

The Palmer arm and leg : adopted for the U.S. Army and Navy by the Surgeon-General, U.S.A., and by the Chief of the Bureau of Medicine and Surgery : manufactured only under the direction of the inventor and patentee / B. Frank Palmer.

Contributors

Palmer, B. Frank
American Artificial Limb Company.
National Library of Medicine (U.S.)

Publication/Creation

Philadelphia [Pa.] : [American Art. Limb Company?], [1865]

Persistent URL

<https://wellcomecollection.org/works/n7ywqwav>

License and attribution

This material has been provided by This material has been provided by the National Library of Medicine (U.S.), through the Medical Heritage Library. The original may be consulted at the National Library of Medicine (U.S.) where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

THE
PALMER ARM AND LEG,

ADOPTED FOR THE

U. S. ARMY AND NAVY,

BY THE

SURGEON-GENERAL, U. S. A.

AND BY THE

Chief of the Bureau of Medicine and Surgery, U.S.N.



MANUFACTURED
ONLY

UNDER THE DIRECTION OF THE INVENTOR AND PATENTEE,

B. FRANK. PALMER, LL.D.,

PRESIDENT OF THE AMERICAN ART. LIME COMPANY.

ALL OTHERS ARE FRAUDULENT IMITATIONS.

OFFICES:

1609 CHESTNUT ST.,
PHILADELPHIA.

1 AND 2 ASTOR PLACE,
NEW YORK CITY.

19 GREEN STREET,
BOSTON, MASS.



Palmer Arm or Leg.

NS AND SOLDIERS

Information free of charge. The price
at ESTABLISHED in the year 1846.

SOLDIERS IN HOSPITAL

should apply in person, or by letter, to Dr. PALMER for an APPLICATION and AFFIDAVIT, blank forms for which will be given. By presenting these to the Surgeon-in-Charge, an ORDER can be obtained. Forward this order, together with STATEMENT AND MEASURES, to Dr. B. FRANK. PALMER, 1609 Chestnut Street, Philadelphia, or to Astor Place, New York, or 19 Green Street, Boston, as may be most convenient.

DISCHARGED SOLDIERS

must forward to Dr. PALMER their DISCHARGE PAPERS, together with an APPLICATION, AFFIDAVIT, STATEMENT, and MEASURES, forms for which will be furnished to all, on application in person or by mail.

SAILORS

should apply to a Naval Surgeon, who will give them the necessary instructions.

CALL, IF POSSIBLE,

at one of the Offices, and get all the information and assistance you require. If you cannot call, write to Dr. PALMER for any explanation, information, or blank forms you may need. All your letters will be promptly answered. No charge is made for Blanks or advice.

WORTHLESS IMITATIONS

of the PALMER LIMBS, are sought to be imposed upon the public as genuine. By applying directly to the offices mentioned below, you will escape the clutches of impostors and pirates.

Address,

B. FRANK. PALMER, LL.D.,

President American Art. Limb Company.

Offices.

1609 Chestnut Street,
PHILADELPHIA.

1 & 2 Astor Place,
NEW YORK.

19 Green Street,
BOSTON, MASS.

American Artificial Limb Company.

OFFICES.

1609 CHESTNUT STREET,
PHILADELPHIA.

ASTOR PLACE, BROADWAY,
NEW YORK.

19 GREEN STREET,
BOSTON, MASS.

OFFICERS.

B. FRANK. PALMER, LL.D., *President.*

CHAS. F. STANSBURY, *Treasurer.*

SAMUEL F. DALTON, *Clerk.*

DIRECTORS.

B. FRANK. PALMER, LL.D.,
HON. MARCUS MORTON,
CHAS. F. STANSBURY,

WM. H. RICHARDSON,
I. S. WHEELER,
E. C. BATES,

J. B. PRINCE.

THE PRESIDENT OF THE COMPANY IS COMMISSIONED BY THE SURGEON-GENERAL U.S.A.

It becomes proper to announce that the PALMER PATENTS have been consolidated, and become the property of a Company, with ample capital, of which DR. PALMER is the President, and in which he retains a large interest. He will continue to give his personal supervision to every branch of the business, which will be conducted at the same places, and in the same manner as heretofore, except that the facilities have been greatly enlarged, so as to enable the demands of patients to be met in a much shorter time than has hitherto been possible.

The greatly increased demand for Artificial Limbs which has been created by the casualties of war, renders it exceedingly desirable that the public should be in possession of such information on the subject of the choice of these substitutes, and the mode of procuring them for the mutilated soldiers of our armies, as shall enable all to judge intelligently and act promptly in every case where such choice may become necessary. The importance of the subject is only to be measured by the aggregate sufferings of the army of heroes who have lost limbs in the service of the country, added to those of thousands in civil life, who have not the consolation of the sympathy and gratitude of a Nation.

The object of the present publication is to afford to the public, and to those who have the misfortune to need artificial limbs, the information which they require, in order to the formation of a correct judgment. Public opinion, when properly enlightened by a presentation of facts, supported by proper evidence, is sure, in the main and in the long run, to pronounce in favor of the best article.

In arriving at a correct conclusion as to which article is best, the public must be guided by a consideration of the *responsibility* and *reputation* of the maker, and the amount of his *experience* in the business. They will also give weight to the *professional opinions* of the Medical Faculty, both of our own country and of Europe, and to the *disinterested testimony* of those who have worn the Limbs, and know by personal experience, their value.

RESPONSIBILITY.

As to the question of responsibility, the public will not demand greater proof than is to be found in the fact that the Palmer patents, after being seventeen years in use in every part of this country and in Europe, have now been purchased by a Company with a capital of \$300,000, whose board of directors embraces the names of gentlemen of means and distinction in the walks of commercial and professional life, and of which the inventor is President. The Philadelphia establishment of the Company is immeasurably the largest and best appointed in all departments, of any establishment for a similar purpose that has ever existed in the world. It has recently been greatly enlarged by the addition of a five-story building in the rear, provided with every facility for the execution of the work in the most prompt and satisfactory manner. At the same time, the houses in New York and Boston have been put in the most complete condition.

REPUTATION.

The question of the reputation of the PALMER LIMBS, admits of a solution equally easy. It would be difficult to find in this country a community, or an intelligent individual, to whom they are not in some degree known. But they have achieved a reputation which is not confined to this country or to Europe, but

is literally world-wide. They have come into direct competition with the best articles that have been produced at home and abroad, and have invariably been awarded the highest place as triumphs of mechanical, surgical, and artistic skill. They have had to encounter the bitterest and most determined opposition which the jealousy and envy of other makers could maintain; but they have sustained the position their merit originally won for them, and continue to be the favorites of the medical faculty and of the public. This has arisen not only from the beauty and perfection of their mechanism for the purpose intended, but from that high grade of workmanship which has always been scrupulously adhered to in their manufacture, enabling the public to feel a perfect confidence that the very best article would, in every case, be supplied.

The evidence of this wide-spread reputation will be found in the Appendix to this pamphlet, in a shape that admits of no contradiction or cavil. It is undoubtedly to this reputation that the soldier is indebted for the institution of the system by which his mutilations are now repaired at the public charge. Had there been no artificial limb which was known and admitted to be a fitting substitute for the lost natural limb, Congress would never have entertained the idea of offering to our soldiers any such special alleviation of the disasters of war.

It is proper that the public should be aware that the noble charity by which our beneficent Government provides Artificial Limbs to the mutilated heroes of our Army, was originally suggested by DR. PALMER, to whose persevering energy its establishment is in a large degree to be attributed. The large number of Limbs already supplied by him to our soldiers and sailors, has been furnished at a price which left no margin for profit, but was indeed below the actual cost, as deduced by intelligent and well-informed witnesses, from the average of his business up to the time his offer to Government was made. This exceedingly low price rendered the plan practicable, by enabling a large number of men to be supplied for a small appropriation, which was all that Congress was willing to risk on an experiment so novel. The system has been in operation for several years, and has worked successfully wherever it has been honestly administered. That unprincipled and incompetent men should manage to secure a share of patronage, is only what we see in all branches of the public service. The vast

majority of the Limbs furnished have been of the PALMER PATENT, and had not the men been, in some discreditable instances, coerced into receiving the limbs of other makers, the number would have been still larger. As it is, the combined facilities of three establishments have been inadequate to keep up with the demand.

Wherever the soldier has been left, as he should be, perfectly free to exercise his own choice in the selection of the limb he desired, the preponderance in favor of the Palmer Limbs has been overwhelming.

This is apparent from the subjoined certificate of Surgeon McLaren, Medical Director U. S. A. for the Department of New England, who has also stated that up to May 31, 1864, but two orders had been issued from his office for any other manufacturer.

"MEDICAL DIRECTOR'S OFFICE,
BOSTON, Nov. 25th, 1864.

From the records of this office it appears, viz.: From December 31st, 1862 (date of Surgeon-General's Order, U. S. A.), to the present date, one hundred and eighteen (118) orders have been given for the 'Palmer Leg.' From November 30th, 1863 (date of Surgeon-General's Order, U. S. A.), to present date, eight orders have been given for the 'S—— Leg.'

A. N. McLAREN, Surgeon U. S. A.,
Medical Director."

Many of those who now urge their untried novelties upon the public, were never heard of until the casualties of war seemed to offer, in the necessities of the unfortunate, a tempting field for profitable enterprise. Their inventions, if they merit the name, have had their origin in the desire to make money out of the misfortunes of the mutilated. It is to such unworthy competitors as these we owe it that the important art of compensating the terrible losses of the mutilated is not everywhere placed by public opinion on that high professional level to which it has been the ambition and effort of DR. PALMER to elevate it. It is to be hoped that Medical Boards which may in future have to take the subject into consideration, will render such just and fearless judgments as will intimidate the charlatan, and elevate the standard of compensatory art.

MEDICAL OPINION.

The opinion of the Medical Faculty, both here and abroad, has concurred with the sentiment of the public in favor of these Limbs. In the Appendix will be found their deliberate utterances on the subject; and of those whose testimony is adduced, there is not one whose name is not known to fame beyond the limits of his own country. Among the names are those of the most illustrious surgeons of the world.

The SOCIÉTÉ DE CHIRURGIE of Paris, had the subject of Artificial Limbs under consideration for twelve years. Their report, recently published, awards to the PALMER LEG the superiority over every other invention of its class.

TESTIMONY OF WEARERS.

The testimony of wearers of the limbs will be, to the mass of the public, the best possible evidence of their merit. The Appendix contains letters from persons in every walk of life, who join in the warm expression of their approval of these substitutes, arising from personal experience of their use. Nothing more than a mere reference to these testimonials seems to be demanded in this place.

EXPERIENCE.

The experience of the inventor in the application of artificial limbs to all classes of amputations, and to a vast variety of special cases, is an element of controlling importance in the selection of an artificial limb. In this particular, comparison can be challenged with any and all makers of limbs. This experience extends over many years and a vast number of cases, since the business of the inventor has long exceeded that of all the other manufacturers of the country or the world. Almost every conceivable case of amputation has been treated by him with success—many cases which had baffled the ingenuity of all others. The advantages of such an experience are no more to be disregarded in this business than in the practice of medicine, surgery, or law. Wise men do not intrust their interests or business to novices in any calling.

AMPUTATIONS.

The character of the amputation has much to do with the successful application of the artificial limb. To this subject Dr. Palmer has given great attention, and in the Appendix will be found a paper in regard to it prepared by him, together with his "NEW RULES FOR AMPUTATIONS," which have been accepted by the profession, and incorporated into leading works on surgery. No enlightened surgeon of the present day would ever think of performing an amputation without keeping distinctly in view the adaptation of the stump to the best possible use of an artificial limb; and the very best guide which such a surgeon could seek on that subject, is the experience of the most extensive manufacturer.

HOW TO PROCURE AN ARTIFICIAL LIMB.

CIVILIANS.

Persons not in the military service, by addressing a letter to DR. PALMER, describing the character of their cases, will be supplied with the proper forms and instructions for measurement. These forms must be clearly and accurately filled up, and the instructions minutely and exactly followed. In amputations below the knee, profiles are indispensable. Full instructions for taking them will accompany the form for measurement. Where patients reside within a reasonable distance of either of the cities of Boston, Philadelphia or New York, it will be best for them to visit one of the offices of the Company, thus insuring accurate measurements and exact fitting of the limb. If the measurements are taken with great care, persons at a distance, who cannot make it convenient to visit either establishment, may feel assured of receiving a limb in all respects satisfactory. In the rare instance in which mistakes occur, they will be cheerfully corrected without expense to the patient.

