Always keep in mind that by doubling yourself up you sink in the water, and that by stretching yourself out, you rise again to the surface. Practise diving after chalk eggs, etc. Your eyes must be kept open, as a matter of course, and you can either keep them open throughout, or open them after you are under the water.

Saving human life. The safest plain is to lay hold of the drowning person by the upper-arm, from behind, keeping him away from you at arm's length.

Those amongst our readers who desire further information on swimming are referred to Gurr's "Art of swimming" and to Kluge's "Aquatic gymnastics".

XXVII. THE CHAIR.

674. ONE or two chairs of the shape shown in our illustration, and strongly made of oak, will prove of service in the gymnasium.



We content ourselves with giving a few hints for their use.

The chair can be used for balancing in various ways, the most difficult being to stand on the top of the back of the chair.

Two chairs placed opposite, render similar services to a pair of parallel bars.

Levers are done on the back of the chair as well as with one hand on the seat, the other on the back. Hopping along with the chair in any of these positions is rather difficult.

Lie with the head on one chair, with the feet on a second chair, and keep the body perfectly stiff.

The chair can be lifted in various ways. Stoop down, grasp one of the legs close to the ground, and lift the chair. Or place yourself behind the chair, grasp the back with one or both hands, and raise the chair forwards, until the arms and the legs of the chair are horizontal.

XXVIII. DUMB-BELLS.

675. DUMB-BELLS used for mass-exercises should never exceed six pounds in weight, and as the men are never of the same strength a sufficient number of dumb-bells of four pounds and even less should be provided.



The cheapest dumb-bells are made of cast iron. A superior kind is made with wooden handles, the "bells" being wedged in securely. Heavy dumb-bells have a handle of wrought iron, covered with leather.

The squad or class practising forms in open order, if possible at double arms' length, and either in two or more ranks, or in a ring. The ring is most advantageous when dumb-bell exercises accompanied with locomotion are gone through. As dumb-bell exercises are very fatiguing the leader may introduce some exercises for the legs from time to time. No one is allowed to put the dumb-bells down except at the word of command, — "*dumb-bells — down!*" They are then placed quietly on the ground, in front of the feet.

We have described the Free Exercises at full length, and as nearly the whole of the exercises described pars. 93 to 106 can be performed carrying dumb-bells, we can now confine ourselves to a very general notice, drawing, however, special attention to those exercises which are most effective if done with dumb-bells.

The whole of the exercises must be done in regular cadence and rythm, and the movements may be accelerated according to circumstances.

676. *Twisting the arms.* Take your position, arms hanging down by the side, knuckles outside. The dumb-bells are then in a horizontal position, one bell in front, the other to the rear. Now turn or twist round your arms outwards until the nails are in front; turn round again until the knuckles are in front, and go on twisting your arms in this manner. If you do so at great speed you will find it a very effective exercise.

The same is also done with arms extended forwards or sideways, or raised above the head.

677. *Exercises of the wrists.* A description of these will be found par. 93. The arms must remain perfectly steady.

678. *Moving the dumb-bells in a vertical plane.* The arms are raised and lowered in all directions, first slowly and steadily, then with a swing (par. 94). As the dumb-bells meet above the head, when raising them sidwards (nails in front) they may be made to clang.

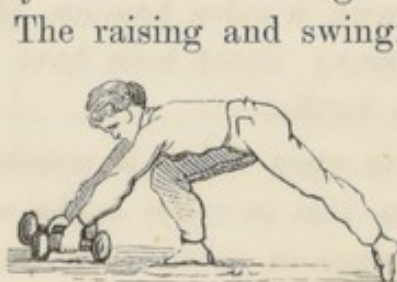


Fig. 1.

The raising and swinging of the dumb-bells can be done in the fundamental position or standing astride, and it may be combined with movements of the trunk or the legs. Examples of this kind will be found on reference to par. 105. The sawyer exercise (fig. 2 par. 105) and swinging the dumb-bells sidwards (fig. 6) are capital exercises of this kind as is also the one shown in the annexed woodcut. The last exercise can be done in five-quarter time, viz. — *one*, — raise dumb-bells above head; *two*, — longe forwards; *three*, — stoop down and touch

ground with dumb-bells; *four*, — raise dumb-bells again over the head, still remaining at the *longe*; *five*, — recover the fundamental position.

679. *Moving the dumb-bells in a horizontal or slanting plane.* Standing astride is the best position for these exercises. One of the most effective of them is the "shoulder test", described par. 95. The dumb-bells clang in front.

Both arms can be swung sidwards in the same direction, accompanied by a twisting of the entire body, the feet, however, remaining firmly planted upon the ground. This is the "mowing exercise" described and illustrated par. 105, fig. 5.

If we allow the arms to sink with the backward swing, we are able to clang dumb-bells behind, an exercise known as the mantlet (par. 96, fig. 3).

680. *Circular movements* have been fully described par. 97. They are done first with one arm, then with the right and left in alternation, and finally with both at once.

681. *Elbow exercises*, see par. 98. The upper arms remain perfectly steady. The fore-arm is thrown out or raised forcibly, and brought back slowly, or the reverse is done.

682. *Thrusting.* We thrust in all directions and holding the dumb-bells in various positions (par. 99), and we combine thrusting with *longing* and various other leg and trunk exercises.

When thrusting take care to have the elbows close to the side, and always place your dumb-bells close to the shoulders, knuckles to the front and thumb uppermost.

Our annexed woodcut shows thrusting down- and upwards, combined with sinking and rising, squatting on heels. — A similar exercise is shown fig. 1 par. 105. — The pounding exercise fig. 3 par. 105, also belongs to this group, and is very effective.

683. *Striking.* The dumb-bell may be looked upon as the handle of a sword, and we can thus show the different cavalry cuts (par. 100). One of the most effective exercises



Fig. 2.



Fig. 3.

of this kind is striking downwards with both arms simultaneously, as shown fig. 3. (Compare par 100.)

684. The *Leaning position*, par. 106, and some of the exercises in it, can be performed with a dumb-bell in each hand, and the hands are thus spared from being put on the floor.

685. *Dumb-bell exercises with locomotion* are arranged in precisely the same manner as the Free Exercises described par. 115. We draw attention particularly to the changing step, accompanied by a thrust upwards with the left or right arm, and to the Basque-step, accompanied by a swinging of the arms sidwards.

XXIX. CLUBS.

686. WE distinguish between the ordinary long clubs and the short clubs, the former being about 24 inches long, the latter 18 inches. The weight of the clubs varies. That of the short clubs need never exceed four pounds. The most useful weight for long clubs is four to ten pounds, according to the strength of the performer. Clubs heavier than ten pounds each may be kept in a gymnasium for the use of individual members, and they can be used also with both hands.



Beginners should always make use of light clubs, and only when they have fully mastered the movement to be executed should they take heavier ones. Precision and regularity in swinging the clubs are of great importance; graceful action, free from jerks and stoppages, should be carefully studied.

As a rule, all club exercises are done first with the right, next with the left, then alternately, and then with both arms simultaneously. Great care must be bestowed upon the left arm, for none of the more attractive exercises can be performed, unless the left and right have attained the same degree of perfection.

687. The starting position for the club exercises is with clubs at "order", to adopt a military term. The hands grasp the clubs on the outside, palms turned inwards. The position is upright, the heels generally together or legs astride. Before beginning the exercises in a squad, the men take distance by raising both clubs horizontally sideways and moving to the left or right until the ends of the clubs are about 6 in. apart.



Fig. 1.

Exercises in which the arms remain straight.

688. Our men fall in, clubs at "Order". They can then raise clubs and arms horizontally in all directions, forwards (A), diagonally forwards to the left and right (B B), sideways (C C) and even backwards (D). Fig. 2.

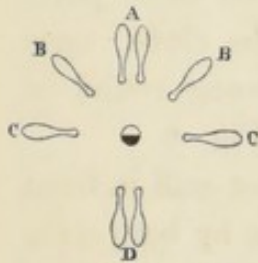


Fig. 2.



Fig. 3.

Both clubs can also be raised to the same side diagonally forwards or sideways, the body twisting in the direction in which the clubs are raised. The clubs must be parallel to each other. — The change from one side to the other, by swinging the clubs downwards and upwards close by the legs, the arms remaining straight, is to be recommended (fig. 3).



Fig. 4.

689. The clubs are raised above the head, forwards, sideways, and both to the right or left (fig. 4).



Fig. 5.

Having raised the clubs above the head, we can swing them backwards and forwards, rising on tiptoe with every backward swing (fig. 5).

690. Having raised the clubs horizontally, we can move them in a horizontal plane, as explained pars. 95 and 679. —

691. The mills correspond to the circular motions of the arms, explained par. 97. Arms and clubs form one straight line. The mill in front of the body deserves to be noticed specially. Starting with clubs extended horizontally sideways, the right club is swung downwards and the left only follows, after the right has completed three parts of the circle. The clubs, once in motion, are swung round in regular cadence. Fig. 6.

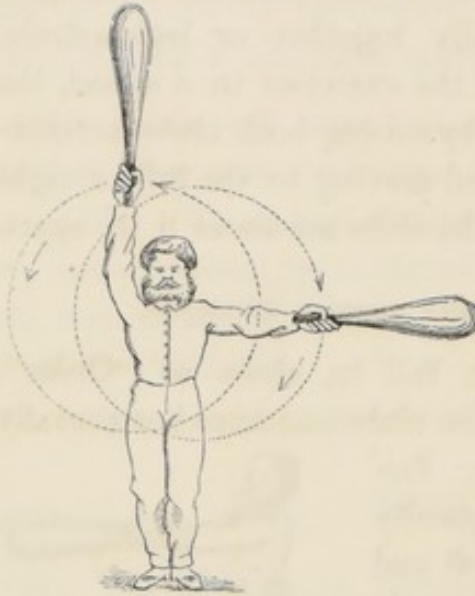


Fig. 6.

Another effective mill in front of the body, is done by both clubs swinging round in the same direction, to the left or right. Compare figs. 3 and 4. Care must be taken that the clubs are throughout parallel to each other.

Exercises in which the arms are bent.

692. Starting from the fundamental position, clubs at "Order", one or both clubs, on the word "to shoulder — *up!*" are brought to the position shown in fig. 7. — The club or clubs must be perfectly perpendicular. From this position we can thrust upwards, sideways and forwards.



Fig. 7.

693. After the clubs have been raised forwards or sideways horizontally the arms can be bent, and we then thrust in a similar manner, taking care to keep the clubs perfectly horizontal. When thrusting sideways, the tops of the handles should nearly meet in front of the chest.

694. Having brought the clubs above the shoulders we can drop them over the shoulders backwards. When done with a swing and in regular cadence, this is a very effective exercise. Fig. 8.

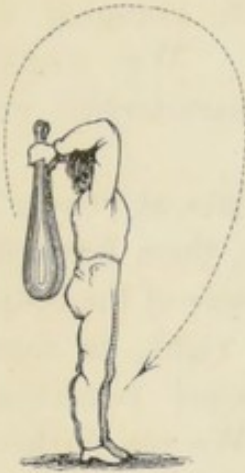


Fig. 8.

The clubs having been raised horizontally forwards, they can be dropped on the shoulders in two motions. At *One*, — they are raised perpendicularly; at *Two*, — they drop slowly upon the shoulders. Fig. 9. The same exercise is done with clubs raised sidwards.

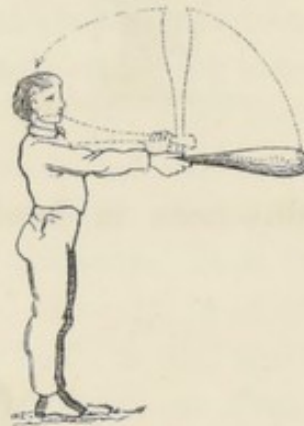


Fig. 9.

Having raised the clubs sidwards, arms horizontal, but clubs perpendicular, we can drop the clubs forwards and backwards.

Having raised the clubs above the head, we drop them in a similar manner backwards, forwards, to the left or right.



Fig. 10.

If the clubs are raised above the shoulders (fig. 7) we can drop them sidwards, the handles meeting opposite the chin, or, by sinking the hands, opposite the chest (fig. 10).

Lastly, we will grasp the clubs with reversed grasp, raise them in front of the body, and swing them to and fro (pendulate), fig. 11.



Fig. 11.

Circles.

696. Circles are effected by a skilful turn of the wrist; they are the most attractive and serviceable of the club exer-

cises, and old hands at the clubs seek their pride in producing circles combined with swinging in the greatest variety. We confine ourselves to a few characteristic examples.



Fig. 12.

697. Holding the clubs at "Order", fig. 1, we can circle them forwards and backwards at the side of the body; and to the left and right, in front of the body, the arms remaining straight and steady. We can furthermore circle the clubs in contrary

directions in front of the body, that is one to the left the other to the right (out-

wards, fig. 12, or inwards). Starting from the "Order" the right club is moved first and the left follows when the right is upright.

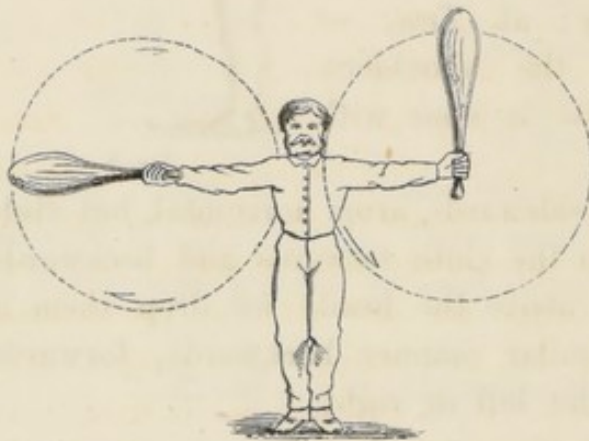


Fig. 13.

698. Holding the clubs out horizontally forwards or sideways we can describe inside or outside circles, forwards

and backwards. These circles are done first with one arm, then with both arms together in the same direction, and lastly in contrary directions. For instance, holding out the arms sideways, the right club describes an outside circle backwards whilst the left describes an inside circle (in front of the arm), etc. Fig. 13.

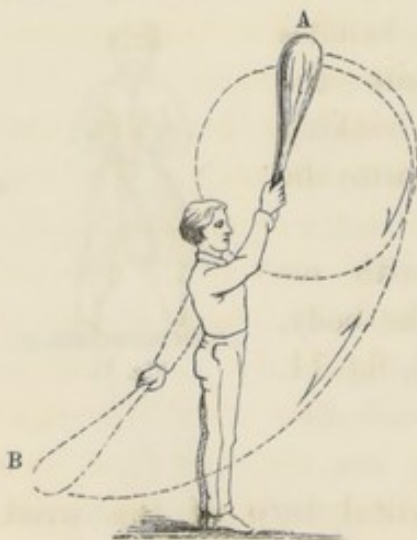


Fig. 14.

699. These circles, combined with swinging, offer some fine practice.

Fig. 14 shows the outside circles combined with swinging



Fig. 15.

and bending the left knee; at *Two*, circle backwards, back to



Fig. 16.



Fig. 17.

forwards. At *One*, raise the clubs to A, at *Two*, circle backwards, at *Three*, swing the clubs back to B, at *One* again to A, and so forth.

Fig. 15 shows the outside circles backwards, combined with swinging side-wards. At *One*, raise both clubs to A, at the same time twisting the body

and bending the right knee; at *Two*, circle backwards, back to A; at *Three*, swing the clubs, close in front of the body, to B, twisting the body in the same direction and bending the right knee; at *Four*, circle backwards; at *One*, swing again to A, etc.

700. The *Circles round the head* are less attractive than the preceding ones. Starting from the "Order" we bring the left club to the position shown in fig. 16, and without stopping we pass it, by the back, to its original position, as indicated by the dotted line. The same is then done with the right club, next with both clubs in alternation, and lastly with both together. The body is bent backwards.

701. The *Circles in rear* are done from the club above shoulder. The club is dropped to the left or right, and describes a circle passing close to the rear and in a vertical plane. The back is hollow, and the hand stationary. — Practise this circle in rear first with the right club, then with the left, and then with both simultaneously. When the latter exercise is done in the same direction —

to the left or right — both clubs start together, but when the circles are described in contrary directions the second club only starts when the first has completed half a circle. The circles must be described with the greatest regularity, and without any stoppages or jerks.

702. The *Circle in front* is shown in fig. 18. We start from the position with club above shoulder. In describing the circle the arm is stretched nearly to its full extend, but as the clubs swing round, the arm bends by degrees until, on the completion of the circle, it is again in the position above the shoulder from which we started.



Fig. 18.

This circle in front is done to the left and right, alternately and simultaneously, in the same manner as the circle in rear.

703. Having mastered both the above circles we practise them in combination. Bring your right club up to the shoulder, describe a circle in rear (fig. 17), and follow this up, without stopping, by a circle in front (fig. 18). When able to do this with perfect ease with the left and the right clubs, raise both clubs to the shoulder and, whilst describing a circle in rear with the right, describe a circle in front with the left club, as shown fig. 19. —

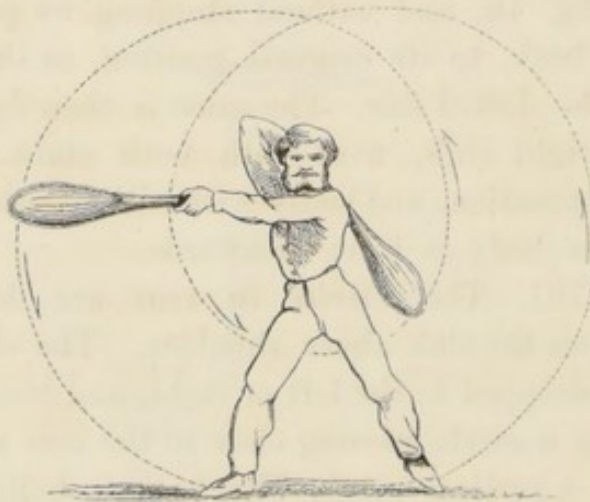


Fig. 19.

704. *Circles above the head* are done with ordinary and reversed grasp. The clubs are raised above the shoulders, but rather higher than for the circles in



Fig. 20.

rear, and the clubs are then swung round in an analogous manner to the circles already described. The back is hollow, and the performer looks upwards, as in fig. 20.

The heavy club used with two hands.

705. The expression "heavy" is to be taken relatively, for that which is light to one man is heavy to another.

The men fall in at arms' length from each other, the club standing on the right side. On the word "clubs in front" they place the club in front, between the two feet, and they are now ready to begin the exercises.

The club is raised forwards horizontally, above the head, and it can be dropped backwards behind the head, as shown fig. 8.

Of more value are the exercises in which we strike with the club. Raising the club above the head (fig. 21 A) we strike downwards (B). The alternate bending and stretching of the legs, which accompanies this exercise, is indicated in our illustration.

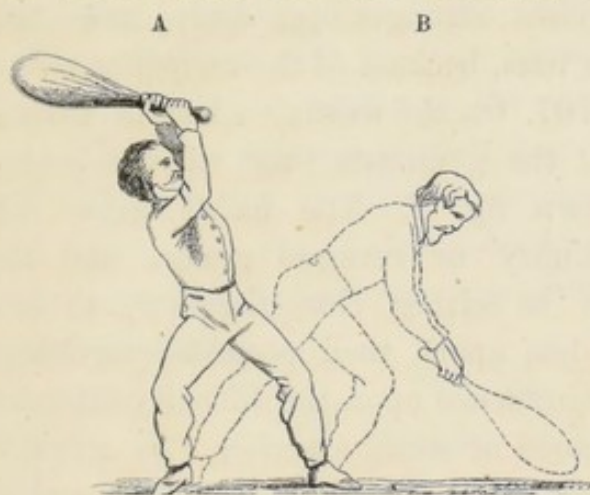


Fig. 21.

The sledge-hammer exercise is a pleasing

variation of the preceding.

Instead of raising the club above the head we can bring it over one of the shoulders, and deliver the stroke in the opposite direction, obliquely downwards.

Swinging the club in a circle over the head, and other exercises can also be practised, including several of those described under wands and bar-bells.

XXX. WOODEN BAR-BELLS.

The bar-bell is shown in the annexed wood-cut. — The exercises described in the following paragraphs are supposed to be performed with wooden bar-bells. Further on we shall speak of heavy bar-bells, made of iron.



706. THE bar-bell exercises can be practised by a large class together, in the same manner as the Free Exercises. The men fall in "at order" and about six feet (double distance) apart, in order to prevent the bars from touching each other. Sometimes marks are painted on the floor of the gymnasium to indicate the positions to be taken up. Where that is not done the distance is obtained by taking the bar in front and shifting sideways until there is an interval of six inches between the ends of the bars.

Most of the following exercises can be done either with a wand or with a bar-bell. Weak persons should use the wands at first for all exercises; stronger men derive more satisfaction from the use of the bars, because of their superior weight.

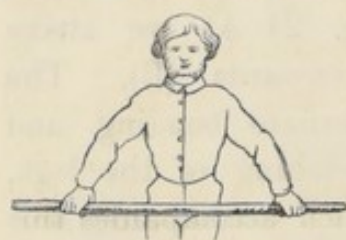


Fig. 1.

707. On the word: — bars in front — *up!* the gymnasts take up the position shown fig. 1. The hands grasp with ordinary or reversed grasp, and they can be either close together, or more or less apart, their position exercising a



Fig. 2.

considerable influence upon the difficulty attending the performance of some exercises. As a rule we have ordinary grasp (knuckles in front), and the hands are three and a half feet apart. To insure uniformity in this respect, rings might be painted on the wands or bars, from six to six inches.

708. Starting from the position with bar in front we can raise the bar, without bending the arms: — forwards (to a horizontal position and above the head), and sideways. The latter exercise is done to the left and right in alter-

nation, and it is combined with a twisting of the body, the feet remaining stationary. Fig. 2.

709. Starting from the position, with bar above the head, we can lower the bar to either side, keeping the arms straight. Fig. 3.

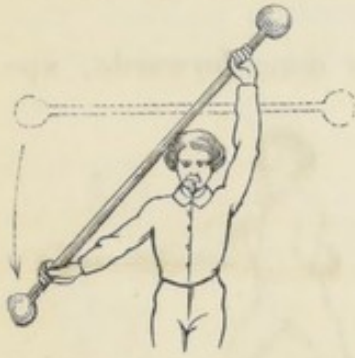


Fig. 3.

710. We have supposed our men hitherto to remain in the fundamental position or astride, whilst raising and lowering the bars. But a very attractive series of exercises is obtained by requiring them to lunge out in different directions, and as this lunging will be mentioned in

connection with various other bar exercises we will take this opportunity, to explain at length the manner of introducing it.

The leader gives the following words of command, —

a) Raise and lower bar, above head — *up! down! up! halt!*

b) The same, and lunge forwards with the left leg — *longe! stay! stay! recover! (or longe! recover!) halt!*

This command also is very clear. The word “stay” means that the men are to remain in the same attitude for two quarters.

c) The same exercise is then done lunging forwards with the left and right leg in alternation; lunging sideways to the left and right; and even lunging backwards.

In these lunging exercises a graceful carriage must be studied above all things.



Fig. 4.

Fig. 5.

711. We have hitherto kept our arms straight whilst raising and lowering the bar, but we can also bend them as shown fig. 4. These exercises can be done only with hands far apart.

712. If we pass the bar to the rear of the body we can also raise and lower it, as indicated fig. 5, though this is rather an awkward exercise. The bar is brought to the rear in the following manner. Start from the position bar in

front, fig. 1. Let go with the left hand and, allowing the end of the bar to drop towards the ground, you pass it to the rear, and again grasp with the left hand.

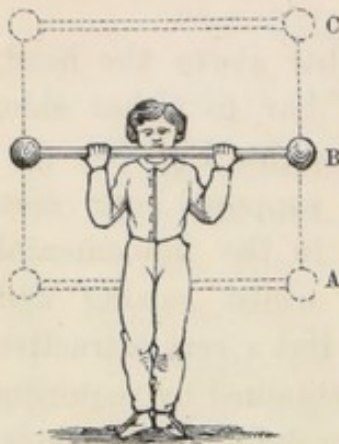


Fig. 6.

713. *Thrusting* is done forwards, upwards, downwards and sideways. The bar, before thrusting, is brought up to the chest, as shown fig. 6 B.



Fig. 7.

Thrusting is combined with longing as explained par. 709.



Fig. 8.

One of the finest bar-bell exercises is the thrust upwards, gliding the bar through one hand, accompanied by a longe sideways, as shown fig. 8. The bar must be perfectly perpendicular.

714. *Passing the bar over the head to the rear* admits of many variations. We begin by passing it to the shoulders, then to the back with arms bent, and finally with

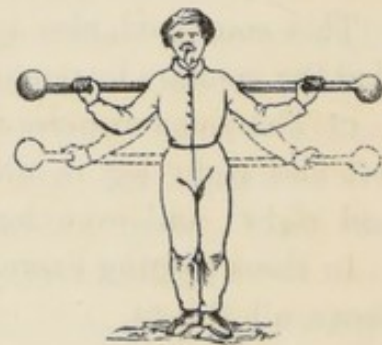


Fig. 9.

arms straight. At first this exercise is done in three motions, thus: — *one* — bar raised above head; — *two* — bar lowered to shoulders; — *three* — bar lowered to back, arms straight. It is then done in one motion slowly or quickly. The further the hands are apart, the easier the exercise.

Longing in combination with this exercise is most attractive fig. 10.



Fig. 10.

715. *Passing the bar to the rear, by the*

left or right. This exercise is done in two motions. Start as in fig. 1; bring your wand to the position shown fig. 4; lower your left hand bringing the bar to the rear. You return to your starting position in the same manner.

716. *Turning the bar.* Hold your bar with both or one hand in the middle; raise your arms forwards, and turn the bar up and down as indicated fig. 11. If done rapidly and with one hand only, this exercise is very trying to the wrist.

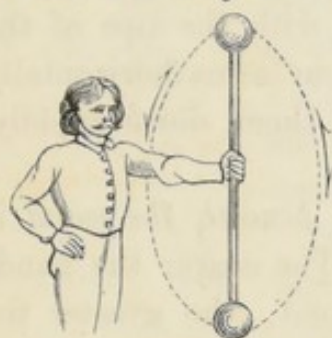


Fig. 11.

717. *Leg exercises etc.* Many of the free exercises for legs and trunk can be performed whilst holding the bar in a certain position. The bar, for instance, can be placed on the shoulders or on the back, supported by the arms; or it can be raised above the head.

Some further exercises will be found par. 740 etc., where the heavy iron bar-bells are mentioned.

XXXI. WANDS.

THE ordinary wands are about 5 feet long. They are made of polished spruce.

Most, if not all the bar-bell exercises can be performed with wands, but there are some for which these latter offer superior facilities, and these alone we shall describe.

718. *Stepping over the Wand.* We start either from position shown fig. 1 of the bar-bells, or with wand raised above the head. First step over forwards with the left or right leg, and step back again. — Then step over forwards with the left and right leg in succession, and step back again in the same way. — In conclusion you can step over forwards, and bring the wand back to the front by passing it over the head.



Fig. 1.

Instead of putting the leg to the ground after having stepped over the wand, we can extend it forwards; or we can place the sole of the foot upon the wand, and keeping it there, raise the arms to a horizontal position.

719. *Jumping over the wand* is done forwards and backwards.

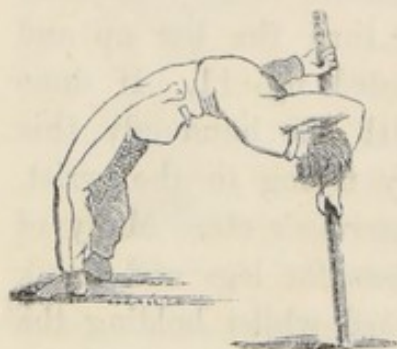


Fig. 2.

Hold the wand with the tips of the fingers, raise your arms horizontally forwards, bring them down rapidly, and jump over.

720. *Passing beneath the wand* is shown fig. 13. The nearer the hands are to the ground, the greater the difficulty. The same exercise can be done holding the wand with one hand only.

Throwing and catching.

721. The wand is held with ordinary grasp, in front of the body. It is then thrown up to a moderate height and caught with reversed grasp. By degrees the wand may be thrown up higher, and it can be made to turn during its flight.

Two men standing opposite to each other can throw and catch one or two wands between them; in the latter case both wands are thrown and caught simultaneously.

Spinning the wand is an exercise in which continental drum-majors excel. Stand astride sideways. Grasp the wand with the right hand about one third below its upper end when holding it perpendicularly. Swing it gently to the left and right, and as it comes up on the right, momentarily release your hold, allow it to spin round close to the hand, and again catch hold of it, as it comes down on the other side. After a time the wand can be made to spin round the hand rapidly, and without a swing between; and as a wind-up it is thrown high into the air.

Cuts and Circles.

The following exercises afford excellent practice, but require a good deal of space (the men stand about 12 feet apart). The wands reach to the chin.

722. The *Starting position* for circling and cutting is shown in fig. 1. The men fall in with wands "at order", that is placed by the side of the right foot. The following words of command are then given: — *Astride to the left — stand! Wands throw — up!* (1, the wand is thrown up, gliding through the right hand, and grasped six inches above its lower end; 2, the right arm is extended sideways.) *Left hand on hip — place!*



Fig. 3.

723. *Outside circle backwards.* The wand drops down towards the back and, passing close behind it, is again brought to the starting position. At first the circle is done slowly, but by degrees the speed increases until the wand cuts whizzing through the air. The arm remains steady, and the wrist alone effects the circular motion.

The same circle is done forwards, in the opposite direction.

724. *The inside circle backwards.* The wand, from the same starting position, drops towards the chest. The same circle is done forwards.

The inside and outside circles are then done alternately, a very effective exercise if done rapidly, and without clumsy jerks or breaks.

725. The above circles can be done also with the arm raised forwards, instead of sideways, — from the attitude of defence or attack.



Fig. 4.

726. The starting position for the *circles above the head* is shown in the annexed woodcut. These circles are described in a horizontal or a slanting direction, forwards or backwards, and the movement must be done with the greatest precision to look well, the arm remaining steady.

727. The *inside and outside "cuts"* are shown in figs. 5 and 6.

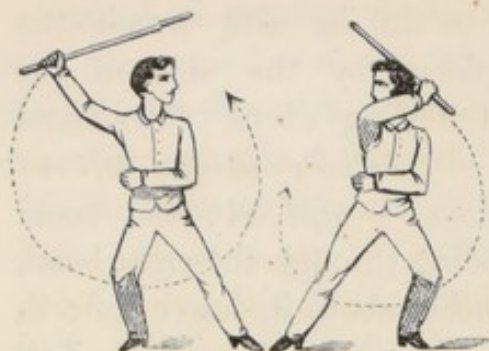


Fig. 5.

Fig. 6.

The head must be turned always in a direction corresponding to the cut. At first each cut should be practised in four motions, at 1 cut, on 2, 3, 4, fetch out and prepare for a fresh cut, etc.

728. The starting position for the circles holding the wands



Fig. 7.

with both hands is shown in our illustration. The wand is perpendicular. We practise first the *circles backwards* on the right and left, then the *circles forwards* on the right and left; and then both alternately. The gymnast always leans towards the side on which he circles bending one leg. The movements are done slowly at first, and should be done very smoothly.

The circles above the head, and the cuts are done in the attitude of defence or attack, in same manner as with one hand.

729. We have hitherto supposed the gymnast to remain stationary whilst circling or cutting with his wand, but we can combine these exercises easily with facings, longing, walking, or jumping forwards and backwards.

