

**Famous airmen and their equipment : with some notes on first-aid in emergencies.**

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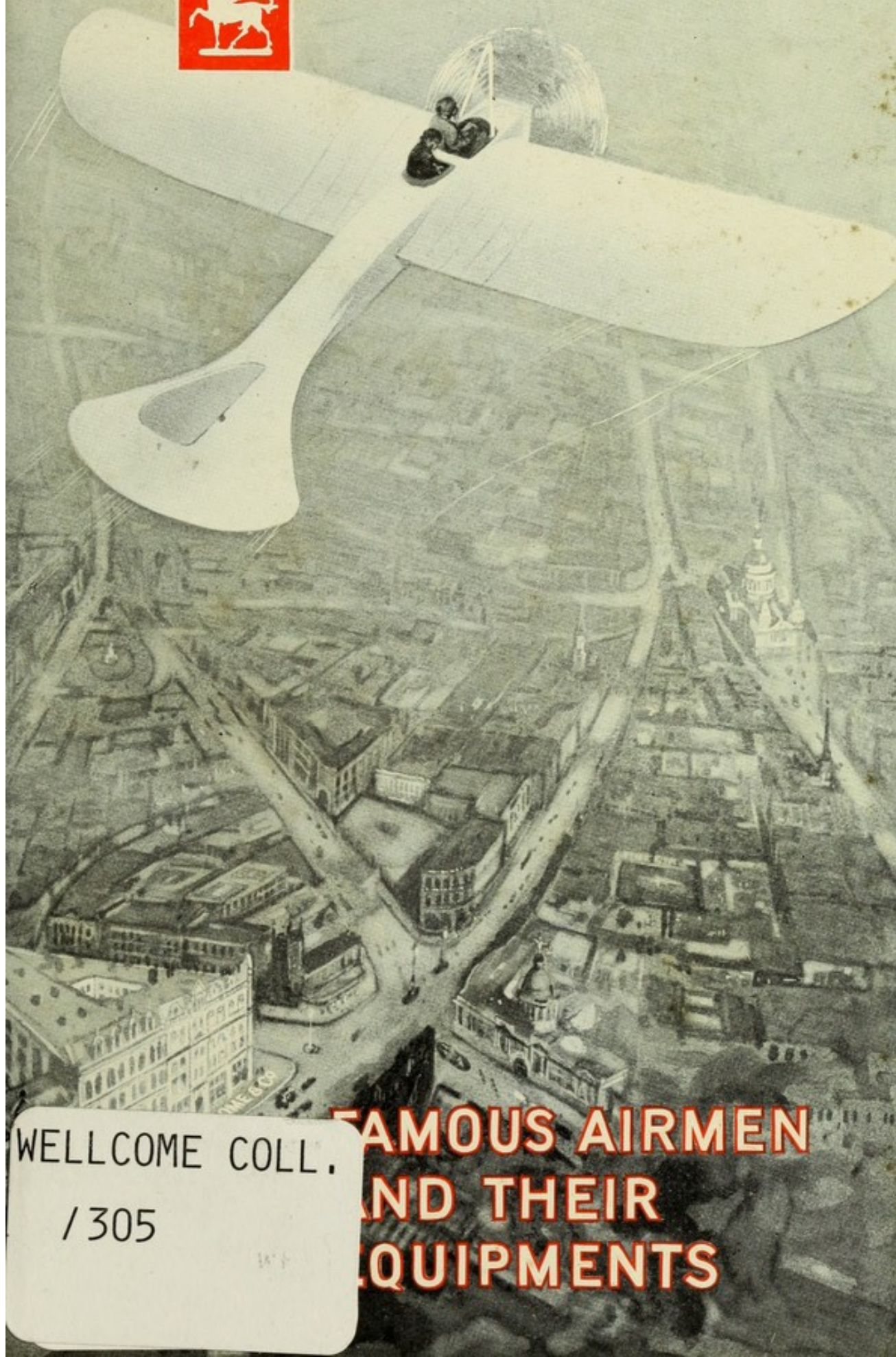
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WELLCOME COLL.

/ 305

**FAMOUS AIRMEN  
AND THEIR  
EQUIPMENTS**

## THE PROGRESS OF AVIATION

Annual Flight records up to the end of 1911 at a glance

### RECORDS OF AEROPLANES

Lilienthal's gliding experiments, 1871-1896; Ader's flights, 1890 and 1897; Wilbur Wright flies a petrol-driven biplane, 1903; the brothers Wright make numerous flights in 1905. Each succeeding year has witnessed marked progress in:—

	DURATION	DISTANCE OF NON-STOP FLIGHTS		SPEED	HEIGHT	
		H.	M.	Miles Yards	Miles per hour	Feet
1906	Santos-Dumont				Santos-Dumont	26
1907					H. Farman	32
1908	Wilbur Wright	2	20	23	Wilbur Wright	39
1909	H. Farman	4	17	35	Delagrèze	49.9
1910	H. Farman	8	12	0	Leblanc	67.5
1911	M. Farman	11	1	29	Nieuport	82.5
					Garros	13,950
					Wilbur Wright	400
					Latham	1640
					Hoxsey	11,470

### FLIGHTS ACROSS THE ENGLISH CHANNEL

Up to the end of 1910 there had been seven aeroplane flights across the English Channel, counting Rolls' double crossing as two.  
In 1911 there were 28 crossings from France to England or from England to France.

### RECORDS OF DIRIGIBLE BALLOONS

HEIGHT—The "Adjutant Reau," 2150 metres (nearly 7000 feet) during a voyage from Issy to Versailles and back, December 6, 1911.

DISTANCE AND DURATION—The "Adjutant Reau," Paris to the Eastern frontier of France and back, carrying eight passengers and two tons of supplies 917.4 kilometres (573 miles), in 21 hrs. 20 min. 50 sec., on September 19, 1911.

### RECORDS OF SPHERICAL BALLOONS

HEIGHT—Süring and Berson, July 31, 1901, at Berlin, 10,800 metres (34,433 feet). DURATION—Colonel Schaeck (Swiss), October 11, 1908, 73 hrs. 47 min. DISTANCE—Emile Dubonnet, Lamotte-Breuil to Sokolowska, Russia, 1954 kilometres (1214 miles), January 7, 1912.

BRITISH RECORD—A. E. Gaudron, with E. M. Maitland and C. C. Turner, London to Mateki Derevni, Russia, 1117 miles, November, 1908.  
AMERICAN RECORD—Post and Hawley, St. Louis to near Quebec, 1171 miles, October, 1910.

# WELLCOME COLLECTION

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TRIPTOLEMUS  
The King of Eleusis  
to whom Demeter gave a Winged Car  
From a Greek Vase  
480 B.C.