SOLDIERS IN HOSPITAL.

Soldiers in Hospital, who have not been discharged, should apply, through the Surgeon-in-charge, to the Medical Director of the Department in which the Hospital is situated, for an order on Dr. B. Frank. Palmer for the limb they require. On

forwarding this order, they will be supplied with the necessary forms for measurement, and all the information and instructions they may desire in the premises. Each patient should state the point at which his limb is amputated, as the forms for measurement differ accordingly. Forms of application will be forwarded to all who desire them.

DISCHARGED SOLDIERS.

Discharged soldiers should forward to one of the offices of the Company, their DISCHARGE PAPERS, together with an APPLICATION for the Limb they require; a STATEMENT of the history of their case, and an AFFIDAVIT that they have received no artificial limb at the expense of the Government. PRINTED FORMS of Application, Statement and Affidavit, will be furnished to every soldier who forwards his Discharge. The discharge will be returned within a few days of its receipt. Its production to the Medical Director is necessary to the obtaining of the order. The soldier will also be supplied with the proper forms and instructions for measurement. All soldiers who can do so, are urgently requested to get their measures taken, and their limbs fitted at one of the Offices of the Company, as the best results will thereby be secured.

SAILORS.

Sailors can obtain orders from a Naval Surgeon. They will be furnished, on forwarding their orders, with all necessary instructions for measurement, and with the required forms.

MILITARY AND NAVAL OFFICERS.

Up to this time, the Government has made no provision for supplying Officers with limbs at the public expense. They are, therefore, on the same footing as civilians in reference to this subject. It is hoped that Congress will see the propriety of offering to gallant officers who have given their limbs in the service of their country, the very best substitutes that art can supply.

ARMS.

The necessity for a good Artificial Hand and Arm was long felt by Dr. Palmer before he turned his attention earnestly to their production. No field of invention could be more thoroughly discouraging. The functions of the natural hand and arm are so various and complex, that their mechanism has been justly deemed one of the most wonderful exhibitions of creative skill, and been made the foundation of an elaborate treatise in support of the existence of the Supreme Intelligence. It was necessary for the inventor to acknowledge, at the outset, the limits beyond which it was hopeless to attempt to go in an effort to imitate the natural member. If this invention falls very far short of what is attainable in this direction, it is still acknowledged by the Medical Profession and the Public to be the best that has thus far been produced, and has given a satisfaction to patients that has been shared in a very limited degree by the inventor. He has long hesitated in submitting the invention to the patronage of the public; and it was only when he found how unequal were the substitutes in use, not only to the wants of the patients, but to the Arm which he had devised, and how urgent was the demand of the suffering mutilated for something at least better than they had, or could then procure, that he consented to commence the application of the Arm. It has been received with a favor which is much beyond his expectations, and the demand now far exceeds our power to supply.

THE PALMER ARM.

The Board of Surgeons who investigated the Artificial Arms of various inventors with a view to recommend the adoption of one or more for the wounded of the Army and Navy, felt bound to a limit as to cost in making their selection. They acknowledged, in their report, that the PALMER ARM was the most superior and elegant article, and allowed the soldier \$50 to aid him in purchasing it.

The PALMER ARM is now furnished for the mutilated heroes of the Army and Navy, and the following abstracts from official letters from the Surgeon-General, on the subject, will set the matter in its true light, and gratify numerous applicants, who, in the past, have been led to believe that they must accept an inferior arm or have no aid from Government.

It is true that this Arm has never been placed in *competition* with those offered at the Government price, it being made at such expense, and in such superior manner, as to render such competition *impossible*.

A Board of Army officers was convened last season, by order of Surgeon-General BARNES, when the PALMER models, with various limbs *in use*, and the following PETITION, signed by hundreds of soldiers, were presented for examination and report.

PETITION TO THE SURGEON-GENERAL.

"WE, the undersigned SOLDIERS, having lost ARMS while in the SERVICE of the UNITED STATES, respectfully request the SURGEON-GENERAL to allow us to receive from GOVERNMENT the PATENT ARM made by B. FRANK. PALMER, or, allow us the amount which would be paid to any other person for furnishing a 'Government Limb,' to aid us in obtaining it, so that we may elect in purchasing an article of STANDARD MERIT, which we believe PALMER's to be."

This Board of eminent surgeons, after careful investigation of all the limbs presented, inserted a *special clause* concerning the PALMER ARM, in their Report, recognizing its great superiority, by reporting upon it as the *only* Arm for which a special order might properly be granted in case the soldier should desire it on the terms it might be offered.

Basing his action upon this Report, the SURGEON-GENERAL issued an order, from which the following is an extract.

ORDER OF THE SURGEON-GENERAL.

"SURGEON-GENERAL'S OFFICE,
WASHINGTON CITY, D. C., Dec. 12, 1863.

The Board of Medical Officers assembled in the City of Philadelphia, for the purpose of examining the different models submitted to them for an Artificial Arm, having reported *

* * * * *

IN COMPLIANCE WITH THE RECOMMENDATION OF THE BOARD, WHEN A SOLDIER MAY DESIRE TO PURCHASE

'THE MORE ELEGANT AND EXPENSIVE ARM OF PALMER,' FIFTY DOLLARS WILL BE ALLOWED TOWARDS PAYMENT FOR THE SAME.

By order of the Acting Surgeon-General.

C. H. CRANE,
Surgeon U. S. A."

Another Board of Surgeons to consider the subject of Artificial Limbs for the soldiers, lately convened, by order of the Surgeon-General, in New York. Having the recommendation of two previous Boards, Dr. Palmer did not deem it necessary to appear before another, hence no action was taken by it in relation to the PALMER ARM. This led some persons to suppose that the soldier might no longer be permitted to have that Arm. Confident that the action of the Board did not have any such effect, a letter of inquiry on the subject was addressed to the Surgeon-General, and the Company now has the pleasure to inform the soldier that he has the same privilege of election that he had before the late Board was convened, and that any Medical Director will furnish him with an order for the PALMER ARM on his presenting a request in writing, and expressing his willingness to pay the amount, above \$50, which it may cost. This will be apparent from the following official letter:

LETTER FROM THE SURGEON-GENERAL.

"SURGEON-GENERAL'S OFFICE,
WASHINGTON CITY, D. C., Sept. 20, 1864.

SIR: In answer to your letter of the 1st inst., I am directed to inform you that the Report and recommendation of the Medical Board recently assembled in New York, to examine samples and models of Artificial Limbs, is not designed to supersede the recommendation of the former Board, of which Surgeon Murray was President, *so far as regards the Limbs manufactured by you.*

Very respectfully,

Your ob't servant,

By order of the Surgeon-General,

W. C. SPENCER,

Assistant Surgeon U. S. A."

To

B. FRANK. PALMER, LL. D.

The rule, in reference to the PALMER ARM, has worked to great acceptance, and cannot be regarded but with favor by the soldier, since he is allowed to decide whether he will have the *best* arm (and pay a portion of the price), or accept the Government Limb free.

Soldiers who prefer to receive the PALMER ARM, should add to their application to the Medical Director the following special request for that arm. A printed form will be furnished to all who may desire to use it, on application to either of our offices.

REQUEST FOR A PALMER ARM.

186

Having made application for an Artificial Arm, I hereby respectfully request an order on B. FRANK. PALMER, LL.D., and agree to pay \$50, in addition to the sum allowed by Government for said Arm.

Signed.....
Co. Regt. Vols.

To Surgeon.....,
Medical Director,

CAUTION.

SOLDIERS and SAILORS, who require limbs, cannot be too cautious in observing all the directions herein-before given, in making their applications. Every information they may require to enable them to proceed regularly, will be cheerfully given on application, in person or by letter, to DR. PALMER, at either of the offices of the Company. No charge is made for consultations, or for printed forms. Where all the requirements are carefully observed at the outset, annoying delays and difficulties will be avoided, and the limbs promptly furnished.

Soldiers are specially notified that NO ONE HAS A RIGHT TO COMPEL THEM TO TAKE A LIMB THAT THEY DO NOT DESIRE, OR TO CONTROL THEIR CHOICE OF A LIMB; and any such attempt, on the part of any person, is an unwarrantable, and usually a corrupt interference with the privilege of selection intended to be conferred upon them by the Government. Such interference, if communicated to Dr. Palmer, will be immediately reported to the SURGEON-GENERAL.

THE LINCOLN ARM.

The LINCOLN ARM is furnished only at the offices of the Company. It is supplied to soldiers on Government order, without charge. Very large numbers of these well-known arms have been already supplied, and are in use in every portion of the country. To procure orders for them, soldiers and sailors have to pursue the course already pointed out. Forms for measurement will be furnished on application, and all required information given.

TESTIMONY

OF A HUNDRED SURGEONS IN AMERICA, ENGLAND, AND FRANCE.

THE following testimonials were submitted to the Board convened by the Surgeon-General to select Limbs for the U. S. ARMY and NAVY.

SURGEONS OF LONDON.

LETTER OF THE GREAT ARMY SURGEON, G. J. GUTHRIE,
EX-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS, LONDON.

"BERKLEY STREET, BERKLEY SQUARE,
LONDON, September 30, 1851.

B. FRANK. PALMER, Esq.

SIR: I have no hesitation in stating that I consider your Patent Artificial Leg to be the best invention I have yet seen; the most useful and the least distinguishable from the natural limb.

I am, sir, your very obedient servant,
G. J. GUTHRIE."

Indorsed by the following eminent surgeons of London:

Sir BENJAMIN BRODIE, Bart.	B. B. COOPER, Esq., Surgeon to St.
Prof. FERGUSSON, Surg. to the Queen.	George's Hospital.
WM. LAWRENCE, F.R.S., Surgeon to	F. SKEY, Esq., Dem. of Anat., St. Bartho-
St. Bartholomew's Hospital.	lomew's Hospital.
EDWARD STANLEY, Esq., Surgeon to	CÆSAR HAWKINS, Esq.
St. Bartholomew's Hospital.	JOSEPH H. GREEN, Esq., F.R.S.
Mr. CAMERON, Surgeon to the Marquis	THOS. WAKLEY, Esq., Ed. <i>Lancet</i> .
of Anglesey.	Sir D. BREWSTER.
Dr. FORBES.	Mr. LUKE.
SAMUEL SOLLY, Esq.	I. W. TURNER, F.R.S.
J. HILTON, Esq.	Dr. J. M. ARNOTT.
J. B. CURLING, Esq., Surgeon to the	Mr. SHAW, Surg. to Middlesex Hospital,
London Hospital.	London.

SURGEONS OF PARIS.

By invitation of M. ROUX and M. LALLEMAND (Jurors of the World's Exhibition, in London), Dr. PALMER visited Paris, where he was invited to go before the Société de Chirurgie with the "Palmer" Leg. The invention was received with an acclamation of approval, by such renowned Surgeons as BARON LARREY, M. VELPEAU, M. DEBOUT, and the world-renowned ROUX, for forty years Chief Surgeon to the Hôtel Dieu.

SOCIÉTÉ DE CHIRURGIE, OF PARIS.

This Society had the PALMER Leg under examination for twelve years. M. Debout is Secretary of the Society, and Chairman of the Committee of Investigation. The REPORT has been translated, and will be sent to any applicant, free of charge.

LETTER OF M. DEBOUT.

(Editor "*Bulletin Général de Thérapeutique, Médicale et Chirurgicale.*")

"PARIS, 15 May, 1855.

B. FRANK. PALMER, Esq.

SIR: Of all the apparatus sent for examination, yours excels in form, lightness, and the simplicity of its mechanism.

I have desired Dr. DEVILLE to examine, for me, the various forms of amputated limbs, in London, and especially those removed at the *lower third of the leg*. The influence which this honorable *confrère* exerts here will make his testimony valuable.

Will you furnish him this information, and accompany him in his visits, in order to expedite them? *Without this knowledge it is impossible to make the report on amputations.*

Judge Choiselat,* of Meaux, walks *marvellously*. He recently walked three miles without any assistance, and with little fatigue. This gentleman has offered to come before the Society, with his surgeon, who is a correspondent of the Association, and to testify *by his success* to the adaptability of your invention.

Accept the assurance of my distinguished consideration.

DEBOUT,"

Chairman Com., Sec'y Société de Chirurgie.