The longing step (see par. 114), with alternate circles inside and outside or forwards and backwards above the head, is one of the best examples of this group, which offers a great variety of exercises, easily arranged by an intelligent leader.

Balancing the wand.

730. The wand is placed perpendicularly upon the palm of one hand and kept there balancing, the gymnast looking up to its upper end. — The wand is then balanced on the back of the hand, and on the different fingers. By throwing it up, we can change from palm to back. And by throwing the wand

up and causing it to turn over in the air, we can balance it on both ends in alternation.

THE LONG WAND.

731. A wand about twelve feet long can be used by as many men as find room along it for co-operative exercises. Even the blind can be made thus to work together in unison. F. Metz of Hanover first introduced these exercises in the Institution for the blind in that town.

Exercises with one Wand.

732. The men desirous of using the wand fall in side by side, according to size; or one behind the other. They can have the wand in front, to the rear, or on one of the sides; and keeping it in any of these positions they can walk and run forwards, backwards and sideways, making use of any of the steps described under "free exercises".

They can furthermore do a good many of the exercises described for the short wand and the bar-bell.

Thus, standing one behind the other, they can raise and lower the wand sideways, pass it over the head to the other side, etc. They can also step over it, and by combining this stepping over with passing over the head, the wand is made to describe a complete circle.

Longing sideways accompanied by a raising of the wand is an attractive exercise.

Similar exercises are done having the wand in front, as raising and lowering the wand, longing combined with thrusting, passing it over the head, etc.

The long wand can be used also as a rack or horizontal bar. The men tell off in twos. The *Ones* then hold, whilst the *Twos* practise. The *Ones*, for instance, having the wand in front, raise it above the head; the *Twos* hang sideways by both or one hand, sink and rise, circle, etc.

Or, the *Ones* pass the wand over the head and place it beneath their arms; the *Twos* go into the rest, sit on it, etc.

Or, the men having faced to the left the *Ones* place the wand upon their shoulders (one man upon his right, the other upon his left shoulder) whilst the *Twos* circle, hang by the arms, the hocks, etc. (See Rack for further examples.)

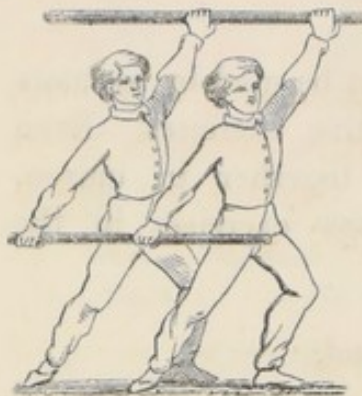


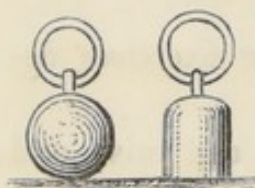
Fig. 8.

Exercises with two wands.

733. Similar exercises can be performed with two long wands. Held up above the head, placed upon the shoulders, or underneath the arms, the two wands may be used in the manner of parallel bars by one half of the men.

XXXII. WEIGHTS.

734. THE shape of the weights is shown in the annexed cuts. At least two weights of 25 pounds, two of 50 pounds, two of 75 and two of 100 pounds should be provided. Heavy dumbbells of 10 pounds and upwards (with wrought iron handles covered with leather), are used



in a similar manner.

The weight must never be thrown on the ground, but should be put down quietly. Beginners must not be allowed to take weights which they are not able to manage easily. Men practising in a squad form a ring, and each man is supplied with a weight suitable to his strength; or the exercises are done, man after man, in the middle of the ring. Each exercise is done left and right.

735. We begin our exercises by lifting a weight placed in front, at the side or behind the body, with one or both hands; or with two or only one finger. Having succeeded in this, we bend the fore-arm until it forms a right angle with the upper-arm.

736. Swinging is done with one or two weights. For instance, lifting a weight with the right hand we can swing it

forwards and backwards at the side, and between the legs ("ringing the changes", similar to the "sawyer exercise", which is generally done holding the weight with both hands).

Taking up a weight with each hand we can swing forwards and backwards and in front or behind the body.

The circular swing is generally done with one weight backwards. When swinging with the right arm the left leg is put forwards (see fig. 2). This should be done with great care.

737. Up to the present time we have put in action only the flexors; when the extensors also are required we speak of "putting up" the weight. The weight is "put up" on the upper-arm, the shoulder or above the head, and all this is done either slowly, by main force, or with a swing.

The weight is put up without a swing either from the ground, or after having lifted it off the ground. The first of these is easiest. The gymnast stoops down, feet apart and knees slightly bend; puts his left hand on the knee and places his right hand (the arm being bent, and the knuckle undermost) in the ring, and puts up the weight steadily and without swinging.

When putting up with a swing, any advantage is fair. The



Fig. 1.

Fig. 2.

position is shown in fig. 1. The weight, on being lifted off the ground, is allowed to swing backwards between the legs, and as it swings forwards, it is put up above the head (fig. 2).

When practising, the weight may be put up first on the upper-arm or the shoulder (with both hands), and then raised above the head.

738. We might now introduce a series of exercises already described under "Dumb-bells", but confine ourselves to mention the "*holding out*" of the weights sideways or forwards, the arms being horizontal. Having put up the weights above the head, we slowly sink the arms sideways until they are hori-

zontal, and having held out the weights, say 25-pounders, for sometime, we again put the weights up above the head, and then lower them slowly to the ground.



Fig. 3.

739. Lying on the back, with arms extended backwards or sideways, we can raise the weights (two at a time) in various ways.

HEAVY DUMB-BELLS.

740. THESE dumb-bells weigh from 10 to 100 pounds each. They are sometimes used in the same manner as light dumb-bells, but we think this a mistake. It is best to confine the practice with heavy dumb-bells to some of the exercises described for the weights, such as putting up, holding out, etc.

IRON BAR-BELLS.

741. THESE bars are of the same shape as those of wood, but they are made of iron and weigh from 20 to 100 pounds each.

The exercises are in most respects similar to those with the wooden bars or wands, but owing to the greater weight their number is somewhat restricted. We will mention some of the leading exercises.

742. *Putting up the bar.* The gymnast takes his position as shown fig. 4, the bar lying on the ground. The bar is put up in two motions. Having stooped down and grasped the bar, ordinary or reversed grasp, knees straight or bent — raise the bar to the chest (fig. 6, par. 707) — put it up above the head; — lower it again to the chest; — stoop down forwards, etc.

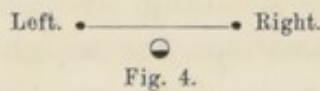


Fig. 4.

This exercise can be varied. You can put up the bar without bending your knees, or you can put it up without bending the arms. If the latter exercise is done, the bar is first held out forwards, the arms being extended horizontally.

743. A characteristic mode of putting up is effected holding the bar at one end. Your right hand, for instance, grasps close to the right "bell", your left about 18 inches away from it. The left hand has reversed grasp. This exercise must also be done with the left hand close to the left bell.

Finally you can put up the bar with one hand, either in two motions, as explained above, or in one motion, with a swing. The free hand is placed on the hip.

744. *Putting up the bar at the side.* You take up your position as shown fig. 45, the bar on the ground. Place your left hand on the hip, and grasp the bar with the right hand in such a way that it over-balances slightly to the rear. You then raise the bar above the shoulder, allowing it to turn over in such a way that the bell which was in front originally is now to the rear. Finally you put it up above the head. The bar is lowered in the

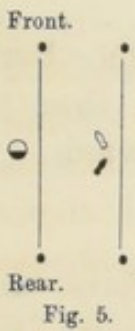


Fig. 5.

same manner, or it may be lowered sideways.

745. *Hammering* is shown sufficiently clear in fig. 5. —

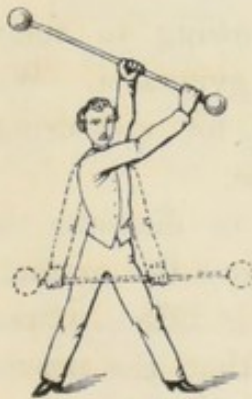


Fig. 6.

You start holding the bar with one hand close to a bell, and with the other about its middle, the latter hand having reversed grasp. The bar is then swung sideways and upwards, the hand, which holds the bar in the middle, being shifted, at the same time, closer to the other hand. On again lowering the bar, this hand returns to its original position. — This exercise must be done to the left and to the right.

746. *Exercises for two men working with one bar.* The two

men take their positions as shown fig. 7. Both grasp with their right hand, close to the bell, the left hand is placed on the hips. They are then in a position to perform, amongst others, the following exercises.



Fig. 7.

a) Putting up the bar.

b) Sawing. The bar is swung in its longitudinal direction.

Walking forwards or backwards may be combined with this exercise, a step forwards or backwards being taken with each forward or backward swing respectively.

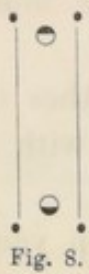


Fig. 8.

747. *Exercises for two men working with two bars.*

The starting position is shown fig. 8.

a) Raising the bars sideways.

b) Putting up the bar above head, grasping with knuckles inside.

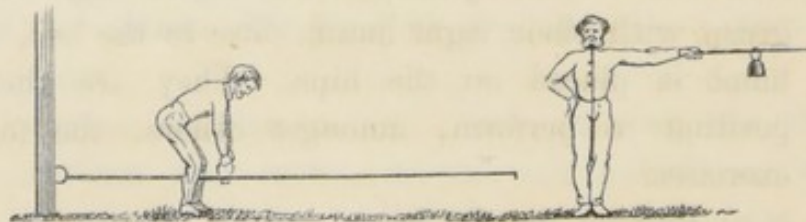
c) Sawing, that is swinging the bars in their longitudinal direction.

d) Swinging the bars sideways, to the left and right. Both bars are swung in the same direction, and to enable them to do this the men must step backwards and stoop forwards.

DYNAMOMETERS.

748. DYNAMOMETERS, or instruments to measure force, are constructed in various ways. Lindner's Dynamometer for measuring compressive and tractive force appears to be constructed on the most correct principles, and can be used at the same time for weighing the gymnasts. The manner of using these instruments is well known, but owing to their expense they are but rarely to be found in gymnasia. We will therefore notice some other contrivances for measuring strength, which are obtainable at small expense.

An iron bar, about 12 feet long and 2 in. in diameter, is attached at one end to a bolt, about 1 foot above the ground. A triangular handle is provided, and the bar is lifted in the manner shown in our illustration. It is clear that the nearer the point of attachment, the greater the weight lifted.

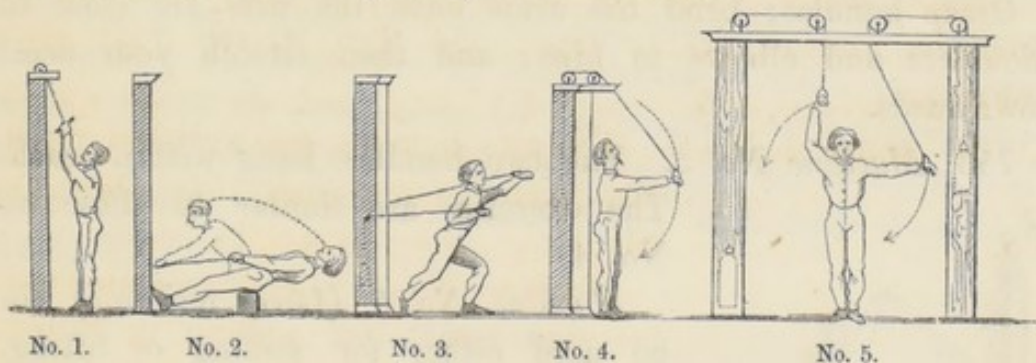


Another dynamometer is shown in our second illustration. It is a stick, 4 to 6 feet long, having a turned handle at one end, and marked off from inch to inch. This stick is held out sideways and a weight suspended by it. The further the weight is from the hand, the more strength is required to sustain it.

MACHINES.

749. A most extensive use of machinery is a characteristic feature of the French school of gymnastics, as developed by M. Triat and others. Simple contrivances for pulling up weights etc. are very old, but many of the machines introduced lately are exceedingly complicated and expensive. If we are to believe some of the inventors these machines render superfluous all other apparatus, and all other exercises. They are certainly calculated to bring into play all muscles, but gymnastics which do nothing else are of little benefit. And therefore, though we would not banish machines from the gymnasium altogether, we would have them introduced sparingly.

Instructions are generally supplied with each machine on the manner of using it. But in order to give some idea of the character of the exercises we will notice, in a few words, six machines of a very simple construction.



750. *Machine No. 1.* The weights slide up and down a wooden box; the handle hangs just within reach.

Place yourself in front of the machine, grasp the handle and, bending your arms and stooping down, pull and push the handle downwards until it touches the ground. The legs should be kept stiff.

Place yourself with the back to the machine, grasp the handle, and do the same exercise.

Machine No. 2. This also has but one handle but its position is about one foot above the ground.

Stand in front of the machine, stoop down, grasp the handle, and raise it above your head. Repeat many times.

Sit down on a low stool or cushion, your feet placed against the foot-board, legs stiff. Bend forwards, grasp the handle, and then alternately straighten and bend the body.

751. *Machine No. 3* has two handles, about 18 inches apart and as high as the chest above the ground.

Take up your position back to the machine; grasp the handles, and thrust arms forwards, alternately or both at once. — Do the same longing out.

Take up your position at arm's length from the machine, your face turned towards it; grasp handles and alternately or simultaneously pull them towards your chest.

752. *Machine No. 4* is similar to No. 3, but the two handles hang just within reach.

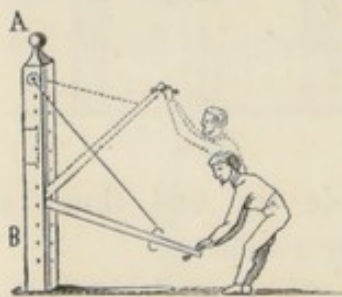
Stand back towards it. Grasp handles. Lower arms forwards, keeping them perfectly stiff.

Lower arms sideways in the same manner.

Grasp handles; bend the arms until the fists are close to shoulders and elbows to hips; and then stretch your arms downwards.

753. *Machine No. 5.* The two handles hang within reach.

The exercises are similar to those on No. 4.



No. 6.

Machine No. 6 (Lever machine) can be used either for pulling or lifting. In the former case the rope to which the weight is attached passes over the upper roll A only; in the latter it is attached to the lower side of the lever

and then passes in succession over the lower roll B and the upper one A.

XXXIII. THROWING.

754. **THROWING** is one of the most healthy kinds of gymnastic exercises. It not only brings into play most of the muscles of the body, but it also trains the eye, and, in spite of fire-arms, skill in it, may prove useful on many occasions.

The term throwing is applied generally to the sending to a distant place any object by means of the projectile force inherent in us; whilst shooting calls forth the projectile force inherent in any machine or instrument which we have under control.

The line which an object thrown or shot describes is called the line of flight or the trajectory. This line is either straight, when we throw or shoot point-blank, or it is curved and forms an arc. When throwing or shooting at a mark we can either cause the projectile to hit it at once, without its previously touching the ground, or we can cause it to make one or more bounds (to ricochet).

755. The various modes of throwing are chiefly called into requisition for a variety of games, where some further hints on throwing will be found. In the following paragraphs we confine ourselves to explaining some of the most useful modes of throwing at length, and to noticing some other descriptions of secondary importance or of less interest to men, in a few words. Above all we recommend the practice of throwing the Pilum — even against an iron-clad target this weapon will prove effective — and the various games with balls described Chapt. XXXVI. —

JAVELINS.

The javelins, blunt or with a point, are about 7 feet long. To prevent



Fig. 1.

their warping, they are placed horizontally upon three or four brackets. We recommend the introduction of the ancient Roman Pilum, a most

formidable weapon, fig. 1. The target for blunt javelins is covered with iron. The Hoop placed on a post, or the figure of a man painted on a board can be used for blunt as well as pointed javelins (figs. 2 to 4).

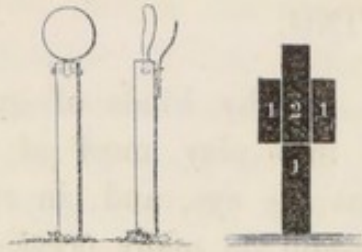
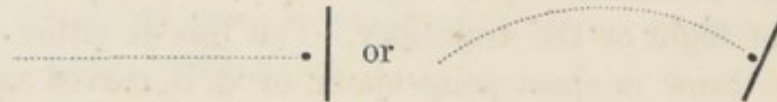


Fig. 2. Fig. 3.

Fig. 4.

756. The Javelin is not any longer used in actual warfare but it affords excellent and useful practice for the gymnast, equally train-

ing the body and the eye. The first thing to be aimed at is the ability of throwing the javelin in a straight direction. We distinguish between throwing point blank, and throwing in an arc.



The former is learned in the following manner. The squad falls in side by side, javelins at "order". The men then open the line to the left, and face to the right half. On the word, "*Javelins — up!*" they raise the wand to a horizontal position, point in front, right fist close to the shoulder. On the word "*Balance!*" the javelin is adjusted in such a manner

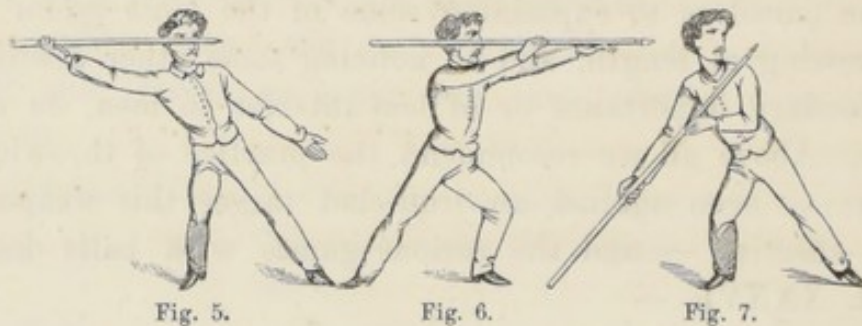


Fig. 5.

Fig. 6.

Fig. 7.

that it over-balances slightly to the front. — On the word, — *Javelin, back!* the right foot is put about two feet to the rear, the right knee is bent, and the lance brought back until its point is close to the right eye (fig. 5). On the word "*Aim!*" the gymnast leans forwards, bending his left knee, brings the lance to the front supporting it on the fork formed by thumb and fore-finger, and, shutting his left eye, takes aim with the

right along the javelin (see fig. 6). On the word "*Javelin back!*" he goes back into the position shown fig. 5, and on the word "*Throw!*" he throws the lance straight to the front. The lance must fly off at a right angle to the alignment on which the squad stands, and if properly thrown, it falls flat on the ground and then glides for some distance along it.

757. Throwing in an arc is practised in a similar manner, but the higher the arc, the more over-weight must be allowed in front. On the word "*Javelin back!*" the gymnast assumes the position shown in fig. 6. The aim, in this manner of throwing, is much more uncertain than when throwing point blank and it is therefore used only when the distance of the target forbids the latter. A slanting direction should be given to the target, if made of a board.

Having mastered the above preliminary exercises the squad proceeds to throw at the target. It forms side by side, as follows, —

Squad 2 3 4 5 6 7
 ○ ○ ○ ○ ○ ○
 1 ○ Thrower □ Target.
 ○ Leader.

Each man is supposed to have his own javelin. When the javelins are blunt or when they are thrown through a hoop, they are fetched only after all the men have thrown, — otherwise after every hit.

The gymnasts first practise throwing point blank and in an arc from varying distances, and subsequently they throw the javelin after a run and whilst running. Throwing upwards and downwards, from an elevation, may also be practised.

BALLS.

758. *Throwing and catching.* You practise first with one ball, then with several. Throw up your ball with the right hand, and catch it with the left or right. Throw it against a wall and catch with both hands or one. Get two or more balls, keep throwing them up in succession with the right hand, and catch with the left, and so forth.

Your next practice is catching a ball thrown to you by a

companion or from a bat. You can catch with one hand, but when the ball is thrown with considerable force, you do better to catch with both hands, holding your arms up, the wrists close together, and the hands open. As soon as the ball touches, you draw back your arms to some extent, in order to break the force of the concussion.

759. *Throwing distance or height.* When throwing distance you may avail yourself chiefly of three modes of throwing, viz. the under-hand, the round-arm, and the over-hand.

Under-hand. — Take the ball in your right hand; raise the arm forwards, *knuckles uppermost*; rapidly swing it backwards, keeping the knuckles in the same position; without stopping swing your arm forwards, turn or twist it round at the same time, so as to bring the knuckle undermost, and deliver the ball when the arm is again raised in front. The twisting or turning of the arm gives an additional impetus to the ball.

Round-arm is much in vogue with cricketers. The arm swings in a plane nearly horizontal, and is kept nearly straight. You may take a run of several strides. When carrying the ball in the right hand prepare to deliver it when your left leg is about to step front, and when throwing at a mark, let fly the moment your chest is square with it.

Over-hand. — The arm swings backwards in a pendant position, but is brought above the shoulder with the forward swing.

760. In addition to these modes of throwing the following may be noticed.

Tossing. — Take the ball in the hand knuckles downwards, and throw it up in a perpendicular direction.

Jerking. — Instead of allowing your arm to swing freely, you stop it suddenly. For instance, take the ball in the right hand, swing as in under-hand throwing, but as soon as the hand comes to the front give the right fore-arm a smart blow with your left hand. The ball will then fly off at an increased speed.

In practising the above modes of throwing you may aim either at attaining a great distance or height, at hitting a

target or mark, or at both combined. Skill in throwing and aiming will prove of service in many of the games described Chapter XXXVII. —

Bouncing. — You throw the ball upon the ground and thus cause it to jump, striking it down again with your flat hand.

Striking. — The ball is thrown up into the air and struck with the bare hand, a bat, a battledore or racket. You can also strike the ball with your foot, as in foot-ball.

IRON SHOT.

SHOT weighing 6, 12, 18, 24 and 36 pounds each should be provided. They are used in three different ways, for bowling, throwing (hurling) and “putting”.

761. *Bowling.* The bowler takes the shot in his right hand, places the left foot in front, the toes pointing in the direction in which he is about to bowl, and the right foot about 30 inches back. The shot is first raised forwards with both hands, the left knee being bent; the left hand is then placed on the left thigh, the right arm swings backwards, the right leg bending at the same time, and is then forcibly thrown forwards in such a manner as to cause it to *roll* along the ground. Bowling should also be practised with the left hand.

The bowling alley must be about 60 feet in length and covered with asphalt or cement. It is our aim at first to bowl the heaviest shot the longest distance, and in order to be able to ascertain the distance readily feet are marked along the side of the alley.

Subsequently a mark (jack, pin) may be placed at the end of the alley to bowl at (see games). —



Fig. 8.

762. *Throwing or hurling the shot.* The shot should not exceed 16 pounds in weight. The practising ground, if indoors, must be covered with tan or saw-dust.

Take up the shot with the right hand, and place your

left hand on the top of it, to insure its steadiness. The feet stand astride, the left foot in front, and the shot is thrown in the same manner as when bowling; the shot must not, however, *roll* along the ground, but describe an arc through the air. The spot where it first touches the ground is the distance thrown.



Fig. 9.

When throwing with the left hand the right foot is placed in advance. Throwing the shot is practised either for distance or throwing at a mark consisting of a stout canvass bag filled with wool, and suspended by a rope as shown fig. 9.

763. *Putting the shot* may be practised with 16 to 36 lbs.



Fig. 10.



Fig. 10 shows the usual position for putting the shot. The shot is not thrown at an angle of 45 degrees, but at a somewhat lesser angle, say 30 degrees, for otherwise the muscles of the chest will not come into full play.

Some men, when putting the shot, stand at first as shown fig. 10, but simultaneously with extending their arm they take a stride forwards with the right (hindmost) leg.

An harmoniously developed gymnast, ought to be able to put a 36 lb. shot as far as he leaps, say 20 feet.

THROWING THE DISC.

764. THE DISC is made of hard wood. It is about a foot in diameter, two or three inches thick in the middle and one inch at the edge, which is rounded off.

The thrower places the disc in his right hand, the fore-finger along the edge, so as to be able to impart the disc a rotatory motion as it flies off. He then raises his right arm backwards and throws the disc with a forward swing, simultaneously putting his left foot to the front.

In throwing, height can be combined with distance.

THROWING THE HAMMER.

765. THIS exercise requires knack as well as strength. At competitions a run of 7 yards is generally allowed. Take up your position at that distance from the scratch (the boundary beyond which you are not allowed to step), stand astride, your left foot in front; let the hammer hang down by the right side. Now swing the hammer forwards and backwards until it has got a good momentum; then swing it round backwards keeping the arms straight; start at the same time and take even strides towards the scratch. Your stepping forwards must increase the impetus of the swing. At the scratch you let fly, the hammer describing an arc the apex of which is about 12 feet above the ground.

Begin with a hammer weighing only seven pounds. An eleven pound hammer, with a handle three feet long, has been thrown 176 feet, a 22-pound hammer 94 feet.

TOSSING THE CAPER.

[766.] a feat once popular over all Europe, but at present confined to the Scotch highlands and some other remote districts. A log of wood, some seven feet long, is shouldered, and then thrown forwards.

DUCKS AND DRAKES.

767. Select a flat piece of stone and throw it, at a low trajectory, against the surface of a sheet of water. If thrown with skill the stone will bound off several times and hop to a great distance. When competing at this exercise the number of bounds made by the stone, decides the victory.

THE BOOMERANG.

[768.] is a curved piece of wood which, if skilfully thrown, has the peculiarity of returning to the thrower, or of starting off suddenly at an unexpected angle. The Australians use this boomerang, and they are able to hit with it a man hiding behind a tree.

HOOPS.

[769.] small or large, are thrown either with the hand, or with the aid of one or two sticks. If thrown with one hand, and made to spin round in a vertical direction during its flight, the hoop, if thrown a distance, will return to the thrower.

BATTLEDORE AND SHUTTLECOCK.

770. THE use of these are hardly acceptable to young men or boys, though they afford very healthy practice.

FLYING THE BIRD.

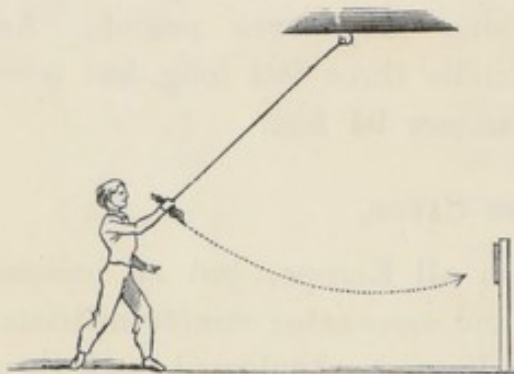


Fig. 11.

771. THE bird has a sharp iron beak and is suspended by a rope, as shown fig. 11. The thrower takes it in his right or left hand, and makes it fly towards a target placed at a suitable distance and elevation.

THE LASSO

[772.] is used by the huntsmen in the Pampas of South America. It consists of a very strong, but thin, well plaited rope, made of raw hide. One end is attached to the saddle of the huntsman, the other is terminated by a small ring of iron or brass by which a noose can be formed. The Gaucho, when he is going to use the lasso, keeps a small coil in his bridle-hand, and in the other holds the running noose, which is made very large, having a diameter of about eight feet. This he whirls round his head, and by the dexterous movement of his wrist keeps the noose open; then, throwing it, he causes it to fall on any particular spot he chooses (Darwin's Journal of the Voyage of the Beagle, p. 44).

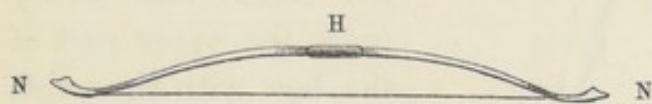
Practice with the Lasso can easily be obtained in a Gymnasium, but the more erratic bolas (erratic in the hands of the unskillful) had best be banished.*

XXXIV. SHOOTING.

773. IF we discharge a projectile by means of an instrument and cause it to fly with speed and violence, we are said to shoot. The kind of shooting at present most in request is that with guns and rifles, but the practice of this accomplishment is hardly ever carried on in connection with a gymnasium, though a gymnasium can scarcely be called complete without its rifle range and shooting gallery. We will therefore confine ourselves to a short notice on archery, slinging and the blow-tube.

THE LONG BOW.

774. THE best bows are made of yew, and those requiring a force equal to from 50 to 80 lbs. to draw them, are most suited for gentlemen.



The outside is called the back; the inside the belly; H is the handle; NN are the nocks, notched pieces of horn, to which the string is attached. — The string is made of hemp, and it is bound with silk at the centre where the arrow is “nocked”. The distance from the centre of the string to the bow should be about six inches. A thin string shoots further, but a thick one insures greater certainty of aim.

The heads of the arrows are of brass or iron; at the other end there is a nock to be applied to the string. Three feathers steady the arrow during its flight, two of these are alike, but the third — the cock — is of a different colour, and it is uppermost when the arrow is put on the string. Weight

* The bolas consists of two balls of wood or iron attached to the ends of a thin plaited thong, eight feet long. The gaucho holds one of the balls in his hand and whirls the other round and round his head; then, taking aim, sends them like chain shot revolving through the air. The balls no sooner strike an object, than, winding round it, they cross each other, and become firmly hitched.

and length of arrows vary, light arrows being used for short distances, heavy ones for long shots.

The bow must be kept dry, and rubbed with linseed oil before it is used.

The rest of a bowman's outfit includes a belt with pouch for arrows, tassel and grease-pot; a brace for protecting the bow-arm, and a glove. The fingers of the glove and the brace should be frequently greased, to protect the string from friction.

775. *Stringing the bow.* Hold the handle with the right

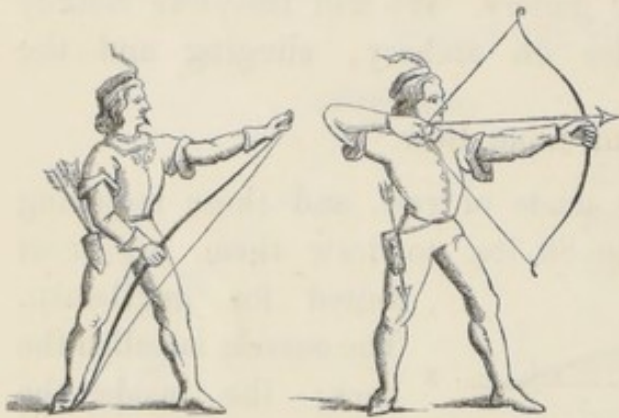


Fig. 1.

Fig. 2.

hand and place the small nock of the bow against the hollow of the right foot. Take the noose between the thumb and the first finger of the left hand, and slowly press the upper part of the bow with the wrist, until you are able to slide it into the nock

of the upper horn. Fig. 1.

When unstringing you proceed in an analogous manner.

Standing. Face and left side are turned towards the target; the legs are astride, the toes of the left foot pointing straight to the front.

Nocking. Hold the bow perpendicular, the arm extended forwards; take hold of an arrow by the middle and nock it. Hold the string firmly with three fingers.

Drawing and aiming. Holding your left arm straight out, draw the arrow with your right hand back towards the ear. In taking aim look at the target, and not at the arrow.

Loosing. — As soon as the bow is drawn, it must be loosed instantly, the left arm being kept steady.

Elevation. — This varies according to distance and strength of the bow. A strong bow will send an arrow almost point-blank to a distance of 40 yards. An expert bowman must also make allowance for the wind.

776. *Target shooting.* — Targets are made of canvass with a backing of plaited straw. The gold centre or bull's eye counts 9; the red circle, 7; the inner white, 5; the black, 3; the outer white, 1. The green outside or petticoat does not count. A full-sized target is four feet in diameter.



It is supported on a stand with movable legs, to give any desired angle.