Wellcome  
for the history  
and Understanding  
of Medicine

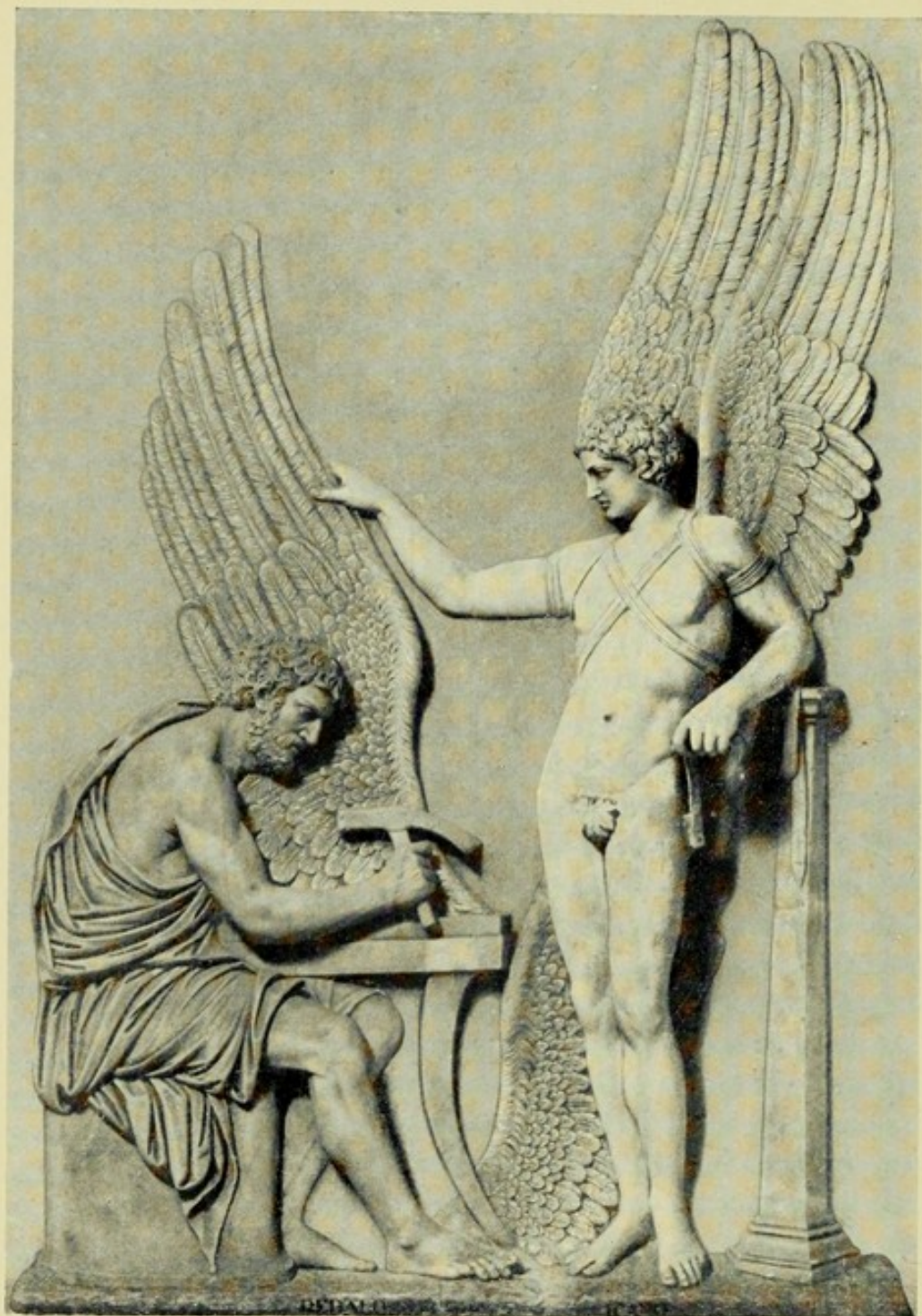
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Photo

Anderson

### DAEDALUS AND ICARUS

From a basso-relievo at the Villa Albani, Rome

Daedalus was the mythological founder and patron of Greek architecture and sculpture, and was said to have procured wings for himself and his son, Icarus, and fastened them on with wax. They fled from the wrath of King Minos through the air, but Icarus going too near the sun, the wax melted, and he fell into that part of the *Ægean*, still called the Icarean Sea.

The legend serves to show how antient is the idea of human flight. The realisation of this age-long ideal has now been achieved by the wit, courage and resource of the modern disciples of Daedalus—the engineers, constructors and aviators of the twentieth century.

FAMOUS AIRMEN

AND THEIR

EQUIPMENTS

WITH SOME NOTES ON

FIRST-AID

IN EMERGENCIES

BURROUGHS WELLCOME & CO., LONDON

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MONTREAL

SYDNEY

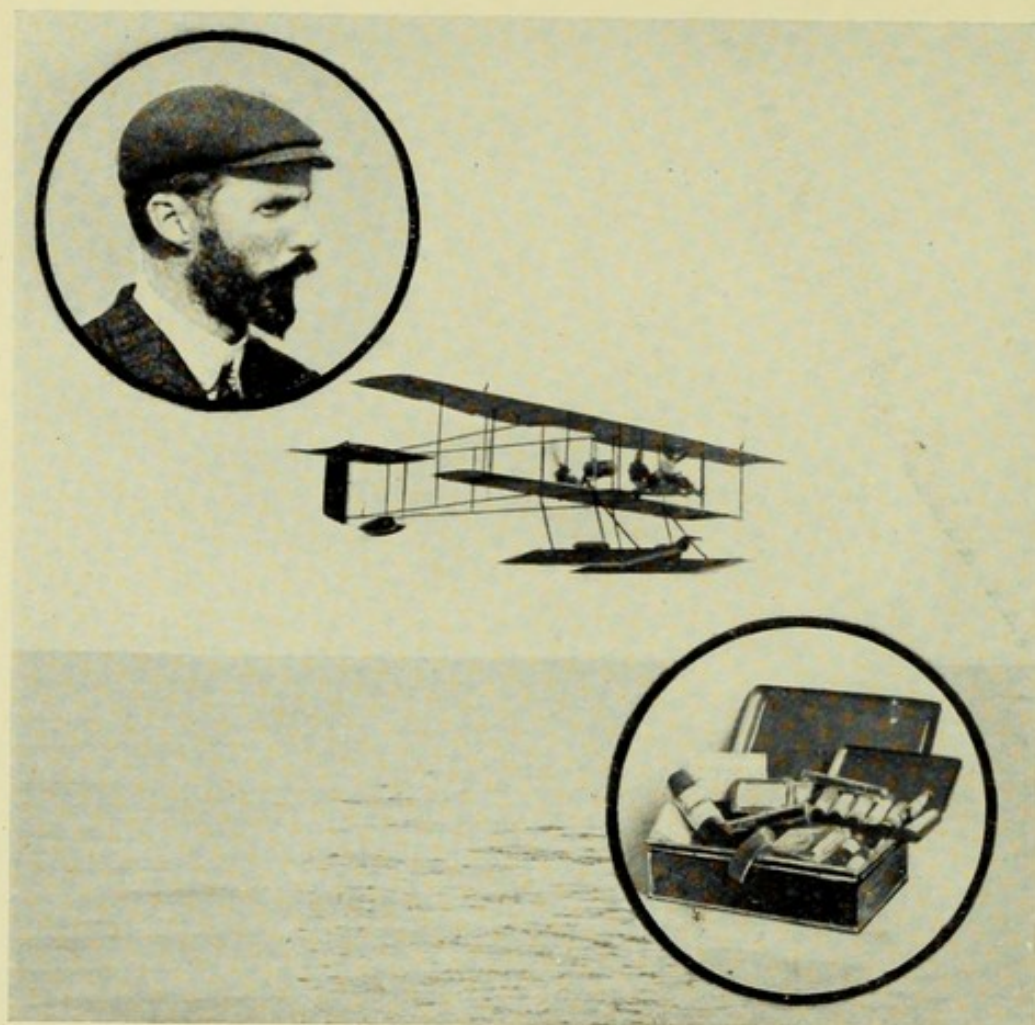
CAPE TOWN

MILAN

SHANGHAI

BUENOS AIRES

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### HENRI FARMAN. AND HIS HYDROPLANE

The contributions of Henri Farman to the cause of aviation are too numerous and too well known to require detailed description. For three successive years (1909-11) he held the world's record for duration of flight, and is equally famous as a designer and constructor of aeroplanes and hydroplanes. In the following interesting report, written in Esperanto, he refers to two aids to the flying man, both international in character, namely 'Tabloid' First-Aid and Esperanto:—

#### *Translation*

"Mi trovas, ke estas tre necesa, ke ĉiuflugisto kunportu unu el viaj 'Tabloid' Unua-Helpo ekipaĵoj kaj sciu Esperanton. Kun tiuj du, li povas ĉien iri.

Feliĉe mi povas diri, ke ankoraŭ mi ne havis gravan akcidenton, sed provante diversajn aparatojn, mi kelkfoje vundiĝis kaj tiam mi estis tre kontenta uzi la 'Tabloid' Unuan-Helpon Kiu ŝparas multekostan tempon."

"I find it very necessary for every aviator to have with him one of your 'Tabloid' First-Aid Cases, and to know Esperanto. With these two he can go anywhere.

Fortunately I can say that I have not yet had a serious accident but, working on the various apparatus, I have hurt myself several times, and was then glad to use the 'Tabloid' case, which saves much valuable time."

*(Inset in the above picture are photographs of Henri Farman and the 'Tabloid' First-Aid equipment carried by him)*



## THE EVOLUTION OF FLIGHT

NOTHING is invented or achieved entirely by one man. In the world of ideas, a new thought grows like a crystal in solution, or rather like a living creature seeking for sustenance and seizing with avidity upon everything which can be of use to its own organism.