* Judge Choiselat had both legs amputated three inches below his knees.

LETTER OF PROF. SYME,
OF THE ROYAL COLLEGE OF SURGEONS, EDINBURGH.

"The merits of the 'Palmer' Artificial Leg are so generally admitted, that I presume my opinion is wished in regard to the *particular modification of it which was lately supplied to a patient of mine.* Nothing could be more *satisfactory* than the ingenious contrivance for the purpose, and I therefore have great pleasure in bearing this testimony. I have the highest opinion of the 'Palmer.'

"JAS. SYME."

"I do not think any improvement can be made upon it.

"JOLIFFE TUFNELL,

"Regius Professor of Military Surgery, Dublin."

TESTIMONY OF THE JURORS OF THE WORLD'S
GREAT EXHIBITION, LONDON, 1851.

"THE JURY HAVE THE HONOR OF SUBMITTING TO HER MAJESTY'S COMMISSIONERS THE FOLLOWING REPORT:

IN THE MECHANICAL COMPENSATION OF LOST PARTS (of the human body), GREAT SUCCESS HAS BEEN OBTAINED; AND AMONG THE CONTRIVANCES FOR SUPPLYING THE LOSS OF A LOWER LIMB, THE ADMIRABLE MECHANISM OF MR. B. FRANK. PALMER'S ARTIFICIAL LEG (United States, No. 39, p. 1435), DESERVES PARTICULAR NOTICE. THIS ARTIFICIAL LEG COMBINES LIGHTNESS AND A SUCCESSFUL IMITATION OF THE MOTIONS OF THE JOINTS."*

[PRIZE MEDAL.]

JURORS.

LONDON.

JOS. H. GREEN, F.R.S.
Ex-President of the Royal College of Surgeons.
WM. LAWRENCE, F.R.S.
Pres. Roy. Col. Surg. and Surg to St. Barth. Hosp.
Mr. JAMES PHILP,
Anatomical Mechanician.

PARIS.

M. ROUX,
Surgeon (forty years) to Hôtel Dieu.
M. LALLEMAND,
Member of the Academy of Sciences, &c.

UNITED STATES.

THOS. CHADBOURNE, M.D.

* N.B. This is the *only artificial leg* that received *special honorary mention* in the Report of the Royal Commissioners.

SURGEONS OF NEW YORK.

"I have examined carefully the Artificial Leg invented by B. FRANK. PALMER, of this country. Its construction is simple, and its execution is beautiful; and, what is most important, those who have the misfortune to require a substitute for the natural limb, and the good fortune to possess it, all concur in bearing practical testimony to its superiority in comfort and utility."

VALENTINE MOTT, M.D., LL.D.,
Professor of Surgery in the New York University.

"It is superior to any with which I am acquainted."

WILLARD PARKER, M.D.,
Prof. of Surgery in the College of Physicians and Surgeons, New York.

"It exhibits great superiority, both in plan and finish."

B. F. BACHE, M.D.,
U. S. Naval Hospital, New York.

"I give my unqualified testimony as to its merits over all."

J. M. CARNOCHAN, M.D.,
Prof. of Surgery in the New York Medical College.

"I believe it to be the best at present in use."

WM. H. VAN BUREN, M.D.,
Surgeon to the New York Hospital, Prof. of Anat., University of New York.

"They combine all the advantages yet devised."

STEPHEN SMITH, M.D.,
Surgeon to Bellevue Hospital.

"They have given uniform satisfaction to my patients."

T. M. MARKOE, M.D.,
Surgeon to New York Hospital.

"I believe them to be the best at present in use."

JAMES R. WOOD, M.D.,
Surgeon to Bellevue Hospital, &c.

"I cheerfully recommend it to all who stand in need."

CHARLES D. SMITH, M.D.,
Surgeon to Bellevue Hospital, New York.

"I believe them to be the best now in use."

FRANK H. HAMILTON, M.D.,
Medical Inspector U. S. A., New York.

"Your Artificial Leg is a triumph of artistic skill."

JOHN W. FRANCIS, M.D.

LOUISVILLE UNIVERSITY, KENTUCKY.

"PALMER'S Patent Artificial Leg is a beautiful specimen of mechanism, well deserving the encomium that has been bestowed upon it by the surgeons of this country and of Europe."

S. D. GROSS, M.D., LL.D.,

Ex-President National Med. Ass'n, Professor of Surgery.

ST. LOUIS UNIVERSITY, MISSOURI.

"It is unquestionably the best artificial leg yet produced."

CHAS. A. POPE, M.D.,

Prof. Surgery, Ex-President National Medical Association.

ALBANY MEDICAL COLLEGE.

"I do not now hesitate to recommend it to my patients."

ALDEN MARCH, M.D.,

President and Prof. Surgery and Operating Surgeon, Albany Med. Col.

"It is superior to any artificial limb I have ever seen."

J. H. ARMSBY, M.D.,

Prof. of Anatomy, Albany Medical College, New York.

YALE MEDICAL COLLEGE, NEW HAVEN.

"We recommend PALMER'S Leg in preference to all others."

J. KNIGHT, M.D.,

Prof. of Surgery, Med. Inst. Yale College.

P. A. JEWETT, M.D.,

Phys. and Surg. Gen. Hospital Soc.

"No mechanical contrivance can be found equal."

P. W. ELLSWORTH, M.D.,

S. B. BERESFORD, M.D.,

Surgeons, Hartford, Conn.

STARLING MEDICAL COLLEGE, COLUMBUS, OHIO.

"Attracted universal admiration in the World's Exhibition."

R. L. HOWARD, M.D.,

Professor of Surgery.

"An invaluable substitute."

J. W. HAMILTON, M.D.,

Prof. Surg. in Starling Med. Col.

"I regard it as the *ne plus ultra* of artificial limbs."

C. C. CHAFFEE, M.D.,

Ex-Member of Congress from Massachusetts.

"I have used one of PALMER'S Artificial Legs 18 years. I believe it to be the best appliance ever invented."

H. A. POTTER, M.D.,

Surgeon U. S. V., Geneva, New York.

SURGEONS OF PHILADELPHIA.

JEFFERSON MEDICAL COLLEGE.

[*The late lamented Professor Mütter.*]

"MY DEAR SIR: I am really very much gratified to find that your ingenuity and perseverance have at length accomplished what the profession has so long waited for in vain,—*a useful Artificial Hand and Arm.* The models you showed me the other day appear to accomplish every indication, and are worthy companions of your *unequalled* Artificial Legs. After many years' observation of the latter, I am compelled to repeat what I have already expressed in writing, that neither in Europe nor America is there an instrument of the kind, in my judgment at least, *worthy of comparison with the PALMER LEG.*"

THOMAS D. MÜTTER, M.D., LL.D.,

Emeritus Professor of Surgery, Jefferson Med. College, Philadelphia.

"It would be difficult to conceive of any apparatus more beautiful in its construction or more admirably adapted."

S. D. GROSS, M.D., LL.D.,

Professor of Surgery in the Jefferson Medical College.

"Incomparable." So pronounced at Jefferson Clinic by

JOS. PANCOAST, M.D.,

Professor of Anatomy, Jefferson Medical College.

UNIVERSITY OF PENNSYLVANIA.

"I have formed a very favorable opinion of its construction."

W. GIBSON, M.D.,

Emeritus Professor of Surgery in the University of Pennsylvania.

SURGEONS OF BOSTON.

"The undersigned having witnessed the successful use of the Artificial Limbs of B. FRANK. PALMER, very gladly recommend them. The very ingenious mechanism which is applied in this invention produces an imitation of the shape and motion of a living member, much *more successful than would seem possible.*"

J. C. WARREN, J. MASON WARREN, S. D. TOWNSEND,
JACOB BIGELOW, GEO. HAYWARD, D. H. STORER,

Surgeons and Physicians to Massachusetts General Hospital.

MASSACHUSETTS GENERAL HOSPITAL.

"BOSTON, August 25th, 1862.

"SURGEON-GENERAL U. S. A.

"SIR: Understanding that, by a recent act of Congress, a sum has been appropriated for the purpose of supplying wounded soldiers with Artificial Limbs, and having had a large experience for many years among my patients, in obtaining substitutes for their amputated limbs, I take the liberty to suggest that the establishment of Palmer & Co., which I have always employed, may be authorized to furnish them.

"It is due, I think, to MR. PALMER, as the *original inventor*, to have this preference over all other manufacturers, theirs being but imitations of his ingenious contrivance.

"A brother of mine, Major Townsend, U.S.A., wore an artificial leg for *forty years*, supplied at times by a variety of persons; among them was the Anglesey Leg, which he imported from England, but he always gave the preference to PALMER'S, as the only one he wore with ease.

"Respectfully,

"S. D. TOWNSEND,

"Senior Surgeon Massachusetts General Hospital."

Cordially indorsed by

BENJAMIN S. SHAW,

Resident Physician and Superintendent.

WM. J. DALE,

Surgeon-General of Massachusetts.

HARVARD UNIVERSITY.

"I have been familiar with the details of the 'Palmer Artificial Leg' for many years, having, as a member of a committee, awarded to it a gold medal soon after its invention, and having also introduced Mr. Palmer to some of the London surgeons at St. Bartholomew's, in 1851, where the Limb received their unqualified approbation. I hope that our maimed New England soldiers may be fortunate enough to be supplied with it."

HENRY J. BIGELOW,

Professor of Surgery in Harvard University, and one of the Surgeons of the Massachusetts General Hospital.

MEDICAL COLLEGE OF OHIO, CINCINNATI.

"We are indebted to Mr. PALMER for the Artificial Leg which has won the admiration of the most prominent surgeons in Great Britain, France, and this country. This is certainly one of the greatest triumphs of American ingenuity."

GEORGE C. BLACKMAN, M.D.,

Professor of Surgery, Med. Col. of Ohio, and Surgeon, U. S. A.

"Palmer's Patent is the most complete artificial limb."

EDW. B. STEVENS, M.D.,

Professor of Physiology and Pathology.

JOHN A. MURPHY, M.D.,

Professor of the Practice of Medicine, etc., in the Medical College of Ohio.

UNIVERSITY OF VERMONT.

"I think them superior to anything of the kind."

SAMUEL W. THAYER, JR.,

Professor of Anatomy and Physiology, University of Vermont.

UNIVERSITY OF BALTIMORE.

"The Artificial Leg of B. FRANK PALMER, is far the best."

N. R. SMITH, M.D.,

WILLIAM PRATT, M.D.,

Professor of Surgery.

CHARLES FRICK, M.D.,

WILLIAM K. KEMP, M.D.,

C. A. HARRIS, M.D.,

L. MACKALL, M.D.

SURGEONS OF WASHINGTON, D. C.

"THE PALMER ARTIFICIAL LEG merits our highest commendation. It is, without doubt, the most perfect Artificial Limb ever invented." MEDAL.

THOMAS MILLER, M.D., W. P. JOHNSON, M. D., and others,
Jurors.

NAVY DEPARTMENT, WASHINGTON, D. C.

I have carefully examined the PALMER Artificial Leg, and find that it seems calculated to form an excellent substitute for the natural one, and leaves nothing to be desired by way of improvement.

I am, very respectfully, your obedient servant,

THOMAS HARRIS, M.D.,

CHIEF OF THE BUREAU.

UNIVERSITY OF MICHIGAN, DETROIT.

"We have no disposition to consume either time or space in praising the ingenuity manifested by Dr. Palmer: that is at this time uncalled for. He is really a public benefactor, and the thousands who need his aid are those only who can suitably speak his praise. There is, however, one result of the invention to which we would especially allude: it is the influence that it has exerted upon the *place of election in the amputation of the leg*. Thanks to the skill of Dr. Palmer, the old rule is now *expunged*, and the conservative element of surgery, which calls for the utmost salvation, can be universally heeded. The rule is now reversed. Thus all the advantages possible are saved to the patient.

"AN ARTIFICIAL ARM, that would be something more than ornamental, has long been a desideratum. That desired object has at length been realized by the same genius, directing the same persevering effort which produced the incomparable *leg*. Mechanical perfection has always challenged our warmest admiration, but when that mechanism is made to supply the place and motions of a lost human hand, even though imperfectly, admiration gives place to enthusiasm, and, as a surgeon, we respectfully and thankfully salute the genius that mitigates the evils necessarily caused by our reluctant, though limb-sacrificing catlin."

MOSES GUNN, M.D.,
Prof. Surg. University of Michigan.