The hits are scored on a card ruled in the following manner, each hit being marked with a pricker.

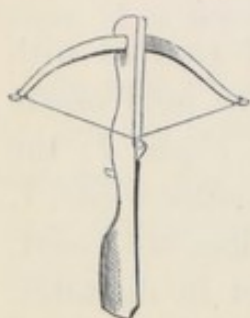
NAME.	Gold. 9.	Red. 7.	Inner- white. 5.	Black. 3.	Outer- white. 1.	Total hits.	Value.
<i>J. Smith.</i>		8	50

In case of a tie for Value, hits decide; but in case of a tie for hits, numbers decide the winner. The usual distance is 100 yards.

777. *Butt shooting.* The butt is made of turf. It is 9 feet long, 7 high, 4 feet deep at the base and 16 in. at the top. The mark, consisting of a circular piece of white pasteboard, 4 in. in diameter for a distance of 30 yards, up to 16 in. for a distance of 120 yards, is placed upon the slope of the butt, about 4 feet above the ground.

778. *Roving.* — The bowmen rove over the country and shoot at any mark that may present itself, generally at long distances. The winner of the first shot chooses the next mark. When keeping a score, all the arrows within five bows' lengths of the mark score, and the owner of the arrow nearest the mark wins.

THE CROSS-BOW



[779.] affords less exercise than the long bow, but it also possesses its advantages. It may be used in a covered gallery of moderate length, and, in the hands of young learners it may fitly take the place of the rifle. Having drawn the bow, which is done with an instrument if the bow is a strong one, you insert the blunt bolt, take aim as with a rifle, and discharge the bow by pulling the trigger. An ordinary target may be used, or a target having a hole in the middle for the bolt to pass through.

THE BLOW TUBE OR TRUNK.

780. THE tube, of wood or metal, is from three to five feet long and has a bore of half an inch. The mouth-piece is of ivory or silver-plated.

The projectile either consists of a needle having a tuft of hair or cotton attached to it, or of a pellet of wet clay rolled in the hand.

The pea-shooters frequently used in the country are only about a foot long and they have a very small bore.

If you wish to shoot put a projectile in at the breech, draw breath, place the tube to the mouth holding it as you would a Rifle, take aim, and blow the projectile out with all your strength.

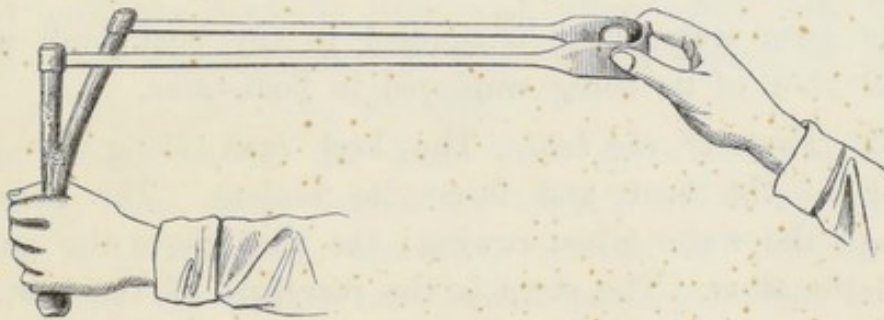
A target painted on wood or some other mark to shoot at must be provided.

SLINGING

[781.] was formerly of some importance in warfare, but at the present time it is merely a pastime or sport which ought to be restricted to out-of-the-way places. Slings are made of various descriptions. Two strings are attached to a piece of leather having a hole in the middle for holding the stone or projectile. The end of one string is wound securely round the

hand the end of the other is held between the thumb and the first and second fingers. Having whirled the sling rapidly round several times you let go the string which you hold between the fingers, and the stone will fly off with great power. — The strings of the old Anglo-Saxon slings had a loop or ring at each end. One loop was hitched over the second finger, the other over the first finger. By merely stretching the latter at the proper moment the projectile flies off. — Some slingers retain hold of both ends of the sling. Having whirled the sling round several times, they suddenly throw the arm back, and propel their projectile by a movement similar to that made in throwing over-hand.

A more manageable kind of sling, called catapult (stone



thrower) has been introduced of late, and can be purchased at most toy-shops. It consists of a fork to which is attached an india-rubber string, as shown in our woodcut. — The left hand grasps the handle of the fork, the right the loop containing the projectile. The left arm is then extended forwards, you take aim between the fork, pull back the india-rubber string and let fly quickly. In this manner you soon learn to hit a target 50 yards off, but your sling will carry as far as 200 yards if you learn to give an auxiliary forward impulse with your left arm.

XXXV. BOATING.

782. *Boats.* The boats now generally used for racing are called outriggers, from the fact of the rowlocks being placed on iron brackets projecting from the sides of the boat. A sculling outrigger is a sort of canoe, about 30 feet long and

12 in. wide and under 40 pounds in weight; it only carries one man, who sculls. There are also pair-oared, four-oared and eight-oared outriggers, the latter two always provided with a rudder. The eight-oared outrigger is over 60 feet long and about 27 inches wide. This description of boats was introduced by Clasper of Newcastle.

The *Gig* is shorter and wider; it has a square stern, is made of five or six strakes and the oars are placed between two thowle pins wedged into the gunwales. There are pair-oared, four-, six- and eight-oard gigs.

The *Wherry* is a shallow light boat, built sharp at each end. Other kinds are the skiff, the ran-dan, the cutter, the funny or canoe.

The term wager-boat is applied to any boat built with a special view of its being employed in boat-races.

783. *Parts of the boat.* The keel runs along the entire length of the boat and forms its bottom. The bows cut through the water when rowing; the part above the water is called the stem. The stern is the rear-part of the boat; the rudder is attached to it. The cross-piece on the top of the rudder is called "yoke", and the lines attached to the yoke and held by the coxswain are the yoke-lines. The part of the boat between bows and stern is called midships. The planks of wood of which the sides of the boat are generally made are called strakes, and there are the garboard, broad, shutter, lower, binding and upper strakes. The gunwale is fixed inside to the latter, and in old-fashioned boats there is a wash-streak into which the rowlocks are cut, whilst in more modern boats the oars are held between two pins, called the thowle and the stopper. The seat on which the oarsman sits is called thwart, and the piece of wood against which he puts his feet stretcher. Port or larboard side is on the left, looking towards the bows, starboard on the right.

784. *Oars and Sculls.* The former are about thirteen feet long, the sculls are shorter. The handle is that part held in the hand; the loom rests on the rowlock or between the pins;

the round part beyond is called the shank, and the broad part the blade.

785. *Rowing.* Each rower uses one oar, and there must be at least two rowers to each boat. Learners should begin in a pair-oared gig or other heavy boat. Sit down on the thwart, place your feet on the stretcher, knees open. Take hold of the handle of the oar, the hands about three inches apart. — Stoop forwards, stretching your arms and keeping the back stiff; dip the oar into the water. — Pull the oar back, still keeping the arms straight and the back stiff. The oar must be pulled steadily through the water, without any jerks, and the water should just cover the blade. — At the end of each pull you feather the oar, that is you turn it round until the blade is horizontal, after which you recover rapidly your starting position. The strokes should be regular, of even length and even strength.

The rowers sit in the boat their faces directed towards the stern. The rower nearest the stern is called the "stroke" and he keeps the time; the rower nearest the bows is called "bows", and the rowers are besides numbered from bows to stern.

786. *Steering.* In a pair-oar the bow-oar acts as steerer, in a four to eight oared boat the coxswain steers not only, but has the command of the boat. He steers partly by means of the rudder, keeping the yoke lines tight in hand; but there are a variety of manoeuvres which are of service in steering,

When turning a sharp point coxswain orders "*Pull bow-side*" or "*Pull stroke-side*" when the men on the side named pull harder. The same object is attained by ordering one of the sides to be "*easy*", when they cease rowing and hold out their oars horizontally. On the words "*Easy all*" both sides cease rowing. — The words "*Hold water all*" are addressed to the crew when the boat is to be stopped. Both sides dip blades of oars according to the speed at which the boat is proceeding. If only one side "holds water" the boat, of course, will turn round. — "Back all" are the words of command for rowing backwards; the oars, instead of being pulled through

the water are pushed through. One side can back whilst the other continues rowing, and this also will cause the boat to turn round.

Other words of command are: — "*Give way*", which means, commence rowing; "*Oars a-peak*", stand the oar upright with the handle on the floor of the boat.

787. *Sculling*. In sculling one man uses two oars, the ends of which generally overlap each other; there is no rudder to steer with. In races an eight-oar frequently follows each sculler to direct his course, but when that is not done the sculler must steer himself, and when looking round he must be careful to keep his shoulders square.

788. *Rules of the river*. When two boats meet, the one which comes down with the tide or the stream gets out of the way. If the boats pass close to each other the oars are taken out of the rowlocks and allowed to drift alongside the boat. The boat getting out of the way must keep outside unless there is ample room inside. — If one boat crosses the river and another comes down with the stream, the latter must keep astern of the former.

789. In conclusion we are bound to mention that none should be permitted to row unless they have first learnt to swim. This precaution is the more necessary as the light rowing-boats now in use are much more likely to be upset than their heavier predecessors.

XXXVI. ANTAGONISTICS.

790. AMONGST the exercises of the gymnasium those, which bring the men into personal contact and antagonism with each other deservedly occupy a prominent place. But they should be carried on with due care. The antagonists meet as friends, and should separate as such. Irritability and hot headedness should be suppressed and reprimanded; the victor should carry himself with modesty, the vanquished should bear his defeat with equanimity. Antagonistics are thus not only a school

for acquiring strength and agility, but they exercise a most beneficial influence upon the ethics of those engaging in them.

Before proceeding to the more serious antagonistic exercises, such as wrestling and boxing, the men should have acquired a certain amount of strength and agility. The more simple exercises of pulling, pushing, etc. contribute towards this object, and should therefore be practised first.

PULLING.

791. THE two men stand facing each other. On the word of command they face to the left, place the outer sides of their right feet against each other, and lay hold of the wrists. On the word *Ready!* they bend the left leg and lean backwards, and on the word *Off!* they try to pull each other to a goal previously fixed upon.

Instead of laying hold of the wrists, the pullers may clasp hands. Or, facing each other, they can make "eyes and hooks" (crook the fingers and hitch them into the fingers of the antagonist, which are also crooked), and pull backwards. They can, furthermore, stand back to back, raise their arms backwards, make "hooks and eyes", longe with one foot forwards and lean forwards, and then try to pull each other to the goal.

Instead of grasping the wrists, the pullers may take hold of a ring or of handles connected by a strap.

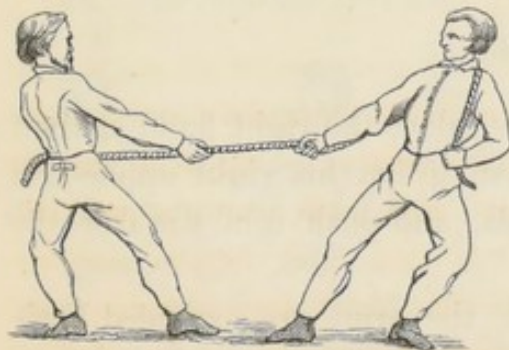


Fig. 1.

Fig. 2.

792. *Pulling at a rope.* The usual way is shown fig. 1; the position with the end of the rope passed round the neck is shown fig. 2. — But the pullers can also stand with their backs towards each other, the rope being passed over a shoulder and held in front with both hands.

793. *Pulling, sitting on the ground.* Both men sit on the ground, place the soles of their feet against each other, stoop forwards, and lay hold of a staff, or of the handles described par. 791. — They then endeavour to pull each other off the ground. — If each man yields to a certain extent a sort of see-saw may be accomplished.



Fig. 3.

794. *Pulling at a Rope passing over a roller.* This ancient exer-

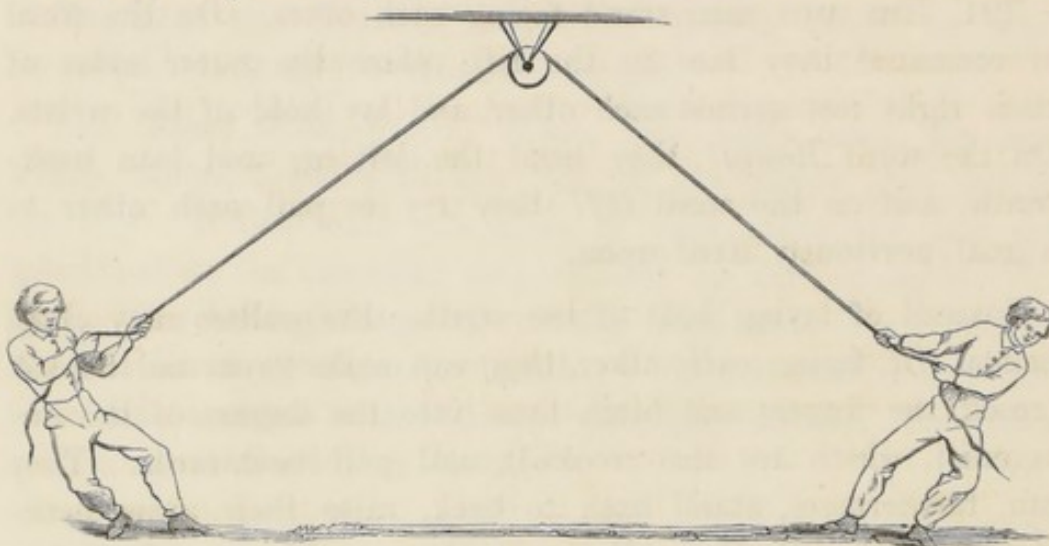


Fig. 4.

cise is sufficiently illustrated fig. 4. The roll is about eight feet above the ground. The antagonist is defeated as soon as his feet leave the ground. Neither is allowed to let go the rope without previously calling out *stop!* Instead of fixing the roll above head, it can be fixed close to the ground.

PUSHING.

795. THE men stand face to face, place the right hand against the left shoulder of the antagonist, grasp his right upper-arm with their left hand, lean forwards, and push him towards the goal.

In pushing hand against hand, the arms are extended horizontally forwards, knuckles uppermost, the hands are then folded, A holding with his right hand B's left, and with his left hand

B's right. Both men lean forwards and push for the goal. The arms must be kept straight and horizontal.

Pushing with plaited grasp is similar to the preceding, but instead of folding hands, the wrists are grasped, as follows.

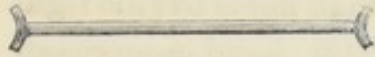


Fig. 5.

A and B each grasp their left wrist with the right hand; they then approach each other,

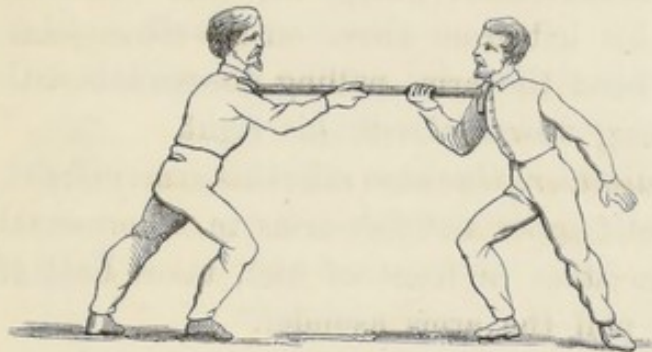


Fig. 6.

and grasp each others right wrist with the left hand. The knuckles are uppermost. The arms are then raised forwards and they push each other as before.

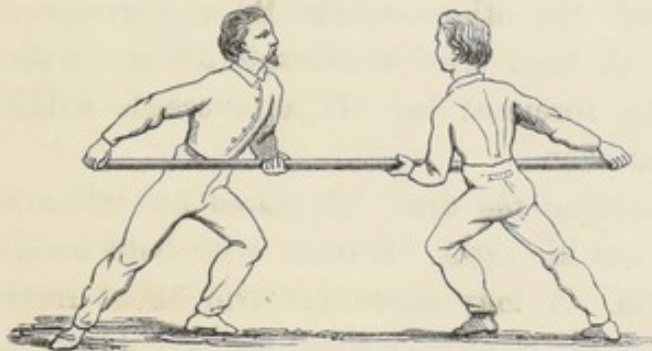


Fig. 7.

The use of the "Shoulder-pusher" is shown fig. 6. Instead of using one shoulder-pusher, two may be used simultaneously.

Pushing with wands is illustrated fig. 7.

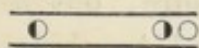


Fig. 8.

When two wands are used by two men, they take up their positions as in fig. 8.

MISCELLANEOUS.

796. *The Styrian Wrestle.* The men stand opposite each other

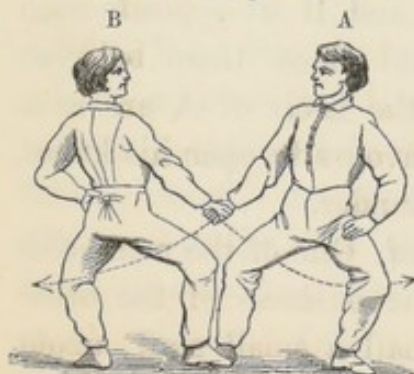


Fig. 9.

as shown fig. 9. — The outsides of the foremost feet are placed against each other, the hands are clasped, and held exactly over the feet. On the leader giving the word *start!* each man tries to push or pull his antagonist from his position, without, however, changing the position of his feet. A, for instance, by for-

cibly pushing B's hand in the direction indicated above, and then forcing it outwards, will cause B to fall on his back. The man who first loses his standing, even should he only shift the position of one of his feet, is beaten.

797. *Bending the antagonists arm.* One man holds out his right arm horizontally sideways, the palm of the hand uppermost. The other man steps behind him, grasps the wrist with his right hand, and places his left from above on the elbow joint. He then endeavours to bend the arm, pulling downwards with his left hand, and pushing upwards with his right.

798. *Pulling the arms asunder.* One man raises his arms in front, knuckles touching and both upper and fore-arms in a horizontal position. The other man steps in front of him, takes hold of the wrists, and tries to pull the arms asunder.

799. *Holding the arm.* A, standing astride, places his left arm on the back, and presents the other arm to B, who grasps it firmly round the wrist. A then tries to liberate his arm without, however, shifting his foremost leg. If he succeeds within 10 or 15 seconds he has won.

800. *Catching and holding the arm.* A places his left arm on the back and holds out his right. B tries, with both hands, to catch hold of A's arm. A may move his arm about freely as long as he does not raise it higher than the shoulder; his hindmost (left) leg he may shift about at pleasure, but his foremost leg must remain on the same spot; and to obviate all disputes in this respect a small ring may be drawn round it with chalk. B has won if he succeeds in catching the arm and holding it for 10 or 15 seconds.

801. *Forcing the knees asunder.* A and B sit opposite each other on chairs. A closes his knees and places them between those of B in such a manner that the heels of A are in a line with B's toes (0110). B now endeavours to open his knees, thus forcing those of his antagonist asunder.

802. *Wresting a ball etc. from the hand.* One of the men holds a ball in his closed hand, and it is the business of the other to wrest it from him. Instead of the ball a small staff, about 15 in. long and rounded at the ends may be taken, the staff

being held either with both hands or with one. Pulling, pushing and twisting are legitimate in this contest.

803. *Touch.* The antagonists stand opposite each other in a position resembling that shown Free Exercises par. 67. The contest consists in touching the antagonist without being touched in return, and to succeed in this, a good deal of agility is required. A touch on the hand does not count. Two touches out of three decide each round.



Fig. 10.

804. *Hopping on one leg.* Both men fold their arms upon the chest, stand upon the left or right leg, rush against each other and try to compel each other to put down both legs. When rushing against your foe, present your left side towards him when hopping on the left leg, and if he is your superior in weight, try to avoid his rush by hopping aside nimbly, and thus tire him out. It is not permitted to catch hold of the antagonist with the hands.

805. *Foot in the hole.* A hole, 18 in. in diameter, six deep, is made in the ground (or a hoop placed on the floor). A stands with one foot in the hole, and B, hopping on one leg, endeavours to force him to put his foot out. B is allowed to attack in any mode he chooses, — he may pull or push with his hands, endeavour to trip him up with his free leg, and make use of all fair artifices. A, in turn, may avail himself of all means for forcing B to stand on both legs. A has lost, if his foot leaves the hole, B if he stands on both legs.

WRESTLING.

806. Wrestling is the art of forcing the antagonist to the ground without resorting to blows or kicks. It is an ancient exercise, highly esteemed amongst the Greeks and in the Middle Ages, but sadly neglected of late. Almost every country has its own style of wrestling, and some countries have even two or three styles. In all cases certain restrictions as to holds and falls are laid down, and any one observing these restrictions, which are acknowledged by both parties,

must be deemed to wrestle fairly. The restrictions of one style of wrestling cannot, however, be applied to another style, and it would therefore be wrong to blame a Cornish-man for kicking, because kicking is not permitted in the styles of Germany or Cumberland.

At the same time we would banish from the gymnasium every thing dangerous or unseemly. We cannot, therefore, admit a style of wrestling which permits one man to twist the other's arms; we cannot admit laying hold of the flesh or the hair; or kicking. Nor are we in favour of that style of wrestling where both men lie on the ground, though that was the practice amongst the ancient Greeks.

The Wrestling Ring.

807. Wrestling takes place in a ring about 25 feet in diameter, around which stand or sit those not actually engaged. Turf, in the open air, or a mixture of sawdust and tan, or coco-nut matting, are all that is required to make the falls less painful.

The Manner of teaching

[808.] varies but little for the different styles of wrestling, and we will therefore give a few hints applicable to all styles. First show the hold and the correct position for attack or defence. Then go through the whole of the falls described. One man attacks, the other offering all facilities for his doing so. The latter, of course, will then be thrown, or ought to be thrown, if the attacking party sets about it properly. — Having shown the various ways of throwing a man, you show how to stop each mode of attack. One man attacks; the other stops. — Only when your pupils have thoroughly mastered the various movements necessary in throwing and stopping, you allow them to wrestle with each other, confining them at first to two or three modes of throwing, until they are fit for voluntary practice. — As a rule none should be permitted to wrestle until they have reached the third stage of proficiency in ordinary gymnastics.

GERMAN STYLE.

809. THIS style is saddled with most restrictions, for you are not permitted to touch your antagonist below the waist;



Fig. 11.

to throw him by tripping up and similar manoeuvres; nor to turn your back towards him. A distinction is made between full hold and half hold. In the former both your arms pass below those of your antagonist, in the latter one arm passes below, the other above, as in fig. 11.

The former hold offers a great advantage, but in the latter both wrestlers are on a footing of equality. Sometimes the wrestlers start with half hold, sometimes they start facing each other and each endeavours to gain the full hold, but in both cases each man is permitted to improve his hold by passing one or both arms underneath those of his antagonist. The hands are not required to remain locked, as in the Cumberland style. A man is thrown if both his shoulders touch the ground.

You throw your antagonist by first lifting him off the ground and then forcing him down backwards (pressing with your chin upon his shoulder), or by swinging him round sideways. Brute strength is mainly decisive in this style of wrestling. The back should be bent, to prevent the antagonist from hugging you close. The guard against your antagonist obtaining the full hold is shown fig. 25. —

CUMBERLAND WRESTLING.*

810. THIS style of Wrestling is general in the northern counties, and has thence spread over the greater part of England, the "Westmoreland and Cumberland Wrestling Society" being its principal promoters in the metropolis. The rules of this style of wrestling are restrictive, but not as much as

* Mr. Margetson, of the Westmoreland and Cumberland Wrestling Society, has kindly looked over this portion of our work.

those of the German style. At the same time it should be observed that the principal falls and stops of which a Cumberland man avails himself are available also, on being modified in a suitable manner, to the loose style of wrestling; and some time devoted to the Cumberland style is therefore not lost, even in the case of those, whose predilections lead them to the other style.

We first of all give the rules as laid down in Mr. Litt's *Wrestliana*.

a. When two men cannot soon agree in taking hold, the umpire shall place them at such a distance as the size of the men may render necessary for ulterior proceedings. He shall then cause them to square their shoulders, and the higher part of their breasts against each other, in such a manner that the right and left shoulder-blades of both are perfectly level, and the arms stretched out so that the hands are in a line with the nipple of the breast. He shall then direct one of them to take hold without shrinking his right breast and shoulder underneath his opponent's, and so as to preserve a perfect equality in the use of the right arm; when this is the case, making proper allowance for contracting the arms by grasping the back of his opponent, the hold will be something below the level of the nipples. If the umpire is satisfied the hold is fair, he shall cause the other to take hold likewise without shrinking, or swerving to either side; which being done, he shall immediately give the word. If the umpire perceives that either party is striving for an advantage, or will not take hold, he shall decide the fall against him; and if neither party will implicitly obey his directions, he shall cross them both out without further loss of time.

b. If the man who takes the latter hold makes play at the same time, and either throws his opponent, or obtains such an advantage by it as in the judgment of the umpire occasions the ultimate termination of the fall; or, if the first taker-hold strike before it can be clearly ascertained that the other has hold, and obtains a similar advantage by doing so, the fall shall be wrestled over again; and if the same conduct

be repeated, the offender shall lose the fall (this rule provides against a "Snap", — viz. when one man begins to wrestle before the other has a fair hold and is ready for him).

c. If, when wrestling, the men get disengaged by their hands slipping over each others head, and they remain opposite each other on terms of perfect equality, it shall be in the option of either party to leave go, and take hold again, as at the first meeting; but if one of the parties only lose his grasp, it shall be deemed perfectly fair for the other to continue the wrestle till he does so likewise, or the fall terminates. If both the parties during a struggle become disengaged, if one throw the other before they remain stationary or fronting each other, it shall be deemed a fair fall.

d. After the men have both taken hold, if either of them quits it, either in endeavouring to save himself, by accident; or by attempting to throw his adversary, he shall lose the fall, provided his adversary retains his own hold, and does not go down by that effort or manoeuvre, which is the immediate occasion or object of quitting the hold; but if his adversary, though retaining his hold, goes to the ground without recovering himself, if it be not immediately, yet in such a manner as is obviously the consequence resulting from such manoeuvre, he shall win the fall. If the effort occasions both parties to lose their hold, and both or neither go down, it shall be deemed a wrestle over again.

e. If both men go down in such a manner that it cannot be clearly and distinctly ascertained which of them was first on the ground, it shall be deemed a wrestle over, or, as provincially termed, a dog-fall, and the decision shall be given without any regard to the circumstance of making play. A man's knees or hands, or either of them, touching the ground, shall be considered conclusive of his being down in all cases, except he is fairly covering his man, and it is occasioned by the desire of making the fall easier to himself or his antagonist; when such is the manifest intention, it shall not interfere with his claim to the fall (a wrestler is considered fairly to cover his man if he fall with only one leg across him).

811. *The hold* is shown fig. 12. Place your right arm inside your antagonists left arm, hook your fingers, and press the back of the left hand upon the antagonists right loin. The legs are astride, the left foot about two feet forwards, and the weight of the body rests exclusively upon the right leg. The shoulders must be squared and the collar bones of both wrestlers on the same level as explained above in rule (a).



Fig. 12.

812. *Improving the hold.* Rule (a) clearly points out how to improve the hold. Shrink your right breast under that of the antagonist, tighten your arms around his loins, or pinnion his right arm by pressing upon it with your left.

813. *The Buttock and Cross-Buttock.* These movements are very similar and they succeed best with a slack hold. They are generally done facing to the right (buttock) or to the right about (cross-buttock). Suddenly turn or twist round to the right so as to place your left hip under your antagonists belly; then pull him close towards you, stoop forwards, thus lifting him off the ground, and if you continue to turn



Fig. 13.

round, he will fall on his back, under you. Fig. 13.

In the cross-buttock you face to the right about to such an extent that your back is turned to your antagonist, and then proceed as before. Compare fig. 21. — Having faced round, you must place your feet in front of his feet, and not between them. We need hardly add, that the hands must remain locked during these movements, and are shifted round by degrees.

You can save yourself from being thrown if you hold your antagonist firmly round the body, crouch down and withdraw your head. On the other hand, if you fail in the buttock, you should try the back-hank.

814. The *Back-hank* (Lock). Make a movement as if about to give the buttock, so as to stand with your left side to your antagonist. Then raise your left leg backwards, and pass it from the inside round your antagonists right leg, so as to bring your instep in front of his shin (fig. 14). Whilst effecting this movement, keep yourself nearly upright, or your antagonist may succeed in throwing you forwards. Once effected, turn suddenly to the left, and force your antagonist over backwards.



Fig. 14.

815. *The hank or back-heel*. Pull your antagonist towards you and put your left heel behind his right heel. Then throw the whole of your weight upon him, at the same time forcing his foot up forwards. You are thus able to throw him backwards.



Fig. 15.

If attacked in this manner, put back your foot, or if caught, try to face whilst coming to the ground. You can also meet this attack by the right leg hipe: — as soon as your antagonist advances his left leg to hank you, hipe him with the right thigh.

816. *Hamming* is done in a similar manner to the back-heel, but your leg is passed behind the antagonists knee (the hock) instead of behind his heel.

Get your leg out of the way, or, supposing your antagonist raises his left leg, swing him round to the right.

817. *The left leg Hipe*. Lift your antagonist off the ground hugging him close to you; and swing him round to the right, turning in the same direction; then suddenly strike the inside part of his right thigh with the outside of your left thigh. You thus bring your antagonist out of his balance, and if you use the impetus of the swing, he must fall, you falling on the top.



Fig. 16.

If you find that the hipe does not take, try the back-hank or the buttock.

You stop the left leg hipe as follows. As your antagonist is about to insert his left thigh, you cross it with your right knee (shin), and when he attempts to lift you off the ground, you seek to prevent being lifted by shrinking your breast under him.

You can anticipate the left leg hipe in the following manner. Your antagonist, previous to hiping you, will step in with his right leg, thus enabling you to give him the back-heel with your left leg.

Hiping is always a dangerous operation, but a right leg hipe exposes the wrestler to less risk than a left leg one.

818. *Left leg stroke.** Strike your antagonists right leg with your left leg in such a manner, that your knee is outside and your instep inside, and swing him round to the left.



Fig. 17.

You stop this stroke by hamming with your left leg.

Some wrestlers do this stroke entirely outside the leg, instead of in and out.

819. *Strokes combined with other modes of attack.* Strike your antagonist with the left leg, as explained above; put it quickly down again, face to the left, and throw him over the right buttock.

Other combinations are: — right leg stroke and left leg hipe; left leg stroke and right leg hipe, etc.

LOOSE WRESTLING (“CATCH-AS-CATCH-CAN”).†

820. IN this style of wrestling all modes of attack or of defence are fair with the following reservations. It is not allowed to strike or kick; to lay hold of the hair, the flesh or the clothes; to twist the fingers or arms, or to make use of grasps which are extremely painful or dangerous. With respect to these latter it is the duty of the umpire to interfere, and a wrestler not desisting when warned, should be disqualified.

* The term “*chip*” is applied to all the different ways of striking with the legs, and indeed to a variety of other manoeuvres.

† As taught by Mr. Schweizer, G. G. S., London.

A wrestler is thrown if he falls on his back, both shoulders touching the ground. This is the usual rule, but we are inclined to recommend that any man touching the ground with any part of the body except his feet, knees or hands, should be considered thrown. This restriction would do away with much unseemly pulling about after a man is once on the ground, and in reality at the mercy of his antagonist.

821. The *Wrestling position* is shown fig. 18. The legs are astride sideways, knees bent, hands placed on the knees (thumbs outside) or held in front (backs of the hands inside). The eye is fixed upon the antagonist.



Fig. 18.