It has been so with flight.

For many ages the idea has been present to alert and imaginative minds, and it is interesting to note how first one and then another scientific investigator made contributions, sometimes quite unconsciously, to the ultimate realisation of this splendid and most characteristic achievement of the twentieth century.

A composite  
discovery

Practical aeronautics began with balloons, unwieldy but august pioneers in the new world of air. They owed their introduction, in part at least, to Cavendish's discovery of the specific gravity of hydrogen. The science of the air made some considerable progress by means of the balloon, but reached a negative result in regard to mechanical flight.

It was only when ballooning was succeeded by the heavier-than-air flying machines that the problem of steering a course through the air was finally solved by the labours of Santos Dumont, the brothers Wright and other pioneers.

The magnificent progress of the years which have followed, crowded with new and splendid records as they have been, is patent to all the world. But a glance should be flung backward also upon those guessers at truth and courageous experimenters who prepared the way, sometimes at the cost of their lives, for this giant task. Flight is essentially a dream that has come true.

To the generality of mankind, flight was for ages the most impractical and fantastic of dreams, yet it maintained a foothold. Ridiculed and outfaced by the crowd, the dream lived and prospered. One day man would fly. That thought touched like a ray of brilliant light the mind of each generation, and awakened a responsive gleam here and there in answer to its message.

Flight a  
realised  
dream

The Greek poets sang of Daedalus, the personification of the earliest developments of the art of sculpture and architecture, and his flight over the Ægean Sea from the wrath of King Minos. Of how he procured wings for himself and his son Icarus and fastened them on with wax! Icarus, so the legend goes, flew too near the sun, and, the wax melting, he fell into that part of the Ægean called after him, the Icarean Sea.

From the borderland between myth and history, there comes a strange tale of an intrepid monk of Malmesbury, Ollivier by name, who, in the eleventh century, made for himself wings and sprang from the tower of his monastery, an early *vol plané* which ended in disaster.

Roger Bacon, that wonderful mediaeval philosopher who looked so far into the future from behind his prison walls, thought something might be done with "a large hollow globe wrought extremely thin and filled with ethereal air or liquid fire."

Mediaeval  
speculations

Leonardo da Vinci, the painter of *Mona Lisa*, wrote a treatise on flying, and his example was followed by many another learned and gifted scribe. Indeed, if human flight could have been achieved by the writing of treatises, it would have been accomplished centuries ago.

Francesco de Lana, in 1670, proposed to build aerial boats to be raised by large globes of thin copper from which the air had been exhausted; and



# "BEAUMONT"

Naval-Lieut. Jean Conneau, better known under the *nom de vol* of "André Beaumont," learned to fly a Blériot monoplane in December, 1910, and won on this type of machine the European Circuit Race, covering the whole distance in 58 hrs. 38 min. ; and also the *Daily Mail* £10,000 prize for the Circuit of Britain, finishing first in 22 hrs. 28 min. 18 sec. During his flights he carries 'Tabloid' First-Aid, No. 706, which, in the above photograph, he is seen to be examining, and concerning which he reports :—

"Grâce à sa légèreté et son format la petite boîte 'Tabloid' First-Aid se recommande spécialement aux aviateurs.

Brooklands, le 21  
Juillet, 1911."

J. Conneau

a few years later, Besnier, a French locksmith, actually constructed a valvular wing apparatus. There is a story, too, of a Marquis de Bacqueville who amused the court of Louis the Fifteenth by an exploit which conducted him not to the blue empyrean, but to the muddy waters of the Seine.

In 1766, Dr. Black, of Edinburgh, suggested that hydrogen, which Cavendish had shown to be at least seven times lighter than air, should be used for lifting bodies. His experiments appear to have met with partial failure, due to the too weighty bladders employed for the gas, and they were abandoned. But not so the idea. The world is frugal of good ideas, and this one was destined to open the gate of the air to many an intrepid explorer.

#### BALLOONS

It was in 1782 that those two ingenious and immortal paper-makers of Annonay, the brothers Montgolfier, discovered the lifting power, as they thought, of smoke, but in reality of hot air. They filled a bag with smoke, but the smoke cooled too rapidly. Their neighbour, an old widow woman whose very name is lost in oblivion, suggested attaching the tray which held the fire to the bag, so as to provide continuous heat. It was done, and the first hot-air balloon floated upwards into the air. A few months later, a large and gaily decorated Montgolfier balloon made an ascent before the astonished gaze of the King and Queen of France and a vast concourse of people. Then a cock, a sheep and a duck were sent up and descended unhurt, much to the surprise of the onlookers, who for the most part gravely distrusted the life-sustaining properties of the upper air. Pilâtre de Rozier and the Marquis d'Arlandes shared the honour of being the first human beings to mount towards the heavens in a Montgolfier fire balloon. The act was one of superb bravery, under such conditions and with such a balloon. They went up

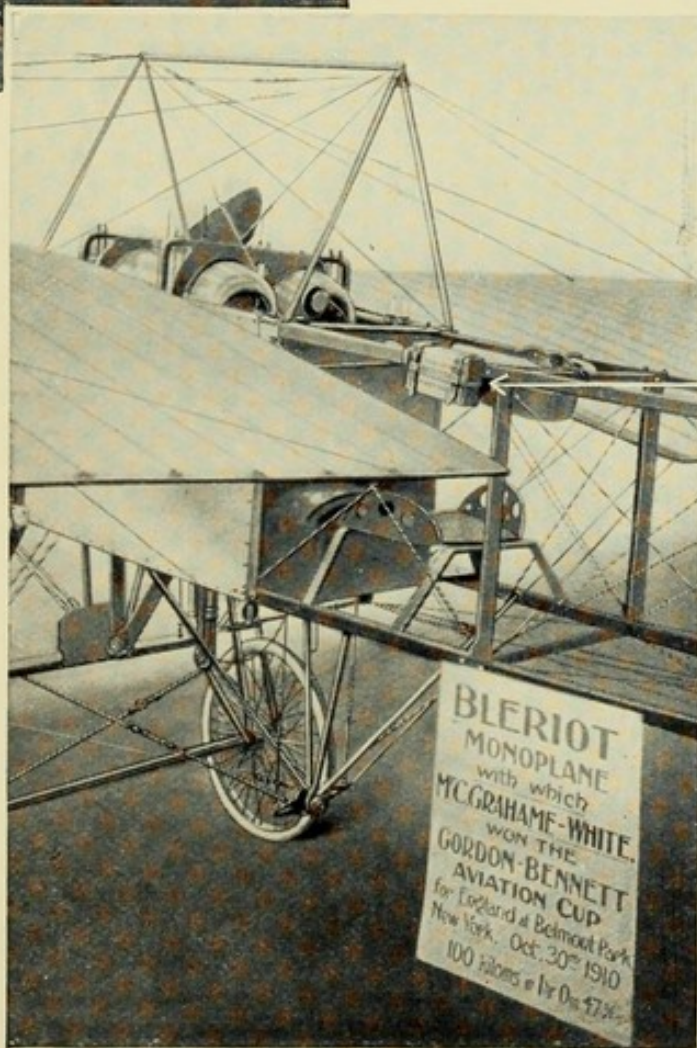
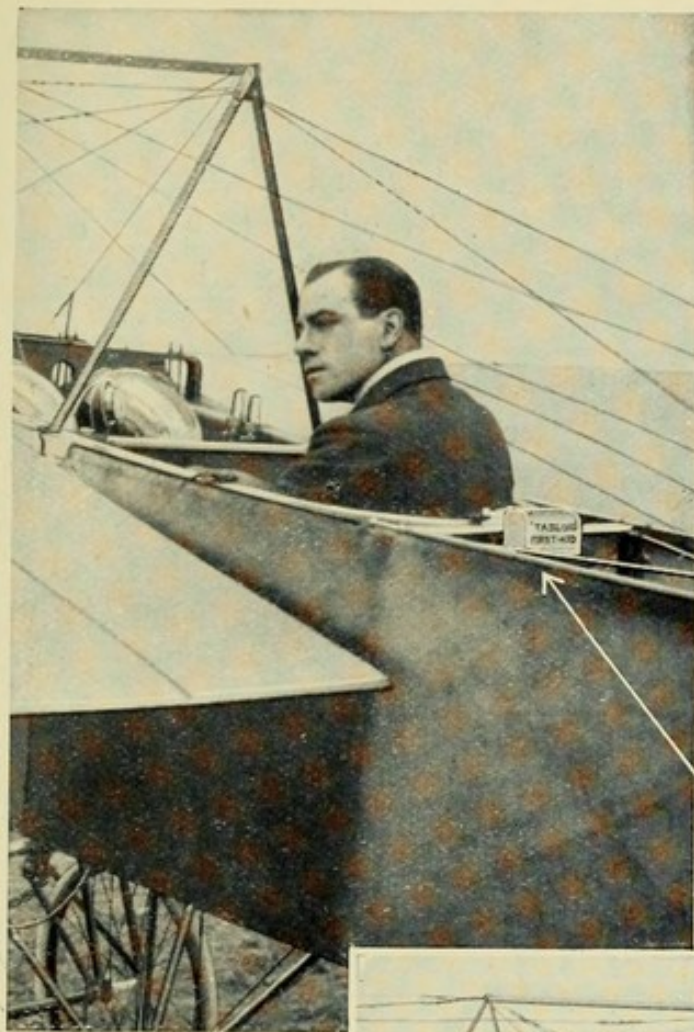
The brothers  
Montgolfier