THE LATE PROFESSOR D. M. REESE.

The following testimonial concerning the PALMER ARM and LEG will command great respect. The late DR. REESE was Chairman of the Committee on Artificial Limbs of the American Institute, New York, for many years, and made the *first report* on the Palmer Leg, in the year 1846.

"Dr. B. F. Palmer, of Philadelphia, *having long since eclipsed all competition* in the construction of artificial *legs*, has now introduced a similar substitute for the *arm, forearm, and hand*, which promises to increase his claims as a public benefactor."

D. MEREDITH REESE, M.D., LL.D.,
Ex-Vice-President of the National Medical Association.

FIRST REPORT ON THE PALMER LEG.

The Inventor has the honor to present the FIRST REPORT made by eminent judges in the year 1846. It will be noticed, that this, and some other Reports, were made before he had *any associates in the business*. The reader will notice, in the language of the distinguished judges, the highest possible encomium. It is indeed gratifying to the Inventor, at this time, when for the first instance his ability to construct *his own Patent* is called in question by *mountebanks*, and *piratical copyists*, to fall back upon his old RECORD.

AMERICAN INSTITUTE, NEW YORK; EXHIBITION. 1846.

"PALMER'S PATENT LEG, *in its appearance, and in its movements, so accurately resembles the natural limb as to require a careful examination before it can be decided to be anything else but the limb provided by nature. It combines lightness with firmness, and we recommend that a SILVER MEDAL be awarded to its inventor.*"

"PALMER'S PATENT LEG merits the still further notice of the Institute, and we recommend a GOLD MEDAL."

D. MEREDITH REESE, M.D., LL.D.,

ALFRED C. POST, M.D.,

S. RUSSELL CHILDS, M.D.,

Judges in 1846 and 1847.

"PALMER'S ARTIFICIAL LEG is superior to any other ever constructed, and merits, for science and humanity, the highest testimonial of the Institute."—*American Institute*, 1850.

FINAL REPORT OF THE AMERICAN INSTITUTE.

"BEST ARTIFICIAL LEG. PALMER'S STILL RETAINS ITS SUPERIORITY OVER ALL OTHERS." GOLD MEDAL.

D. M. REESE, M.D., LL.D.,

PROF. J. M. CARNOCHAN, M.D.,

PROF. H. G. COX, M.D.,

Judges.

THE WORLD'S GREAT EXHIBITION, NEW YORK.

"PALMER & Co., FOR THE BEST ARTIFICIAL LEG—MEDAL."

PROF. J. RENWICK, Chairman,

" W. PARKER, New York,

" J. M. CARNOCHAN, "

" A. CLARK, "

DR. GALLARDET, Paris,

" PARKMAN, Boston,

" LUDLOW, New York,

AND OTHERS,

International Jurors.

ORIGINAL REPORT OF BOSTON SURGEONS.

"THE Committee are of opinion, that this invention fulfils the various requisites of a substitute for the lower limb, as completely as any artificial machinery ever can be expected to do. *In imitating the various movements, in the mode in which the flexions of the knee, ankle, and foot are connected, and the apparent reliability and permanence of the mechanical details, they do not see any failure to fulfil the highest possible requisites.* They recommend that MR. PALMER's successful improvement be acknowledged by the bestowal upon him of a SILVER MEDAL."

J. WINSLOW LEWIS, M.D.,

LUTHER V. BELL, M.D.,

(Late Surgeon U. S. V.) Judges.

BOSTON, MASS., Nov. 1847.

SECOND REPORT.

"This Leg has been already fully reported upon by former Committees, who had every opportunity to examine and test its merits. And the Committee would have simply referred to those reports, but for the fact that Messrs. Palmer & Co. have accomplished what has heretofore been deemed an impossibility, viz., *enabling a person who has lost both legs, as in the case of Mr. Sanford, with one adjusted at the thigh, and the other below the knee, to walk with two substitutes.* The young man who exhibits their models, shows in his own person ability to walk fairly *without a cane*, upon a pair of PALMER's Legs. So far as we know, this Leg is *without an important rival* in this and foreign countries.

We recommend a GOLD MEDAL."

HENRY G. CLARK, M.D.,

WINSLOW LEWIS, M.D.,

GEORGE BARTLETT, M.D.,

HENRY J. BIGELOW, M.D.,

Judges.

BOSTON, MASS., Nov. 1853.

REPORT OF THE COMMITTEE OF SURGEONS OF THE FRANKLIN INSTITUTE.

"HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, Jan. 11th, 1849.

THE COMMITTEE ON SCIENCE AND THE ARTS, constituted by the FRANKLIN INSTITUTE of the State of Pennsylvania, for the promotion of the MECHANIC ARTS, to whom was referred for examination an Artificial Leg, invented by B. FRANKLIN PALMER, report: * * * * *

"The Committee have seen the Artificial Leg, worn by the inventor himself. It is light, well-shaped, easily adjusted, and of a surface readily kept clean. The shape of the leg is such as to represent exactly, when clothed, its natural fellow.

The pressure of the artificial leg is made uniformly upon the surface of the sides of the stump, and not upon the end.

Mr. P. is enabled, by means of his invention, to walk without a cane in such a manner as to readily deceive one not acquainted with the facts.

All the natural movements of the limb are beautifully executed. He can throw either leg over the other, and can mount a height of five inches with either leg indifferently without assistance.

In conclusion, the Committee would remark, that the ARTIFICIAL LEG of Mr. PALMER is SUPERIOR TO ANY THAT HAS YET COME UNDER THEIR NOTICE. It is light, strong, beautifully shaped, apparently very durable, self-acting in a greater degree than anything they have ever met with, easy and natural in its motion, and possesses, apparently, all the qualities desirable or attainable in such an invention.

The Committee would recommend the award to the inventor of 'SCOTT'S LEGACY MEDAL AND PREMIUM,' and also to the Committee on Exhibitions, to award to him the FIRST PREMIUM, for his model exhibited in the late Exhibition.

PROF. B. HOWARD RAND,
Chairman Committee.

By order of the Committee.

WILLIAM HAMILTON,
Actuary."

FRANKLIN INSTITUTE'S LAST REPORT.

"The Artificial Legs invented and made by B. FRANK. PALMER, are believed to be *unequalled*. They have received the award of the SCOTT'S LEGACY MEDAL AND PREMIUM, on the recommendation of the Committee on Science and the Arts, as well as a FIRST PREMIUM from this Committee, at a former Exhibition."

E X T R A C T S.

EMINENT WORKS ON SURGERY.

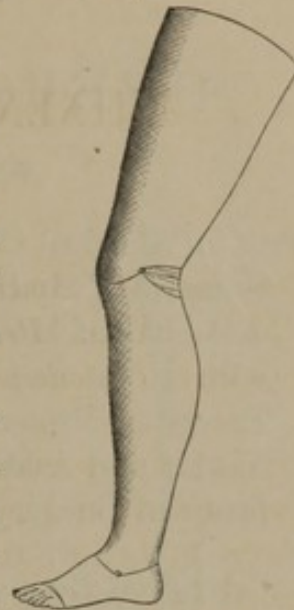
From the great American "System of Surgery;" by S. D. GROSS, M.D., LL.D., Professor of Surgery in the Jefferson Medical College, Philadelphia: pp. 647 to 649, Vol. 1. A.D. 1856.

"GREAT improvement has of late years been effected in the construction and adaptation of artificial limbs, and there is reason to believe that the inconvenience and suffering occasioned by their use, are more frequently attributable to the misconduct of the surgeon, than to the want of skill on the part of the manufacturer of the substitute. It has been only within a comparatively recent period that operators have hit upon the correct principles of making good and serviceable stumps. Allanson, nearly three-quarters of a century ago, understood the subject much better than it has been understood since, if we except the last ten or fifteen years.* He strongly insisted upon a long and well-shaped stump, and exerted himself with great ability, but in vain, to induce the profession generally to follow his example. The happy changes which have lately been introduced into this department of operative surgery, are, I believe, mainly due to the manufacturers of artificial limbs, who, with an ingenuity and a perseverance worthy of so good a cause, have reduced the whole process to one of principles founded upon the study of anatomy and mechanical philosophy. *It would be difficult to conceive of any apparatus more beautiful in its construction, or more admirably adapted to the end proposed, than the artificial substitutes of Mr. Palmer, of this city, who obtained the prize medal at the Great Exhibition in London, in 1851.* Combining lightness with strength, and neatness with symmetry, they are worn with great comfort and satisfaction, and are apparently as perfect as any piece of human mechanism of the kind can well be

* The time the Palmer Leg was perfected and introduced to the public.

made. The joints, constructed on the principle of the ball and socket articulation, are situated at the proper points, and their surfaces being well secured, move upon each other with great accuracy and facility, through the intervention of cords, wires, springs and levers, the whole arrangement being a close imitation of the natural muscles and tendons. The socket is made with special care, neatly fitting the stump in every portion of its extent, to prevent friction and excoriation, the pressure being diffused over the entire circumference of the stump, while the extremity of the latter is perfectly free, in the interior of the former. The annexed cut (Fig. 138), affords an illustration of this apparatus." * * * * *

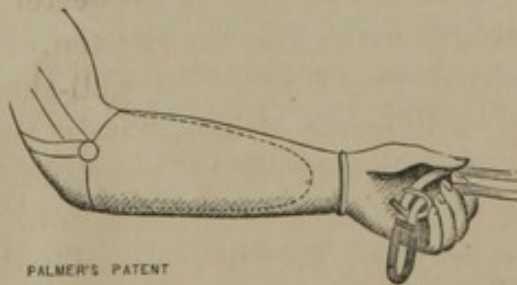
Fig. 138.



Palmer's Patent.

"I subjoin Mr. Palmer's instructions for the formation of suitable stumps in amputations of the leg and thigh, as they are now generally acted upon by the more accomplished operators of the country."

"Various attempts have been made to construct artificial hands and arms. Mr. Palmer, after many trials, has at length devised a limb, which in point of neatness and adapt- edness, leaves hardly anything to be desired on the subject."



PALMER'S PATENT

Extract from a celebrated English Work on Surgery. By JOHN ERICHSEN, London. American Edition, by JOHN H. BRINTON, M.D., Surgeon U.S.V. Philadelphia, 1854: p. 86.

"The most perfect of all the artificial limbs we now possess, is the one invented by Mr. B. F. Palmer, of Philadelphia. This invention received the PRIZE MEDAL at the World's Exhibition of 1851. It merits the entire confidence of the surgeon."

FROM THE GREAT WORK ON

OPERATIVE SURGERY.

BY ALF. A. L. M. VELPEAU,

Prof. of Surgical Clinique of the Faculty of Medicine of Paris; Surgeon of the Hospital of La Charité; Member of the Royal Academy of Medicine, of the Institute, &c. Fourth Edition, with Notes and Observations, by VALENTINE MOTT, M.D., Emeritus Professor of Surgery in the University of New York; and Additions, by GEORGE C. BLACKMAN, M.D., Professor of Surgery, in the Medical College of Ohio.

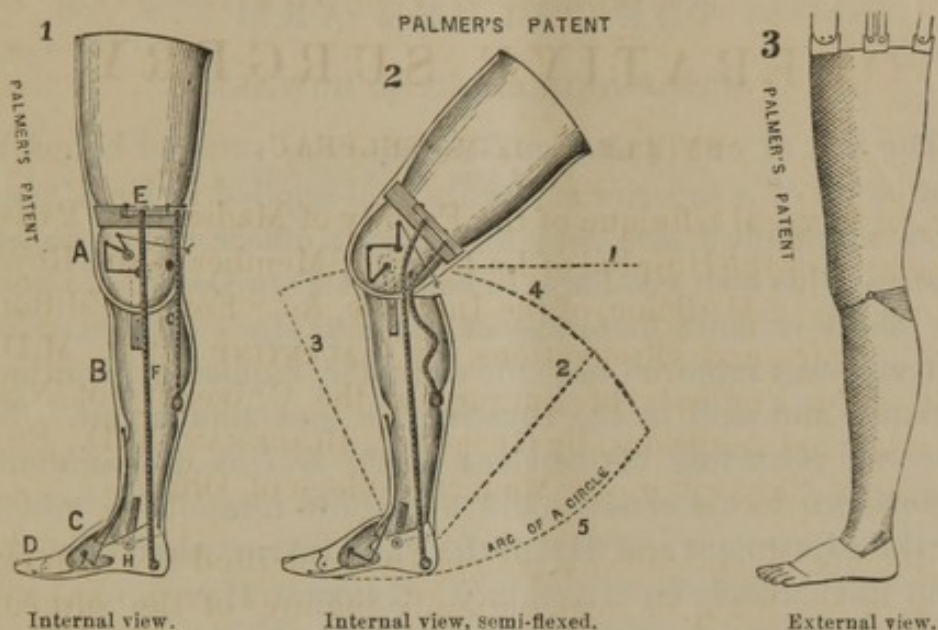
Artificial Legs.—After a patient has submitted to an amputation of his limb, he very naturally inquires of the surgeon what is the best substitute he can suggest for him, and we know that this question has often given rise to much perplexity. As to the lower extremity,* we now have it in our power to furnish every desirable information upon this point, and for this we are indebted to Mr. B. Frank. Palmer, the inventor of the artificial leg which has won the admiration of the most prominent surgeons in Great Britain, France, and this country.