The hold. Approach your antagonist without getting into an erect position. Place your right hand upon your antagonists neck, looking over his right shoulder; and grasp his left or right wrist with your disengaged left hand. Fig. 19.



Fig. 19.

CROSS-BUTTOCKS.

822. *Cross-buttock, arm round the neck.* A and B have the hold shown fig. 19. A quickly grasps with his left hand B's right wrist; — faces to the left about, thus turning his back towards B's chest; his legs standing in front of those of B; at the same time he brings his right arm round B's neck. — B's right arm he must keep to the front. — If A stoops forwards in this position B's feet leave the ground, and with a swing and twist to the left, A throws him on the back. If done with sufficient force, B will turn a somerset in the air. Fig. 20.



Fig. 20.

It is easy to stop this fall. As soon as A has faced about, B holds him firmly round the body with both arms. Having

thus insured himself against being thrown, it is advisable to let go, for there is little chance of throwing in this position.

823. *Cross-buttock, arm round the body.* The starting position is the same as in the preceding. A places his right hand on B's neck; B places his left hand on A's neck, so as to leave A's arm inside.



Fig. 21.

A grasps with his left hand B's right wrist. A now faces to the left about simultaneously letting go with his right hand which he puts on B's back, passing his arm beneath B's left arm. Having secured a firm hold, either on B's right shoulder or near his hip, he lifts B off the ground by stooping forwards, and throws him. Fig. 21. —

A, having faced about, must keep his legs astride sideways, in front of B's legs.

There are two ways of stopping this fall. As soon as A begins to turn, B places the knuckles of his left hand upon A's chest. Only a very superior antagonist will be able to break through this stop. If B is nimble he may even succeed in throwing A in the same manner A intended to throw him, for he need only turn to the right and place his left arm round A's back.

The second way of stopping consists in B putting his left leg over A's left leg after the latter has turned round. This is a very secure stop.

824. *The head in chancery and cross-buttock.* A and B place their right hands on each others necks.



Fig. 22.

A suddenly pulls B's head towards him and brings it below his left arm-pit; he then passes his left arm round B's neck, and places his right hand on B's back, as shown fig. 22. In this position B is almost helpless, for A presses upon him with the entire weight of his

body. Having kept B in durance for some time, A suddenly relaxes the hold of his left arm. B no doubt will

avail himself of this moment to withdraw his head, but A quickly grasps his right wrist with his left hand, puts his right arm further round B's back, faces to the left about, and throws him over the buttock as shown fig. 21.

A wrestler in the position of B, fig. 21, can save himself from being thrown by passing his left leg round A's left leg. — If the pressure becomes unbearable B should throw himself flat upon the ground. Grasping after A's legs, always supposing A to stand in a proper position, only increases the pressure.

Throws over the shoulder.

825. The following mode of attack is not available against a heavier and taller man.

A and B place their right hands on each others necks. A grasps B's right wrist with his left hand; pulls B's arm down from his neck, and then makes the following four movements

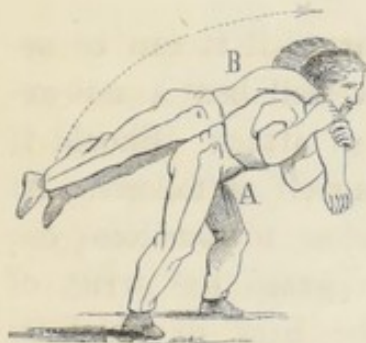


Fig. 23.

in rapid succession (learners do these movements slowly, the teacher counting). 1. A grasps B's right upper-arm close to the shoulder with his right hand. 2. A lets go his left hand and grasps with it B's right arm close above the elbow. 3. A turns to the left about, his back being turned towards B, and places B's arm over

his right shoulder, still maintaining his hold, fig. 23. 4. A stoops forwards and throws B on the back.

B's defence is the same as against the buttock.

826. A and B place their left hands on each others necks.

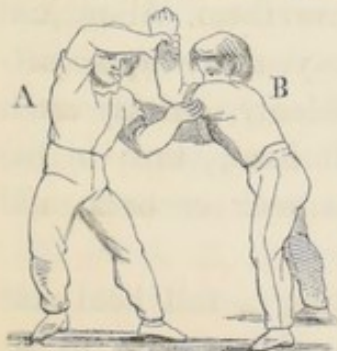


Fig. 24.

A grasps B's left wrist from the inside with his right hand; pulls down B's left arm from his shoulder; rapidly raises it again and grasps B's upper-arm from below with his left hand, fig. 24. — A now steps forward with his left foot, passes B's left arm over his head, faces about at the same time, and puts B's

arm on his right shoulder. A is then able to throw B as described in the preceding paragraph.

The Rush.

827. A and B place their left hands on each others necks. A puts his disengaged right hand back, with a view of inducing B to try and catch it. B, in order to do this, is obliged to lean to the left. A avails himself of this moment to grasp with both hands B's left upper-arm, he pulls him to the right, and simultaneously, his left shoulder in advance, he rushes upon B's left shoulder, and thus forces him to the ground.

B can save himself by placing the back of his right hand on A's chest, par. 823. He may then endeavour to lay hold of A's left leg with his right hands, against which mode of counter attack B secures himself by rapidly springing back.

Full hold.

828. The full hold is of great advantage if it can be secured, but a wrestler who keeps his back well bent is not exposed to any great risk from this mode of attack. Should it be attempted nevertheless, you defend yourself as follows. At the moment your antagonists hands are close to your loins you

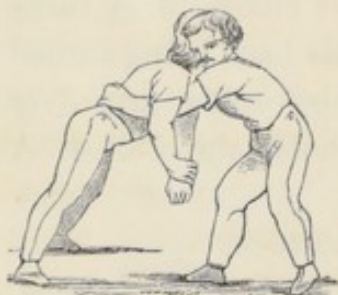


Fig. 25.

lower both arms, grasp the wrist of your left hand (the back of which is turned inwards) with your right hand, straighten your arms, and lean forwards as shown fig. 25. In this position you can press with such force upon your antagonists arms, that he will soon endeavour to withdraw them. Allow him

to do this to a certain extent, but as soon as you have space sufficient to turn in, give up the pressure suddenly, quickly catch your antagonists right wrist with your left hand, turn to the left about, put your right arm round his neck or back, and throw him as shown fig. 20 or fig. 21.

Should your antagonist succeed in getting a full hold and is thus able to hug you close, you are almost sure to be

thrown, but may still save yourself from defeat, by turning round during the fall. With some wrestlers this turning round during the fall, and thus avoiding coming down on the back, is a favourite manoeuvre, which may be put a stop to frequently by not releasing your antagonist until he is on the ground.

Laying hold of the legs.

829. If you maintain the position shown fig. 19, your antagonist will find it no easy matter to lay hold of your legs. But occasions arise when from inadvertance or in consequence of a failure in an attack one of your legs is within the reach of your enemy, and to these cases the following examples apply.

830. A and B place their left hands on each others necks.



Fig. 26.

A grasps B's right wrist with his right hand, and pulls him towards him. If B is induced thereby to step forwards with his left leg, A lays hold of it near the knee with his left hand, lifts it up and pulls it to the left, pulling at the same time B's left arm to the right or pressing upon his chest,

and thus throws him on his back. Fig. 26.

831. A and B place their right hands on each others necks. Each wrestler then endeavours to lay hold of his antagonists disengaged arm. We will suppose B to have succeeded in grasping A's left wrist. A then lets go quickly with his right hand; with a blow he releases his left hand, places it from the outside on B's right shoulder-blade, and lays hold of B's right elbow with his right hand. A now leans with the whole of his weight upon B's right side, and B, in order to reduce this pressure, is almost sure to grasp A's right fore-arm with his left hand. If B does this, A lays hold of B's right knee with his left hand, lifts it up, and by pressing his right fore-arm upon B's chest, he forces him down backwards.

832. A and B hold each other by the upper arms. A pulls



Fig. 27.

B towards him and lets go suddenly; he then drops on his left knee, puts his head between B's legs which he grasps; lifts B off the ground, pulls his legs towards him, and throws him backwards. If done with spirit, this manoeuvre is generally successful. B can save himself by quickly leaning forwards and laying hold of A round the body.

Tripping up.

833. Tripping up is done by placing a leg behind one of the legs of your antagonist, and forcing him down backwards. Thus, supposing the wrestlers to stand facing each other, one of them, by stepping sideways to the left, can put his right leg or his left leg behind his antagonists right leg.



Fig. 28.

834. Another way of tripping up is as follows. A places his right hand on B's neck and grasps B's left wrist with his left hand. He then pulls B obliquely to the left, takes at the same time a step with right foot diagonally to the right. He then finds himself in the position shown fig. 28, his right hand holding B's right shoulder, his left holding B's left wrist, and his right leg behind B's left leg. A is thus enabled to force B down backwards.



Fig. 29.

835. A and B place their right hands over each others necks; A grasps B's right wrist with his left hand, and B does the same to A. Both then simultaneously turn to the left about and thus find themselves in the position shown fig. 29, when either of the wrestlers has it in his power to throw the other.

By putting your hip well under your antagonist, as shown in fig. 30, you enjoy an advantage.



Fig. 30.

leg, fig. 31, and is thus in a position to throw.

836. A puts his right hand on B's neck and grasps with his left, B's right wrist. A then steps to the left and puts his right leg behind B's right



Fig. 31.

Locks.

837. A and B place their left hands on each others necks. A grasps B's left arm with his right hand, passes his right leg round B's left leg from the inside, and throws him to the right.



Swiss "Swinging".

You can also pass your right leg round your antagonists left leg from the outside; or your right leg round his right leg from the inside.

BOXING.

Amongst the various antagonistic exercises boxing deservedly occupies a high rank, not only because it is first-rate as a bodily exercise, but also on account of its utility.

Attitude of defence.



Fig. 1.

838. The attitudes vary according to the peculiarities of boxers, but the following may be recommended as being the most usual.

You stand astride, with your left foot about 20 inches in advance of your right one. The toe of the left foot points towards the antagonist, and the right forms nearly a right angle with the left one. The legs are bent slightly,

and the weight of the body rests equally upon both. The body is erect, the head thrown back. — Both arms are brought in front of the body. The left arm is in advance, and its fist is rather higher than that of the right arm. The elbows are turned in, and close to the side, though without constraint, and the arms are kept constantly at play, that is, they are moved to and fro. This not only keeps your arms supple, but it serves also to hide your intentions.

The fingers are clenched tightly, and the thumb is doubled down outside them. When striking a blow, the muscles of the hand and arm, and indeed of the entire body, must be braced up. At other times the fist remains clenched, but not very tightly, in order to avoid unnecessary fatigue.

The Guard is also practised with the right foot in front, in which case the right fist takes the position of the left, as explained above.

Advance. Put your left foot a short step in advance, and follow up with the left.

Retreat. Put your right foot a step backwards, and follow up with the left quickly, the feet remaining the same distance apart. Practise advancing and retreating several steps in succession, being careful to maintain your guard.

Shifting. This is resorted to when desirous of getting beyond the reach of the antagonist. Standing on Guard with your left foot in advance, as usual, you place your left foot about 20 inches behind the right, changing guard at the same time. Then put the right foot a step backwards, again changing guard, and so forth.

Practise this movement also advancing.

Blows.

839. The blows are delivered generally with the middle knuckles, and always with the fist firmly clenched. The left hand blow is delivered as follows. Longe out with the left foot as far as may be convenient, and throw your entire weight upon it, raising at the same time the heel of the right foot.

Strike out straight from the shoulder, quick as lightning, and without first pulling back your fist, for that would betray your intention. Having delivered your blow, recover guard instantly. — The right arm remains in its position (fig. 2).



Fig. 2.

The right hand blow is delivered in the same manner, with the left foot in advance, but this right hand blow is not generally attempted when leading off.

Practise these blows first without an antagonist, in front of a glass, and be careful you always recover guard quickly and correctly.

Round blows, that is when the fist passes through the segment of a circle instead of through a straight line, are not near as effective as the straight, direct blows. They, at the same time require more time in their execution and are therefore easier parried or anticipated.

Chopper. If blows may be likened to thrusts, a chopper resembles a cut. The chopper is generally delivered with the right arm, after you have parried a blow with the left. As a rule you hit your adversary upon the bridge of the nose; in most cases this will cause his eyes to water, and enables you to throw in a few more blows effectively. A severe blow on the nose shuts up both eyes and completely blinds your man.

The usual places for planting blows are the cheeks and the pit of the stomach, technically called the "mark". Body blows, as a rule, are not very effective. The most hurtful blows are under the ear, between the eyebrows, and on the "mark". The former produces insensibility and blood sometimes flows from nose, mouth and ears. The second may produce temporary blindness. A blow on the stomach is the most dangerous of all, and may prove fatal. You can render it less dangerous by drawing in the belly, keeping your breath, and bending the upper part of the chest.

Before proceeding to guard against blows you should have learnt to deliver them quickly and correctly. You may prac-

tise for that purpose in front of a looking glass, or you may hit at a mark consisting of a ball suspended by a string from the ceiling, but the most expeditions plan is to have your teacher opposite, who will be able to correct any mistakes at once, and thus prevent your acquiring bad and slovenly habits.

Guarding.

840. We can guard against a blow in four different manners.

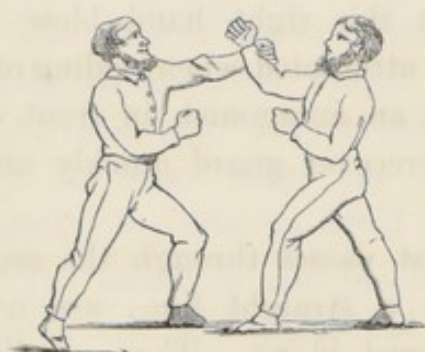


Fig. 3.

1. *By parrying.* Blows aimed at the head or upper part of the chest are parried by striking the antagonists arm upwards and outwards. — Sometimes blows at the stomach are parried by striking downwards and outwards, but this requires a very quick eye, and is attended with danger unless you are very quick. Fig. 3.

2. *By stopping.* The blow is stopped with the outer side of the arm, not suddenly (“dead stop”), but in a yielding manner, so as to break its force gradually. Blows at the face are stopped by raising the elbow, blows at the stomach by lowering it. Fig. 4.

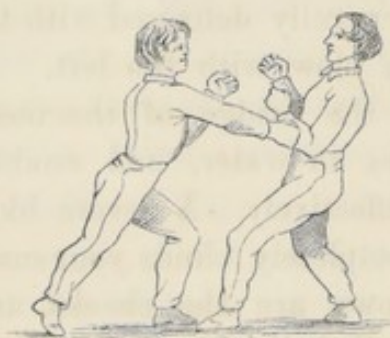


Fig. 4.

3. *By avoiding it.* A blow may be avoided by stepping sideways or backwards, by drawing back

the head (when the tenth part of an inch will save from punishment), by bending the head sideways or ducking it, or by sinking down.

4. *By anticipating blow by blow,* in ring parlance called *counter hitting*. This is easiest explained by two examples. — A strikes at B's stomach, and in doing so leans forwards, bringing his head into dangerous proximity. B, in that case, neither parries nor stops, but delivers a blow, before A is able to reach him. — Or, A gathers himself up to give B a right

hand blow directed upon his left temple; B steps close up to him and gives him a straight left hand blow between the eyes. If your opponent is addicted to counter hitting, your best plan is to draw him out by a feint, to parry and to plant a return blow.

We will now give a few examples for practice in parrying and stopping.

A strikes with his left hand at B's right cheek, — B parries or stops with right arm.

A strikes with his right hand at B's left cheek, — B parries, or stops with the left arm thrown across the body.

A strikes at B's ribs, — B stops the blow, with the right or left arm, as the case may be.

Having parried or stopped a blow, B must quickly recover guard.

Return blows. Having guarded against a blow with your left hand, you are in a favourable position for planting a blow with your right hand. The following examples, for practice, will render this clear.

A strikes with left hand at B's right cheek, — B parries with his right arm and gives a left handed return blow.

A strikes with left hand, — B avoids the blow, by throwing back his head, and gives a left handed return blow.

Feints are used to take the antagonist off his guard. For instance, you feint a left-handed blow, and thereby induce your antagonist to make the motion of parrying it, whereby he lays himself open to a blow aimed at him in good earnest. When practising feints let each man act alternately on the defence.

Closing and *in-fighting* are only resorted to when fighting, and not when sparring. The boxer either endeavours to seize his antagonist with one hand, with a view of administering punishment with the other, or he closes and wrestles. Should your antagonist succeed in laying hold of your neck with one arm, so as to get your head in 'chancery', you must endeavour to hold his head back or to seize the arm he has at liberty.

In sparring the hands must be dropped when you close, and the set-to is considered finished.

XXXVII. GAMES.

841. A course of Physical Education cannot be considered complete without a liberal introduction of games. The number of gymnastic games is large, but it is better to confine one's self to a few games and to attain perfection in these, than to practise many, and remain a novice in all. It was partly this reason, partly the fact of many games requiring special preparations or localities, which induced us to limit ourselves to a notice of nine "representative" games.

CRICKET.

842. It is not our intention to give a description of this favourite national game, for to do so in a manner at all satisfactory, we should be obliged to devote much more space to it than we are able to afford. We contend ourselves, therefore, with giving

THE LAWS OF CRICKET.

As Revised by "The Marylebone Cricket Club."

1. The ball must weigh not less than five ounces and a half, nor more than five ounces and three-quarters. It must measure not less than nine inches, nor more than nine inches and one-quarter in circumference. At the beginning of each innings, either party may call for a new ball.

2. The bat must not exceed four inches and one-quarter in the widest part; it must not be more than thirty-eight inches in length.

3. The stumps must be three in number, twenty-seven inches out of the ground; the balls eight inches in length; the stumps of equal and of sufficient thickness to prevent the ball from passing through.

Pitching the Wickets.

4. The bowling crease must be in a line with the stumps, six feet eight inches in length; the stumps in the centre, with a return crease at each end towards the bowler at right angles.

5. The popping crease must be four feet from the wicket, and parallel to it; unlimited in length, but not shorter than the bowling crease.

6. The wickets must be pitched opposite to each other by the umpires, at the distance of twenty-two yards.

7. It shall not be lawful for either party during a match, without the consent of the other, to alter the ground by rolling, watering, covering, mowing, or beating, except at the commencement of each innings, when the ground may be swept and rolled at the request of either party, such request to be made to one of the umpires within one minute after the conclusion of the former innings. This rule is not meant to prevent the striker from beating the ground with his bat near to the spot where he stands during the innings, nor to prevent the bowler from filling up holes with sawdust, etc., when the ground is wet.

8. After rain the wickets may be changed with the consent of both parties.

The Bowler.

9. The bowler shall deliver the ball with one foot on the ground behind the bowling crease, and within the return crease, and shall bowl four balls before he change wickets, which he shall be permitted to do only once in the same innings.

10. The ball must be bowled; if thrown or jerked, the umpire shall call "No ball".

11. He may require the striker at the wicket from which he is bowling to stand on that side of it which he may direct.

12. If the bowler shall toss the ball over the striker's head, or bowl it so wide that in the opinion of the umpire it shall not be fairly within the reach of the batsman, he shall adjudge one run to the party receiving the innings, either with or without an appeal, which shall be put down to the score of wide balls; such ball shall not be reckoned as one of the four balls; but if the batsman shall by any means bring himself within reach of the ball, the run shall not be adjudged.

13. If the bowler deliver a "no ball" or a "wide ball", the striker shall be allowed as many runs as he can get, and he shall not be put out except by running out. In the event of no run being obtained by any other means, then one run shall be added to the score of "no balls" or "wide balls", as the case may be. All runs obtained for "wide balls" to be scored to "wide balls". The names of the bowlers who bowl "wide balls" or "no balls", in future to be placed on the score, to show the parties by whom either score is made. If the ball shall first touch any part of the striker's dress or person (except his hands), the umpire shall call "leg bye".

14. At the beginning of each innings the umpire shall call "play"; from that time to the end of each innings no trial ball shall be allowed to any bowler.

The Striker.

15. The striker is out if either of the bails be bowled off, or if a stump be bowled out of the ground;

16. Or, if the ball from the stroke of the bat, or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher;

17. Or, if in striking, or at any other time while the ball shall be in play, both his feet shall be over the popping crease, and his wicket put down, except his bat be grounded within it;

18. Or, if in striking at the ball he hit down his wicket;

19. Or, if under pretence of running, or otherwise, either of the strikers prevent a ball from being caught, the striker of the ball is out;

20. Or, if the ball be struck, and he wilfully strike it again;

21. Or, if in running, the wicket be struck down by a throw, or by the hand or arm (with ball in hand), before his bat (in hand) or some part of his person be grounded over the popping crease. But if both the bails be off, a stump must be struck out of the ground;

22. Or, if any part of the striker's dress knock down the wicket;

23. Or, if the striker touch or take up the ball while in play; unless at the request of the opposite party;

24. Or, if with any part of his person he stop the ball, which, in the opinion of the umpire at the bowler's wicket, shall have been pitched in a straight line from it to the striker's wicket, and would have hit it.

25. If the players have crossed each other, he that runs for the wicket which is put down is out.

26. A ball being caught, no runs shall be reckoned.

27. A striker being run out, that run which he and his partner were attempting shall not be reckoned.

28. If a lost ball be called, the striker shall be allowed six runs; but if more than six shall have been run before lost ball shall have been called, then the striker shall have all which have been run.

29. After the ball shall have been finally settled in the wicket-keeper's or bowler's hand, it shall be considered dead; but when the bowler is about to deliver the ball, if the striker at his wicket go outside the popping crease before such actual delivery, the said bowler may put him out, unless (with reference to the 21st law) his bat in hand, or some part of his person be within the popping crease.

30. The striker shall not retire from his wicket and return to it to complete his innings after another has been in, without the consent of the opposite party.

Substitutes etc.

31. No substitute shall in any case be allowed to stand out or run between wickets for another person without the consent of the opposite party; and in case any person shall be allowed to run for another, the striker shall be out if either he or his substitute be off the ground in manner mentioned in laws 17 and 21, while the ball is in play.

32. In all cases where a substitute shall be allowed, the consent of the opposite party shall also be obtained as to the person to act as substitute, and the place in the field which he shall take.

33. If any fieldsman stop the ball with his hat, the ball shall be considered dead, and the opposite party shall add five runs to their score; if any be run they shall have five in all.

34. The ball having been hit, the striker may guard his wicket with his bat, or with any part of his body except his hands, that the 23rd law may not be disobeyed.

The wicket Keeper.

35. The wicket keeper shall not take the ball for the purpose of stumping until it have passed the wicket; he shall not move until the ball be out of the bowler's hand; he shall not by any noise incommode the striker; and if any part of his person be over or before the wicket, although the ball hit it, the striker shall not be out.

The Umpires.

36. The umpires are the sole judges of fair or unfair play; and all disputes shall be determined by them, each at his own wicket; but in case of a catch which the umpire at the wicket bowled from cannot see sufficiently to decide upon, he may apply to the other umpire, whose opinion shall be conclusive.

37. The umpires in all matches shall pitch fair wickets; and the parties shall toss up for choice of innings. The umpires shall change wickets after each party has had one innings.

38. They shall allow two minutes for each striker to come in, and ten minutes between each innings. When the umpire shall call "play", the party refusing to play shall lose the match.

39. They are not to order a striker out unless appealed to by the adversaries;

40. But if one of the bowler's feet be not on the ground behind the bowling crease, and within the return crease, when he shall deliver the ball, the umpire at his wicket, unasked, must call "no ball".

41. If either of the strikers run a short run, the umpire must call "one short".

42. No umpire shall be allowed to bet.

43. No umpire is to be changed during a match, unless with the consent of both parties, except in case of violation of the 42nd law; then either party may dismiss the transgressor.

44. After the delivery of four balls, the umpire must call "over", but not until the ball shall be finally settled in the wicket keeper's or bowler's hand; the ball shall then be considered dead; nevertheless if an idea be entertained that either of the strikers is out, a question may be put previously to, but not after, the delivery of the next ball.

45. The umpire must take especial care to call "no ball" instantly upon delivery; "wide ball" as soon as it shall pass the striker.

46. The players who go in second shall follow their innings, if they have obtained eighty runs less than their antagonists, except in all matches limited to only one day's play, when the number shall be limited to sixty instead of eighty.

47. When one of the strikers shall have been put out, the use of the bat shall not be allowed to any person until the next striker shall come in.

Note. — The Committee of the Marylebone Club think it desirable that, previously to the commencement of a match, one of each side should be declared the manager of it: and that the new laws with respect to substitutes may be carried out in a spirit of fairness and mutual concession, it is their wish that such substitutes be allowed in all reasonable cases, and that the umpire should inquire if it is done with the consent of the manager of the opposite side.

Complaints having been made that it is the practice of some players when at the wicket to make holes in the ground for a footing, the Committee are of opinion that the umpires should be empowered to prevent it.

THE LAWS OF SINGLE WICKET.

1. When there shall be less than five players on a side, bounds shall be placed twenty-two yards each in a line from the off and leg stump.

2. The ball must be hit before the bounds to entitle the striker to a run, which run cannot be obtained unless he touch the bowling stump or crease in a line with his bat, or some part of his person, or go beyond them, returning to the popping crease as at double wicket, according to the 21st law.

3. When the striker shall hit the ball, one of his feet must be on the ground, and behind the popping crease, otherwise the umpire shall call "No hit".

4. When there shall be less than five players on a side, neither byes nor overthrows shall be allowed, nor shall the striker be caught out behind the wicket, nor stumped out.

5. The fieldsman must return the ball so that it shall cross the play between the wicket and the bowling stump, or between the bowling stump and the bounds; the striker may run till the ball be so returned.

6. After the striker shall have made one run, if he start again, he must touch the bowling stump, and turn before the ball cross the play to entitle him to another.

7. The striker shall be entitled to three runs for lost ball, and the same number for ball stopped with hat, with reference to the 28th and 33rd laws of Double Wicket.

8. When there shall be more than four players on a side there shall be no bounds. All hits, byes, and overthrows, shall then be allowed.

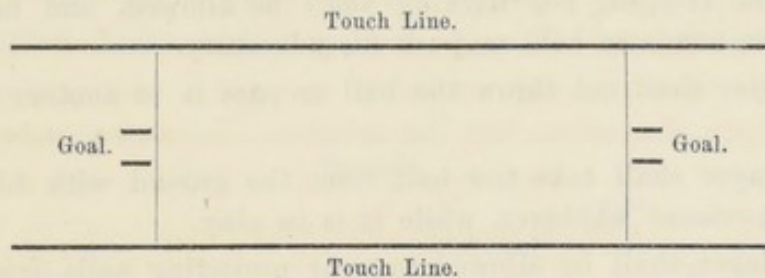
9. The bowler is subject to the same laws as at Double Wicket.

10. Not more than one minute shall be allowed between each ball.

When Single Wicket is played without sides, the first innings is tossed for, and when out the striker takes the bowler's place, then that of wicket-keeper, then fieldsman to the left of the bowler, and so on in succession, according to the number engaged.

FOOTBALL.

843. Sides having been chosen, the ball is delivered in the middle of the play ground, and each side then endeavours to drive it through the goal of the other side. The rules adopted by the Football association are as follows.



1. The maximum length of the ground shall be 200 yards; the maximum breadth shall be 100 yards; the length and breadth shall be marked off with flags; and the goals shall be defined by two upright posts, eight yards apart, without any tape or bar across them.

2. The winner of the toss shall have the choice of goals. The game shall be commenced by a place-kick from the centre of the ground by the side losing the toss. The other side shall not approach within ten yards of the ball until it is kicked off.

3. After a goal is won, the losing side shall kick off, and the goals shall be changed.

4. A goal shall be won when the ball passes between the goal-posts or over the space between the goal-posts (at whatever height), not being thrown, knocked on, or carried.

5. When the ball is in touch, the first player who touches it shall throw it from the point on the boundary line where it left the ground, in a direction at right angles with the boundary line, and it shall not be in play until it has touched the ground.

6. When a player has kicked the ball, any one of the same side who is nearer to the opponents' goal line is out of play, and may not touch the ball himself, nor in any way whatsoever prevent any other player from doing so until the ball has been played; but no player is out of play when the ball is kicked off from behind the goal line.

7. In case the ball goes behind the goal line, if a player on the side to whom the goal belongs first touches the ball, one of his side shall be entitled to a free kick from the goal line at the point opposite the place where the ball shall be touched. If a player of the opposite side first touches the ball, one of his side shall be entitled to a free kick, at the goal only, from a point fifteen yards from the goal line, opposite the place where the ball is touched; the opposing side shall stand behind the goal line until he has had his kick.

8. If a player makes a fair catch, he shall be entitled to a free kick, providing he claims it by making a mark with his heel at once; and in order to take such kick he may go as far back as he pleases, and no player on the opposite side shall advance beyond his mark until he has kicked.

9. No player shall carry the ball.

10. Neither tripping nor hacking shall be allowed, and no player shall use his hands to hold or push his adversary.

11. A player shall not throw the ball or pass it to another with his hands.

12. No player shall take the ball from the ground with his hands, under any pretence whatever, while it is in play.

13. No player shall be allowed to wear projecting nails, iron plates, or gutta-percha, on the soles or heels of his boots.

Definitions of terms.

A place kick is a kick at the ball while it is on the ground, in any position which the kicker may choose to place it.

A free kick is the privilege of kicking at the ball, without obstruction, in such a manner as the kicker may think fit.

A fair catch is when the ball is caught, after it has touched the person of an adversary, or has been kicked or knocked on by an adversary, and before it has touched the ground or one of the side catching it; but if the ball is kicked from behind the goal line, a fair catch cannot be made.

Hacking — is kicking an adversary intentionally.

Tripping — is throwing an adversary by the use of the legs.

Knocking on — is when a player strikes or propels the ball with his hands or arms.

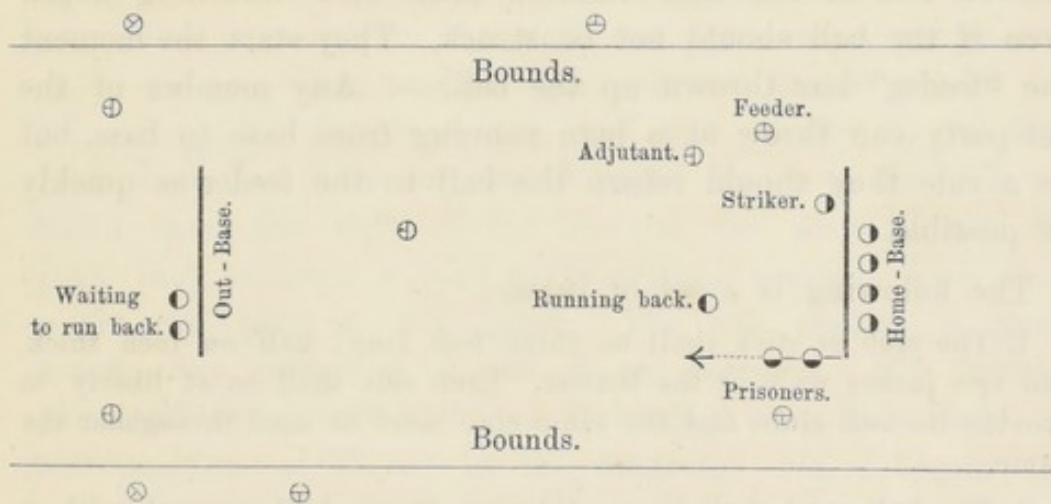
Holding — includes the obstruction of a player by the hand or any part of the arm below the elbow.

Touch — is that part of the field, on either side of the ground, which is beyond the line of flags.

CLUB-BALL.

844. THE game is thus named in Strutt's Pastimes. Recent publications refer to it as Ball-stick, and derive it from the German Ball-stock.