# GRAHAME- WHITE

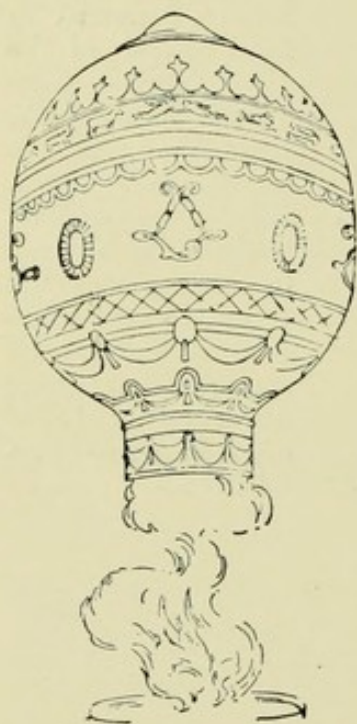
Claude Grahame-White made a plucky attempt to win the first *Daily Mail* £10,000 prize, for a flight from London to Manchester, in 1910. He won the Gordon-Bennett Cup for England, at the great aviation meeting at Belmont Park, New York, in the same year, on a Blériot monoplane, which is shown in the photograph below, with First-Aid equipment attached. He reports on his 'Tabloid' equipments as follows:—

"You will be interested to know that I first made the acquaintance of your 'Tabloid' First-Aid Cases by carrying one of the small aluminium pocket equipments (No. 706) on my flight from London to Manchester last April. I found it so well adapted for the requirements of aviators that I have never been without this case, or one of your other models, on subsequent flights, and I consider no aviator should be without one."

*C. Grahame-White*



from the centre of Paris, standing on a wicker gallery close to the fire, which they fed with bundles of fuel. Each held a big wet sponge with which to mop out the flames whenever, as frequently happened, the silk envelope took fire.



The Montgolfier balloon

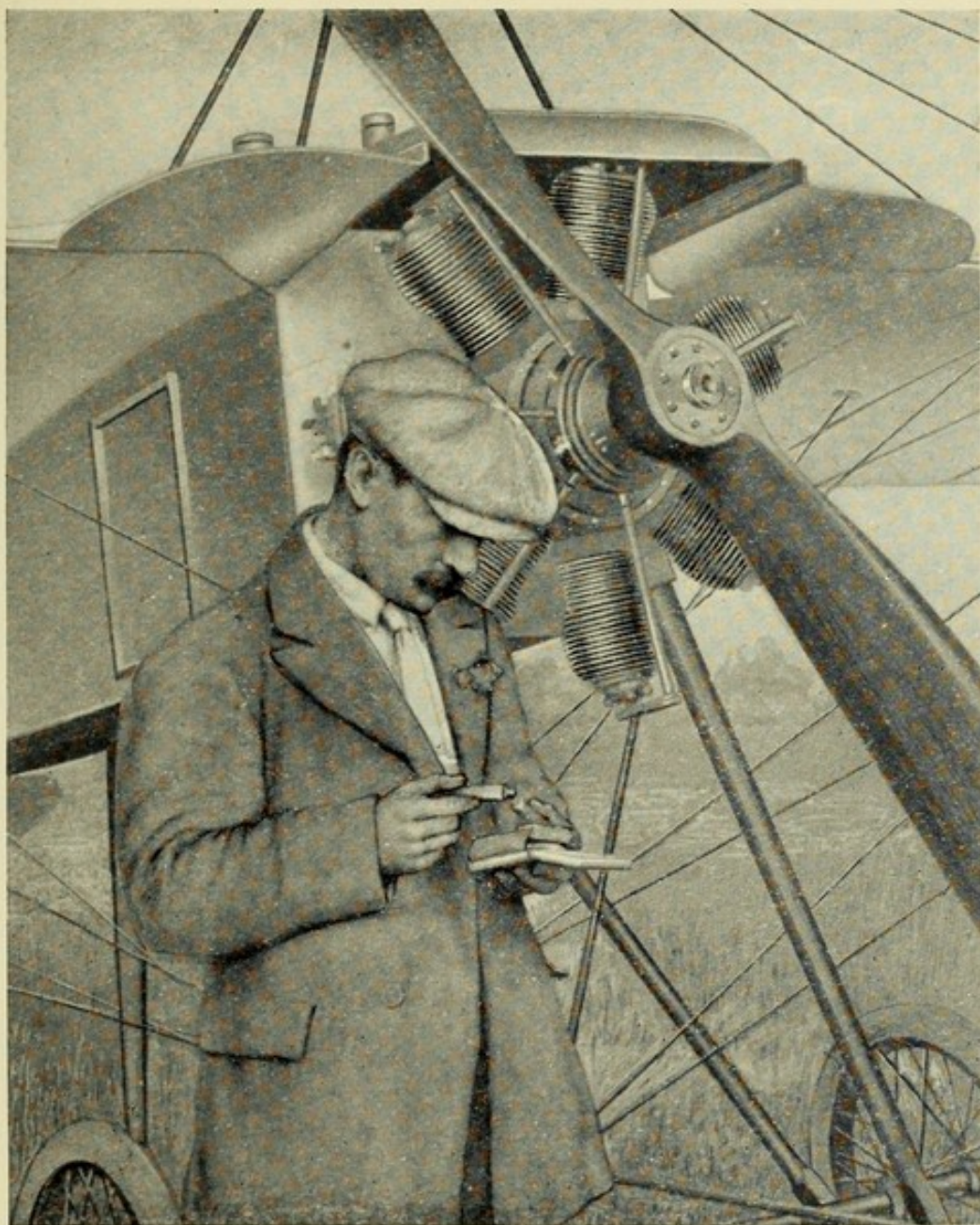
The discovery of hydrogen gas, or inflammable air, as it was called, was next utilised, and under the superintendence of F. A. C. Charles, the brothers Robert constructed balloons inflated with the new gas. The valve and most of the improvements in the gas balloon were due to the ingenuity of Charles.

Pilâtre de Rozier fell a victim to the recklessness of ignorance. He attempted to combine a fire balloon with an upper envelope of hydrogen gas, and perished in the inevitable explosion and collapse which took place.

Some attempts were made to guide balloons in the air, but with ill-success. The wind proved itself always the master, the oars and sails with which the early balloonists tried to steer were soon seen to be useless. Yet on January 7, 1785, Blanchard, a Frenchman, and Dr. Jefferies, an American physician, aided by favouring winds, made a balloon voyage across the English Channel. Their exploit aroused enormous enthusiasm. In the same year Garnerin invented the parachute, which has often demonstrated in most spectacular fashion the buoyancy of the air.