During the Great Exhibition in London, 1851, we had an opportunity of inspecting the large number of artificial limbs there presented, and we know that there was but one opinion as to the vast superiority of Mr. Palmer's invention to any hitherto offered. In a word, Mr. Palmer bore away the palm, the adjudicators being, among the rest, no less than the distinguished surgeon of *St. Bartholomew's Hospital*, Mr. William Lawrence, and the renowned veteran of the *Hôtel Dieu*, Roux, recently deceased. This, certainly, is one of the greatest triumphs of American ingenuity.

We copy from a pamphlet issued by Mr. Palmer, the description of its peculiarities, remarking, at the same time, that through his politeness and liberality, we are enabled to present to the reader an internal view of this beautiful piece of mechanism. We also insert the views of Mr. Palmer, which have special reference to the *comfort* and *usefulness* of the mutilated."

* The arm not then invented.

FROM VELPEAU'S FRENCH SURGERY.



"The articulations of knee, ankle, and toes, consist of detached ball and socket joints, A, B, C. The knee and ankle are articulated by means of the steel bolts, E, E, combining with plates of steel firmly riveted to the sides of the leg, D, D. To these side plates are immovably fastened the steel bolts, E, E. The bolts take bearings in solid wood (properly bushed) across the *entire diameter of the knee and ankle*, being stronger, more reliable and durable than those of the usual construction. All the joints are so constructed that *no two pieces of metal move against each other in the entire limb*. The contact of all broad surfaces is avoided, where motion is required, and thus friction is reduced to the *lowest degree possible*. These joints often perform for many months without need of oil or any attention,—a desideratum fully appreciated by the wearer.

"The tendo Achillis, or heel tendon, F, perfectly imitates the natural one. It is attached to the bridge, G, in the thigh, and passing down on the back side of the knee bolt, E, is firmly fastened to the heel. It acts through the knee bolt, *on a centre*, when the weight is on the leg, imparting security and firmness to the knee and ankle joints, thus obviating all necessity for *knee-catches*. When the knee bends, in taking a step, this tendon vibrates from the knee bolt to the back side of the thigh, A, Fig. 2. It descends through the leg, so as to allow the foot to rise above all obstructions, in flexion, and carries the foot down again, in extension of the leg for the next step, so as to take a firm support on the ball of the foot. Nature-like elasticity is thus attained, and all thumping sounds are avoided.

"Another tendon, H, of great strength and slight elasticity, arrests the motion of the knee, gently, in walking, thus preventing all disagreeable sound and jarring sensation, and giving requisite elasticity to the knee.

"A spring, lever, and tendon, I, J, K, combining with the knee bolt, give instant extension to the leg when it has been semi-flexed to take a step, and admit of perfect flexion in sitting.

"A spring and tendons in the foot, L, M, N, impart proper and reliable action to the ankle joint and toes. The sole of the foot is made soft, to insure *lightness and elasticity of step*.

"The stump receives no weight *on the end*, and is well covered and protected to avoid friction and excoriation.

"Fig. 3, is a view of Palmer's perfect model."

OUR MILITARY HEROES.

THE PALMER ARM.

MAJOR-GENERAL O. O. HOWARD.

The first of our illustrious Generals who suffered honorable mutilation of a superior extremity, and applied to Dr. PALMER for a mechanical arm, was the gallant officer above named, who gave his own good arm in battle at FAIR OAKS. No general officer is more deserving of the inventor's highest effort. The arm was removed near the shoulder, requiring the utmost patience and skill in the construction and adjustment. The General, regarding his services *in the field* as of paramount importance to his country, did not allow himself *ten minutes* for the adjustment and trial of the Patent Arm, when done, but went immediately on active duty. GENERAL HOWARD has written the inventor favorably, and says he anticipates more gratification in the use of the arm "*when the war is over.*"

BRIGADIER-GENERAL WILDE.

COL. WILDE, the gallant commander of the Thirty-fifth Massachusetts Volunteers, lost an arm *at the shoulder-joint*, while leading the "Thirty-fifth" in battle. He applied to Dr. Palmer and was supplied with a kind of armor which enabled him to take the field again within a few weeks.

About the time it was applied, COL. WILDE was promoted to the rank of Brigadier-General. The armor has been supplied in several instances since, with the same success, which was so great in the case of the distinguished General as to induce him to order a PALMER ARM, which the inventor is now making.

BRIGADIER-GENERAL GEORGE W. MACY.

It affords us great pleasure to notice the announcement, just made, that another distinguished COLONEL, who is a patient of Dr. PALMER'S, has been made a BRIGADIER while using the Patent Arm in active service. We allude to GENERAL GEORGE W. MACY, of the Massachusetts 20th, who has been constantly on duty in the field since the loss of his hand in battle.

There are hundreds of mutilated soldiers on our "Roll of Honor," who are worthy of honorable promotion.

AN AMPUTATION ON THE BATTLE-FIELD.

MAJOR-GENERAL DANIEL E. SICKLES.

[This distinguished officer is the only one of so high rank who has lost a *leg* in the country's service. Amputation above the knee. The circumstances of General Sickles' losing his leg, at the battle of Gettysburg, are somewhat striking. His horse had just been struck in the breast by a musket-ball, and whilst striving to subdue the affrighted animal the General was hit just below the knee of the right leg by a cannon-ball. Strange to say, he maintained his seat firmly until he calmed his horse, when he let go the bridle and taking his two hands he raised his shattered limb over the pommel of the saddle, then disengaging his other foot from the stirrup, he slid easily to the ground, and fell. Fearing the excessive loss of blood would exhaust him, and being at the moment without any of his staff, whom he had dispatched with orders to different parts of the field, he took out his handkerchief and bound up his dangling leg. In a short time, one of his aides-de-camp, Major Tremaine, galloped up and proceeded to assist him in tying up with another handkerchief the terrible wound. He asked for stimulants to sustain him till an ambulance was found, which came up in some half an hour. Whilst being carried off the field of battle, he felt himself growing so faint that he supposed his death imminent, and he began calmly to give messages to various members of his family. A chaplain of the army riding by, stopped to make inquiries, when the General regarding himself in a dying condition desired him to enter his ambulance and administer to him the consolations of religion. Soon after, Major Sim, the Surgeon of the General's corps (3d), having heard of his wound, dashed up in his medical ambulance. After examining the wound, he decided that immediate amputation was necessary. The General was then lifted from his ambulance on to a table constructed on the spot from the materials carried in the surgeon's ambulance for such occasions. The amputation was effected about four inches above the knee, as the leg was too shattered to think of preserving it. Whilst under chloroform, the General was giving constant directions as to his troops, for the operation was performed amid the roar of artillery, and the yells of the combatants. One of his phrases was remarkable: "A man," he cried, "is but a cipher in this war. The cause is worth whole hecatombs of men."]

OPINION OF OUR MILITARY HEROES CONCERNING
THE PALMER LEG.

MAJOR-GENERAL SICKLES.

BREVOORT HOUSE, NEW YORK,
January 12, 1865.

SIR: I have great pleasure in bearing testimony to the excellence of the artificial leg you made for me. I have used it long enough to convince me of the superior mechanical construction of the limbs you make.

My intercourse with yourself has impressed me with your unwearied devotion to your patients, and the rare scientific accomplishments you bring to their relief.

In placing this note at your disposal, I only perform a duty to my comrades who may, by the fortune of war, have occasion for your services.

I remain, dear sir, very respectfully,

D. E. SICKLES,

Major-General.

B. FRANK. PALMER, LL.D.

BRIGADIER-GENERAL BARTLETT.

[This gallant General has risen from the rank of Captain while using the Palmer Leg in the service. Amputation above the knee.]

BOSTON, MASS., January 6, 1865.

DEAR SIR: I have now used the Palmer Leg (full length) for more than two years. During most of that time I have been on active duty in the field. It has stood the severe test of campaigning, exposure to all weathers, and constant use in the saddle, *admirably*; not better than I had hoped, but far better than I expected. I have never been kept off duty an hour by any fault in its mechanism. I willingly bear testimony to its merits, and express my satisfaction with the result of the test to which I have subjected it. (It is not *bullet-proof*—few legs are!)

I am, sir, very respectfully,

W. F. BARTLETT,

Brigadier-General.

B. FRANK. PALMER, LL.D.

BRIGADIER-GENERAL FESSENDEN.

[One of the most remarkable instances of restoration by the Palmer Leg appears in the case of this brave young General, the son of the distinguished Secretary of the Treasury. Amputation below the knee.]

WASHINGTON, December 27, 1864.

DEAR SIR: Having worn one of your patent legs for nearly three months, I desire to add my testimony in favor of an invention so beneficial to humanity. I suffered amputation of my right leg, six inches below the knee, on April 30, 1864. Five months later, or in the last of September, I began to wear my false leg, which you made, and have worn it most of the time since. The socket was comfortably fitted, and I have no trouble with the leg whatever. I cannot express in language my admiration and gratitude for an invention which reconciles me to the loss of a limb, and which enables me to enjoy so much comfort and happiness. It makes that which formerly appeared as one of the severest afflictions, to be in reality one of the least. My patent leg has been perfectly satisfactory in every way, and I do not see what fault can be found, or what improvement can be made. Should you desire any other testimony from me, I shall always be happy to give it.

I am, very respectfully,

Your ob't servant,

FRANCIS FESSENDEN,

Brigadier-General.

B. FRANK. PALMER, LL.D.

The above letters have been indorsed in the following terms by a GREAT NUMBER OF SOLDIERS. We give place to a portion of the names, and intend soon to present a complete list of the mutilated heroes on our ROLL OF HONOR. COMMISSIONED OFFICERS have paid for limbs, but NO CHARGE has been made to any other soldiers.

CERTIFICATE OF SOLDIERS.

"I have read the certificates of MAJOR-GENERAL D. E. SICKLES, and BRIGADIER-GENERALS W. F. BARTLETT and FRANCIS FESSENDEN, concerning the patent leg of DR. B. FRANK. PALMER, and fully concur in the opinion expressed by those eminent officers.

"I lost my own leg in my COUNTRY'S SERVICE, and have been supplied by Dr. Palmer with his best PATENT LEG, without charge. I believe the PALMER LEG to be the best known, and recommend DR. PALMER for the exclusive patronage of the Government."

[Signed by hundreds—see pages 32-33.]

THE FOLLOWING

OFFICERS AND SOLDIERS

Affixed their autographs to the certificates of Generals SICKLES, BARTLETT, and FESSENDEN, in about ONE WEEK. Many more have now been received, and will soon be added to our ROLL.