Having chosen sides and tossed up for innings, the winning party occupies the home-base. The out-party station themselves over the play-ground, as indicated on our diagram where the home party is shown thus \ominus , the out-party thus \oplus . The captain or best man of the out-party acts as "Feeder", the next best thrower is stationed behind the prisoners, and a less prominent but active member of the party acts as adjutant, taking up his place close to the Feeder. It is his duty to hand rejected balls and „tips" to the Feeder, thus enabling



the latter to keep always an eye upon the prisoners. — The bases are from 20 to 40 yards apart, and they are most conveniently made with painters' poles, 20 to 30 feet long. The bounds, beyond which the members of the home-party are not allowed to run, can be marked off with a few flags. The ball is about as thick as a fist; a tennis-ball, covered with a netting of stout string, answers very well. The club is 3 feet long, 2 inches wide at the top, and provided with a convenient handle. We will now describe the manner of playing.

The first man of the home-party steps in front of the base, and takes up the club. The feeder throws up the ball about

ten feet high and in the direction of the striker, who may refuse to strike unless the ball is thrown up properly. If he hits the ball, he may endeavour to run to the out-base, if not, he proceeds by the shortest way to the prison. He must stop there, keeping one foot in contact with the base, until a chance occurs for running to the out-base. The second man of the home-party then takes up the club. If he also misses, he joins his comrade in prison, taking up his place inside of him. Prisoners must hold each other by the hands, and the prisoner nearest the home must keep one foot in contact with it. As soon as a chance occurs, the prisoners run to the out-base, and back again to the home-base. It happens occasionally that the entire home-party, with the exception of one man, is either in prison or at the out-base. In such a case one or two of the best runners must risk returning home, even if the ball should not be struck. They start the moment the "feeder" has thrown up the ball. — Any member of the out-party can throw at a man running from base to base, but as a rule they should return the ball to the feeder as quickly as possible.

The following is a set of rules.

1. The club or stick shall be three feet long, half an inch thick, and two inches wide at the bottom. Each side shall be at liberty to provide its own club, and the same club must be used throughout the game.

2. The ball used shall be an ordinary tennis ball covered with a netting of stout twine.

3. The bases shall be 40 yards apart, the bounds 20 yards.

4. The feeder shall take his position three yards from the striker. He must throw up the ball about ten feet high, and in such a manner that the striker may strike it conveniently.

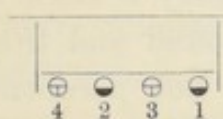
5. The striker shall be at liberty to refuse two balls, whether they be thrown fairly or not, but he cannot refuse the third ball, if thrown fairly in the opinion of the judge.

6. The men of the in-party shall strike the ball in the following order — first the man through whom they won their innings, then the feeder, and then the rest in any order they may fix upon. But after all have had struck once, they shall strike in the order in which they return from the out-base.

7. The in-party loses its innings in the following cases.
- If the ball is caught from the club by one of the out-party.
 - If a member of the in-party is hit with the ball whilst not in contact with one of the bases, except when proceeding from the strike to prison.
 - If the ball is in the hands of the feeder without a member of the in-party being ready with the club to strike it.
 - If the ball is touched with the fingers by one of the in-party.
 - If the striker throws the club behind the base, or takes it away with him, instead of putting it down gently.
 - If one of the in-party passes beyond bounds.
8. One point is allowed every time the ball is hit with the club. One hundred points (or the highest number of points in three innings) decide a match.

FIVES.

845. THIS game is played in front of a dead wall having a piece of smooth ground (asphalte) in front of it. A horizontal line is drawn on the wall, one yard above the ground,



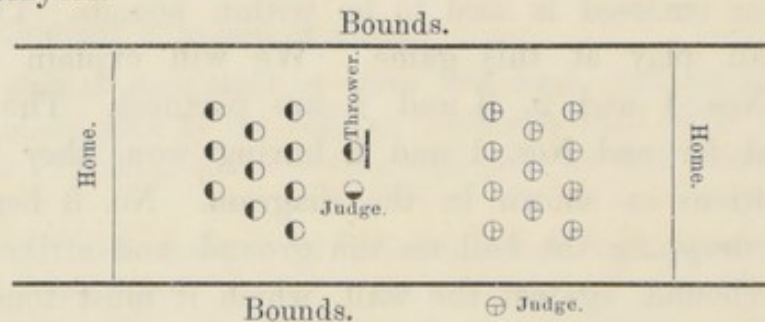
and another line is drawn on the ground, ten feet from the wall and parallel to it. Two lines running at right angles to the wall are drawn from the ends of the line on the ground, and the space thus enclosed is said to be within bounds. Two, four, or six can play at this game. We will explain a game of four, Nos. 1 and 2, 3 and 4 are partners. The innings are tossed for and Nos. 1 and 2 having won, they take up their positions as shown in the diagram. No. 3 begins the game by dropping the ball on the ground and strikes it, on its first rebound, against the wall, which it must touch above the wall-line. On its descent the ball must fall outside the bounds, and on its first rebound it must be struck by one of the in-party (No. 1 or 2). The ball, in all cases, must touch the wall above the line, and on rebounding from the wall it must fall within bounds, except at the commencement of each round. If one of the players strikes the ball below the wall line or outside bounds, or if he misses it altogether on its first rebound from the ground, the opposite party scores one, and the player is out. If both players on the same side are out, a fresh round begins, as explained above. Eleven points

generally win a game, though sometimes fifteen or twenty-four are played for.

PUSH-BALL.

846. THE ball is about 12 inches diameter, covered with strong leather, and weighs from 8 to 10 pounds. The homes are at least 30 yards apart. It is the object of each party to send the ball into the home of the other.

The captains toss up for the first throw. The ball must be thrown both hands raised above the shoulder, and it must leave the hands at an ascending angle. A run is permitted. The opposite party seek to stop the progress of the ball by pushing it back, with hands raised above the head. If they catch the ball, or throw it back with hands lower than the shoulders, then the ball is considered to have touched the ground at the spot where it was caught or stopped in this irregular manner. The umpires should each carry a stick to indicate the spot where the ball touched the ground and from which it is to be thrown, and the thrower is not permitted to step beyond this stick. Our diagram shows the positions of the players.



The following is a set of rules.

1. The ball to be of leather stuffed with wool, and not to exceed eight pounds in weight. The homes to be 60 yards apart, the bounds 20 yards.

2. The first throw to be decided by lot, and to be delivered from a spot three yards from the middle of the play ground, in the direction of the home of the party throwing.

3. The ball must be thrown with hands raised above the shoulders, and at an ascending angle. If thrown in defiance of this rule, or beyond bounds, the other side shall be entitled to demand that it be thrown again and from the same spot.

4. If the thrower steps beyond the spot marked on the ground by the umpire, the other side may demand that the ball be thrown again.

5. The ball must be stopped and pushed back with hands raised above the shoulders, and the man who first touched it throws it from the spot, where it first touched the ground.

6. If caught or thrown back with hands lower than the shoulders, the ball shall be considered to have touched the ground at the spot where it was caught or stopped in this irregular manner. The same rule applies to carrying or "butting" with the shoulders.

7. Each party to number ten men and a captain. Sides are changed after each game.

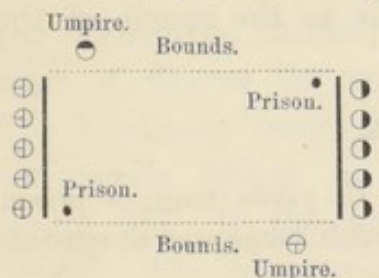
8. Three games out of five to decide a match.

9. There shall be one judge, whose decision is final, or a judge to each side and a referee.

PRISON-BARS.

847. THIS game is described in Strutt's Pastimes. It is played differently in various parts of the country. The rules, which we give, appear to coincide with those in force in Strutt's time. They are observed also in Germany, where the game is known as *Barlaufen*.

The homes are 40 yards apart. Each party takes possession of one of the homes. The prisons are indicated by a flag-staff placed three yards in front of each home as shown in the diagram. The number of players may vary from 10 to 50 to each side.



The game is opened by a challenge on the part of the leader who had the first choice. He proceeds to the other home and selects one of the men. The man selected must hold out his hand, the challenger gives him three taps, quick or slow, as he thinks best, and starts back for his own home, the man challenged, and he alone, starting in pursuit. The party of the challenger may send one or more to the rescue, and it is a rule throughout the game that the man latest from his home, "bars" all those out before him, that is, he can take any of them prisoner if he overtakes him, but cannot be made prisoner himself. The challenge is repeated every

time a prisoner is made or liberated, but in these cases the captor or the liberator challenges, and not the captain. If a prisoner is made the umpire calls out "Stop!", when all players return to their homes. The prisoner is taken to prison. He stands astride touching with one foot the stake or staff marking the prison, the other leg being astride, and the hand extended towards his own party. If a second prisoner is made he is placed inside the first. The prisoners must join hands. — The prisoners are liberated if one of them is touched by a member of their own party before the latter is struck by one of the guards, set to watch the prisoners. The rescue of prisoners forms one of the most exciting parts of the game. Some of the best men should be set to watch them, and they must keep a careful watch and run out in turns. Each man can run out, as a matter of course, but too many should not run out at a time, in order that an efficient reserve may always be in the home. Much depends on the captain's judgment in placing and sending out his best runners. — When the ground is free of players one party sends out a "decoy" to entice men of the other party to leave their home; good runners should always be ready to come to the rescue of the decoys.

RULES OF THE GAME.

1. The homes to be 40 yards apart and 15 yards long; a prison, marked by a flag, to be 3 yards in front of each home, and at opposite corners of the play ground.

2. Each game is opened by a challenge on the part of the captain who had the first choice.

3. The challenge is repeated every time a prisoner is taken or liberated, but in these cases by the captor or the liberator.

4. The challenger can be pursued only by the man challenged, but his own party may send men to the rescue.

5. Any man touched by a man of the other party, who left his home later than he did, is prisoner.

6. The game stops as soon as a prisoner is taken, until the captor has challenged; and the same rule is observed after a prisoner has been liberated: Two prisoners cannot thus be made in succession.

7. Any man running beyond bounds is a prisoner.

8. If any one reaches the home of the other party without being touched, he is allowed to return to his own home outside the bounds.

9. As long as there is only one prisoner he must touch the stake marking the prison, with one foot. If there are several prisoners they must join hands, the one last taken touching the stake with one foot.

10. The prisoner or prisoners are liberated and free to return to their home if one of them is touched by one of their own party, without the intending liberator being touched himself.

11. If one of the prisoners leaves his place previous to being touched in this manner, then they are not liberated; nor is their intending liberator to be taken prisoner, unless touched before he reached them.

12. Each game to be over and sides to be changed when there are three prisoners (or four, when there are over fifteen players to each side).

13. The decisions of the umpires to be final.

THE PAPER CHASE OR "HARE-AND-HOUNDS".

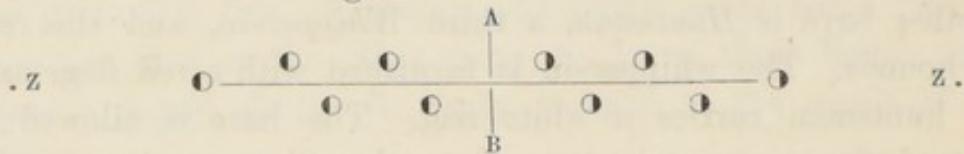
848. This is a game for the open country. One boy is *Hare*. He is provided with a bag full of small pieces of paper, one of which he drops every ten paces. This is the scent. Another boys is *Huntsman*, a third *Whipper-in*, and the rest are hounds. The whipper-in is furnished with a red flag, and the huntsman carries a white flag. The hare is allowed a start of five or ten minutes, when the others go in pursuit. The huntsman comes first, followed by the hounds, and the whipper-in brings up the rear. They all walk or run in single file. If the huntsman loses the scent, he calls out "*lost!*" The whipper-in then stations himself with his flag at the place where the last piece of paper was found, and the rest wheel round in a circle, keeping in line, when one of them is sure to recover the scent. The huntsman then sounds his horn and the chase is continued over fields hedges and ditches. At last the hare is in sight. The huntsmen encourages his followers to fresh efforts, but the hare, after all, may evade his pursuers, and reach home before them. — The hounds are not allowed to make short cuts, but must follow the scent as indicated by the slips of paper. — After such a hot game it is advisable to walk about for some time and to change clothes in a warm room.

THE COCK FIGHT.

849. EACH side station themselves in their home. On a signal, by the umpire, they all leave their homes and, hopping on one foot, they approach each other. Arms are folded on the chest, and each player then rushes at one of the antagonists, and endeavours to force him to put down his leg. Any one putting down his leg is "dead" and must join the umpire, who, after the *melée* has lasted some time, gives the signal to retire. Each side then returns to its home, but having rested a short time, the players again sally forth, this time hopping on the other leg. The game is continued until all the men of one side are "dead". (Compare par. 804.)

FRENCH AND ENGLISH.

850. A stout rope, thirty to forty feet long, is all that is required. Sides being chosen, the men take up their positions as indicated in the diagram.



The umpire stations himself in the centre, and as soon as he gives the word, each side tries to pull the other over the boundary AB, or far enough for the last man to be able to touch point Z with the hand. The captains should regulate the pulling by word of command.

PART III.

A SYNOPSIS OF GYMNASTIC EXERCISES.

Teachers of gymnastics and Leaders of squads will find on the following pages a Synopsis of the principal exercises, which, we hope, will prove of service to them, when preparing for their lessons. We have already, Chapters IV to VI, mentioned the manner of conducting the exercises, and the distribution of the pupils into three classes, according to their strength and address. In the following pages, as elsewhere throughout the book, the difficulty attending the performance of each exercise is indicated approximately by the Roman figures I, II or III. A leader, having a squad of beginners, should confine himself to the exercises marked I, but a leader of a superior squad, without neglecting the easier exercises, may draw within the range of practice the exercises marked II or III, according to the proficiency of his men.

The figures in brackets () refer to the paragraphs of Part II, where a description of the exercises indicated will be found.

FREE EXERCISES.

The principal free exercises will be found in the following pages arranged for actual practice. The exercises of each of our fourteen specimen sets bring into play nearly all the muscles of the body. A teacher, proceeding on the same plan, will be able to vary his exercises to an almost endless extent, and thus keep alive the interest of his pupils. The latter

generally place the hands on the hips, and unless orders are given to the contrary, they stand in the fundamental position. Each exercise, as a rule, is done first left; then right; then left and right in alternation; and finally left and right simultaneously.

We have given the words of command in full, and though it is not at all necessary to adhere to every word, yet, leaders should endeavour to follow the mode of expression adopted and recommended.

First Example.

Thrust upwards with the left arm—arm—*up!*—*Thrust!*

The same with the right arm, and with the right and left arms in alternation.

Thrust forwards with the left arm—arm—*up!*—*Thrust!* (the elbow must be brought back). Vary this exercise as above.

Thrust sidwards with the left arm—arm—*up!*—*Thrust!* Vary like the preceding exercises.

Balancing position on one leg—right leg—forwards—*up!*

The same, on the right leg.

Raise and lower the left leg forwards—*raise!*

The same, with the right leg, and with the left and right in alternation.

Arms on back—*fold!* Back bend forwards—*bend!*

Back bend backwards—*bend!*

Back in alternation forwards and backwards—*bend!*

Second Example.

Thrust upwards with both arms—arms—*up!*—*Thrust!*

Thrust forwards with both arms—arms—*up!*—*Thrust!*

Thrust sidwards with both arms—arms—*up!*—*Thrust!*

Balancing position on one leg—right leg sidwards—*up!*

The same on the right leg.

Raise the right leg sidwards, and move it alternately to the front and the side without putting it on the ground—*up!* (front! side! etc.).

Raise and lower the left leg sidwards—*raise!*

The same with the right leg, and with both alternately.

Back bend sideways, to the left and right—*bend!*
 Left foot astride sideways—*place!*
 Body twist to the left and right, heels steady—*twist!*

Third Example.

Thrust both arms alternately upwards and forwards—*thrust!*
 The same upwards and downwards; and upwards, sideways
 and downwards.

On tip-toe—*stand!*

Knees, bend and stretch—*bend!*

On heels squat—*down!*

Sink and rise, squatting on heels—*down!*

Left foot astride sideways—*place!*

Arms above head raise—*up!* Back bend forwards touching
 the ground with the fingers—*bend!*

Fourth Example.

Raise and lower both arms sideways, clapping hands above
 the head, and striking the thighs with the back of the hands
 —*raise!*

Swing both arms forwards and backwards, rising on tip-toe
 with the backward swing—*swing!*

Raise arms horizontally forwards—*up!* Open and close the
 arms, tips of fingers meeting—*on!*

Balancing position on the left leg—the right leg forwards
 —*up!* Bend and stretch the left knee—*bend!*

The same, standing on the right leg.

Raise and lower the right leg sideways, bending the left
 knee—*raise!*

The same with the left leg.

Funnelling forwards with the right leg—*on!*

The same with the left leg.

Arms above head raise—*up!* Back bend forwards touching
 the toes, and backwards—*bend!*

Fifth Example.

Throw out both (or one) arms sideways, from the chest
 —arms—*up!*—Throw—*out!*

Throw out arms sidwards, from the shoulders—arms—*up!*
—Throw—*out!*

The "Reel"—arms—*bend!*—*Reel!*

Balancing position on one leg—right leg forwards—*up!*
Bend and stretch the foot (not the leg)—*bend!*

Swing the right leg forwards, backwards, again forwards,
and then put it on the ground—*swing!*

The same with the left leg, and with both alternately.

Pounding. Bend back forwards—*bend!* Left arm—*bend!*
Pound—*away!*

On tip-toe—*stand!* Sink and rise—*on!*

On tip-toe—*stand!* Bend the knees. Jump up 12 times—
jump!

Sixth Example.

Right arm sidwards—*up!* Funnel forwards—*round!*

The same with the left arm; with both arms simultaneously;
backwards; and with one arm forwards the other backwards.

Right arm sidwards—*up!* The figure of 8—*round!*

Left foot astride sidwards (forwards)—*place!* Sink and rise,
squatting on heels—*down!*—*Position!*

Raise and lower the left knee—*up!*

The same with the right and alternately.

Raise the left knee to the chest—*up!*

Left foot astride sidwards—*place!* Both arms horizontally
sidwards—*up!* Bend the back sidwards, to the left and
right—*bend!*

Balancing position on the left leg—right leg forwards—*up!*
Hop 12 times on the left leg—*hop!*

The same on the right leg.

The same, four hops alternately on the left and on the
right leg.

Seventh Example.

Right fist above left shoulder—*up!* Strike down to the
right—*strike!*

The same with the left arm.

Right fist above right shoulder—*up!* Strike down to the
left—*strike!*

The same with the left.

Right fist—*up!* Strike to the left and right alternately—*strike!*

Right foot astride forwards—*place!* Right fist above left shoulder—*up!* Left knee—*bend!* Strike downwards to the right, stretching the left knee, and bending the right knee, as you do so—*strike!*—*Recover!*

(The rest of the preceding exercises can be varied in the same manner.)

Straddle sideways alternately shifting the toes and the heels—*on!*—

Alternately bend the left and right knees, rising on tip-toe—*bend!* *Recover!*

Left foot a long stride forwards—*place!* Alternately bend the left and right knees—*bend!* (A capital exercise if done properly.)

Mowing exercise to the left and right (heels steady)—*mow!*

Balancing position on the left leg—right leg sideways—*up!*
Hop 12times—*hop!*

The same on the right leg.

The same, four hops alternately on the left and on the right leg.

Eighth Example.

Both fists above shoulders—*up!* Strike forwards, short—*strike!*

The same, striking downwards.

The same striking down- and backwards and rising on tiptoe.

Kick forwards with the right foot, in three motions—*kick!*
(1. raise knee; 2. kick; 3. put the foot down).

The same with the left foot, and with both alternately.

The right knee—*up!* Kick 8times forwards without putting the foot down—*kick!*

The same with the left foot.

Longe sideways to the left—*longe!* (hands on hips).

The same to the right, and to the left and the right alternately.

Longe forwards with the left foot—*longe!* *Recover!*

The same with the right and alternately.

Left foot astride sideways—*place!* Arms above head,—knuckles outside, tips of fingers touching—*up!* Sawyer exercise—*on!*

Beat hop, raising the legs forwards—left leg—*up!*—*hop!*

Beat hop, raising the legs sideways—left leg—*up!* *hop!*

Ninth Example.

Circular motion forwards with one arm (the left or right)—*round!*

The same, with both arms simultaneously.

The above backwards.

Kick thighs, left and right—*kick!*

Kick sideways with the right foot, in three motions—*kick!*

The same with the left foot.

The right knee—*up!* Kick 8 times sideways without putting the foot down—*kick!*

Kicking backwards is done in the same manner (compare the 8th Set).

Left foot astride sideways—*place!* Twist the body to the left and right, at the same time swinging your arms sideways and upwards, and bending backwards—*swing!*

Jump into the straddling position sideways and back—*jump!* (1. bend the knees; 2. jump).

Jump into straddling position forwards, the left and right foot in front alternately—*jump!*

Tenth Example.

Right arm sideways—*up!* Circular motion outwards, in front of the body—*round!*

The same with the left arm.

The same with both arms, three times, and then clap hands behind—*round!* (It is best to stand astride.)

Right knee raise—*up!* Grasp the thigh with both hands—*grasp!* Throw out the right leg 8 times—*out!*

Throw out the right leg forwards in three motions—*out!*

(1. raise knee and bend it; 2. throw out the leg; 3. put the foot down).

The same with the left leg, and alternately.

The same, throwing the legs out sideways.

Longe forwards with the right foot—*longe!* Arms above head raise—*up!* Bend the back, touching the ground with the fingers—*bend!*

On heels squat—*down!* Jump twelve times—*jump!*

Grasshopper jump without gaining ground—on heels squat—*down!*—*Jump!*

Eleventh Example.

Thrust upwards with both arms—arms—*up!* *Thrust!*

The same, longing forwards, right and left—*longe!*

Throw out arms sideways from the chest—arms—*up!* Throw—*out!*

The same, longing sideways—*longe!*

Raise and lower the arms horizontally sideways—*up!*

The same, and simultaneously raise the left or the right leg—*up!*

Arms on back—*fold!* Bend back forwards—*bend!* Move round by the left without rising—*round!* (left, back, right, front, etc.).

The same, by the right.

Kick both thighs jumping—*kick!*

Twelfth Example.

Hands on hips—*place!* Longe forwards with the right foot and thrust with the right arm—*longe!*

The same with the left and alternately.

Throw out the arms sideways, from the shoulders—arms—*up!* Throw—*out!*

The same, and longe forwards—*longe!*

Raise and lower the right arm forwards—*up!*

The same, and simultaneously raise the right leg, kicking the palm of the hand—*up!*

Raise arms horizontally forwards—*up!* Open and close the arms, tips of fingers meeting—*on!*

The same, longing forwards—*longe!*

Right arm sideways above the head—*up!* Raise and lower the left and right arms alternately—*on!*

The same, bending the back sideways and one knee—*on!* (As you bend the back to the left, you bend the right knee and stretch the left one.)

Raise both knees to the chest, jumping—*jump!*

Thirteenth Example.

Raise and lower both arms forwards, above the head—*up!*

The same, and longe forwards—*longe!*

Thrust sideways with both arms—arms—*up! Thrust!*

Thrust sideways with the right arm, and longe to the right—*longe!*

The same to the left, and alternately.

Thrust sideways with the left arm, and longe to the right—*longe!*

The same to the left, and alternately.

Arms forwards, slanting upwards, tips of fingers meeting—*up!* Circular sweep of the arms to the rear, and clap of hands behind the back—*on!*

The same longing forwards—*longe!*

Hands on hips—*place!* Longe forwards raising the arms above the head; stoop forwards touching the ground with the fingers; rise; and recover your position—*on!* (longe, stoop, arms up, recover).

Jump, straddling in the air, and raising the arms sideways—*jump!*

Fourteenth Example.

Thrust upwards with both arms—arms—*up!*

The same in alternation with squatting on the heels—*on!* (thrust, squat).

Thrust upwards as you sink, squatting on heels—*on!*

Thrust upwards as you sink, downwards as you rise, squatting on heels—*on!*

Thrust downwards as you sink, upwards as you rise, squatting on heels—*on!*

Balancing position on one leg—right leg—*up!* Sink and rise, squatting on heel—*sink!*

Longe sideways raising the arms above the head; turn to the right and stoop, touching the ground with the fingers; rise; and recover your position—*on!*

Jump, crossing the legs in the air—*jump!*

An Example of co-operative exercises (135—141).

In a line abreast fall—*in!* Arm in arm—*stand!*

Raise and lower the legs forwards—*up!*

Swing the right (left) leg forwards, backwards, again forwards, and then put it on the ground—*swing!*

Arms around each others' necks—*place!*

Bend the back, forwards and backwards—*bend!*

Arms—*down!* Hands—*grasp!* Longe forwards; raising the arms above the head—*longe!*

Hands—*loose!* To the right—*face!* Hands on shoulders of men in front—*place!*

Sink and rise squatting on heels—*sink!*

Right leg raise forwards—*up!* Grasp right ankle of the man behind you—*grasp!* Left leg alternately bend and stretch—*bend!*

On left leg hop without gaining ground—*hop!*

Words of Command for some exercises of locomotion.

Quick step—*march!*

Mark time by stamping with the left foot—*mark!* (107.)

On tip-toe—*march!*

Four steps stamping, four on tip-toe—*march!*

Hands on hips—*place!*

Balance step, raising legs forwards—*march!* (108.)

Balance step, kicking thighs—*march!*

Balance step raising the knees to the chest—*march!*

Balance step throwing out the legs—*march!*

Testing step—*march!* (109.)

Changing step—*march!* (110.)

Basque step—*march!* (111.)

- Rocking step—*march!* (112.)
 Longing step—*march!* (113.)
 Twirl step sideways—*march!* (114.)
 On heels squat—*down!* Grasshopper jump forwards—*jump!*
 (124.)
 Hop forwards on one leg—*hop!* (125.)
 Four hops on the left, four on the right leg, forwards—
hop!
 Bounding steps—*run!* (128.)
 Four hops on one leg and four bounding steps in alternation
 —*hop!* (124.)
 Galopp forwards—*hop!* (128.)
 Galopp sideways—*hop!*
 Galopp backwards—*hop!*
 (In Galopp the left or right foot leads.)
 Changing step (forwards or backwards)—*hop!* (126.)
 Basque step—*hop!*
 Rocking step—*hop!*

TACTO-GYMNASTICAL EXERCISES.

WORDS OF COMMAND.

- In line abreast fall—*in!* (151.)
 Eyes—*right!* *Dress!* Eyes—*front!*
 Open line to the right—*march!* (152.)
 To the right close—*march!*
 Hands—*grasp!* Open line to the left—*march!* Arms—*down!*
 To the right close—*march!*
 To the left (or right)—*face!* (The line stands now in flank.)
 (154.)
 To the left (or right) about—*face!*
 To the left (or right) half—*face!* *Front!*
 Forwards (or backwards) quick step—*march!* (155.)
 To the right—*turn!*
 To the left—*turn!*
 To the right half—*turn!* (Diagonal march.) *Front!* Line—*halt!*

Wheeling (156).

Right wheel—*march!* *Halt!* (or *forward!*).

On the right, wheel backwards—*march!* *Halt!*

On the centre, left wheel—*march!* *Halt!*

Marching of a flank-line (157).

To the right—*face!* (The men now stand in flank.)

At an obtuse (or right, or acute) angle to the right—*march!*

Countermarch to the left—*march!*

In zigzag (or a serpentine, a ring, or a maze)—*march!*

Changes of position in Line (158).

Front! (The men stand abreast.)

Form in front of the first man—*march!*

Form to the left of the last man, backwards—*march!*

Form to the right of the first man—*march!*

Form in rear of the first man, backwards—*march!*

Form in rear of the last man—right about—*face!* *March!*

(Spartan Countermarch.)

Form in front of the first man—*march!* To the right about—*face!* (Macedonian Countermarch.)

The Column (160).

(The men, at first, stand in a line abreast.)

In fours tell—*off!* Form fours in front of the ones—*march!*

Form a line abreast, to the left backwards—*march!*

To the right—*face!* Quick step—*march!* (The men march in a flank line, single file.)

Form twos, to the right, forwards—*march!*

Form fours, to the right, forwards—*march!*

Form single line, to the left, backwards—*march!*

Form fours, to the right, forwards—*march!*

To the left (or right) wheel—*march!* *Forward!* *Halt!*

To the left—*face!*

Open files to the left—*march!*

In files, countermarch to the right—*march!* *Halt!*

Form in rear of the last man, in each file—right about—*face!* *March!* (Spartan Countermarch.)

Form in front of the first man, in each file—*march!* To the right about—*face!* (Macedonian Countermarch.)

LEAPING.

High Leap.

High leap, springing off with both feet and landing on both—

- a.* Standing leap.
- b.* Leap with a fore-spring, forwards, sideways and backwards.
- c.* The same, turning to the left or right during the flight.
- d.* High leap, with a run of two and more paces.
- e.* Leap, straddling and raising the arms during the flight, etc.
- f.* High and long leap combined.
- g.* "Window leap", between two ropes or sticks.
- h.* Leap over two ropes, one behind the other (2 sets of stands are required; ropes or sticks can be placed both the same height, or one can be placed higher than the other).
- i.* Leap carrying dumb-bells (which are thrown away), a musket or some other weight.

High leap, springing off with one foot, landing on two.

- a.* Standing leap.
- b.* Leap, with a run of two or more paces.
- c.* Leap with an oblique run.
- d.* The same, turning during the flight.
- e.* The same (*a—c*) and straddling, raising the arms, tilting, or throwing a lance etc., during the flight.
- f.* High and long leap combined.
- g.* "Window leap".
- h.* Leap over two ropes, one behind the other.
- i.* Leap carrying weights (dumb-bells etc.).

Striding high leap, springing off with one foot, landing on the other.

- a.* Standing; *b.* running.

Hopping on one foot.

High leap on a table or other fixed surface above the ground.

Long Leap (174).

Long leap, springing off with both feet, and landing on both.

- a.* Standing, forwards, sideways or backwards.
- b.* With a fore-spring, forwards, sideways or backwards.
- c.* With a run of two and more paces.
- d.* Turning during the flight.
- e.* The above, straddling, throwing etc.
- f.* Long and high leaps combined (leaping stand in the ditch).
- g.* Long leap carrying a weight (dumb-bells).
- h.* Long leap to a pre-determined distance (a small hoop is placed on the ground).

Springing off with one foot, landing on both.

- a.* The same as above; *b.* excepted.

Striding long leap, springing off with one foot, landing on the other—

- a.* Standing; *b.* with a run.

Hopping on one foot.

Deep Leap (175).

- a.* From a sitting position.
- b.* From a squatting position.
- c.* From a standing position.
- d.* From hanging by the hands.
- e.* Deep leap and long leap combined.
- f.* Deep leap and high leap combined.
- g.* Leap into a blanket.

The storming Board (176).

The difficulty increases with the steepness of the board.

Run up, in 2, 3 or more paces, face about, halt, and walk down.

Walk up, and down in the same manner.

Run (one or two steps on the board) and jump off sideways.

The same, and face to the left or right, as you jump down.

Run or walk to the top of the board, halt, and jump down forwards.

The storm leap, two or one steps on the board.

Storm leap over a leaping stand placed beyond the board.

Pole Leaping (178).

Preliminary exercises.

Long leap.

a. Standing.

b. Running.

c. Circle leap.

d. Leap over a stand placed in the ditch.

e. Leap with two poles.