James Tytler made the first ascent from the British Isles, in August, 1784, using a Montgolfier fire balloon, at Edinburgh. A more successful trip was that of Vincent Lunardi, a young Italian attaché of the Neapolitan Embassy. He rose from London in a gas balloon,

Vincent  
Lunardi's  
ascent



### VÉDRINES

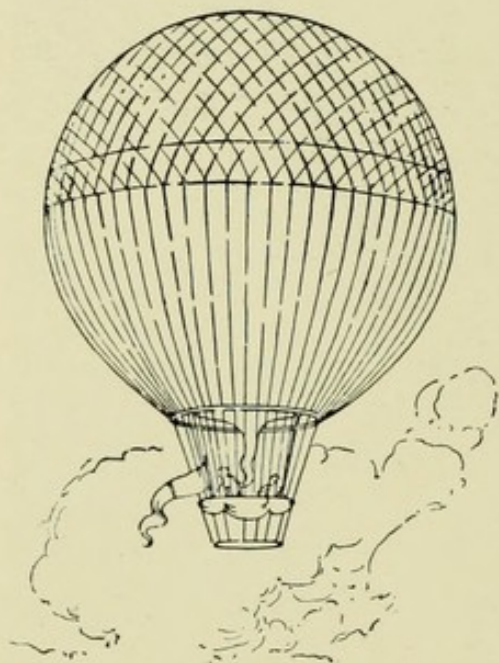
Jules Védrines, who has attained front rank in the aviation world, won the Paris-Madrid race in 1911, and made a record for speed in crossing the English Channel (European Circuit), which he accomplished in 30 minutes. He competed in the *Daily Mail* £10,000 Air Race in 1911, and completed the 1010 miles flight round Great Britain in 23 hrs. 37 min. 54 sec. In Jan. 1912 he attained a speed of 105½ miles per hour—a world's record. He flies a Morane-Borel monoplane, and carries a 'Tabloid' First-Aid. The photograph shows the aviator handling his 'Tabloid' Pocket-outfit, concerning which he reports:—

"Je considère votre Premier-Secours 'Tabloid' comme très utile. Son peu de volume en fait un modèle d'une extrême commodité."

*J. Védrines*

amid the wildest excitement, and landed, after some remarkable adventures, at Ware. A stone with a long inscription still marks the spot of his descent.

A very large balloon, filled with 85,000 feet of gas, took up three men from the Vauxhall Gardens on November 7, 1785; and, traversing a distance of 500 miles in 18 hours, descended near Weilburg in Nassau. Robert Hollond, Monck Mason and Charles Green were the occupants of the car. The spherical balloon proved intractable, a blind alley upon the pathway of aviation; but none the less some remarkable feats have been accomplished with it, notably that of Glaisher and



First balloon to cross the English Channel, 1785 (*see page 10*)

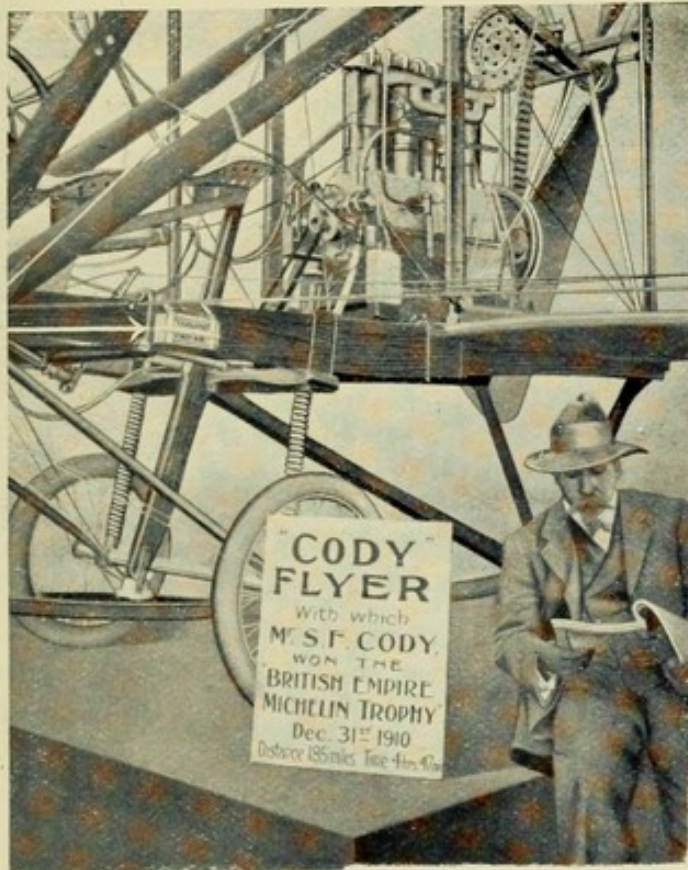
Coxwell, who, in the year 1862, rose to an altitude of nearly seven miles in the air.

The balloon promised to be of value in exploring inaccessible tracts of land, and in 1897 Salomon August Andree, a Swedish engineer, undertook the bold exploit of a balloon voyage in search of the North Pole (*see page 65*). On July 11, he and his two companions, Strindburg and Fränkel, ascended from Danes' Island, Spitzbergen, about 600 miles from the Pole. One carrier pigeon, apparently liberated 48 hours after the start, and two floating buoys, were subsequently found, but beyond this—silence. The fate of these brave men is still one of the undiscovered secrets of the frozen North.

As early as 1794, balloons were used for military purposes. A military aeronautics school was founded

## CODY

S. F. Cody is an American who has become a British citizen. Has done important work for the War Office, and uses aeroplanes of his own design. He has made numerous successful flights, and was the winner of the British Michelin Trophies, 1910 and 1911, and the British Empire Michelin Cup No. 2 in 1911. His was the only biplane and the only All-British machine that finished the Circuit of Great



Britain, 1911. He carries 'Tabloid' First-Aid as his medical equipment. Mr. Cody reports as follows:—

"The 'Tabloid' First-Aid Case has always been in its place on my machine and I have found the contents of inestimable value on numerous occasions. I consider it altogether a most excellent idea, enabling one, as it does, to carry in the smallest possible space, remedies with which to meet every emergency."

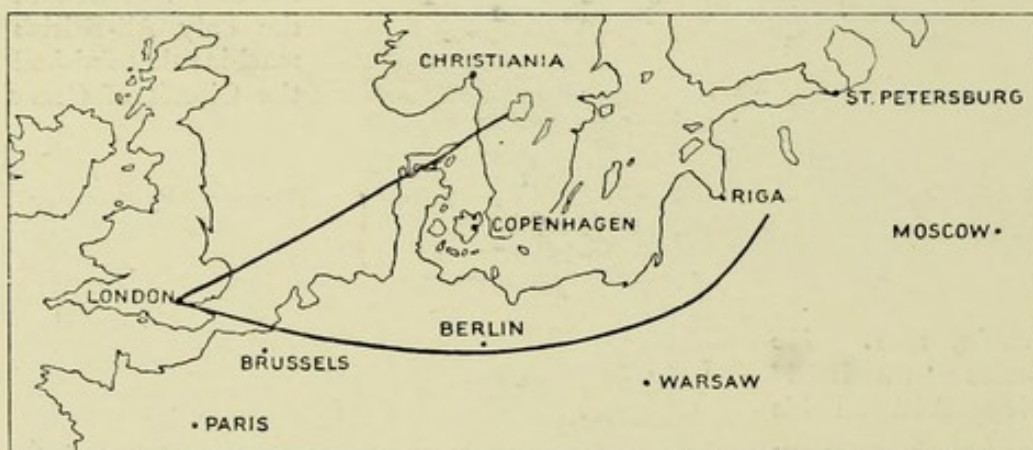


The arrows in the above photographs indicate the position of the 'Tabloid' First-Aid, which is fixed on the machine within easy reach of the aviator.

at Meudon, and before the battle of Fleurus, the general and adjutant ascended with Coutelle, the balloon pilot, to reconnoitre.

Balloons were used during the American Civil War and with notable success at the siege of Paris, when the famous M. Gambetta escaped from the beleaguered city in the "Armand-Barbes." In 1883-4 most of the great Powers organised regular ballooning services, and aeronautics as a part of military science dates from that period.