ARCHIBALD CLARK,	JOHN P. OWENS,	NATHAN H. POTTS,
CHARLES W. KEYS,	AMASA J. SMITH,	WM. R. RAMSEY,
CHARLES M. ROBERTS,	WILLIAM SPRAKER,	JOHN Y. SEIDERS,
GEORGE L. STARKEY,	G. P. VAN ALSTINEE,	THEO. SELAH,
FRANK B. WARD,	CHARLES LAWRENCE,	JOHN E. SIEGRIST,
ALONZO B. ADAMS,	PATRICK MURPHY,	JAMES BATHURST,
C. L. BABSON,	H. J. PIERCE,	J. SHARP WALKER,
JOHN L. BRADISH,	ALEXANDER WILSON,	ALFRED WHITTINGHAM,
SAMUEL DOWNS,	CHARLES W. BARNES,	WM. CHAMPENO,
LORENZO W. HOFSES,	NICHOLAS BOURKNEY,	JOHN OSBORN,
JOSEPH JAMES,	ERSKINE B. BRANCH,	L. A. ROBB,
DANIEL D. MARTIN,	AARON BYINGTON,	JOHN J. SMITH,
DANIEL M. MOODY,	JACOB CHRISTOFFERSON,	W. SPITLER,
JEROME O. SANBORN,	SOLOMON CLOSSER,	JOHN TREES,
E. H. WHEELER, JR.,	EDWARD COLE,	SAMUEL D. WALKINS,
R. B. COOKSON,	JAMES H. DANGLER,	JOHN WARD,
ENOS REWITZER,	J. L. DERRY,	THOMAS ABBOTT,
WILBUR HOWARD,	JOSEPH R. DUNN,	E. W. ALLABACK,
CUMMINGS PRIEST,	WARREN K. FULLER,	THEODORE N. ANEY,
SAMUEL C. ROBINSON,	PATRICK KERWIN,	JAMES BAKER,
JOHN M. WILKINSON,	ALBERT D. KIMMIE,	DANIEL H. BEE,
HENRY G. ANTHONY,	PHILIP KREIG,	CHAS. BURBRIDGE,
OLON B. CARPENTER,	DANIEL MCCORD,	JAMES F. BURNS,
WILLIAM W. COOK,	WILLIAM H. MCCLURE,	GEO. H. CHURCH,
WILLIS P. DURKEE,	MICHAEL O'ROUKE,	JOHN CLUCK,
BARTLETT E. WHITE,	PATRICK QUINN,	GEO. L. COOK,
WESLEY C. SAWYER,	CONRAD REIZLER,	ANDREW CROOKS,
MOSES S. HERRICK,	WILLIAM RELYEA,	CHARLES CUNNINGHAM,
PHILIP MCGUIRE,	JOHN ROSS,	ADAM DENNIS,
WM. W. WHITCOMB,	JAMES S. SCULLION,	ABRAM DREIBELBIS,
JOHN W. RICKE,	PHILETUS SEDGWICK,	JAMES J. EDMONDS,
JOHN W. BLAKENEY,	JACOB SKOUTON,	TIMOTHY ELLIOTT,
DANIEL A. HATCH,	GEORGE W. SMITH,	DAVID S. FLOCKHART,
N. M. HEMENWAY,	THEODORE SPININGS,	RICHARD FORNEY,
EDWARD KELLY,	HOLLAND TWINEM,	PHILIP FOY,
CHESTER B. KENFIELD,	WALTER S. VILES,	CHARLES H. GRIEFF,
FREDERICK MARTIN,	JOHN E. WUNDERLEN,	WILLIAM GROSS,
CHARLES F. MORGAN,	WM. D. SMITH,	ALFRED HAUSBECK,
ALBERT SHERMAN,	THOS. J. SPROUL,	CONRAD HOCHSTETLER,
RICHARD AMBROSE,	GEO. FORSEYTH,	BENEVILLE HOYER,
LEVI DIXON,	WM. H. KIRBY,	HENRY HULCEY,

THOMAS H. DOYLE,	JOSIAH M. WILLS,	WARREN H. JOLINE,
DANIEL MAGHER,	JNO. B. ROBINSON,	JOSEPH A. KASHNER,
FREDERICK GUYER,	WILLIAM BRAGG,	JACOB KREGER,
HENRY CLIFF,	W. H. DICKEY,	JOHN V. KUHN,
LOUIS DUGAL,	JNO. L. DOUGHERTY,	JOHN W. LANGFITT,
HIRAM L. FOSTER,	E. D. HULBERT,	ABSALOM LITTLE,
LEWIS M. HAWLEY,	WILLIAM KEINER,	JAMES C. LOCKE,
N. LOHR,	WM. LEHR,	JOHN KANE,
EDWIN MARTIN,	HENRY H. PALMER,	W. H. PULLEN,
JOHN W. MORGAN,	THOMAS J. RODGERS,	JOHN H. CAREY,
WILLIAM F. NICE,	DAVID P. WALLACE,	R. M. FISH,
JOHN O'CONNOR,	DANIEL D. WHITMORE,	SAMUEL HOYT,
OBADIAH PALMER,	JOHN ANDERSON,	ISAAC LANE,
ARCHIBALD G. PATTON,	JOHN KOUNTZ,	FERNANDO PAGE,
OBADIAH PFEIFFER,	ALEXANDER LOWRY,	WILLIAM M. SHATTUCK,
LEWIS RODENHOFFER,	PEDRO MONTALDRO,	NICHOLAS ZIESSE,
GEORGE W. ROSEVELT,	PETER PIXLEY,	CHAS. H. DOERFLINGER,
GEORGE GEDDES,	MATTHIAS ROSSELIT,	CHAS. A. DIBBLE,
ELI SMITH,	WILLIAM SAGE,	Z. B. RUSSELL,
WILLIAM S. SNYDER,	GEO. SKIDMORE,	HENRY KLINKER,
PARKS J. STACKHOUSE,	WILLIAM WEST,	THOS. YULE,
JOHN STINSON,	JOHN N. RUNYON,	WILLIAM E. HEWITT,
WILLIAM G. TRETLE,	WILLIAM P. WILON,	JOHN MICHAELS,
JOHN W. TRUESDELL,	T. H. GENTRY,	FREDERICK STEINHAUS,
JOHN VANKIRK,	C. MCGUIRE,	MICHAEL SCHNEIDER,
A. J. VANKIRK,	JOHN J. TROUTMAN,	ISAAC LOPER,
JAMES WEBB,	ALEXANDER ANDREWS,	CHAS. S. VALENTINE,
JONATHAN G. WEST,	JONATHAN BRINSON,	G. M. COWGER,
E. E. WILSON,	HENRY C. CARR,	GEORGE A. MILLIKEN,
ORLANDO WRIGHT,	A. DAUGHERTY,	M. V. AMELUNXEN,
JONATHAN M. JOHNSON,	W. W. ENGLISH,	ROBT. KELLY,
JOHN MCKNIGHT,	S. U. GOODWIN,	P. HENRY CASEY,
JACOB P. OBIER,	GEO. HASENOUR,	ALBERT E. WOODRUFF,
GEO. BLACK,	GEO. LAMBERT,	CHAS. W. BROWN,
CYRUS RIDENOUR,	JOHN M. TUCKER,	ROBT. S. WATROUSE,
A. G. LEONARD,	JOHN ALLEN,	SAML. FAULKNER,
JAMES B. SHANE,	RICHARD CLEARWATER,	E. P. MCINTYRE,
WILLIAM B. JONES,	J. N. DUNLAP,	J. W. FOREMAN,
JAMES SKELTON,	SCHUYLER WAKEFIELD,	VIRGIL W. SWETT,
WM. C. DUNGAN,	HENRY BECKER,	JOHN SCHROTH,
HENRY A. BROTT,	OLIVER H. CLARK,	M. C. DONAGHO,
CYREMRO DE JEAN,	JONATHAN JESSUP,	CHAS. F. DYER,
JAMES SMITH,	WILLIAM HOUSER,	A. McMILLEN,
DAVID WOOD,	S. D. STROCK,	WM. BRANIGAN,
ALBERT WHITNEY, AND MANY OTHERS.		

(To be continued.)

MAJOR N. C. MACRAE, U. S. A.

No. 100 EAST THIRD STREET,

CINCINNATI, OHIO, January 1, 1865.

DR. B. F. PALMER.

DEAR SIR: Your manufacture of artificial *legs* has been fully tested by me during a period of more than *sixteen consecutive years*. I take pleasure in testifying, for the benefit of others, that your manufacture is very *durable, simple, and excellent*. The simplicity of your invention is its greatest recommendation, and I have not the talent to point out any change in it.

Very truly yours,

N. C. MACRAE,

Major U. S. A.

CAPTAIN W. HENRY WALCOTT.

FORT PREBLE, ME., Aug. 2, 1864.

DEAR SIR: I lost my left leg in the battle of Gettysburg, the wound being a compound, comminuted fracture. Before my recovery I had to submit to ten operations, which, of course, did not leave me in the most favorable condition for the application of an artificial leg. Before concluding which of several legs I should select, I was waited upon by at least ten different manufacturers, including those of all the so-called "improvements" which have been brought out. I concluded that the PALMER LEG was at least quite as good as any of them, and I procured it.

Immediately upon putting it on, I walked with great ease and naturalness. In one week, I threw aside my cane, and I now march my company on parade without cane or support of any kind, and march without fatigue. At the late party given at Fort Scannel to the Congressional Committee, I *danced* three times, one of the dances being a contra-dance. I allude to this to show what can be done with a Palmer Leg.

Very truly yours,

W. HENRY WALCOTT,

Captain 17th U. S. Infantry.

B. FRANK PALMER, LL.D.

COLONEL H. D. JARVES' STATEMENT.

December 10, 1862, 2d Lt. H. D. Jarves, 24th Mass. Vols., bought one of Palmer's legs (left leg).

May 1st, 1863, went to North Carolina, and served on Staff of 18th A. C. as Asst. Com. Musters, and Commissary of Musters, Army and Dist. of N. C.

January 8th, 1864. Commissioned Major 56th Mass. Inf. Started with the regiment from Annapolis, April 21st, 1864, and went through the marches from Annapolis of the Ninth Corps, the battle of the Wilderness, and was disabled by a shell contusion in battle of Spottsylvania Court-house, May 12th, while in command of the 56th Massachusetts.

May 25th, 1864. Commissioned Lieut.-Col. 56th Mass. Inf.

The Palmer Artificial Leg has been as near perfection as anything artificial can be. I have been able to walk several miles without a cane, wearing my sword, and am perfectly satisfied with the invention.

H. D. JARVES,
Lieut.-Col. Mass. Inf.

CAPTAIN W. C. SAWYER.

GROTON, CAMP STEVENS, NOV. 7, 1862.

DR. B. FRANK. PALMER.

DEAR SIR: It is now about one month since I first applied the artificial leg you made for me. I am constrained to say it has more than realized my expectations. Before selecting the "Palmer Leg," I made diligent inquiry and examination, and concluded finally that I was sure to get as good as any in procuring yours. I was fearful that, with so short a stump, I should be unable to discharge all the duties devolving upon me as Commandant; but to my surprise I am able to wear it constantly, walk wherever I wish to, and, most surprising of all, *ride on horseback every afternoon* almost as well as ever. In short, I find it equal to all emergencies. I desire to express my full satisfaction, and earnestly recommend my brother officers and soldiers, who may need an artificial leg, to lay aside the crutches as soon as possible, and procure a "Palmer Leg."

With much gratitude, I remain,

WESLEY C. SAWYER,
Capt. and Comdt., Camp Stevens.

FROM A GALLANT SOLDIER.

32 VINE STREET, CINCINNATI, OHIO,
December 8, 1864.

DR. B. F. PALMER.

SIR: I lost my leg at the battle of Wilson's Creek, Mo., in August, 1861, where the lamented General Lyon fell, and in consequence of difficulties in healing the wound, was unable to use an artificial leg till November, 1862. I applied to Dr. Corliss, your agent in this city (whose gentlemanly bearing I here take the liberty to acknowledge), to procure one for me from your establishment. I have worn it since November, 1862, to this day, and am now wearing it; and I wish to say, for the benefit of all similarly situated, who have not yet "procured a substitute," that they cannot do better than get a "Palmer Leg." This last summer I have walked, on an average, six miles a day over a *rough country road*, and have met with no inconvenience save such as is necessarily incident to one in my condition.

When the U. S. Government made a liberal appropriation for purchasing limbs for limbless soldiers, I availed myself of the opportunity, and ordered another from you (my choice of the manufacturer being optional), which fits me equally as well as the one I purchased myself, and answers its requirements to all intents and purposes. Few persons would notice that I wear an artificial leg.

Respectfully, your obedient servant,

R. W. ROWE,

Late of Co. H., 1st Mo. Lt. Artillery.

ANOTHER ON THE "ROLL OF HONOR."

244 LONGWORTH STREET,
CINCINNATI, January 10, 1865.

DR. B. FRANK. PALMER.

DEAR SIR: In the battle of Stone River, I received an injury in the foot, and my foot was amputated at the instep (Pirogoff operation). The surgeon assured me that I could walk on what remained of the heel. In June last, your agents here procured and fitted me with one of your artificial feet.

I can now walk well, and few, if any, would notice that I wear an artificial foot.