High leap.

a. Standing.

b. Running.

c. Carrying the pole over the rope.

d. Upon an elevation.

Deep leap.

a. Facing about.

b. Without facing about.

c. Gliding down the pole.

d. Deep and long leaps combined.

e. Deep leap with the aid of two poles.

f. Leaning upon the top of a pole.

VAULTING BUCK.

Begin with the buck as high as the hips and gradually increase the height. Many exercises of the horse, not mentioned in the following list, can be transferred to the buck.

Vaults into the Rest (182).

I. Vault six times into the rest, from a standing position,

a. with a fore-spring; b. without a fore-spring.

The same, raising the legs alternately sideways.

The same, straddling.

The same, crossing the legs.

The same, raising one or both knees to chest.

The same, raising right knee, extending left leg.

The above exercises (once each), with a run of 2, 3 and more paces.

Swing-off backwards.

Balance Rest (183).

II. Balance rest.

Swinging for- and backwards in the balance rest.

Balance rest and swing-off *a.* sideways; *b.* backwards.

Balance rest and straddle-off forwards.

Mounting and Dismounting.

I. Mount forwards, dismount sideways (184).

Mount forwards, swing-off backwards.

Mount forwards, straddle off forwards.

II. Front-mount (185).

Rear-mount.

Mount backwards.

Vaults over.

I. Kneel, and knee-leap (187).

The vault, standing or with a run.

II. The vault, only using one hand (188).

The vault springing off at a distance from the buck, which is increased gradually.

The vault, first clearing a rope (leaping stand) in front of the buck.

The vault over the buck and a leaping stand placed beyond it.

The vault, and face about after you have cleared the buck.

I. The vault backwards (189).

II. Squatting vault to a standing position (190).

Squatting vault.

III. Somersets, etc.

THE HORSE.

EXERCISES FROM THE SIDE.

Each exercise should be done to the right and to the left.

Vaults into the Rest.

These exercises are done first with a run; then from a standing position six to twelve times, with or without a fore-spring.

- I. Vault into the rest (192).
 - The same, and face to right (left).
 - The same, and raise right leg sideways.
 - The same, and straddle.
 - The same, and cross legs.
 - The same, and raise one or both knees.
 - The same, raise right knee and extend left leg sideways.
- I. Vault into the rest, and swing-off backwards (194).
- II. The same, and turn to the right (left) about.
 - Back-swing in the rest sideways (195).
 - Vault into the rest, horse behind (196).
 - The same and swing-off forwards.

Mounting.

You mount first with a run, then from a standing position or the rest, the latter being the more difficult.

- I. Mount the saddle, shifting a hand, dismount on off-side (197).
 - Mount the saddle, lifting a hand,—dismount on near-side (198).
- II. The same, and dismount on off-side.
 - I. Mount the croup (199).
 - II. The same, throwing legs up high.
 - Mount the neck, passing over the saddle (200).
 - Mount the saddle, both hands on the same pommel (201).
- III. The same, using only one hand.
 - II. Rear-mount (202)—*a.* on the saddle; *b.* the neck or croup.
 - III. Rear-mount, both hands on one pommel.
 - Rear-mount, using only one hand.
 - II. Screw-mount (203)—*a.* on the neck (croup); *b.* in the saddle.
 - III. Screw-mount, from the rest, horse behind (204).
 - Shear-mount (205).
 - I. Side-mount backwards (206).
 - Side-mount forwards, throwing the right leg over the croup, the left over the saddle (207).
 - II. Side-mount forwards, squatting through between arms (208)—*a.* leg after leg; *b.* both legs together.

- I. Side-mount on one thigh, on near-side of croup (neck) (209).
- II. The same, on off-side of croup (neck).

Feints.

An advanced squad should follow up each mount with the feint corresponding thereto. For instance,—*a.* mount on croup; *b.* feint over croup; *c.* feint over croup, feint over neck; *d.* feint over croup, and mount on neck; *e.* feint over croup, and front vault over neck.

- I. Feint over croup (neck) (211).
- I. Feint to the mount in the saddle, shifting hand (212).
- II. Feint to the mount in the saddle, lifting one hand (213).
- Feint to the rear-mount (214).
- Feint to the screw-mount.
- III. The above feints in alternation over croup and neck, to the left and right, for instance (215).
 - a.* Feint over croup, feint over neck.
 - b.* Feint over croup, feint to the left over the saddle.
 - c.* Feint to the rear-mount over croup, to the screw-mount over neck.

Circles.

- I. Circle forwards with right leg, sitting down on the saddle, astride (216).
- II. The same, without sitting down.
- II. Rear circle with the right leg (the right leg crosses to the left) (217).
- Circle with the right leg from the seat astride on the saddle (218)—
 - II. *a.* forwards;
 - III. *b.* backwards.

Balance Rest.

- II. Rest sideways, knees above saddle, between the arms.
The same, legs extended forwards.
- III. Stand on hands (221)—*a.* arms bent; *b.* straight.

Balance rest crossways (222)—

- II. *a.* on both arms; *b.* arching the back (223); *c.* raising and extending the legs;
- II—III. *d.* swing forwards and backwards (224);
- III. *e.* balance rest on one arm (222).
- III. The turnspit (225).
- III. Thread a needle (226).

Levers.

- II. Lever on one elbow (227)—*a.* from the seat astride; *b.* from the rest sideways.
- III. Lever on one elbow, the other arm extended forwards.
- II. Lever upon both elbows (228)—*a.* from the seat astride; *b.* from the rest sideways.
- III. Free lever,—*a.* from seat astride; *b.* from rest sideways.
- III. Spinning round in the lever (229).
- III. Change of lever, from the left to the right arm (230).

CHANGES OF SEAT.

- I. Sitting on one thigh, change from off- to near-side, hands in front (231).
The same, hands on pommel behind.
- III. Sit astride on croup change to saddle and back, both legs swinging forwards or backwards on one side of the horse (232).
The same from saddle to neck and back.
- I. The mill, sitting astride (a change from croup to neck, always looking to the saddle) (233).
- III. The mill, sitting on one thigh (234).

The Shears.

- I. The shears backwards (235)—*a.* sitting on croup; — *b.* sitting on saddle.
- II. *c.* from the balance rest (one hand on each pommel); *d.* using one hand only.

- II. Shears forwards rest behind, *a.* sitting on neck; *b.* on saddle.
- III. *c.* from balance rest; *d.* using one hand only.
- II—III. Shears backwards and forwards in alternation.

VAULTS OVER THE HORSE.

These vaults are done with a run, standing, and from the rest. They are done generally to a standing position on the off-side, but they can be done also to a sitting position or the rest on the off-side. In the latter case you finish with a swing-off forwards.

Flank-vault (236).

- I. Over the croup, the saddle or the neck, with a run.
- II. The same, standing or from the rest.
- III. Using only one hand.
To the rest on off-side, horse behind.
Backwards, from the rest, horse behind.

Monkey-vault (237).

- I. With a run, to the squatting position on croup.
- II. From the rest or the standing position.
Without squatting on the horse.

Front-vault (238—240).

- I. With a run, placing the hands on the pommels, the back, or the neck.
- II. From a standing position, or the rest.
Springing down forwards.
Springing down backwards.
- II. Front-vault, facing to the right (239).
Facing to the left about.
- III. Front-vault, using only one hand.
Front-vault, swinging the legs up high.
Front-vault to the seat on the off-side.
Front-vault to the rest on the off-side, horse in front.
The same, horse behind.
- III. Double front-vault over neck and croup in succession (240) —
a. with a run; *b.* standing; *c.* from the rest.

Rear-vault (241).

- II. With a run, hands on the neck, the pommels or the croup.
From a standing position, or the rest.
Over the neck, and face to the left.
- III. Over the neck, and face to the right about.
Rear-vault from the rest, horse behind.
Using one hand only.
- III. Rear-vault to the rest on the off-side (243).
Double rear-vault (in succession over neck and croup).

Screw-vault (242).

- III. From the rest, horse in front.
From the rest, horse behind.

Knee-vault (244).

- I. Kneel on saddle, and spring off forwards.
- II. The same, and face about, whilst springing down.
Kneel and spring up, so as to stand on the saddle.
Knee-vault, kneeling on one knee.

Squatting vault (245).

- I. Squatting vault to a standing position on the saddle, and
jump down forwards or backwards.
The same, knees open (outside arms).
- I. Pass the legs over the saddle, and swing off forwards,—
a. leg after leg; *b.* both legs together.
- II. Pass the legs over the saddle forwards and backwards in
succession.
 - I. Squatting vault, hands on pommels, with a run.
 - II. Squatting vault, hands on croup or neck.
- II. Squatting vault to the rest on the off-side.
- III. Squatting vault, using only one hand.
- III. Squatting vault backwards.
- III. Squatting vault forwards to the balance rest, followed by
the squatting vault backwards.
- III. Squatting vault over a leaping stand placed on the
off-side.

Sheep-vault (246).

III. With a run, and standing.

Straddle-vault (247).

I. Go into the rest, straddle, and place the feet on the horse, outside the pommels, knees bent.

The same, legs straight.

I. Straddle-vault into a standing position on the horse.

II. Straddle-vault, with a run.

III. Straddle-vault, standing, or from the rest.

Straddle-vault to the side-sead on off-side.

Straddle-vault to the rest on off-side, horse behind.

Straddle-vault, and face about.

IV. Straddle-vault, using only one hand.

IV. Straddle-vault, backwards.

III. Straddle-vault over a comrade sitting on the horse.

Wolf's vault (248).

II. To a standing position on the horse.

Wolf's vault, hands on pommels, croup or neck.

III. The same; from a standing position or the rest.

The same, using only one hand.

Somerset (249).

II. Somerset, arms bent,—*a.* from the rest, with a back-swing or slowly; *b.* from a standing position; *c.* with a run.

III. Somerset, arms straight.

Roll-over backwards (250).

II. From the rest, horse behind.

Vaults using only one hand (251).

III—IV. These have been included above, but they may be practised separately, first using the left, then the right hand. These vaults are the flank-vault, front-vault, rear-vault, screw-vault, squatting vault (arm between the knees), sheep-vault, straddle- and wolf's vaults.

Leaps (252).

- III. Leap to a standing position on the saddle.
 - Thief's leap.
 - Squatting leap.
- IV. Straddle-leap.
- III. Tiger-leap.

Combined Exercises.

We confine ourselves to a few examples. An intelligent leader, following these up, will be able to form many similar combinations.

- III. Mount on croup, and rear-vault over the neck.
- III. Mount on neck, and front-vault over the croup.
- III. Feint over the croup and mount on neck (253).
 - Feint over the croup and mount in saddle.
 - Feint over the croup and rear-mount over neck.
 - Feint over the croup and screw-mount.
 - Feint over the croup and shear-mount.
- III. Feint over the croup and the neck, and circle forwards with left leg (254).
 - Feint over the croup and the neck, and rear-circle with right leg.
- III. Feint over the croup and front-vault over neck (255).
 - Feint over the croup and rear-vault over neck.
 - Feint over the croup and squatting vault over saddle.
- III. Side mount on the left thigh on off-side of croup followed by mounts on the neck and saddle, vaults over the neck, and circles as above (256).
- III. The clockwork (257).

EXERCISES FROM THE CROUP.

Vaults into the Rest.

- I. Vault into the rest, raising the legs, straddling etc. (259).
- II. Swing off backwards (260).

The same, and face to the right about.

II. Vault into the rest, horse behind (261).

I. Rest cross-ways astride on off-side of croup (left thigh against croup, face turned towards neck) (262).

II. The same on saddle (hands on pommels).

III. The same on neck (left hand on front pommel).

I. Rest sideways on off-side of croup (263).

II. The same on saddle.

III. The same on neck.

Balance Rest.

I. Vault into balance rest on the croup, and swing off backwards.

II. The same, on back or front pommel.

III. The same on neck (264).

II. Swing in the balance rest.

II. Walk in the balance rest forwards and backwards (265).

II. Hop, in the balance rest.

III. Hop, swinging the legs.

Mounting.

I. Mount the croup (266)—*a.* placing both hands on croup; *b.* one on croup, the other on back pommel; *c.* both on back pommel.

II. Mount in the saddle (267)—*a.* hands upon croup; *b.* one hand upon croup, the other upon front pommel; *c.* both hands on front pommel.

III. Mount the neck,—*a.* hands in succession upon croup and neck; *b.* hands on neck only; *c.* hands on croup only.

I—III. Mount, using only one hand.

Mount backwards (268).

I. *a.* on the croup;

II. *b.* in the saddle;

III. *c.* on the neck.

Shear-mount backwards (269).

II. *a.* hands on back pommel; *b.* on front pommel.

Shear-mount forwards (269).

III. *a.* hands on croup; *b.* on one of the pommels.

I. Front-mount (270).

II. Front-mount in the saddle.

III. Front-mount on the neck.

II—III. Front-mount, using only one hand.

I. Rear-mount on the croup (271).

II. Rear-mount in the saddle.

III. Rear-mount on the neck.

III. Rear-mount, using only one hand.

I. Screw-mount on the croup (272).

II. Screw-mount in the saddle.

III. The screw on the neck.

Feints.

II. Feint to the front-mount, over the croup (273).

III. The same, over the saddle.

III. Feint to the rear-mount.

Circles.

II—III. Vault to the rest sideways or the balance-rest, preliminarily to performing circles described 216 to 221.

Vaults over the Horse.

II. Front-vault, over the croup (274).

III. Front-vault, over the saddle (hands on pommels).

II. Rear-vault with one leg (275).

Rear-vault (276).

I. Cats-vault on the croup, jump down sideways or swing-off backwards from back-pommel (277).

II. Cats-vault in the saddle; straddle off forwards, placing hands on neck.

III. Cats-vault on the neck.

II. Monkey-vault on croup (face towards tail), and straddle off (278).

III. Monkey-vault on saddle or neck.

- I. Squatting vault to a standing position on the croup (279).
- II. Squatting vault to a sitting position on the croup.
Squatting vault to a standing or sitting position on the saddle.
- III. Squatting vault to a standing or sitting position on the neck.
- III. Giant-vault forwards—*a.* hands in rapid succession upon croup and neck; *b.* hands on neck; *c.* on saddle; *d.* on croup (280).
- IV. Giant-vault backwards.
Giant-vault, using only one hand.
- III. Somerset from the balance-rest on the back-pommel to a sitting position on the neck (281).
Somerset from balance-rest on front-pommel or neck to a standing position on ground.
Somerset from a standing position on the horse (282).
Bear's somerset (from the seat in the saddle) (283).

Combined Exercises (285).

- III. Feint to the front-mount over the neck, each hand upon a pommel, and
 - a.* front-vault over croup; *b.* rear-vault over croup;
 - c.* swing-off backwards
 Vault to the balance-rest, each hand upon a pommel, and
 - a.* feint over the neck; *b.* front-vault over the neck;
 - c.* rear-vault over the neck; etc.

CO-OPERATIVE EXERCISES.

Vaults from the side, by two men.

Both men do the same exercise, one to the left, the other to the right.

- I. Rest and raise outer leg.
Mount on neck and croup.
Monkey-vault.
Rear-mount.
- II. Front-vault.
Rear-vault.

THE RACK.

The bar should never be higher than necessary, to enable the leader to render the necessary assistance. Every exercise should be done left and right, when practicable.

EXERCISES HANGING BY THE UPPER EXTREMITIES.

Hanging by the hands.

- I. Hang sideways, bar in front (290)—
 - a.* ordinary grasp; *b.* reversed grasp; *c.* double grasp.
 Hang sideways as above, arms spread out.
 The same, arms crossed.
- I. Walk sideways, ordinary, reversed or double grasp—
 - a.* one hand leading; *b.* hand over hand; *c.* hand under hand.
- I. Hop sideways, ordinary, reversed or double grasp.
 Hang alternately with the left and right hand.
- I. Hang sideways and raise one or both legs horizontally forwards.
 The same, and raise the knees to the chest.
 The same, and kick downwards.
- I. Hang crossways, bar in front (291)—
 - a.* hands covering each other; *b.* hands folded; *c.* hands in front of each other.
 Hang crossways and walk forwards and backwards.
 The same, and hop forwards and backwards.
 Hang crossways and raise the legs, etc.
- I. Hang sideways, bar behind (292).
 Hang crossways, bar behind.
- III. Walk sideways, forwards or backwards whilst hanging, bar behind.
 - I. Hang sideways with arms bent, and sink slowly—
 - a.* reversed grasp; *b.* ordinary grasp.
 - II. Walk sideways, hanging with arms bent—
 - a.* reversed grasp; *b.* double grasp; *c.* ordinary grasp.

- II. Hop sideways, hanging in the same manner.
Walk or hop, arms bent and legs extended horizontally forwards.
- I. Hang crossways, arms bent, and sink slowly.
- II. Walk and hop, forwards and backwards, arms bent.
- I. Change grasp, hand after hand (294).
- II. Change grasp, moving both hands at once—
a. from double to double grasp; *b.* from reversed to ordinary grasp; *c.* from ordinary to reversed grasp.
Walk, facing about and changing grasp with each step.
Hop, changing grasp with each hop.
- III. Hop, facing about and changing grasp with each hop.
- I. Swing, hanging sideways.
Swing, and straddle with each forward and backward swing.
- II. Swing, and momentarily lift the hands with each backward swing.
The same and clap hands.
- II. Swing and change grasp, hand after hand.
- II. Swing and face to the right or left, changing grasp with each forward swing.
- III. The same, but face to the right about.
- I. Hang sideways by the hands, and change (296)—
a. to the elbows; *b.* to the arm-pits.
The same, swinging.
- II. Hang sideways, bar behind, and change to elbows.

The Rise into the Rest.

- I. Rise and sink, hanging sideways (297)—
a. reversed grasp; *b.* double grasp; *c.* ordinary grasp.
Rise and sink, hanging crossways.
- II. Rise and sink, the legs being extended forwards.
Rise and sink, breasting the bar.
Rise and sink, hanging by one hand, the other grasping the wrist.

II. Rise to the rest on the fore-arms (298)—

a. arm after arm; *b.* both arms together.

Rise to the drop-rest (299)—

a. arm after arm; *b.* both arms together, and then go up into the rest with straight arms.

II. Up-rise, quickly, with a jerk (300).

III. Up-rise, slow pull.

IV. Up-rise, without bending the arms.

IV. The same with reversed grasp, or with one arm.

III. Rise and sink, hanging sideways, bar behind (297).

Hang sideways, bar behind; rise to the drop-rest on the left arm; face to the left about; to the drop-rest on both arms, bar in front; and then go up into the rest (300).

Hang crossways, bar in front; rise into the drop-rest on the right arm; face to the left about, to the drop-rest on both arms, bar behind; and go up into the rest.

IV. The same, hanging crossways, bar behind.

III. Hang sideways, bar behind (reversed grasp); rise up to the drop-rest, and the rest—

a. arm after arm; *b.* both arms together.

IV. Up-rise, bar behind, slowly (300).

II. Up-swing to the rest on one or both fore-arms (301).

Up-swing to the drop-rest.

II—III. Up-swing, arms bent,—

a. reversed grasp; *b.* double; *c.* ordinary grasp.

III. Up-swing, arms straight.

Up-swings several times in succession.

II. Up-start, shins to the bar, arms bent (302).

III. Up-start, arms straight,—

a. ordinary; *b.* reversed grasp.

IV. Up-start, legs extended forwards.

III—IV. Up-starts and up-swings, followed by the underswing, circles, vaults, etc.

Circling the Bar.

- I. Circle, from the standing position to the rest (303)—
a. reversed grasp; *b.* ordinary grasp.
 Circle, and turn over forwards (315)—
- I. *a.* leaning on the bar.
 II. *b.* body stiff.
- I. Circle, sit, and turn over backwards.
 Circle from the rest, bar behind, and turn over backwards, body stiff (ordinary grasp).
 Hang sideways and circle to the rest (304).
- II. *a.* with a moderate swing;
 III. *b.* steadily; *c.* with a full-swing.
 Clear circle and over-swing (305)—
- II. *a.* from a standing position;
 III. *b.* hanging; with a swing.
- II. Circle from the rest to the rest, backwards (306).
 III. Clear circle from the rest to the rest.
 Clear circle from the rest, and over-swing.
 The same, and under-swing.
 Clear circle, continued.
 Grand circle, backwards.
- II. Circle forwards, from the rest to the rest (ordinary grasp) (307).
 III. Clear circle forwards, from the rest (reversed grasp).
 IV. Grand circle forwards.
- Circle, grasping with one hand (308)—
- III. *a.* from a standing position;
 IV. *b.* hanging.
- Back-circle from the rest (bar behind) (309)—
- II. *a.* slowly; *b.* with a swing.
 III. Back-circle clear, to the drop-rest (bar behind) (310).
 Back-circle clear, to hang by the arms (bar behind).
 The same, and over-swing (shoot over the bar).
 Back-circle forwards, from the rest (bar behind) (311)
- III. *a.* with a swing; *b.* slowly.
 IV. Grand back-circle forwards.

Back-circle backwards, from the rest (bar behind, reversed grasp) (312)—

III. *a.* with a swing;

IV. *b.* slowly.

Hanging head downmost.

I. Hang head downmost sideways (316)—

a. knees bent, insteps against the bar; *b.* soles of the feet below the bar; *c.* shins against the bar;

II. *d.* legs and body straight; *e.* astraddle (bar between the legs).

II—III. Walk along the bar, hanging head downmost as above.

II. Hang head downmost, sideways, bar behind (317)—

a. legs extended forwards; *b.* legs extended upwards.

Hang head downmost, crossways (318)—

I. *a.* legs extended forwards;

II. *b.* legs extended upwards (bar between legs); *c.* the same, and sway round to the left and right.

II. Roasting Jack.

Turn-over passing the legs between the arms (319)—

I. *a.* from a standing position;

II. *b.* hanging.

III. Turn-over and cut-away, from a standing position crossways, or with a swing (320). It is extremely dangerous to do this exercise sideways.

Levers hanging by the hands.

III. Back-lever sideways (321).

Front-lever sideways.

III. Back-lever crossways (322).

Front-lever crossways.

Change from back- to front-lever, passing the legs between the arms (323).

Side-lever, hanging by one hand.

Hanging by the Arms.

I. Hang by the elbow joints, bar in front (325).

Hang by the arm-pits, bar in front.

- I. Hang by the arms, bar behind (Hang by the left elbow, bar in front; and throw your right arm over the bar behind you. Get down in the same manner).
- I. Swing, hanging by the arms (326)—
 - a.* bar in front; *b.* bar behind.
- I. Change from hanging by the elbows to hanging by the arm-pits (326)—*a.* arm after arm; *b.* both together; *c.* swinging.
- I. Travel along the bar, hanging by the elbow joints, bar in front (326).
- II. Travel, hanging by the elbow joints, facing about (bar alternately in front and behind).
 - I. Arm-circle forwards, bar behind (muscle-grind) (327).
 - II. Arm-circle backwards, bar behind.
- III. Arm-circles with one or both arms extended along the bar.
 - II. Arm-circle backwards, bar in front (328).
 - III. Arm-circle forwards, bar in front.
 - III. Arm-circle, sideways (329).
 - II. Arm-circle, resting upon the fore-arms (330).

HANGING BY UPPER AND LOWER EXTREMITIES.

- I. Hang crossways by both hands and one leg (331).
The same, by the right elbow and the right leg.
- I. Hang sideways by both hands and one leg, knee outside the hands (332).
The same, and travel along the bar.
The same, and swing.
- I. Slanting swing-up (left arm over the bar) (333).
Slanting twirl—*a.* backwards, *b.* forwards.

Twirl, hanging by both hands and one leg, the knee outside the hands (334)—
 - I. *a.* backwards;
 - II. *b.* forwards;
 - III. *c.* holding with one hand only.

Hang sideways by both hands and one leg, the knee between the hands (335)—

- I. *a.* travel along the bar; *b.* swing; *c.* swing-up to the seat, forwards and backwards;
- I. *d.* twirl backwards;
- II. *e.* twirl forwards.

Hang sideways by both hands and one leg, knee inside both hands (336)—

- I. *a.* travel; *b.* swing;
- II. *c.* swing up to the seat, forwards and backwards; *d.* twirl forwards (double grasp); *e.* twirl backwards (ordinary grasp).

- I. Hang sideways by both legs and both hands (337)—
a. knees between hands (legs pass between arms); *b.* hands between knees (legs straddle); *c.* both hands on the same side of the legs; *d.* one hand between the legs, the other outside.

- III. Swing up, hanging by both legs and both hands, forwards and backwards (338)—

a. knees between hands; *b.* hands between knees; *c.* one hand between the knees, the other outside.

Sitting twirl (339)—

- II. *a.* knees between hands, backwards; *b.* the same forwards;
- III. *c.* hands between knees, backwards; *d.* the same forwards; *e.* changing grasp after each revolution; *f.* holding with one hand only.

Sitting twirl, both hands on the same side of the legs (start from the rest, bar in front, double grasp).

- I. Hang sideways by one leg, hands grasping the shin (340),—
- II. *a.* swing up forwards; *b.* the same backwards.
- II. Tumbler-twirl with one leg (340)—*a.* forwards; *b.* backwards.

- I. Hang sideways by both legs, the hands grasping the shins (341)—

- III. *a.* swing up forwards; *b.* the same backwards.
Tumbler-twirl with both legs,—
- II. *a.* forwards; *b.* backwards;
- III. *c.* both hands grasping one shin.
- I. Hang sideways by hands and insteps (342)—
a. insteps between hands; *b.* insteps outside hands.
- II. The lover's knot (343).
The nest (344).
- Swings off kneeling (from the rest) (346)—
- I. *a.* one knee between the hands; *b.* both knees between;
c. both knees outside the hands; *d.* one knee between
the other outside.
- Instep-swings off the bar (from the rest) (345)—
- I. *a.* one instep between hands;
- II. *b.* one between, the other outside the hands; *c.* both
insteps outside (straddling);
- III. *d.* both insteps between (squatting).
- Instep-twirls (347)—
- II. *a.* one instep between the hands, the other leg over
the bar.
- III. *b.* both insteps outside the hands (straddling); *c.* both
insteps between the hands (squatting).
- II. The hammock (348).
- III. The turnspit (349).
- II. Mill sideways (350)—
a. both hands in front; *b.* one hand in front, the other
behind; *c.* using only one hand.
- II. Mill forwards and backwards (352).
Swing-up to the mill,—
- III. *a.* sideways (351); *b.* forwards (352).

HANGING BY THE LOWER EXTREMITIES.

Hanging by the hocks.

- I. Hang by the hocks sideways (354).
- II. The same, and grasp the toes.

- I. Hang by the hocks, crossways.
- II. Hang by one hock, and change from one to the other.
- II. Travel, hanging by the hocks.
- II. Swing, hanging by the hocks (355)—
 - a.* hanging by both hocks; *b.* hanging by one, the other placed over the instep.
- III. Hock swing-up (356)—
 - a.* hanging by both hocks, forwards; *b.* the same backwards; *c.* hanging by one hock.
- Hock swing off the bar (357)—
 - II. *a.* hanging by both hocks;
 - III. *b.* hanging by one hock, the other over the instep.
- III. Hock-drop from the seat.
 - Hock swing off the bar, from the seat on it.
- IV. Hock-spring off the bar, from a hanging position (358).
- III. Hock circle, hanging by both hocks (359).
 - Hock circle, and face about into the rest at the end of the revolution.
 - Hock circle hanging by one hock, forwards and backwards.
- III. Lever hanging crossways by one hock, the foot of the other leg placed against the bar.
 - The same, and bend the back (sink and rise, kissing the bar).

Hanging by the insteps.

- Hang by the insteps (361)—
 - II. *a.* legs astraddle;
 - III. *b.* both feet together.

EXERCISES IN THE REST.

Rest with straight arms.

- Rest sideways, bar in front (363)—
 - I. *a.* walk sideways, ordinary, double or reversed grasp.
 - II. *b.* hop sideways.
- I. Rest sideways, bar behind (364)— and walk sideways.
- II. Walk sideways in the rest, continually facing about.

Balance Rest.

Balance rest sideways (365)—

- II. *a.* arching the back; *b.* squatting (soles of feet above bar);
- III. *c.* both legs extended horizontally forwards; *d.* legs astraddle, outside the arms; *e.* walk sideways whilst in the balance rest.

Balance rest crossways (366)—

- II. *a.* on both hands;
- III. *b.* on one hand; *c.* walking forwards and backwards; *d.* Roasting Jack.

Drop-rest.

Sink from the rest with straight arms to the drop-rest, and rise again (367)—

- II. *a.* bar behind;
- III. *b.* bar in front.

Walking in the drop-rest (368)—

- II. *a.* bar behind; *b.* bar in front; *c.* facing about (the bar alternately in front and behind).

Change of grasp, in the drop-rest (369)—

- II. *a.* hand after hand, bar in front or behind;
- III. *b.* both hands together.

Stretch out the arms, alternately (370)—

- II. *a.* bar behind;
- III. *b.* bar in front.

Change from drop-rest on one side of the bar to drop-rest on the other side (371)—

- II. *a.* keeping bar in front (start hanging crossways);
- III. *b.* keeping the bar behind, passing the legs between the hands on first starting; *c.* the preceding, starting from the drop-rest on one arm.

Levers in the rest.

Lever (373)—

- II. *a.* resting on both elbows; *b.* resting on one elbow, other hand grasping bar;

- III. *c.* resting on one elbow, other arm extended forwards;
d. free lever; *e.* change from the lever on the right to
 that on left elbow.

Sitting.

- I. Sit sideways upon one thigh, and travel (374).
 I. Sit sideways upon both thighs—
a. throwing over leg after leg, from the rest; *b.* facing
 about from the rest.
 Sit astride (crossways), and travel for- and backwards.
 Change seat, sitting astride (375)—
 II. *a.* throw over leg after leg, holding bar behind;
 III. *b.* throw over leg after leg, without holding the bar;
c. throw over both legs at once.

Lying.

- III. Lie at full length upon the bar, hands holding on, behind
 the head (376).
 II. Lever sideways, lying on the stomach (377).
 III. Lever sideways, lying on the back.
 Lie on back, and drop into the hocks.
 IV. Lie on back, and swing off to a standing position.

Kneeling.

- I. Kneel on one or both knees, holding fast with the hands
 (378).
 II. The same, without holding fast.
 III. Lever, kneeling.

Standing.

- II. Rest sideways, raise the knees, and stand on bar (379).
 Rest crossways, the same.
 II. Leaning position (380).
 III. Stand upon a shoulder (from seat astride) (381).
 III. Stand on hands (from rest sideways) (382).
a. arms bent; *b.* arms straight.

Vaulting.

Compare for these exercises the Horse, exercises from the side. The height of the bar is increased by degrees.

Vaults into the rest (383).

Mount (384).

Feints, circles, exercises in the balance rest, and changes of seat (385).

Vaults over the bar (386).

Somerset (387).

Underswing, over a leaping stand (388)—

a. springing off the ground; *b.* from a hanging position; *c.* from the rest.

PARALLEL BARS.

EXERCISES IN THE REST.

The rest, arms straight (390)—

- I. *a.* outside grasp; *b.* inside grasp;
- II. *c.* jumping, and swinging arms forwards.
 - I. The rest, and face to the left and right (391).
 - I. The rest and
 - a.* raise knees to the chest; *b.* kick thighs (392).
- Raise the legs forwards (393)—
 - I. *a.* right and left leg forwards in alternation;
 - II. *b.* right leg over right bar; *c.* right leg over left bar; *d.* both legs;
 - III. *e.* both legs, and straddle.
- Raise the legs backwards (394)—
 - I. *a.* right and left in alternation; *b.* right leg over right bar;
 - II. *c.* both legs (lean forwards); *d.* both legs, straddling over the bars.
- Arch the back (395)—
 - I. *a.* keeping legs locked; *b.* straddling over the bars behind.
- Drop-rest (396)—
 - I. *a.* from a standing position; *b.* from the rest with straight arms.
 - II. *c.* with inside grasp.