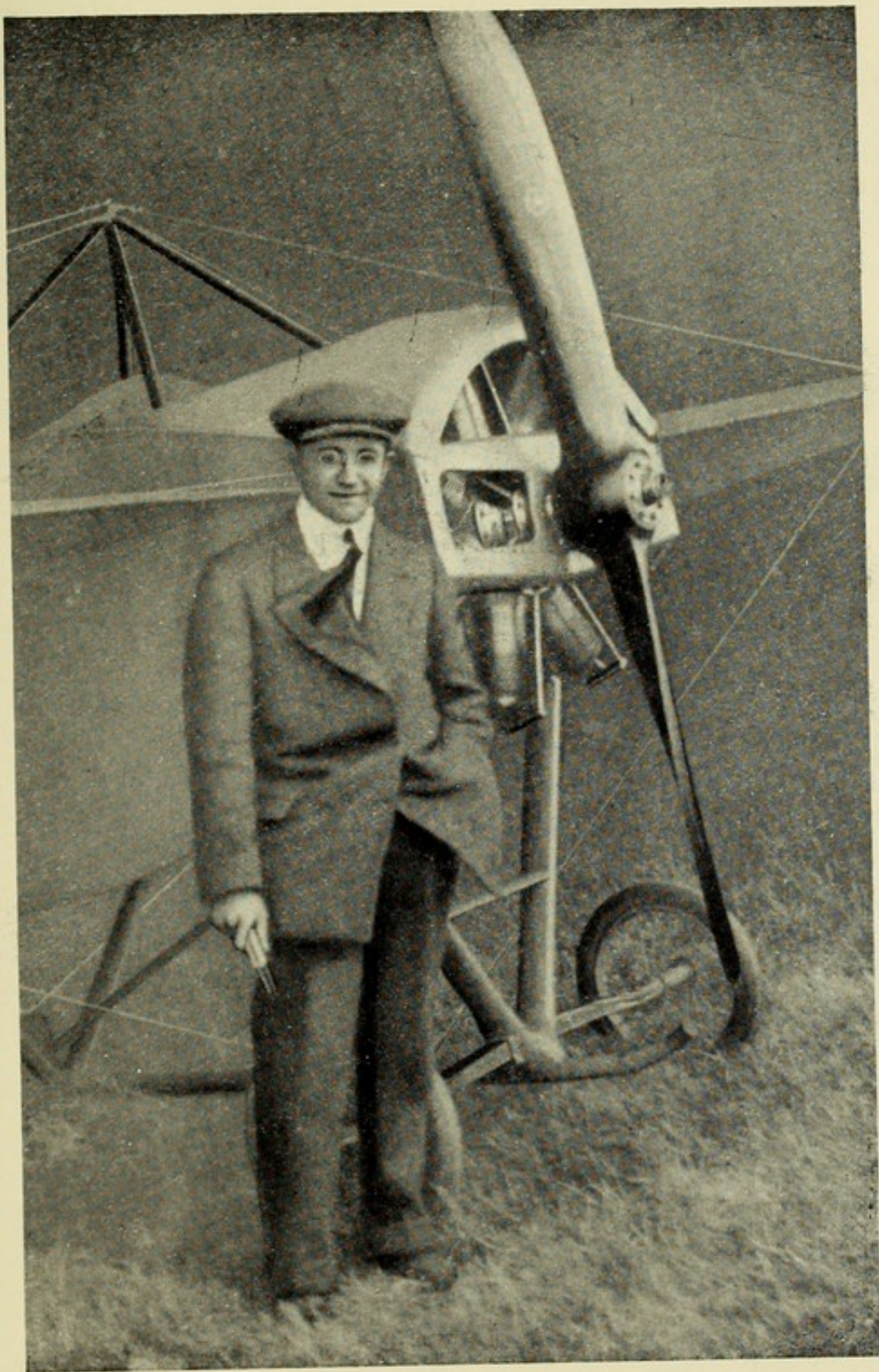
Military  
balloons



Route Map showing direction taken by the "Mammoth" balloon on its two voyages from London to Sweden and London to Russia.

In 1907, the *Daily Graphic* organised a balloon expedition. The "Mammoth," with Mr. Gaudron, Mr. J. L. Tannar and Mr. C. C. Turner on board, ascended from the Crystal Palace grounds on October 12, and, after remaining 19 hours in the air and covering 703 miles, the British distance record, and the world's overseas record (360 miles), came down in Sweden at Brackan.

In the following year, on November 18, the same balloon, with Mr. A. E. Gaudron in command, and carrying Capt. E. M. Maitland and Mr. C. C. Turner, who is now an aviator, travelled from London to Mateki Derevni, Russia, a distance, as the crow flies, of 1117 miles—the British record (*see page 67*).



#### WEYMANN

Charles Weymann accomplished a flight of 231 miles, carrying a passenger, from Buc to Clermont Ferrand, in 6 hours, with three stops, on September 7, 1910. In 1911 he won the Gordon-Bennett Cup for America, at Eastchurch, Isle of Sheppey, using a Nieuport monoplane. He is shown in the above photograph holding a No. 706 'Tabloid' First-Aid in his hand.

## DIRIGIBLE BALLOONS AND AIRSHIPS

The problem of rendering a huge inflated sphere dirigible in air was, after many attempts, seen to be insoluble. The limits of progress in this direction had been reached.

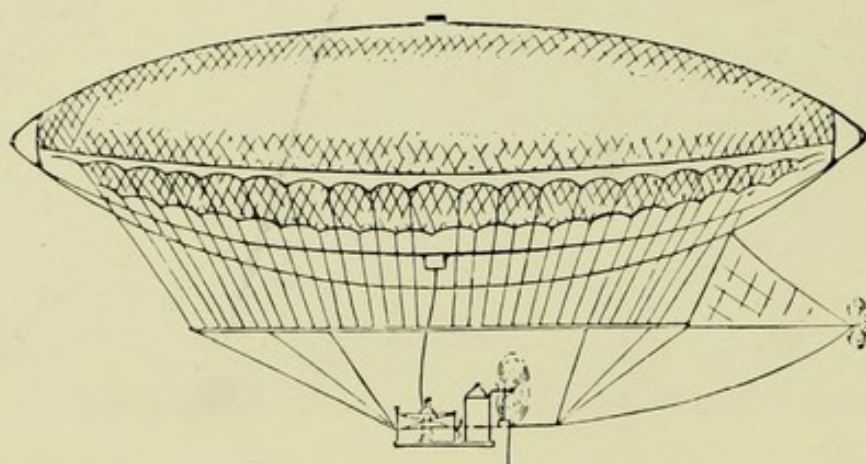
Meantime, alterations in the shape of the gas bag and the use of a mechanical propelling force had been suggested.

Very early in the history of aviation, the Duc de Chartres had commissioned the brothers Robert to construct a fish-shaped balloon, with which some successful ascents were made. They could not be called flights, since the oars with which this pioneer airship was provided proved utterly ineffectual. A

Giffard's  
airship

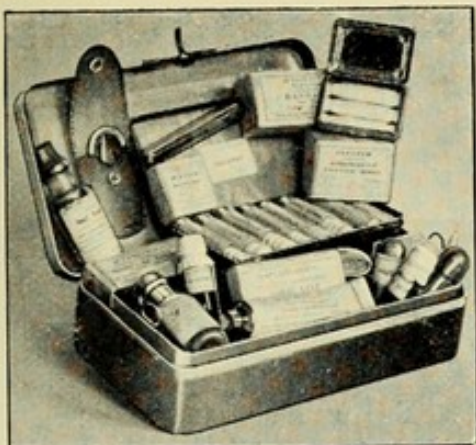
great step forward was made by Giffard in 1852, with his cigar-shaped airship driven by a three-horse-power steam engine weighing three quarters of a ton. Twenty years after, Paul Haenlin built an airship in Vienna, much more nearly resembling the modern type, and fitted—momentous innovation—with a gas engine.