Yours, truly,

PEDRO MONTALDO.

81 EAST VINE STREET,
CINCINNATI, December 2, 1864.

DR. B. FRANK. PALMER.

DEAR SIR: I have worn one of your patent artificial legs for NINE YEARS, WITHOUT ANY REPAIRS; and although my stump is only six inches in length, I can do more work in my blacksmith shop than any journeyman that I can hire; and men have worked beside me every day for months without knowing that I wore an artificial leg, I walk so well, until I told them of it. It is the best leg I have ever seen.

Yours, truly,
JOHN PURSER.

BARRE PLAINS, MASS., May 19, 1864.

DR. B. FRANK. PALMER.

I have worn your artificial leg constantly for about eight years. It is a full-length leg, and I have performed an astonishing amount of work with it. My business is flannel-finishing. I can travel twelve miles in three hours and a half, and have done it, *walking every step of the way on your artificial leg*. I frequently walk, on Sundays, from three to five miles. I am now getting a new leg. I have been importuned by other artificial leg manufacturers; but having thoroughly tried your leg, I am satisfied that nothing artificial can surpass it; hence I cannot afford to make *experiments*.

The statement concerning my walking ability may seem to smack of the incredible; but I shall be glad to fully satisfy any unfortunate fellow-sufferer that all I state, and more than I can here specify, can be done with a *full-length* artificial leg. Another fact of great importance to all who are obliged to wear artificial legs, I must mention. In the nearly eight years that I have worn your limb, I have expended *less than five dollars* for *repairs*. I give these facts more to benefit the afflicted than from any desire to extol your invention. I shall be happy to communicate with any one who may wish for a personal statement.

Respectfully yours,
MAT. WALKER.

U. S. CLOTHING DEPOT, 102 WEST SECOND STREET,
CINCINNATI, December 10, 1864.

I take pleasure in recommending Dr. B. F. Palmer's Artificial Leg. I have never had to leave it off a day. My leg was amputated about four inches above the knee, but I walk so well with the "artificial" that many of my personal acquaintances have been unable to discover the natural from the artificial limb. It has never been out of order, and now is as good as when new.

Yours, respectfully,

G. M. THRASHER,
102 West Second Street.

69 WEST SIXTH STREET, CINCINNATI,
January 11, 1865.

DR. B. FRANK. PALMER.

DEAR SIR: I have worn one of your Patent Artificial Legs for many years, and having worn others, without being satisfied, and examined all kinds made in this country, I have no hesitancy in saying I consider yours superior to any I have ever seen.

I have worn it every day since your agents here fitted me. I walk several miles every day, and very few would notice that I use an artificial leg.

Yours, truly,

SOL. MARTIN.

MILFORD, MASS., Jan. 20, 1865.

B. F. PALMER, LL.D.

DEAR SIR: I have worn one of your admirable artificial legs about three months. My leg was amputated, at the Massachusetts Hospital, by Dr. H. J. Bigelow, in August, 1863. I want simply to testify to the *practical* value of your leg. You will remember that it is a *thigh* amputation. I stand ten hours daily at my business (stone-cutting), and at the close of the day walk two miles to my home. *I can walk ten consecutive miles comfortably*, having done that in a fortnight after I first put it on. I walk so naturally that my lameness is scarcely observed.

Truly yours,

WILLIAM H. BATCHELDER.

AN ANKLE-JOINT OPERATION.

CINCINNATI, January 12, 1865.

DR. B. FRANK. PALMER.

DEAR SIR: In 1857, my left leg was amputated at the Commercial Hospital, in this city, *through the ankle joint*. The same year I procured of your agent here one of your patent legs, which enabled me to walk so well that many persons who have tried were not able to tell which was the artificial leg on seeing me walk. I have worn your patent leg OVER SEVEN YEARS, WITHOUT ANY REPAIRS, and can do as much work, as a baker, as any other man.

Yours, respectfully,

JOHN FECHNER.

STATE OF NEVADA,

ASSEMBLY CHAMBER, February 18, 1865.

DEAR SIR: I received the leg made for me, and have been wearing it, with satisfaction and delight. I am satisfied I could not have been better pleased, and more exactly fitted, had I visited the factory myself. It is my intention to write this as a testimonial for your pamphlet, and, as a voice from the Sierras, express the gratitude I feel towards you.

Respectfully,

CHAUNCEY STEWART.

B. FRANK. PALMER, LL.D.

CANAAH, JEFFERSON CO., IND.,

February 10, 1865.

DR. PALMER.

The artificial leg that I procured of your agent is a success. I could not be content without it. It will prove a lasting blessing. No one would suppose that I have an artificial foot, when I walk. My amputation being what some call "Chopart's" amputation through instep, said by the doctors to be the hardest of all amputations to fit successfully, I had been thus discouraged, and went on a *knee-crutch* about ten years. I was told by other leg manufacturers that no one could make an artificial foot that I could walk with (only a few months ago). I have used your leg about three months.

Yours, truly,

HENRY O. PEEL.

REV. E. M. PECKE.

[This eminent divine, whose case presented many obstacles in the way of immediate success in the use of the Palmer Foot, has kindly offered a testimonial, which, under the circumstances, will be regarded as an opinion intelligently formed, and consequently of great value.]

MAUCH CHUNK, PA., Jan. 12, 1865.

MY DEAR DR. PALMER: Nothing can give me more pleasure than to add my testimony to that of hundreds of others in the matter of the excellence of your patent appliances for amputated limbs. As you know, my case is one of the SYME operations of the right foot. Although very tedious in healing, the stump is now perfectly sound and available for use. For the last eighteen months I have walked, not only with comfort, but with really pleasurable satisfaction. How far I *can* walk, or for how long a time, I cannot say. I *have* walked for five hours and a half at a time, using no cane (I never do), over the roughest kind of country. What more I can do I do not know, having never tried; but on the city pavement I have found myself fully equal to all the walking I have any need for. The only thing that I believe I cannot do *well* is to *run*; however, in my profession, I do not anticipate having much running to do. I am sure if all persons who suffer the loss of a limb experience as little inconvenience as I do, they will not waste many moments in regret. I have always been a very active man, and I do not find that I am now any less active than in former days. May you long live to make others as happy and as useful as you have made me, and may they all be as grateful to you as

Your loving friend,

E. M. PECKE.

To

B. FRANK. PALMER, LL.D.

N. G. NETTLETON, Esq.

HOMANS & Co.'s BANK, 23 WEST THIRD STREET,
CINCINNATI, Dec. 20, 1864.

DR. B. FRANK. PALMER.

DEAR SIR: Having worn your Patent Artificial Leg for fifteen years, I recommend it as being superior to any I have ever seen. I have worn several kinds and examined others,

but I consider yours the best; so much so that, about a year ago, being desirous of having a new artificial leg, so as to have two, for convenience, I procured another of yours in preference to any other that I could find. It is light, easily worn, durable, and not liable to get out of order. I walk so well that few suspect that I walk with an artificial leg.

Yours, truly,

N. G. NETTLETON.

JAMES S. STACKHOUSE, Esq.

PHILADELPHIA, January 9, 1865.

DR. B. FRANK. PALMER.

DEAR SIR: On the 22d of April, 1857, it was my misfortune to lose a foot and ankle-joint by a railroad accident. Since wearing your Artificial Leg, I have, the greater portion of the time, been employed on the Pennsylvania Central Railroad in the capacity of conductor, and in that position have run, at different times, the most difficult trains on the road (accommodation trains), from the fact of these requiring greater activity on the part of the conductor, such as jumping on and off at stations, passing quickly through the train from one car to another, &c. It affords me great pleasure to add my testimony to the superiority of your limb. In fact I can scarcely realize that I have suffered so severe a loss as that of a foot. During the six years I have worn the leg I have thoroughly tested it in the most trying position in which a leg, particularly an artificial leg, can be used, and am happy to say I have never found it wanting. Should you wish to refer any parties to me for information concerning the good qualities of my limb, I would be happy to see them at my residence, No. 1344 Coates Street.

I remain yours, truly,

JAS. S. STACKHOUSE,

Conductor P. R. R.

PHILADELPHIA, February 4, 1865.

DR. B. FRANK PALMER.

DEAR SIR: Having worn one of your artificial legs for about seven years, it gives me pleasure to state that it has given me entire satisfaction. I am engaged in active pursuits, frequently act in the capacity of railroad conductor, and occasionally indulge in hunting and fishing. I am able to walk with perfect comfort and naturalness, and with little fatigue. I have walked

continuously as much as twenty miles, without inconvenience. My loss is not suspected by those who have no previous knowledge of it, as I walk without the slightest limp, and never use a cane. You are at liberty to publish this statement for the benefit of all who may need your professional services.

Respectfully, yours,

A. D. MIDDLETON.

PHILADELPHIA, June 17, 1863.

I hereby certify that I have worn various artificial legs, made upon different plans by different persons, and am free to state that, after using Palmer's patent, and witnessing its superiority, especially in the beautiful and substantial invention of his *ankle joint*, as patented in 1846, I give his plan the preference over all others.

W. W. REIGLE.

THE OPINION OF A LADY.

[SYME OPERATION.]

IRVING HOUSE, TWELFTH STREET, NEAR BROADWAY,
NEW YORK, January 12, 1865.

DEAR DOCTOR: Having derived so much benefit from your skill in the adaptation of an artificial foot, I cannot refrain from expressing my gratitude—daily increasing as it is—for I more and more experience the ease and facility of movement through your invaluable invention.

The 17th of last March my foot was amputated. The period of deep distress, and the frightful future of helplessness then opening before me in my 22d year, can only be realized by those of similar sad experiences. Unfortunately, not a few, in this day of crippled humanity from war's sad *footprints*, will understand me.

When Dr. Olcott, of Brooklyn, after close investigation of the subject, made me acquainted with your wonderful invention, I confess I had but little faith in the possibility of so far repairing my loss; but, from your care, I found myself not only able to throw aside my crutches, but was surprised immediately to find myself an independent walker. The second day of the trial I walked, without crutch or cane, full two miles; and now, after five months' use, part of that time travel-

ling, I find that I can run up and down stairs, walk without limping, and, with a perfect feeling of security, make my way through the crowds of a metropolis; indeed my most intimate friends would scarcely suspect the presence of an artificial foot.

It would be an easy matter to conceal my loss, were I so disposed; but my sympathy with the unfortunate, and my gratitude to you, my dear Doctor, forbids anything of the kind; and I ask you to permit me to offer my public testimony to your skill, and will ever hold myself ready to gladly respond to any inquiries from those who may be interested.

I remain yours, gratefully,

MRS. JOHN B. EAGAN.

B. FRANK. PALMER, LL.D.

FROM A LADY WHO HAS WORN THE LIMB SEVENTEEN YEARS.

SOUTH ACTON, MAINE, October 3, 1864.

MY DEAR DOCTOR: This bright, beautiful morning, memory goes back eighteen years. I find the morning similarly beautiful; but circumstances and surroundings very dissimilar. Sick, emaciated—with vitality well-nigh consumed—as a last alternative, I was obliged to submit to the amputation of my right limb.

What a contrast does the present picture present.

Well, vigorous, happy, full of life and purpose, two good limbs—walking finely!

Truly, God has dealt kindly with me, and I hope I possess, in some measure, a thankful heart.

I have continued the constant use of the Palmer leg more than seventeen years to the present time, having worn a duplicate only for the last six weeks, and even now am having the original repaired, with the expectation of its lasting some time longer.

I can never be too thankful that an invention so nearly compensating for the lost member was so closely allied to the date of my misfortune.

I did not have to combat life years without it. For, with such tenacity do I cling to it, that it seems to me, no greater misfortune could befall me than to be deprived of it.

Very truly, yours,

ABBY H. GODING.

AMPUTATIONS.

BY

B. FRANK. PALMER, LL. D.

[Originally published in the "Surgical Adjuvant." Copied in "Velpéau's Surgery," 1854.—With Additions, 1865.]

WHERE AND HOW TO AMPUTATE.

It is obvious that the artificial joints and tendons can never be made to act by mere volition, yet the well-adjusted substitute may be made to respond to the movement of the living member, and it requires no argument to show that the mechanical limb may be moved by *lever power* as readily as the natural one. The stump may be termed a lever, which, aided by auxiliary appendages attached to the thigh or body, moves the false leg. Upon the length and fitness, then, of the stump, depends in a great measure the success in locomotion.