Sink and rise—

- I. *a.* kissing hands alternately;
- II. *b.* kissing bar behind hands; *c.* inside grasp.
- I. Rest on fore-arms (397)—
Rise from rest on fore-arms to drop-rest, and sink down again.
- I. *a.* arm after arm;
- II. *b.* both arms together.
Rise from rest on fore-arms, to rest with straight arms, and sink down again,—
- II. *a.* arm after arm; *b.* both arms together.

Travelling.

Walk forwards and backwards (398)—

- I. *a.* outside grasp;
- II. *b.* inside grasp.
- II. Stork walk, forwards and backwards.
Walk forwards and backwards,—
- II. *a.* one leg extended forwards;
- III. *b.* both legs extended forwards.
- II. Walk sideways (399).
I. Hop forwards, and backwards (400).
- II. Hop sideways.
Walk in the drop-rest (401).
- I. *a.* forwards;
- II. *b.* backwards;
- III. *c.* sideways.
The lion stride (long strides in drop-rest)
- II. *a.* forwards; *b.* backwards.
- II. Hop in the drop rest, forwards and backwards.
Waltzing (402)—
- II. *a.* forwards, without gaining ground; *b.* backwards; *c.* gaining ground (turn twice to left, then twice to right);
- III. *d.* the same, in drop-rest.
Travel in the rest on fore-arms (403)—
- I. *a.* gliding along the bars;

- II. *b.* alternately rising to drop-rest on the left and the right arm;
- III. *c.* lion stride with rest on fore-arms.

Swinging in the Rest.

Swinging in the rest with straight arms (404)—

- I. *a.* as high as the bar;
- II. *b.* to a horizontal position;
- III. *c.* to a nearly vertical position.
- II. Swinging sideways.
- II. Swinging, keeping the body stiff (405).
 - I. Swinging, combined with movements of legs (406)—
 - II. *a.* straddle with each forward swing;
 - II. *b.* straddle with each backward swing;
 - II. *c.* raise and lower one leg with each swing, etc.
 - II. Travel, swinging, rest with straight arms (407)—
 - a.* hop forwards with each backward swing; *b.* hop backwards with each backward swing; *c.* hop forwards with each forward swing; *d.* hop backwards with each forward swing; *e.* hop with each forward and each backward swing; *d.* long or high hops.
 - II. Swinging in the drop-rest (408)—
 - a.* legs locked; *b.* straddle above bars with forward or backward swing, or with both.
 - III. Travel, swinging in the drop-rest—
 - a.* hop forwards with forward or backward swing; *b.* hop backwards with forward or backward swing; *c.* hop with each swing.
- Grasshopper swing, starting from drop-rest (409)—
 - II. *a.* rise with backward swing; *b.* rise with forward swing;
 - III. *c.* rise with both.
- Grasshopper swing, starting from rest with straight arms—
 - II. *a.* sink with forward swing; *b.* sink with backward swing;
 - III. *c.* sink with both.
 - II. Grasshopper jump (410)—
 - a.* hop forwards with forward swing; *b.* hop forwards with backward swing; *c.* hop backwards with backward swing;
 - d.* hop backwards with forward swing.

Swinging in the rest upon the fore-arms (411)—

- I. *a.* as high as the bars;
 - III. *b.* to a vertical position.
- Rise from rest upon fore-arms to drop-rest (412)—
- II. *a.* with backward swing; *b.* with forward swing;
 - III. *c.* with both.
- II. Glide along the bars, in the rest on fore-arms (413)—
- a.* forwards with forward swing; *b.* backwards with backward swing.
- III. Change from the rest upon the fore-arms, to the drop-rest, swinging, and hop along the bars (414)—
- a.* forwards; *b.* backwards.

Levers in the Rest.

- II. Lever on two supporting elbows (415).
Lever on one elbow—*a.* lengthways; *b.* across the bars.
- III. Change from lever on right elbow to that on left elbow.
The same, travelling (a step after each change).
- IV. Lever on one arm, the other extended forwards.
- III. Free-lever.

Standing head downmost.

- II. Standing upon a shoulder (416)—*a.* from a kneeling position on bars; *b.* from the rest.
- III. Standing upon a shoulder, change from one bar to the other.
- IV. Lever, standing upon one shoulder.
- II. Standing on the neck (neck on one bar, hands on other) (417).
- III. The same, and sink down to a horizontal position.
- III. Standing upon the fore-arms, head downmost (418).
Standing upon the hands (419)—
- III. *a.* arms bent; *b.* arms straight; *c.* walk backwards;
- IV. *d.* walk forwards; *e.* sink and rise (alternately bend and stretch the arms).

Circles in the middle of the bars.

- II. Circle forwards with one leg (420).
Circle backwards with one leg.

- III. Circle with both legs over one bar (421)—*a.* forwards;
b. backwards.
 Circle with both legs over both bars (422)—forwards;
 (start from seat behind one of the hands).
 The same, backwards (start from seat in front) (423).

Leaning position.

- I. Leaning position forwards (424)—sink and rise.
 Leaning position backwards (425)—
 Change between leaning positions forwards and backwards.
 Leaning position, resting upon the fore-arms (426)—
a. rise to the drop-rest and sink; *b.* rise to the rest with
 straight arms, and sink.
 Travel in the leaning position (427)—
a. walk forwards and backwards; *b.* hop forwards and
 backwards, with hands only.
 II. *c.* hop with hands and feet.
 I. Leaning position, forwards (428)—
a. on one hand and two feet; *b.* on two hands and one
 foot; *c.* on left hand and right leg.
 II. The same, backwards.
 III. Leaning position with arms spread out (429).

Changes of seat.

- I. Change, sitting within the bars (430).
a. jumping to the ground between each change; *b.* with-
 out jumping down; *c.* travel, forwards and backwards,
 jumping to the ground; *d.* travel, without jumping to
 the ground.
 Change seat, throwing over one leg in front (431)—
a. right leg over right bar, and swing between; *b.* right
 leg over right, left over left bar in alternation, swing
 between; *c.* the same, without a swing between;
d. right leg over left bar, left over right bar, swing
 between;
 II. *e.* the same, without a swing.
 Change seat, throwing over one leg behind the hand (432)—

- I. *a.* right leg over right, left over left bar in alternation, and swing between;
- II. *b.* right leg over left bar, crossing in front (left leg hangs down inside);
- III. *c.* right leg over left bar, facing to the right and crossing behind (left leg hangs down inside); and change from bar to bar, without an intermediate swing.

I. Half-moon with one leg (change from front to rear, on the same bar).

Serpentine with one leg (change from front, on left bar, to rear, on right bar).

Change of seat with both legs closed, (433)—

- I. *a.* in front of hands, with and without a swing between;
- I. *b.* behind hands, with an intermediate swing;
- II. *c.* behind hands, without an intermediate swing;
- I—II. *d.* half-moon (front to rear, on same bar);
- I—II. *e.* serpentine (front of one bar, to rear of other);
- II. *f.* half-moon or serpentine, facing about after each change (hands change positions).
- III. Changes of seat, as above, but in the drop-rest.
- III. Changes of seat, as above, with grasshopper swings.

Change seat sitting astride on both bars (434)—

- I. *a.* from front to rear and back, hands stationary;
- III. *b.* from front to rear with grasshopper swing;
- II. *c.* from rear to front, travelling forwards; *d.* from front to rear, travelling backwards;
- III. *e.* the same, with grasshopper swing, forwards and backwards.

Shears backwards (435)—

- II. *a.* with a swing between; *b.* without an intermediate swing;
- III. *c.* with a grasshopper swing.

Shears forwards,—

- II. *a.* with a swing between; *b.* without an intermediate swing;
- III. *c.* with a grasshopper swing.

HANGING.

I. Hang by the fore-arms (elbows) (437).

 Hanging by the arms (438)—

I. *a.* arms extended lengthways along bars, forwards or backwards; *b.* arms extended sideways.

Turning over.

 Turn-over backwards and forwards (439)—

I. *a.* with a spring off the ground, arms and legs bent;
 b. hanging, arms and legs bent;

II. *c.* legs straight, arms bent; *d.* arms straight, legs bent;

III. *e.* both arms and legs straight.

 Hang head downmost (440)—

I. *a.* legs bent; *b.* kick upwards, leg after leg;

II. *c.* kick upwards, both legs together; *d.* hang, with legs straight;

 II. *e.* walk along the bars, hanging head downmost;

III. *f.* hop along the bars, hanging head downmost.

I. The "hammock" (441).

 The nest (442).

III. Levers, hanging by the hands (443)—

a. back lever; *b.* front lever; *c.* change between the two.

III. Levers, hanging, arms extended along bars,—

a. front lever; *b.* back lever; *c.* change between the two.

Hanging by the Legs.

II. Hang down outside, backwards (sit on one bar and place insteps underneath other) (444)—

a. sink to horizontal position; *b.* sink, until you hang head downmost, and bring up a bar-bell or a weight.

 Hang down outside, forwards (kneel on one bar, place heels underneath the other).

 Hang by the hocks, inside bars (445).

 Hang by the thighs, head downmost (446).

III. Plunge forwards, hanging by the thighs (start sitting astride).

- IV. Plunge backwards, hanging by the thighs (start sitting astride).

Rolls.

- II. Roll forwards, falling into the arms (start sitting astride) (448).
The same, backwards.
Roll forwards with drop-rest (start sitting astride) (449).
Roll forwards, arms extended backwards along bars (450).
- III. The same, without a swing, and with levers.
- II. Roll backwards, arms extended forwards along bars.
- III. The same, slowly.
- II. Roll forwards starting from rest upon the fore-arms (541).
Roll backwards starting from rest upon the fore-arms.
- III. Roll forwards starting from drop-rest (452).
Roll backwards starting from drop-rest.

Changes between hanging, and resting.

- Hang by the arms, extended forwards along bars (451)—
- II. *a.* up-rise, with intermediate drop-rest;
- III. *b.* up-rise, without drop-rest; *c.* up-swing; *d.* up-start.
Up-rise at the end of the bars, hanging by the hands (455)—
- II. *a.* arm after arm;
- III. *b.* both arms at once, with a jerk; *c.* slowly.
- III. Up-swing at the end of the bars (455).
Up-start at the end of the bars.
Up-rise, up-swing and up-start, in the middle of the bars (inside grasp).
- Change between leaning position and "hammock" (456)—
- II. *a.* arm after arm, and rise the same way;
- III. *b.* both arms together, and rise the same way; *c.* sink by spreading out your arms.
- Swing-over backwards (start standing between the bars) (457)—
- II. *a.* to the seat;
- III. *b.* to the rest (inside grasp).

VAULTING.

Vaults from the End of the Bars.

- I. Vault into the rest (460).
- II. Vault into the rest, backwards (461).
- I. Vault into rest and swing off, backwards or forwards (462).
Clear right bar in front (463), starting,—
 - I. *a.* from the rest; *b.* from the seat on left bar, in front of hand;
 - II. *c.* from seat on left bar behind hand; *d.* from seat on right bar behind hand;
 - I. *e.* from seat astride on both bars, behind hands;
 - II. *f.* from drop-rest; *g.* from rest on fore-arms.
Clear right bar behind (464).
- I—II. To be varied similarly to the preceding exercise.
Circle outwards with one leg (465)—
 - II. *a.* from standing to standing position; *b.* from standing position to the rest; *c.* from the rest to a standing position.
Circle inwards with one leg,—
 - II. *a.*, *b.*, *c.*, as above.
- III. Circle inwards with both legs (466)—
 - a.* standing position to standing position; *b.* standing position to the rest; *c.* rest to the standing position.
- III. Circle outwards with both legs,—
 - a.* standing to standing position; *b.* rest to standing position.
 - II. Straddle-off forwards (from the rest, face outwards) (467)—
 - a.* over one bar; *b.* over both bars.
 Straddle-off backwards (from the rest, face inwards) (468)—
 - II. *a.* over one bar;
 - III. *b.* over both.
 Straddle inwards (from standing position) (469)—
 - II. *a.* to the seat astraddle;
 - III. *b.* to the rest; *c.* back to the standing position.
 Straddle outwards (from standing position; the legs are swing up between bars) (470)—
 - I. *a.* to the seat astraddle;

- III. *b.* back to the standing position.
Shear-mount (471)—
- II. *a.* throw both legs over one bar, in front of right hand, face about, at the same time throwing the right leg over the left bar; change hands simultaneously.
- III. *b.* Shear-mount, crossing the legs in the air.
Somerset forwards, at the end of the bars (472)—
- II. *a.* with a swing, arms bent;
- III. *b.* with a swing, arms straight; *c.* without a swing, steadily; *d.* from the drop-rest; *e.* from the rest on the fore-arms; *f.* from the seat astraddle; *g.* from the free lever.
- II. Drop over, backwards, to a standing position (474)—
- II. *a.* from rest on fore-arms; *b.* from rest with straight arms.
- III. Somerset backwards—*a.* in the middle of the bars; *b.* at the end, face inwards.
Shoot over, at end of bars (475)—
- II. *a.* springing off the ground;
- III. *b.* hanging.

Vaults from the side.

- I. Vault into the rest sideways, and swing-off backwards (476)—
- a.* both hands on near-bar; *b.* one hand on near-bar, other on off-bar.
- Mounting, one hand on near-bar, the other on off-bar,—
- II. *a.* front-mount; *b.* rear-mount; *c.* screw-mount;
- III. *d.* shear-mount.
- II. Front-vault into the rest between the bars (478)—and—
- a.* clear the off-bar in front; *b.* clear the near-bar in front; *c.* clear the off-bar behind; *d.* clear the near-bar behind.
- III. Rear-vault into the rest between the bars,—and—
- a.* clear the off-bar behind; *b.* clear the near-bar behind, etc.
- III. Front-vault over both bars (479)—
- III. *a.* both hands on the near-bar; *b.* one hand on the near, the other on the off-bar.

- III. Rear-vault, to be varied like the preceding.
Knee-leap (kneel on near-bar).
- II. Squatting vault (479)—
 - II. *a.* to the seat on the near-bar, and squat over the off-bar;
 - III. *b.* over both bars.
 Straddle-vault,—
 - II. *a.* to a standing position on the near-bar;
 - III. *b.* to the rest sideways on the off-bar;
 - IV. *c.* over both bars.
 Somerset,—
 - III. *a.* stand on near-bar, somerset over the off-bar;
 - IV. *b.* over both bars at once (hands on the off-bar).
- III. Shoot over the off-bar (480).

THE HANGING BAR (TRAPEZE).

Leaders are referred to the Rack and the Rings for a large number of exercises which can be performed also at the Trapeze. We confine ourselves here to a notice of some of those exercises which are peculiar to the apparatus in question.

Bar stationary, or nearly so.

- Travel up into the seat (484)—
 - I. *a.* upon one thigh;
 - II. *b.* upon both thighs.
- II. Change seat, passing outside one of the ropes.
Squat over the bar—*a.* one hand grasping the bar, the other a rope; *b.* grasping the ropes with both hands.
 - I. Turn over forwards and backwards, grasping the ropes.
The "hammock" (486)—*a.* grasping ropes about height of your head; *b.* grasping them height of hips.
The nest (487)—*a.* insteps on bar, hands on ropes; *b.* insteps and hands on ropes; *c.* on bar only.
- III. Back-lever, hanging by the ropes (487).
Front-lever, hanging by the ropes.
Levers below the bar.
- II. Hang by the hocks (489)—*a.* on the bar; *b.* on the ropes, insteps beneath the bar; *c.* by the ropes alone.

Hang by the insteps (490)—

- II. *a.* starting from a hanging position;
- III. *b.* dropping down from the seat.

THE RINGS.

Hanging, Rings stationary.

- I. Hang by both hands (492)—*a.* arms straight; *b.* arms bent, and sink slowly.
Rise and sink (297).
Hang by one hand, the other on hip.
- I. Hang by one hand, the other grasping the wrist, arms bent.
- II. Hang by one hand, arm bent.
Hang alternately by left and right hand.
Rise and sink hanging by one hand.
- II. *a.* the other grasping the wrist;
- III. *b.* freely.
- II. Shoulder wrench (494)—*a.* feet on ground; *b.* off ground.
 - I. Twist the arms (495)—*a.* hanging with arms straight; *b.* with arms bent.
 - II. Change grasp, hanging with arms bent.
Extend the arms sidwards (497)—
 - II. *a.* alternately;
 - III. *b.* simultaneously, but pull back quickly; *c.* the same, and remain in the position.
- I. Hang by both elbows (498)—*a.* rings in front; *b.* rings behind; *c.* in alternation (shoulder twist).
- I. Hang by one elbow.
- I. Hang by the arm-pits (499)—*a.* arms down; *b.* one or both arms extended sidwards.
Hang with arms extended horizontally sidwards (499)—
- II. *a.* one ring near arm-pit, other near elbow; *b.* both rings near the elbows;

- III. *c.* one ring close to the left arm-pit, the other close to the right wrist; *d.* one ring near elbow, the other near the wrist; *e.* both rings close to wrists.

Hang by the fingers (500)—

- I. *a.* three or two of both or of one hand;
 II. *b.* two or one finger of both hands or of one;
 III. *c.* the little fingers.

- I. Hang and swing, rings stationary (501)—*a.* forwards and backwards; *b.* sidwards; *c.* in a circle.

Hang with arms bent, and swing as above.

Hang by the elbows, or the arm-pits, and swing as above.

Hanging and swinging.

Swing forwards and jump to the ground (502)—

- I. *a.* legs straight; *b.* legs (and arms bent);
 II. *c.* both legs extended forwards; *d.* clearing a leaping stand.

Swing backwards and jump to the ground (503).

Swing to and fro' hanging by the hands (504)—

- I. *a.* touching the ground with one or both feet in the middle of each swing;
 II. *b.* without touching the ground;
 III. *c.* bend the arms with each forward and backward swing;
d. face about at the end of each swing.

Swing to and fro', hanging by the elbows,—

- I. *a.* rings in front;
 II. *b.* rings behind.

Swing to and fro' hanging by the arm-pits.

Exercises in the Rest, Rings stationary.

The rest with straight arms, ropes in front (505)—

- I. *a.* raise the knees; *b.* straddle; *c.* kick;
 II. *d.* raise both legs horizontally forwards.

- I. The rest, ropes behind (506)—varied like the preceding exercise.

- I. Drop-rest, ropes behind or in front (507).

- III. Drop-rest on one arm.

- II. Sink and rise (508 or 396).
Extend arms sidwards, from the drop-rest (509)—
- II. *a.* alternately the left and right arm;
- III. *b.* both arms simultaneously.
- I. Swing forwards and backwards, in the rest with straight arms (510)—*a.* ropes behind; *b.* ropes in front.
- II. Swing in the drop-rest—*a.* for- and backwards; *b.* side-wards; *c.* in a circle.
- III. Grasshopper swings (511) (rings stationary)—*a.* sink with the backward swing; *b.* sink with the forward swing; *c.* sink with both.
- I. Rest upon the fore-arms (512), legs extended forwards.

Exercises in the Rest, Swinging.

- II. Swing forwards in the rest, and jump to the ground (513).
Swing backwards in the rest, and jump to the ground (514).
Swing to and fro' in the drop-rest (515)—
- II. *a.* touching the ground in the middle of each swing;
- III. *b.* clear of the ground.
- Swing to and fro' in the rest with straight arms (515)—
- II. *a.* touching the ground in the middle of each swing;
- III. *b.* clear of the ground.
- III. Grasshopper swing (516) (start with straight arms)—
a. sink with each backward swing; *b.* sink with each forward swing; *c.* sink with both.
- Swing to and fro' in the drop-rest (516)—*a.* rise with each forward swing; *b.* with each backward swing; *c.* with both.

Hanging and Resting in alternation, Rings stationary.

- I. Hang, and rise to the drop-rest on one arm.
Hang, and rise to the drop-rest, arm after arm.
Up-rise (517)—
- II. *a.* arm after arm;
- III. *b.* with a jerk; *c.* slowly.
- III. Up-start (518)—*a.* with a swing; *b.* slowly.
- III. Up-swing (519).

- II. Rise from hanging by the elbow joints to the rest upon the fore-arms (520).

Hanging and Resting in alternation, Swinging.

- III. Swing to and fro', hanging (521)—*a.* up-swing at end of backward swing; *b.* at end of forward swing; *c.* at end of each swing; *d.* up-start, in the same manner.

Turning over, hanging, Rings stationary.

Turn over, for- and backwards (522)—

- I. *a.* with a spring off the ground, legs bent;
 II. *b.* the same, legs straight; *c.* clear of the ground, legs bent or straight; *d.* the same, arms bent, legs straight; *e.* the same arms straight, legs bent;
 III. Turn-over, legs and arms straight.

Swing-over (523)—

- I. *a.* with a spring of the ground;
 II. *b.* clear of the ground.

Turn-over and shoulder-wrench, forwards and backwards (524)—

- I. *a.* feet touching the ground;
 II. *b.* clear of the ground.
 III. Cut away turn (524)—*a.* with a short run and spring off the ground; *b.* clear of the ground.

Hang head downmost (526)—

- I. *a.* legs bent;
 II. *b.* legs straight.

- I. The nest (527)—*a.* by both hands and both insteps; *b.* by both hands and one instep; *c.* by one hand and one instep.

- II. The "hammock" (528)—(feet in one ring, hands in other).
 Lever, hanging (529)—

- II. *a.* face downwards;
 III. *b.* face upwards; *c.* the preceding in alternation; *d.* lever sideways.

- III. Turn-over into the rest (530)—*a.* into the drop-rest, with a spring off the ground; *b.* hanging clear of the ground.

Turning over, Hanging, and Swinging (531).

- III. Swing to and fro'—*a.* in the nest; *b.* hanging head downmost.
 Turn-over forwards and backwards—*a.* at end of each forward swing; *b.* at end of backward swing; *c.* at end of each.
 Turn-over, and shoulder-wrench, varied like the preceding.
 Swing-over—*a.* at end of a backward swing; *b.* at end of a forward swing.
 Cut-away, with forward swing.
 Turn-over into the rest, at end of backward swing, etc.

Turning over from the Rest. Rings stationary.

- II. Arch the back (532).
 Turn-over forwards from the rest (533)—*a.* bending the arms and legs; *b.* from the drop-rest.
 Turn-over backwards from the rest.
 III. Somerset forwards (534)—*a.* springing off the ground; *b.* clear of the ground; *c.* from the drop-rest; *d.* without any swing.
 Lever in the rest (535)—
 II. *a.* both or one elbow supporting;
 III. *b.* free lever; *c.* lever in the drop-rest.
 III. Stand on the hands (head downmost) (536)—*a.* arms bent, legs round the ropes; *b.* arms straight; *c.* sink and rise, by alternately bending and stretching the arms; *d.* extend one or both arms sideways.

Exercises, standing in the Rings (538).

- I. Stand in the rings or stirrups, hands grasping about as high as the shoulders,—*a.* straddle; *b.* longe forwards; *c.* sham walking and running; *d.* thrust arms sideways, etc.; *e.* longe to the left, and thrust to the right, etc.
 I. Leaning position, hanging, backwards and forwards.
 III. Leaning position in the rest, hands in one ring, feet in the other.

III. Sink and rise in this position.

Lower yourself to the "hammock", and rise again to the rest.

Exercises in which the feet are on the ground.

- I. Drop forwards and backwards (rings as high as chest).
Drop sideways, to the left and right.
Funnel—*a.* hanging by the hands; *b.* the arms.
- I. Leaning position (rings as high as the knees), face downwards—*a.* sink and rise; *b.* extend the arms sideways.
- II. Leaning position, face upwards—*a.* sink and rise; *b.* extend the arms sideways.

ROUND SWING.

The exercises, as a rule, are done first in the fundamental position, and subsequently hanging by one hand or by the elbow. They must be done round by the right and round by the left.

- I. Walk (542)—*a.* forwards; *b.* backwards; *c.* sideways (face turned inwards).
Trot (543)—
 - I. *a.* forwards, slow steps; *b.* forwards short and quick steps;
 - II. *c.* backwards, slow steps; *d.* backwards, quick steps.
 Giant stride (544)—
 - I. *a.* four strides to the round;
 - II. *b.* two strides to the round;
 - III. *c.* one stride to the round; *d.* backwards.
 Gallop (545)—
 - I. *a.* forwards;
 - II. *b.* sideways;
 - III. *c.* gallop backwards.
 - II. Run sideways, the legs crossing each other (545).
 - III. Run sideways, the face turned outwards.
 Giant gallop (545)—
 - II. *a.* forwards, two bounds to the round;
 - III. *b.* forwards, one bound to the round; *c.* backwards.

Run, raising the heels (546)—

- II. *a.* forwards;
- III. *b.* backwards.

Run, raising the legs (546)—

- II. *a.* forwards;
- III. *b.* backwards.
- II. Hop on one leg, forwards and backwards (547).

High leap, springing off with one or both feet.

Long leap, springing off with one or both feet.

- III. Fly round (548)—*a.* forwards, both legs raised horizontally; *b.* sidwards, face inwards, legs astraddle or raised forwards; *c.* sidwards, but the face turned outwards; *d.* backwards.

- I. Trot forwards in the rest (each runner has two ropes).
- II. Trot backwards in the rest (each runner has two ropes).
- III. Run sidwards in the rest (549).
- III. Fly round, in the lever, etc. (550).
- Tilting should be introduced (551).

THE SEE-SAW.

See-saw hanging by the Hands (554).

- I. Face turned inwards, and hanging—*a.* on the last rundle; *b.* the rails.
Face turned outwards, and hanging.
One Side turned to the bearer (sideways), and hanging
a. on the last rundle, hands folded or close together;
b. on one rail; *c.* on both rails.
The above exercises, straddling the legs as you go up.
The same, raising the knees or heels (kicking thighs).
The same exercises, hanging with arms bent.
- III. See-saw, hanging by one hand.
II—III. Swing forwards, on going up.
II—III. Swing backwards, on going up.
- III. Raise insteps to rundle, each time you go up.
Turn over forwards or backwards, passing legs between arms, each time you go up.

See-saw hanging by the Arms.

- II. Hang, arms extended lengthways along rails—*a.* face inwards; *b.* face outwards.
 Hang by elbows on last rundle—*a.* rundle in front; *b.* rundle behind.
 The same, combined with movements of the legs and swinging, as above.

See-saw in the Rest (555).

- II. Rest, arms straight, face inwards—*a.* hands on rails; *b.* on rundle.
 II. The same, face outwards.
 The rest sideways (one side turned towards the bearer)—
a. between two rundles; *b.* on a rail (each man on a different one); *c.* one hand on rail in front, other on rail behind.
 III. The above exercises combined with straddling, raising of knees or heels.
 The drop-rest—*a.* on two rails, face inwards or outwards; *b.* on a rundle face outwards or inwards.
 Drop-rest and—*a.* straddle; *b.* raise knees or heels; *c.* swing forwards and backwards.

CROSS-BEAM.

Travel in the rest sideways (559)—

- I. *a.* leaning upon the stomach;
 II. *b.* body stiff.
 I. Ride forwards sitting astride (560).
 Ride backwards sitting astride.
 Ride sideways, sitting astride.
 Ride sideways in the side-seat.
 Travel in the balance-rest crossways (561)—
 II. *a.* forwards; *b.* backwards.
 Travel in the balance-rest sideways.
 I. Pass from the top to the bottom of the beam (Start sitting astride) (562).

- I. Hang crossways by hands (arms) and legs (563).
 I—II. Hang alternately by the hands (arms) alone, and by hands and arms. Change positions 12 times.
 Travel, hanging by arms and legs (564)—
- I. *a.* forwards, legs locked; *b.* backwards, legs locked; *c.* forwards and backwards, moving legs in unison with the hands.
 Travel, hanging by the hands alone (565)—
- I. *a.* forwards; *b.* backwards; *c.* sideways.
 Pass from the bottom to the top of the beam,—
- I. *a.* by the slanting swing-up;
 II. *b.* by circling;
- III. *c.* by rising on the elbows.
 If the beam is not very thick, many exercises of the Rack can be transferred to it, and if low, it can be used for vaulting.

LADDERS.

We distinguish between upper side, lower side and outside of the ladder. The men should go down in the same way they go up.

When two ladders stand side by side, they go up one ladder, and down the other (567).

UPRIGHT LADDER.

- Walk up facing the ladder (568),—
- I. *a.* both hands on beams; *b.* hands on rundles;
 II. *c.* using only one hand;
 III. *d.* carrying a burden.
- I. Walk up on the outside of the ladder (569).
 Walk up, back towards the ladder (570),—
- II. *a.* grasping beams, above head; *b.* grasping beams as high as hips; *c.* grasping rundles.
- Travel up, using hands only (571),—
- I. *a.* one hand leading;
 II. *b.* hand over hand;

III. *c.* hopping.

(The legs hang down straight, or they are put round the beams.)

Vanes (572),—

- I. *a.* sitting upon a rundle and putting instep below the one below;
- II. *b.* foot-vane;
- III. *c.* hand-vane.

RUNDLED POLE.

It admits of most of the exercises of the upright ladder, and in addition you can go up, sitting upon the rundles (573).

SLANTING LADDER.

Walking up.

Walk up on the upper side, facing the ladder (574),—

- I. *a.* hands on beams, one foot leading; *b.* the same, foot over foot; *c.* the same, passing over one or more rundles; *d.* the same exercises using only one hand;
- II. *e.* carrying a burden.

Walk up on upper side, facing the ladder (574),—

a. to *c.* as above, hands on rundles.

Walk up freely, without using the hands.

- II. *a.* from rundle to rundle;
- III. *b.* passing over rundles.

Walk up on upper side, back to the ladder (575)—

- II. *a.* using the hands;
- III. *b.* without using the hands.

Walk up on the outside of the ladder (two men at the same time), varying steps and grasp (576).

Walk up on the lower side of the ladder (577),—

- I. *a.* hands on beams; *b.* hands on rundles;
- I—II. *c.* passing over one or more rundles;
- III. *d.* back to the ladder.

Travelling in the leaning position (578).

Hang in the leaning position on the upper side of the ladder, face towards it,—

- I. *a.* travel, one hand leading;
- II. *b.* travel, hand over hand;
- III. *c.* travel, passing over one or more rundles;
- IV. *d.* hop from rundle to rundle;

Hang in the leaning position, back to the ladder,—

- III. travel, one hand leading, and hand over hand.

Rest in the leaning position, facing the ladder,—

- I. *a.* travel, one hand leading;
- II. *b.* hand over hand;
- III. *c.* passing over one or more rundles;
- III. *d.* hopping.

Rest in the leaning position, back to the ladder,—

- II. *a.* travel, one hand leading;
- III. *b.* travel, hand over hand.

Up-rise from the leaning position, hanging, to the rest (579),—

- II. *a.* arm after arm;
- III. *b.* both arms together.

Hanging on the Lower side.

- I. Hang on the beams, a rundle, or on both (580),—
a. arms straight; *b.* arms bent; *c.* rise and sink etc.

- I—III. Jump up and catch hold *a.* of the beams; *b.* of a rundle; *c.* of a beam with one hand and of a rundle with the other (580).

Travel, one hand leading (581),—

- I. *a.* hanging on beams; *b.* on rundles; *c.* one hand on a beam, other on a rundle;
- II. *d.* legs raised forwards.