Tissandier's dirigible followed ten years later with an electrically-driven motor, and, in 1884, two French



Giffard's Dirigible, 1852

officers, Captains Renard and Krebs, designed "La France." This fine airship established some very interesting and important records. It was the first aerial vessel in which the propeller was turned into a



No. 715. 'Tabloid' First-Aid  
as carried by  
HUBERT LATHAM



LATHAM

Hubert Latham has made many successful flights, notably at the Rheims Aviation Meeting, 1909; at the Blackpool Meeting which followed, when he accomplished a flight against a strong gusty wind; and at the Rheims Meeting, 1910, when he rose to a height of 4658 feet. He reports as follows:—

Paris, 12 *Mai* 1911

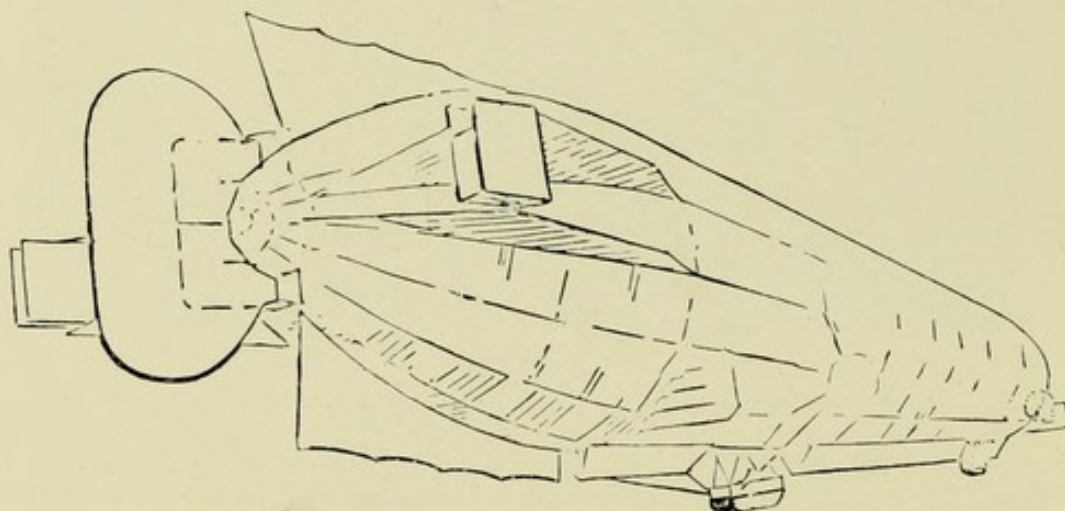
"Je tiens à vous dire combien m'a été utile votre trousse de Premier-Secours 'Tabloid.'

"Elle est si peu volumineuse que je n'hésite jamais à l'emporter en aéroplane, et m'a rendu service plusieurs fois, surtout dans les meetings d'aviation où un pansement rapide est souvent nécessaire."

*H. Latham*

tractor, being fixed in front; the first, also, on which the aeronauts were able to steer their course back to a starting point after a trip of  $2\frac{1}{2}$  miles.

The Schwartz airship, completed in 1897 in Berlin, marked a further advance, chiefly in methods of filling the balloon and in the introduction of greater rigidity. As the nineteenth century was drawing to a close, the experiments of an intrepid aeronaut, whose name is inseparably connected with the story of aviation, began to arouse attention. Santos Dumont's perseverance Santos Dumont constructed no fewer than fourteen airships. He learnt something by each of his failures, and he taught the world something by each of his successes. With "Santos V" he won the Deutsch de la Meurthe prize in 1901, by steering round the Eiffel Tower and returning to the Aero Club grounds in little over 30 minutes. Since then the Lebaudy airships and the later constructions of the French Military Balloon Department have shown continuous advance. Airship construction in France has adhered more or less to the flexible type, whereas



A Zeppelin Airship

in Germany, under the determined and courageous leadership of Count Zeppelin, it has developed in the direction of the rigid type.

A remarkable voyage was made in 1910 by Wellman and a crew of five men. Starting in the "America"



#### WATKINS

Lieut. Watkins with the Vickers Monoplane, which was to have accompanied the Mawson Antarctic Expedition, fitted with 'Tabloid' First-Aid, the position of which is indicated by an arrow in the above photograph. He reported as follows on 'Tabloid' First-Aid :—

*August 14, 1911*

"Fortunately for myself I have had no occasion to use the small 'Tabloid' First-Aid, but a great friend of mine, who has been in aviation for many years, had a bad fall on his monoplane and was badly cut in many places. Your small outfit came in most handy.

"I consider that the 'Tabloid' equipment is quite the most useful thing one could desire."

*W. Watkins*

airship from Atlantic City, they set out to sail across the Atlantic, but were driven by contrary winds for over 1000 miles towards the Bermudas, and were ultimately rescued from their perilous position by a passing steamship, R.M.S. "Trent" (*see page 69*).

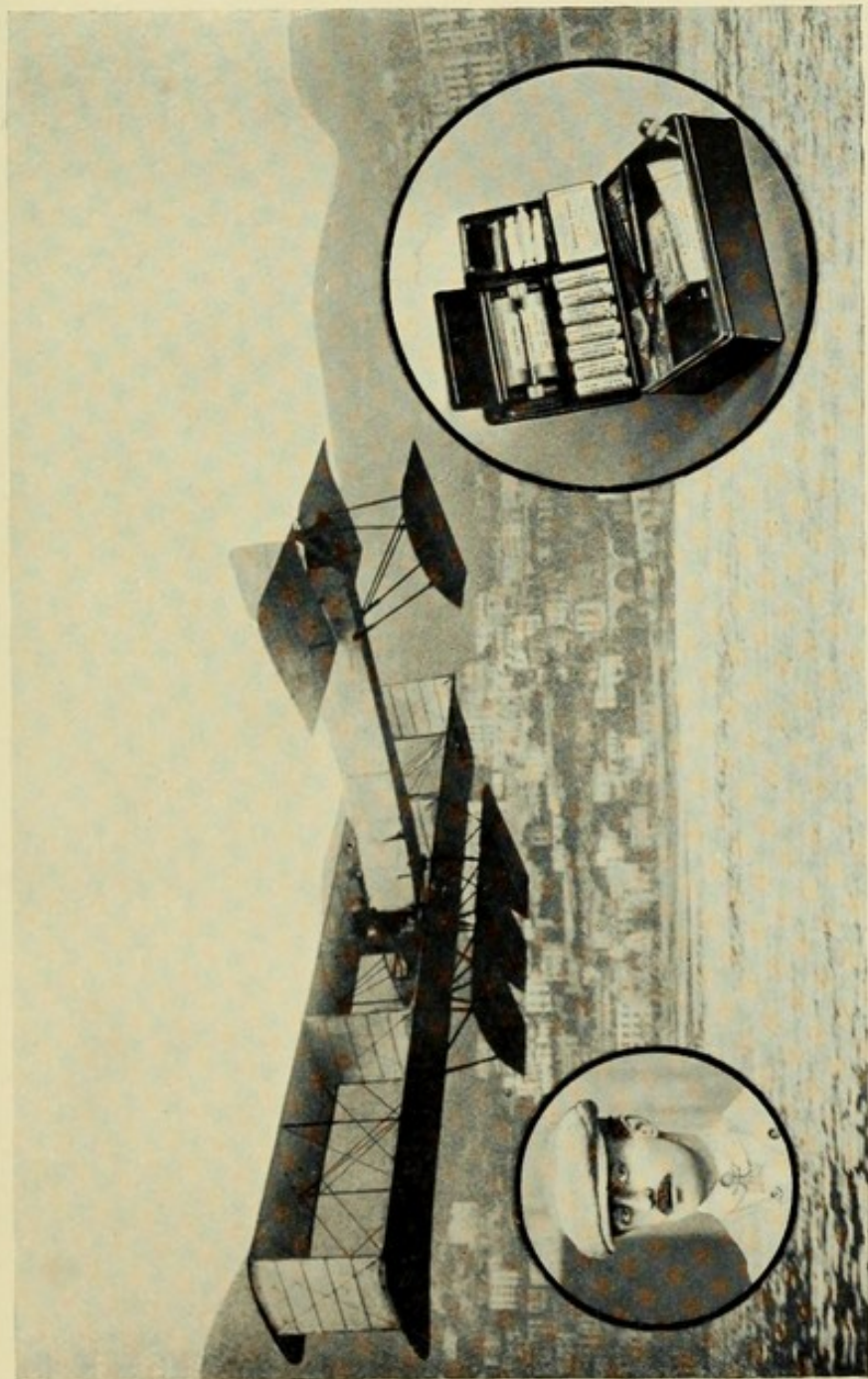
Many splendid airships of various types have now been built, and they are capable of attaining a speed of over 40 miles an hour in perfect calm, and therefore of proceeding against a moderate head wind. The aerial navies of the world are beautiful to look upon, but still—the wind is their master. Nevertheless, they are the logical outcome of the determination to produce air craft lighter than air, yet capable of being propelled faster than the breeze which would otherwise determine the direction. To such a measure of success the airship has attained. It can cope with a breath of air, but falters before a wind and flies before a gale. Some acute students of aeronautics prophesy for it, however, a splendid future. With the rapidly growing knowledge of airmanship, and the new devices for pressure-resisting gas bags recently suggested, the airship may yet triumph over all its difficulties.