The rule of Chopart is no longer admissible. This operation does not admit of so perfect or so durable a substitute, and none of the various modifications of it furnishes so good a stump for locomotion as the mode of Pirogoff, which is found to be the best of all the ankle operations now practised, and commends itself to the attention of the profession.

If removed through the tarsus, and particularly if no more of the bones than the astragalus and calcis remain, the cicatrix is invariably drawn downward by the contraction of the tendo Achillis, and the patient is rarely, if ever, able to support any considerable portion of his weight upon the heel. The support is necessarily upon a socket *inclosing the leg*. The false foot and ankle are less perfect, the tendo Achillis does not perform its function, and an adequate artificial tendon is supplied with great difficulty. I am almost weekly appealed to by patients who, having suffered this mutilation, find that *careful treatment, for years*, will not produce a good base of support. The contraction of the gastrocnemii muscles causes such depression of the cicatrized surface that the least attempt at walking keeps up ulceration of the cicatrix, which is often followed by *caries of the bones*, involving the necessity of secondary amputation.

RULES FOR AMPUTATION.

THE GREATEST LENGTH POSSIBLE should be saved (except when variations of the rule are demanded), and if the living portion be radically defective in length, or flexibility, Art, though it may mitigate the suffering, can never fully supply the deficiency.

Often, in cases which admit of most favorable amputation a most unwarrantable portion of the leg is removed, and not unfrequently the knee is permitted to remain semi-flexed so long as to become incapable either of full flexion or extension, while in other instances a healthy joint is found fully flexed and permanently *useless* for want of a little care in healing.

FIRST PLACE OF ELECTION.

The first point of election, when a portion of the *foot* must be removed, is obviously at the metatarso-tarsal joint, as done by Lisfranc, in which case the phalanges can readily be supplied, so as to effect complete restoration.

SECOND PLACE OF ELECTION.

Pirogoff's amputation at the ankle, after numerous trials, all of which have been most completely successful, is found to possess superior advantages, and must be classed as the second point of election, in order, and the first of its *class*.

Dr. Hewson, Surgeon to the Pennsylvania Hospital, Philadelphia, has performed the Pirogoff operation with perfect success in *five consecutive cases*. In all of these bony union between the tibia and the os calcis has been readily established, and the end of the calcis has formed the most perfect point of support in every instance.

I have the pleasure to present extracts from the report of Dr. Hewson to the COLLEGE OF PHYSICIANS, OF PHILADELPHIA, published in the AMERICAN MEDICAL JOURNAL, Philadelphia, July, 1864, viz.:

"CASE IV. Morris Lammey, aged 12 years, residing in Erie Street, was injured on the 10th of August, in attempting to get off a freight train whilst in motion. The wheels of a car passed obliquely over his right foot, crushing it close up to the ankle-joint, literally leaving nothing but the heel. He was brought immediately to the Pennsylvania Hospital, where a Pirogoff amputation was performed within four hours after the accident occurred.

Owing to the extent of the injury on the sole and inside of

the foot, the incision had to be made further back on the sole than was done in the other cases, and the portion of the os calcis preserved was consequently less.

The posterior tibial was preserved intact. Four ligatures in all were applied to bleeding orifices. The edges were united by leaden sutures, and a dry dressing was used with the extending weight. The wound united rapidly, having suppurated very little. The os calcis appeared to be firm to the tibia on the twenty-fourth day.

He had an artificial limb applied by Dr. Palmer, in the month of February, and is making good progress in its use. He can already run with facility on it.

Most persons who have undergone an ordinary amputation of the leg can *walk*, on an efficient artificial limb, with great ease, and even at a rapid rate, after some practice in its use; but few, if any, can however undertake to *run* with such an adjunct.

Five cases have been operated on by the author of this communication. In all a cure followed rapidly. In two especially the result was least to be expected.

John Nespar, who has been walking on one of PALMER'S legs for a year, has never had to use any additional covering than that originally put on his stump. He, too, *runs* perfectly."

THIRD PLACE OF ELECTION.

Prof. Syme's operation will (since we have made a limb to meet its requirements) now become the third point of election, but should never be substituted for the Pirogoff when the latter can be well performed. It is only in cases where *caries of the os calcis* forbids the election, that preference should be given to the Syme, since the same amount of integument is essential in both operations. The success in walking is similar to that in a Pirogoff operation, though not equal.

FOURTH PLACE OF ELECTION.

We now arrive at what may be called the *first* place of election of the *leg*, or the lower third, which is usually about ten inches below the inferior edge of the patella, though it is always advisable to amputate high enough to secure a good flap, which is very important, as it prevents unpleasant sensations, such as arise from a slight tension of the thin skin, too often found to be the only covering of a protruding bone.

FIFTH PLACE OF ELECTION.

If a stump must necessarily be less than ten inches in length *below the knee*, amputate at the lowest point possible.

SIXTH PLACE OF ELECTION.

This is the operation for the application of the leg *on the knee*, and should be so performed as to allow the end of the stump, when flexed, to fall *one inch* back of the thigh, to form a sort of grapple, as it fits the concavity of a socket, by which means the limb may be held securely in its place without any appendages to connect it with the waist or shoulders. The point is *just below the tuberosity of the tibia*, and an artificial joint is applied without exhibiting a protruding stump. This rule will apply in amputation for ankylosis of the knee. Perfect use of the knee-joint should always be secured, if possible, even if the stump is too short for use in walking. The end of the stump is so secure from all pressure (in the hollow of this flexible socket) that use does not produce excoriation or inflammation, and I have, in repeated instances, applied my limb, in the JEFFERSON COLLEGE, within six weeks after the day of amputation, without any danger of immediate or remote inconvenience to the wearer. Amputation *at any point below the knee* is preferable, in all cases, to any of the operations *through the knee*, and the latter should never become the point of election until the surgeon is compelled to recede from the former. If the knee be diseased or ankylosed, and the *joint fully extended*, or only *partially* flexed, in such manner as *to prevent supporting the weight of the body on the knee*, then the knee-joint or the thigh should become the point of election; otherwise, *never*.

SEVENTH PLACE OF ELECTION.

Various modes of amputation through the knee-joint have been tried, and in some instances, where the sixth place of election was inadmissible, with the best results. The best cases are those in which the patella has been preserved, and retained *in situ* as the point of support.

EIGHTH PLACE OF ELECTION.

About ten inches from the perinæum, usually, or at the lower third of the thigh, with an ample flap, well covering the bone. If obliged to operate at a point nearer the trunk, save

the *utmost length possible*, as every half inch of the thigh, in such case, becomes invaluable.

An ample and well-adjusted flap is, in all cases, highly desirable. The double flap, of Liston, is admirably suited to my uses.

The weight of the body is supported by an even pressure around the whole leg, near the knee-joint, if amputated *below* the knee, and a flexible socket, attached by means of auxiliary side-joints, is laced to the thigh, usually, to enable the patient to graduate the pressure as he finds most proper.

If the *thigh* is amputated, the pressure is adjusted to its conical walls *near the body*, but there must be *no direct pressure against the perinæum*, as excoriation would follow. The *end must be entirely free from all pressure*, as well as in case of application below the knee.

TREATMENT OF THE STUMP.

The joint of the knee and hip should be made perfectly flexible, as soon as cicatrization will admit of movement.

The stump should be tightly bandaged for several weeks previous to the application of the new limb, to compress and solidify the cellular substance, and give the stump a conical shape. The joints should be rendered capable of the fullest flexion and extension. This being done, the patient may walk with much facility at the first attempt, maintaining naturalness and precision of step.

The views now presented are such as have been derived from a practice which embraces many thousands of cases, in which no conceivable form of amputation, known among intelligent operators, could escape notice.

In such a paper as this, it is thought best to publish briefly the results of professional observation, rather than to discuss doubtful theories.

We shall make progress *surely*, if we "make haste *slowly*," in the great science of surgery and compensatory art.

Engaged in a practice now much greater than ever before, I shall find occasion soon for a more extended and interesting paper.

B. F. P.

American Artificial Limb Company.

[Consolidation of Dr. Palmer's Patents. Army and Navy Governmental Commission.]

CHAS F. STANSBURY,

Solicitor of Patents, TREASURER.

B. FRANK. PALMER, LL.D.,

Inventor and Patentee, PRESIDENT.

[All Communications should be addressed to the President of the Company.]

Office, 1609 Chestnut Street,

Philadelphia, May 1st, 1865.

DEAR SIR:

I beg leave to call your attention to the Pamphlet just issued by the **AMERICAN ARTIFICIAL LIMB COMPANY**, a copy of which is mailed herewith, for your perusal. I would request your special attention to the article on the third page of the cover, concerning the mutilated Heroes of the late War, and solicit a communication from you, *by first mail*, on the subject of your loss of a limb, and also ask you to call the attention of your mutilated comrades to the same subject, and request of them, on my behalf, the favor of a statement, in writing, giving the No. of Regiment and Company to which each belonged, with his place of Residence.

I am collecting communications of this kind, to make up a book of reminiscences of the Great War, and propose to make selections from it for publication, with honorable mention of the names found on the long Muster Roll of our "broken soldiers," who have gallantly given their limbs to save their Country.

Yours, very truly,

B. FRANK. PALMER,

PRES. A. A. LIMB CO.

American Artificial Limb Company.

(Incorporated in the State of New York, and having its principal office in New York City.)

B. FRANK PALMER, LL.D.,

Attorney and Counselor at Law,

CHAS. R. STANBURY,

President of the American Artificial Limb Company.

[All communications should be addressed to the President of the Company.]

Office, 1609 Chestnut Street,

Philadelphia, May 1st 1865.

DEAR SIR:

I beg leave to call your attention to the Pamphlet just issued by the AMERICAN ARTIFICIAL LIMB COMPANY, a copy of which is mailed herewith for your perusal. I would request your special attention to the article on the third page of the cover, concerning the mutilated Heroes of the late War; and solicit a communication from you, by first word, on the subject of your loss of a limb, and also ask you to call the attention of your mutilated comrades to the same subject, and request of them, on my behalf, the favor of a statement, in writing, giving the No. of Regiment and Company to which each belonged, with his place of Residence.

I am collecting communications of this kind, to make up a book of reminiscences of the Great War, and propose to make selections from it for publication, with honorable mention of the names found on the long Muster Roll of our "broken soldiers," who have gallantly given their limbs to save their Country.

Yours, very truly,

B. FRANK PALMER.

Printed by A. A. Linn Co.

(M.L.N.)

PRINTED FOR THE

The Roll of Honor.

DR. PALMER is preparing a COMPLETE LIST OF ALL THE HEROES who have given an Arm, or Leg, in the great War, now just terminated, and he respectfully solicits the names of OFFICERS and SOLDIERS, of every grade, who have suffered such honorable mutilation, with particulars of the battle, or manner in which the limb was lost, and *the degree of success in locomotion in case an artificial limb has been supplied.* The name of the manufacturer should be given, or the *cause* stated if the patent limb has *not* been selected and applied, so that it may be known what the character of the treatment has been on the part of the surgeon and the mechanician.

THE "ROLL OF HONOR" now contains the names of more than ONE THOUSAND SOLDIERS AND SAILORS, and additions are being made at the rate of about TWO HUNDRED EACH MONTH.

Such a mass of narrations, fresh from the field of battle, by the gallant soldiers who fell, wounded, amidst the roar of cannon and clashing of bayonets, will present the most thrilling examples of soldierly daring, coupled with heroic fortitude, and Christian resignation, under the severest fortune of War.

It is hoped that every soldier and sailor who has lost an Arm or Leg will forward the information at an early day, to insure honorable mention in the first edition of the book for the purpose, soon to be published.

PHILADELPHIA, May, 1865.

THE
PALMER ARM AND LEG,

ADOPTED FOR THE

U. S. ARMY AND NAVY,

BY THE

SURGEON-GENERAL, U. S. A.

AND BY THE

Chief of the Bureau of Medicine and Surgery, U.S.N.



MANUFACTURED
ONLY

UNDER THE DIRECTION OF THE INVENTOR AND PATENTEE,

B. FRANK. PALMER, LL.D.,

PRESIDENT OF THE AMERICAN ART. LIMB COMPANY.

ALL OTHERS ARE FRAUDULENT IMITATIONS.

OFFICES:

1609 CHESTNUT ST.,
PHILADELPHIA.

1 AND 2 ASTOR PLACE,
NEW YORK CITY.

19 GREEN STREET,
BOSTON, MASS.