Travel, hand over hand,—

- I. *a.* hanging on beams;

II. *b.* on rundles; *c.* passing over one or more rundles; *d.* one hand on a beam.

Travel, hopping,—

II. *a.* hanging on beams (short or long hops);

III. *b.* from rundle to rundle; *c.* passing over rundles; *d.* legs raised forwards, etc.

III. Travel, hanging back to the ladder (582).

I—II. Travel, hanging outside ladder (582).

Hang and stand on the lower side of the ladder (583),—

I. *a.* three rundles between feet and hands;

II. *b.* one or two rundles between feet and hands;

III. *c.* feet and hands on same rundle;

I—III. *d.* pull up, or rise and sink, in the above positions.

HORIZONTAL LADDER.

Attention of leaders is drawn to the fact that many of the following exercises can be varied still further by varying the manner of grasping the rundles, the beams, or by grasping a rundle with one hand and a beam with the other.

Travelling sideways must be done to the left and to the right.

Hanging with the Hands.

Hang on both beams (584),—

I. *a.* outside grasp; *b.* inside grasp.

Hang on one rundle,—

a. ordinary grasp; *b.* reversed grasp.

Hang on two rundles,—

a. outside grasp; *b.* inside grasp; *c.* with arms spread out, one or two rundles between the hands;

II. *d.* the same, three rundles between.

Hang with bent arms, and rise and sink (585),—

I. *a.* on both beams, outside grasp;

II. *b.* the same, inside grasp;

I. *c.* on one rundle, ordinary or reversed grasp; *d.* on two rundles, outside grasp;

II. *e.* on two rundles, inside grasp.

Swing for- and backwards (585),—

- I. *a.* hanging on both beams; *b.* hanging on one rundle.

Swing sideways,—

- a.* hanging on one beam; *b.* hanging on two rundles.

Swing in a circle,—

- a.* hanging on beams; *b.* on one rundle; *c.* on two rundles.

Changing grasp.

Hang on two rundles (586),—

- I. *a.* change between outside and inside grasp, hand after hand;

- II. *b.* both hands together; *c.* change to grasp on a beam, and back.

Hang on both beams,—

- I—II. *a.* and *b.* as above.

Hang on one rundle,—

- I. *a.* change from ordinary to reversed grasp, hand after hand;

- II. *b.* the same, both hands together; *c.* change to inside or outside grasp on beams.

Travelling (587).

Travel sideways hanging on one beam (588),—

- I. *a.* one hand leading; *b.* hand over hand; *c.* hand under hand;

- I—II. *d.* one hand leading, and long strides;

- II. *e.* with arms bent; *f.* one hand leading, legs raised horizontally;

- I—II. *g.* the same, swinging sideways;

- II. *f.* the same, facing to the right or left about with each step.

Hop sideways, hanging on one beam (589),—

- I. *a.* arms nearly straight;

- II. *b.* arms bent; *c.* taking long hops; *d.* swinging.

Travel sideways, hanging on two rundles (590),—

- I. *a.* outside grasp, hand after hand;

- I—II. *b.* the same, with long strides;

- II. *c.* the same, arms bent; *d.* the same, legs raised horizontally;

II. *e.* the same, swinging sideways; *f.* the same, facing about with each step;

II—III. *g.* the preceding exercises, inside grasp.

II. Hop sideways, hanging on two rundles (590).

Travel forwards and backwards, hanging on the beams (591),—

I. *a.* hand after hand, arms straight;

II. *b.* the same, arms bent; *c.* the same, legs raised, etc.;
d. the same, inside grasp;

III. *e.* inside grasp, and arms bent.

Hop forwards and backwards, hanging on the beams (591),—

II. *a.* without a swing, arms nearly straight; *b.* arms bent;

III. *c.* arms bent, and legs raised forwards; *d.* taking long hops, without and with swinging; *e.* inside grasp.

Travel forwards and backwards, hanging on rundles (592),—

I. *a.* one hand leading; *b.* hand over hand;

II. *c.* the same, arms bent; *d.* the same, legs raised; *e.* the same leaving out one or two rundles;

III. *f.* the same leaving out three or four rundles;

II—III. *g.* the above exercises swinging;

II. *h.* one hand leading, reversed grasp;

III. *i.* hand over hand, reversed grasp.

Hop forwards and backwards, hanging on rundles (592),—

II. *a.* from rundle to rundle; *b.* the same, arms bent, legs raised; *c.* passing over one or two rundles;

III. *d.* passing over three or four rundles.

Travel forwards and backwards, having one hand on a rundle, the other on a beam (593).

To be varied in the same manner as the preceding.

Hanging with the fingers (594).

These exercises can be done only at a ladder provided with a groove for the fingers, but hanging with four fingers or less, can be practised also at the rundles.

Hang on the groove of the same beam,—

- II. *a.* rise and sink; *b.* travel sideways, one hand leading;
- III. *c.* hop sideways.

Hang on the grooves of both beams,—

- II. *a.* rise and sink; *b.* travel for- and backwards, hand after hand;
- III. *c.* hop for- and backwards.

Miscellaneous.

- I. Hang by hands and legs, and travel for- and backwards (595).

Pass from the bottom to the top of the ladder (596),—

- II. *a.* by circling a rundle;
- III. *b.* by the uprise.

Exercises in the leaning position, on the top of the ladder (see parallel bars).

- III. Walk along the top of the ladder, carefully stepping from rundle to rundle.

THE ROPE LADDER

The exercises of the upright wooden ladder are also available for the rope ladder, and most of those of the slanting and horizontal ladders can be transferred to rope-ladders of that description (597).

CLIMBING.

The climbing apparatus, together with the ladders, is generally put in the same spot of a gymnasium, and leaders should avail themselves of the facilities thus afforded for varying these rather trying exercises. More advanced men should come down by a different piece of apparatus from that by which they ascended.

THE UPRIGHT POLE

(Hanging or fixed.)

Climbing positions (600),—

- I. *a.* holding with both hands and both feet; *b.* with one

hand and both feet; *c.* with both hands and one foot;
d. change hold of feet;

III. *e.* hold with feet only.

Ordinary climbing (601),—

- I. *a.* one hand leading; *b.* hand over hand;
- II. *c.* both hands moving together; *d.* changing hold of feet with each step; *e.* describing a spiral line; *f.* carrying a burden (a coil of rope round the neck).

Fancy climbing (602),—

- II. *a.* using one leg and both hands; *b.* using both feet and one hand; *c.* climb having the pole behind you.

Climb, using only the hands (603),—

- II. *a.* one hand leading; *b.* hand over hand;
- III. *c.* hopping (both hands move together); *d.* the above, legs raised horizontally; *e.* pole behind.

II. Two climbers pass each other in the middle of the pole (604).

III. Walk up the pole (605).

II. Climb, head downmost (606).

Climb, resting upon the hands (607),—

III. *a.* using the legs; *b.* without using the legs.

Vanes (608),—

II. *a.* resting upon one elbow;

III. *b.* free vane; *c.* shoulder-vane.

THE PAIR OF UPRIGHT POLES.

Hang between the poles (609),—

- I. *a.* with the hands; *b.* with hands and legs, knees inside;
c. the same, knees outside.

Hang between the poles,—

a. lift hands alternately; *b.* swing for- and backwards.

Climb, using hands and legs (610),—

- I. *a.* moving hand after hand;
- II. *b.* moving both hands together.

Climb, using the hands only (611),—

- II. *a.* hand after hand;
- III. *b.* hopping (both hands move together); *c.* the same, swinging forwards and backwards; *d.* hand after hand and hopping, the legs raised horizontally.

Wander from pole to pole (612),—

- I. *a.* without facing about;
- III. *b.* facing about; *c.* in a slanting direction;
- II—III. *d.* the above, hanging with the hands only.
- III. Walk up between the poles (613).

Climb, resting upon the hands (614),—

- a.* using the legs; *b.* using the hands only.

Several exercises can be transferred to the pair of poles from the rings, for instance the turn-over, the swing-over, hanging head downmost, the back- and front-levers (615). Comp. 522 to 529.

THE SLANTING POLES.

Exercises hanging with the hands only.

Hang on one pole, double grasp (616),—

- I. *a.* pole in front; *b.* pole behind.

Hang on two poles, outside or inside grasp (616),—

- a.* poles in front; *b.* poles behind.

Travel, hanging on two poles, outside grasp (618),—

- I. *a.* hand after hand, up and down, poles in front or behind;
 - II. *b.* hopping, poles in front or behind; *c.* the same, arms bent.
- Travel, hanging on two poles, inside grasp,—
- II. *a.* hand after hand;
 - III. *b.* hopping.

Travel sideways from pole to pole,—

- I. *a.* hand after hand;
- II. *b.* hopping.

Travel, hanging sideways on one pole (619),—

- I. *a.* one hand leading;

- II. *b.* hand under hand; *c.* hand over hand; *d.* with arms bent; *e.* hopping, etc.

Travel, hanging crossways on one pole,—

- I. *a.* hand after hand, pole in front; *b.* the same, pole behind;
II. *c.* hopping.

Travel from pole to pole, hanging sideways (619),—

- I. *a.* one hand leading, forwards and backwards;
II. *b.* hand over hand;
III. *c.* hopping.
II. Travel from pole to pole, facing to the left or right with each step (620).

Hanging by hands and legs.

Climb (621),—

- I. *a.* on top of pole; *b.* underneath the pole.

Hang on one pole with hands and hocks, and travel up and down (622),—

- I. *a.* head first (backwards);
II. *b.* legs first (forwards).

Hang on two poles with hands and hocks, knees outside or inside, and travel up and down (622),—

- I. *a.* head first;
II. *b.* legs first.

Exercises, lying on the poles.

Lie on the top of two poles, and travel up and down (623),—

- I. *a.* head first (pull);
III. *b.* legs first (push).

Exercises in the Rest.

Compare parallel bars, 398 to 401, 424 to 429. At the poles these exercises are, however, more difficult (624).

THE RUNDLED ROPE.

- I. Climb up standing upon the rundles (625).
I. Climb up sitting upon the rundles.

THE KNOTTED ROPE.

All the exercises of the smooth rope can be performed at the knotted rope, where they are rather easier, in consequence of the support afforded by the knots (626). You may also climb up sitting or standing upon the rundles. In the former case you cross your legs.

THE ROPE.

Climbing positions (627),—

- I. *a.* holding with both hands and both feet; *b.* holding with one hand and both feet; *c.* change hold of feet;
- I. *d.* sailors' climbing position.

Ordinary climbing (628),—

- I. *a.* one hand leading; *b.* hand over hand;
- II. *c.* both hands moving together; *d.* changing hold of feet with each step; *e.* carrying a coil of rope etc. round the neck.

Climb, using only the hands (629),—

- II. *a.* one hand leading; *b.* hand over hand;
- III. *c.* hopping; *d.* the above, legs raised horizontally; *e.* rope behind.
- II. Two climbers pass each other in the middle of the rope (630).

III. Climb, head downmost (631).

II. Stand in the rope (632).

Sit in the rope,—

II. *a.* the rope slung around one thigh; *b.* the rope slung around both thighs and the body.

III. The vane (634).

THE PAIR OF ROPES

admits of exercises similar to those on the pair of poles (635).

SLANTING ROPES

admit of exercises similar to those on the slanting poles.

THE PLANK.

Walk up and down, gradually increasing the slope (637).

THE MAST.

Practice in climbing is recommended during voluntary practice (638).

THE CLIMBING WALL.

Climb up using hands and feet (639).

The same using the hands only.

THE TRUCK.

The truck is placed on the slanting plank, or on a pair of poles or ropes (640).

Pull up and lower yourself,—

- a.* lying on the stomach (fig. 17); *b.* lying on the back;
- c.* sitting on the truck.

BALANCING.

The difficulty of the following exercises depends mainly upon the thickness of the beam. If there is a wavering end, or if the beam can be made to slant, their difficulty is increased still further. Very many of the free exercises can be performed on the beam: we have confined ourselves to a few examples.

THE BALANCING BEAM.

Get on the beam (643),—

- I. *a.* sit astride, kneel, squat, stand; *b.* sit, squat, stand;
- I. *c.* change between sitting and standing positions repeated several times in succession.

Facings (644),—

- I. *a.* to the right or left;
- II. *b.* to the right or left about.

Leg exercises, standing (645),—

- I. *a.* raise one leg in all directions;

II. *b.* swing one leg for- and backwards; *c.* sink and rise, squatting on heels; *d.* squatting position on one leg.

Arm exercises (646),—

I. *a.* fold arms on chest or back; *b.* thrust in all directions, etc.;

II. *c.* the same, standing on one leg.

Ordinary walk (647),—

I. *a.* forwards; *b.* backwards; *c.* sidwards.

Fancy steps (648),—

I. *a.* walk, raising knees to chest; *b.* throwing out the legs forwards;

II. *c.* in the squatting position.

II. Two men pass each other, standing (649).

Walk over obstacles (650),—

II. *a.* over a stick; *b.* over a man, hanging below the beam; *c.* over a man sitting or crouching on the beam.

II—III. Walk, carrying a burden (651).

Encounter on the beam (652). The men are only allowed to touch each others' hands.

THE BALANCING PLANK.

The leader walks his men over the plank forwards, backwards and sidwards, and in doing so, he should avail himself largely of fancy steps, taking care that the men keep time, which may be marked by stamping or clapping of hands (653).

THE BALANCING POLES.

Two or three of these poles should be placed parallel to each other (654).

Walk in pairs (655),—

I. *a.* forwards, two men abreast; *b.* backwards, two men abreast; *c.* sidwards, the men face each other;

II. *d.* fancy steps.

Walk singly on one pole (656).

II—III. Same as at balancing beam, but more difficult.

Walk singly on two or three poles,—

- I. *a.* one foot on each pole, forwards, backwards and sideways; *b.* rocking step (on two poles); *c.* change from one pole to the other;
- III. *d.* Basque step (on three poles).

BALANCING STAKES.

The stakes are arranged in a line or ring, three feet apart. Stand on one leg, holding hands (659),—

- I. *a.* raise and lower disengaged leg; *b.* sink and rise, squatting on heel.

Stand on one leg, freely (660),—

- II. *a.* and *b.* as above.

II—III. Walk from stake to stake, gradually increasing their distance from each other.

HANGING PLANK.

Balancing position, plank steady (664),—

- I. *a.* on both legs, looking along the plank or sideways; *b.* the same, arms folded on chest, etc.

- II. *c.* stand on one leg.

Walk, plank steady,—

- I. *a.* forwards; *b.* backwards; *c.* sideways.

Rock the plank, standing astride,—

- II. *a.* raise hinder leg with each forward swing; *b.* raise foremost leg with each backward swing; *c.* raise foremost leg with each backward swing, hindmost leg with each forward swing;
- III. *d.* raise foremost leg with forward swing; *e.* raise hindmost leg with backward swing; *f.* raise hindmost leg with each backward swing, foremost leg with each forward swing.

Walk, one foot leading, plank rocking,—

- II. *a.* forwards (left leg leads with backward swing, right leg follows with forward swing; *b.* sideways, left or right foot leading.

Walk forwards, plank rocking,—

- II. *a.* one step in advance with each backward swing; *b.* two steps in advance with each backward swing;
- III. *c.* one or two steps in advance with each forward swing; *d.* one step in advance with each forward and each backward swing.

Walk backwards, plank rocking,—

- II—III. *a.* to *d.* same as preceding.
- III. Jump forwards with each forward swing.
Hop forwards, on one foot, with each forward swing.

STILTS.

Mount the stilts (665),—

- I. *a.* stilts placed against a wall;
 - II. *b.* jump up freely.
- Walk in all directions,—
- I. *a.* without keeping time;
 - II. *b.* in regular time and cadence.
- I—II. Turn and face about.
 - I. Walk, one foot leading.
 - II. Changing or triple step.
 - II. Walk, stilts held in front.
 - II. Hop on both stilts or on one.
 - III. Run.—Walk up and down stairs, etc.

DUMB-BELLS.

The men form in one or two lines at double arms' length, or in a ring. Leg exercises should be introduced from time to time, to rest the arms. Many of the Free Exercises can be done carrying dumb-bells; referring the leader for these to chapt. X. we confine ourselves to a limited number of examples.

Most of the following exercises should be varied by requiring the dumb-bells to be held knuckles upwards or below, in front or behind.

Twist the arms (676),—*a.* arms hanging down by the side; *b.* arms extended horizontally forwards; *c.* extended sidwards; *d.* extended upwards.

Wrist exercises (677).

Moving the dumb-bells in a vertical plane (678).

Raise and lower arms forwards,—*a.* to a horizontal position; *b.* above the head; *c.* the same, and simultaneously raise a leg; *d.* the same, and longe.

Raise and lower arms sideways,—*a.* to *d.* as before.

Swing dumb-bells for- and backwards.

The same, and longe forwards.

Sawyer exercise (105).

Swing both dumb-bells sideways in the same direction, standing astride.

Raise the dumb-bells above the head, longe forwards, stoop and touch the ground; raise dumb-bells above head, and recover.

Moving the dumb-bells in a horizontal or slanting plane (679).

Shoulder-test (raise arms forwards and open them sideways).

The same, longing (start with arms raised forwards).

Mowing exercise.

The mantlet (circle from front to rear).

Circular movements (680).

Circular movement forwards,—*a.* with one arm; *b.* with both arms in alternation; *c.* with both arms together.

Circular movement backwards,—*a.* to *c.* as above.

Funnel exercise, arms extended sideways, forwards or upwards.

The figure 8.

Elbow Exercises (681).

Raise dumb-bells to shoulders, upper arms steady.

Throw out arms sideways—*a.* from chest; *b.* from the shoulders.

Thrusting (682).

Thrust forwards, sideways, downwards,—*a.* arms in alternation; *b.* both together; *c.* accompanied by longing.

Thrust upwards, squatting on heels,—*a.* thrust, as you rise;
b. thrust, as you sink.

Thrust up- and downwards, squatting on heels.

Pounding Exercise.

Striking (683).

Strike outwards (left to right).

Strike inwards (right to left).

Strike sidwards (dumb-bells are raised above head).

Strike forwards.

The two first are done with each arm separately; the two last with both arms at once. When striking "short", you only describe a quarter of a circle.

Exercises in the leaning position (684).

Compare 106. The hands are placed on the dumb-bells, not on the ground.

Exercises with locomotion (685).

Walk, and thrust or raise dumb-bells with each step.

Changing step and thrust upwards.

Basque step, and swing dumb-bells sidwards, etc. Compare 115.

CLUBS.

When club exercises are carried on by an entire squad, they must be directed by word of command, in the same manner as all mass-exercises. The clubs should not be too heavy, and leg exercises may be introduced occasionally, to give the arms a rest.

The men fall in side by side, in one or more ranks, clubs "at order". They open ranks in the usual way extending both clubs horizontally sidwards (681).

Each exercise, as a rule, is done first with the left club, then with the right, then with both in alternation, and finally with both together.

Exercises in which the arms remain straight.

Raise clubs horizontally forwards (688),—*a.* one club; *b.* both clubs in alternation; *c.* both clubs together.

Raise clubs diagonally forwards,—*a.* to *b.* as before.

Raise clubs horizontally sideways,—*a.* to *b.* as before.

Raise one club forwards, the other sideways.

Raise right club sideways to the left.

Raise both clubs horizontally sideways in the same direction, twisting the body.

Raise clubs above the head, in one or two motions (689),—*a.* forwards; *b.* sideways; *c.* both in the same direction sideways.

Swing clubs for- and backwards, rising on tip-toe.

Raise clubs forwards and move them in a horizontal plane (684),—*a.* opening the arms; *b.* in the same direction, twisting the body.

Mill (691),—*a.* in front of body, clubs crossing; *b.* in front, clubs swinging round in the same direction, by the right or left; *c.* at the side of the body, forwards and backwards.

Exercises in which the arms are bent.

Raise clubs above shoulders (692).

Thrust upwards, sideways and forwards (clubs to remain perpendicular).

Raise clubs horizontally forwards or sideways, and bent and stretch the arms (clubs to remain horizontal) (693).

Drop clubs over the shoulders (694).

Wrist Exercises (695).

Raise clubs horizontally forwards and drop them backwards on the shoulders, in two motions.

Raise clubs sideways, and drop them on shoulders.

Raise arms sideways, clubs perpendicular; drop them forwards and backwards to a pendant position.

Raise clubs to shoulders, and drop them sidwards.

Raise clubs with reversed grasp and pendulate.

Circles.

Each circle to be done first with one club, then in alternation, and lastly with both together.

Circle at the side (697),—*a.* backwards and forwards; *b.* one club backwards, the other forwards.

Circle in front of the body (697),—*a.* both circling in the same direction; *b.* in contrary directions.

Outside circles, arms extended forwards (698),—*a.* forwards; *b.* backwards.

Inside circles, in the same manner.

Outside and inside circles, arms extended sidwards.

Outside circles, swinging the clubs forwards (699).

Outside circles, swinging sidwards.

Circles round the head (700).

Circles in rear (701).

Circles in front, starting with clubs above shoulders (702).

Circles in rear and front, in combination (703).

Circles above the head (704).

The Heavy club, wielded with both hands (705).

Raise and swing it in all directions.

Strike downwards.

Sledge-hammer exercise, etc.

WOODEN BAR-BELLS.

The men form in open order, bars in front (706).

Raise the bar, arms straight (708),—*a.* forwards horizontally; *b.* forwards above the head; *c.* sidwards perpendicularly; *d.* the above, longing forwards or sidwards (710).

Raise the bar above head and lower it sidwards, keeping the arms straight (709).

The same, bending the arms (711).

Bring the bar to the rear, and raise and lower it sideways (712).

Raise the bar to the chest, and thrust (712),—*a.* upwards, forwards, or downwards; *b.* the same, in succession; *c.* the same, longing forwards; *d.* thrust and longe sideways; *e.* thrust upwards, gliding bar through hands, and longe sideways.

Pass bar over the head to the rear (714),—*a.* to the shoulders, in two or one motions; *b.* to the back, arms bent, in three to one motions; *c.* to the back, arms straight; *d.* the preceding, longing forwards.

Pass the bar to the rear, by the left or right (715),—*a.* to the rear by the left, back by the left; *b.* to the rear by the right, back by the left.

Turning the bar (716).

a. Holding the bar with both hands; *b.* holding with one hand.

Leg exercises etc. (717).

a. Raise bars and one leg simultaneously forwards; *b.* raise bars above head and squat on heels; *c.* bend the back and touch ground with bars; *d.* the same, longing (comp. dumbbells), etc. etc.

WANDS.

The whole of the preceding exercises can be done also with wands. We add the following.

Step over the wand (718),—*a.* with one foot, forwards and backwards; *b.* foot after foot; *c.* step over forwards, and bring the wand over the head, back to the front, *d.* pass wand to the rear, over the head, and step over backwards.

Jump over the wand (719),—*a.* forwards and backwards; *b.* forwards, and pass wand over head; *c.* pass wand to the rear over the head, and jump over backwards.

Pass beneath the wand (720),—*a.* holding with both hands; *b.* holding with one hand.

Throwing and catching (721).

Throw up, and catch with both hands,—*a.* with reversed grasp (knuckles under); *b.* with ordinary grasp; *c.* cause the wand to turn round in the air.

Throw up and catch with one hand.

Spin the wand.

Cuts and Circles.

Circles, arm extended sideways (722),—*a.* outside circle backwards; *b.* the same, forwards (723); *c.* inside circle backwards and forwards (724); *d.* inside and outside circles in alternation.

Circles, arm extended forwards (725),—*a.* to *d.* as above.

Circles above the head (726),—*a.* horizontal, forwards and backwards; *b.* slanting, forwards and backwards.

Cuts (727),—*a.* inside; *b.* outside; *c.* inside and outside in alternation.

Circles, holding the wand with both hands (728),—*a.* circle backwards, on the left or right; *b.* circle backwards, on each side in alternation; *c.* circles forwards, on each side in alternation; *d.* above the head, 4 times from left to right, 4 times from right to left in alternation.

Circles and cuts, combined with longing, walking, facing about, jumping forwards and backwards, etc., afford a variety of attractive exercises for more advanced gymnasts, the arrangement of which may fitly be left to thoughtful leaders (729).

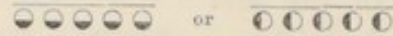
Balancing the wand (730).

a. On the palm of the hand; *b.* on the back of the hand; *c.* on different fingers; *d.* shift it from palm to back of hand; *e.* balance on other parts of your person.

THE LONG WAND.

Exercises with one wand (732).

The wand is 10 feet long. One wand is provided for every five or six men, who either stand abreast or one behind the other, thus:—



The bar-bell exercises described 708, 713, 714, 717 and the wand exercises 718 and 719 can be done having the wand in front.

Similar exercises are done with the wand on one side.

The wand is used also in the manner of a horizontal bar.

Exercises with two wands (733).

The exercises are arranged in a similar manner. Placed on the shoulders, the wands form parallel bars.

WEIGHTS.

The difficulty of the following exercises depends mainly upon what weights are used.

Lift one weight (735),—*a.* with both hands; *b.* with one hand; *c.* with 4, 3, 2 or 1 fingers; *d.* lift, and bend fore-arms.

Lift two weights, one with each hand.

Swing one weight (736),—*a.* between the legs (ring the changes), holding with both hands; *b.* the same, with one hand; *c.* at the side of the body (for- and backwards); *d.* in front (to the left and right).

Swing two weights (736),—*a.* for- and backwards; *b.* side-wards.

Circular swings (736),—*a.* with one weight, forwards; *b.* the same, backwards; *c.* with two weights.

Put up a weight to the fore-arm or the shoulder (737),—*a.* using both hands, with a swing; *b.* the same, without a swing; *c.* using one hand only.

Put up two weights to the fore-arms or the shoulders (731),—
a. with a swing; *b.* without a swing.

Put up one weight, above the head (737),—*a.* with a swing and intermediate rest on the fore-arm; *b.* the same, without a swing; *c.* without a swing, steadily.

Put up two weights above the head, one in each hand (731),—*a.* with a swing; *b.* steadily, without a swing.

Hold one or two weights out sideways (732),—*a.* having previously put them up above the head; *b.* starting, weights hanging down by the sides.

Lie on the back and raise one or two weights forwards, backwards or sideways.

IRON BAR-BELLS.

Put up the bar, hands in middle, 20 in. apart (742),—
a. bending knees and arms; *b.* keeping the legs straight;
c. keeping arms straight.

Put up the bar with both hands, one hand close to a ball the other 18 in. away from it (743).

Put up the bar with one hand (744),—*a.* bar in front;
b. bar at the side.

Hammering (745).

Exercises for two men, working with one bar (746),—
a. putting-up; *b.* sawing, combined with walking, etc.

Exercises for two men, working with two bars (747),—
a. raise bars sideways; *b.* put them up above the head;
c. sawing; *d.* swinging sideways, both bars in same direction.

THROWING JAVELINS.

Having explained the manner of taking aim and throwing, you vary the latter as follows:—*a.* throw point-blank;
b. throw in an arc; *c.* throw with a run or running.

RULES FOR ATHLETIC COMPETITIONS.

1. THE competitions are strictly confined to Amateurs. Persons who have competed for Public or Admission money, or for a Prize with Professionals, or who ever have made gymnastics or athletics a means of livelihood, are ineligible.

2. Protests against any intending competitor on account of his being a Professional or otherwise ineligible, must be lodged with the Judge previously to the competition coming off. The judge will then inform the person concerned that he competes under protest, and the Medals or Prizes shall be retained for four days. But if within that time the persons protesting shall not produce evidence in support of their allegation, satisfactory to the Committee, then the Medals or Prizes shall be handed over.

3. *High leap, running.* Three tries are allowed at each height. The pins upon which the stick is placed shall project three-quarters of an inch. A competitor touching the stick without causing it to fall to the ground, shall be considered to have cleared it. The take-off to be on turf or the bare ground, the landing on soft soil.

4. *The long leap.* To be practised at a shallow ditch filled with soft soil, and at least six feet wide and twenty-four long. Scales shall be fixed to the ground on each of the two long sides of this ditch. Three tries allowed. Falling backwards to count as a try, but not towards a prize. The distance to be measured from the edge of the ditch to the hindmost heel.

5. *Standing leap.* No preparatory spring allowed. Three tries at each height.

6. *Pole leaping.* The uprights shall be nine feet apart, and the stick placed on pins projecting three-quarters of an inch. A competitor touching the stick without causing it to fall down shall be considered to have cleared it. Three tries are allowed at each height. Causing the pole to throw down the stick, to count as a try. Each competitor must provide his own pole.

7. *Flat Races.* All races will be started by word of mouth. Any competitor starting before the word, may be put back

several yards at the discretion of the starter. No attendants will be permitted on the scratch, or in the race. In the sprint races each man must keep to his own side. Any one wilfully jostling or hindering another runner shall be disqualified. The competitors take their places according to the order in which they appear in the programmes, the first man taking the inside.

(Starting by word of mouth—the starter counting “one!” “two!” “off”—is preferable to starting by pistol. If starter and time-keeper are not able to see each other, the former raises a signal flag the moment the start is made.)

8. *Hurdle Races.* The hurdles shall be 42 inches high, and 10 or 20 yards apart. Each man must keep to his own hurdle.

9. *Heats.* If races are run in heats the two best in each trial heat shall run in the deciding heat.

10. *Putting the 36 lb. shot.* The shot to be delivered from the shoulder with one hand. Three tries allowed with each hand, the best to be added together and the highest total to win. Competitors to be confined to a square of seven feet, marked on the ground with tape. Stepping on the tape or beyond, or touching the ground beyond with any part of the body to count as a try.

11. *Throwing the hammer.* Three tries will be allowed, the best to count. Length of run not limited. Distance to be measured from foremost foot, immediately before, or at the time of delivery, to pitch of ball. “No throws” shall count as a tries.

12. *Throwing the spear.* The spear to be thrown at a mark consisting of a block of wood, one foot high and eight inches wide, placed on a post four feet six inches high, from a distance of fifteen yards. The spear must not swerve from its direct course, and its point must fairly hit the mark. Each competitor to be allowed six throws. Ties to be decided by three throws additional. Each man must provide his own spear.

13. *Climbing the rope.* The manner of ascending or descending is optional; but no competitor shall be allowed to sit in the rope, nor to spend over 30 seconds in the descent.

14. *Wrestling, catch as catch can.* It is not permitted to lay hold of the clothes, the flesh or the hair; or to kick or strike. A man shall be considered thrown, if he falls on his back. Two throws out of three to decide. The wrestlers, at the beginning, are paired off according to the numbers they draw from a hat. (For more detailed instructions see the chapter on competitions.)

15. *Boxing.* Each pair to spar two or more minutes, as may be required by the judge, to show style, each to score up to three marks; afterwards to try for three face-hits (or body blows?) out of five, each hit to score one mark, the most marks to win. Competitors must provide their own gloves.

16. *Fencing, broadsword, etc.* The same system to be observed as in boxing. Any competitor, touched by his antagonist, must immediately drop the point of his foil, his sword or stick, and indicate with the left hand the point touched, or he will be disqualified. Each man must provide his own gloves. Masks, foils, swords and sticks will be provided by the committee.

17. *General competition* as adopted by the National Olympian Association.

High running leap—1 mark for every 2 inches above 50.

Long running leap—1 mark for every foot beyond 10 feet.

Half-mile flat race—1 mark for every three seconds short of three minutes.

Putting the 36 lb. shot—the best left and right hand throw to be added, and one mark awarded for every foot beyond 20 feet.

Climbing the rope—1 mark for the first ascent (the first 27 feet above the ground are not allowed to count), 7 for the second, and 10 for the third ascent.

None are entitled to a prize unless they obtain at least one mark in each of the exercises mentioned, nor are any permitted to compete unless they are able to swim fairly one hundred yards.