Fortunately there was another line of development and another school at work upon the fascinating problem of the conquest of the air. The balloon had made a splendid reconnaissance, the dirigible had demonstrated many important facts; it was the task of the aeroplane to complete the conquest, and literally ride the winds in its triumphant flight.

#### GLIDERS AND AEROPLANES

The heavier-than-air school began to receive recruits and contributions from various sources early in the nineteenth century. Sir George Cayley, a Yorkshire baronet of great scientific attainments, laid before the Institute of Civil Engineers his wonderfully accurate anticipations of the flying machine of the future. This

Cayley's  
flying  
machine



THE "CANARD" HYDROPLANE IN FLIGHT

Inset are photographs of G. Voisin and the 'Tabloid' First-Aid equipment carried by him

## VOISIN

Gabriel Voisin, one of the pioneers of aeroplane and hydroplane construction, and himself an accomplished flying man, reports on the 'Tabloid' First-Aid equipment which he carries as follows:—

"Nous avons bien reçu votre boîte de secours dont nous avons usé le jour même.

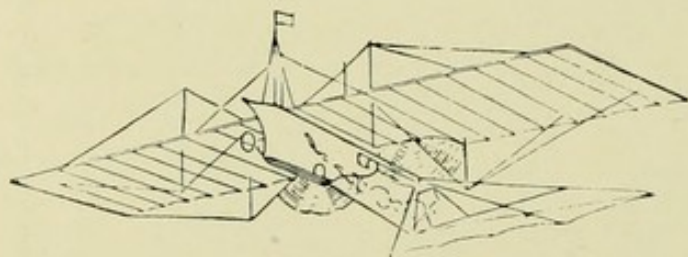
"Je dois dire que votre pharmacie est parfaitement complète et qu'elle a sa place dans toutes les voitures automobiles, et tous les aéroplanes."

*Gabriel Voisin*

was in 1809. In the following year Thomas Walker, of Hull, wrote "A treatise upon the art of flying by mechanical means."

These men showed a due appreciation of the problems of dynamic flight, and when, in 1842, Henson made a model flying machine from Cayley's designs, he stood upon the threshold of the great discovery.

But the time was not yet: much remained to be accomplished; the steam engines available were far too heavy, and the ideal motive power for such light craft was still—an ideal. Henson's model bears a distinct



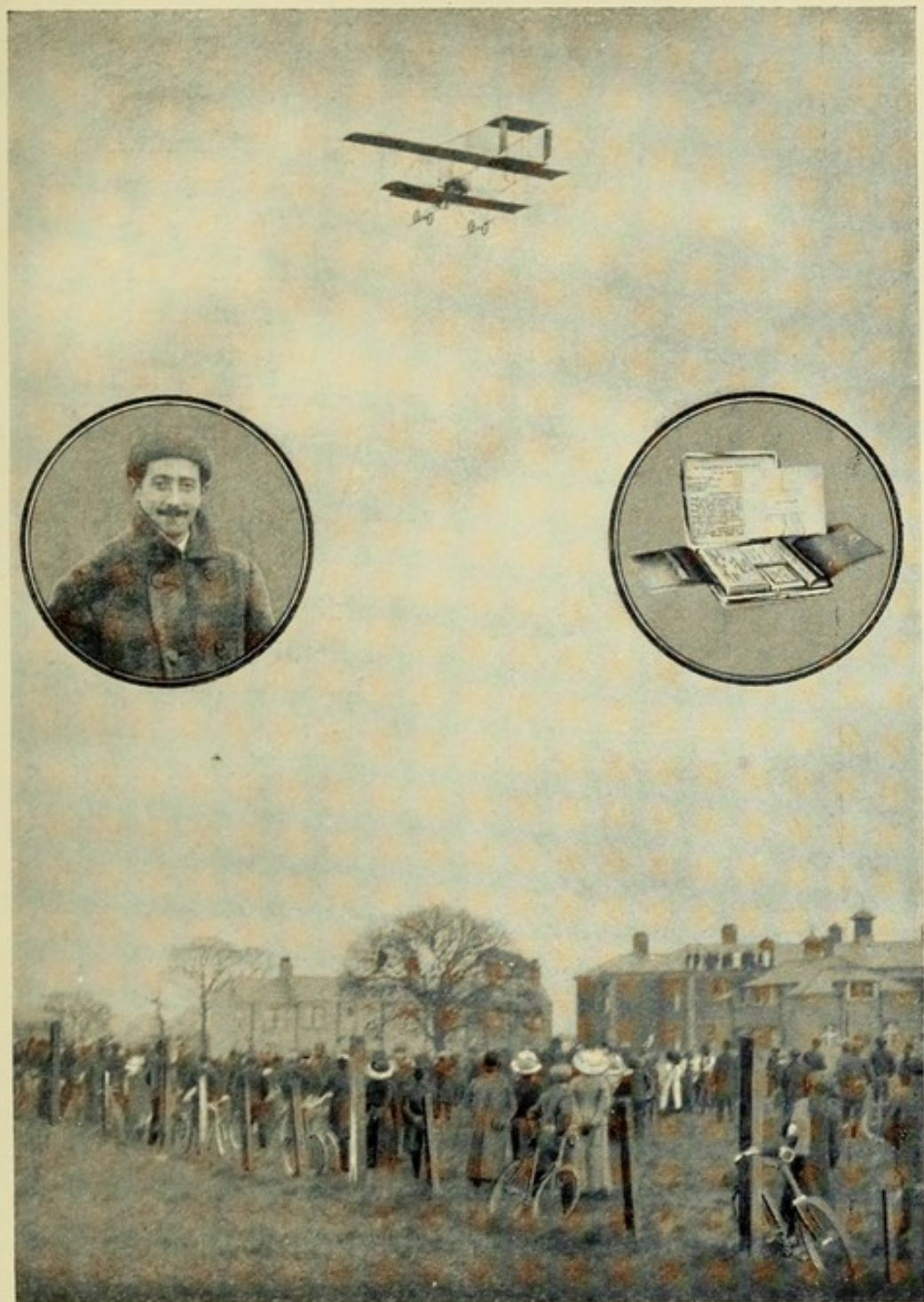
Henson's prophetic idea, 1843

resemblance to a modern monoplane, and his friend Stringfellow also accomplished much useful work.

The latter in after years achieved the distinction of producing the first engine-driven model aeroplane which actually flew. In 1866 the Aeronautical Society

The Aeronautical Society of Great Britain

of Great Britain was founded, and the scientific aspects of flight and the laws of the air began to be studied in Britain as never before. Slowly and tentatively the conception of the air as being, like the sea and land, a pathway, and navigable, if they could but learn its secrets, presented itself to scientific men, not as a wild dream but as a practicable problem. Some extremely interesting observations were made by Horatio Phillips concerning bird flight and the dipping edge of a plane as it entered the air. His experiments determined what subsequent experience has proved to be the best shape for planes. The efforts to produce wings which could be affixed to the arms and which should enable man to fly by muscular effort had proved so discouraging that the notion of flight by that method was abandoned. The lighter-than-air school, represented



#### PAULHAN ON HIS FLIGHT TO MANCHESTER

Louis Paulhan won the first *Daily Mail* £10,000 prize in 1910, for a flight from London to Manchester on a Farman biplane. Inset is a photograph of the aviator, and the No. 706 'Tabloid' First-Aid which he carried during his flight, and concerning which he reports:—

"Je profite de cette occasion pour vous exprimer le plaisir que j'ai eu de porter avec moi durant le vol que j'ai fait de Londres à Manchester une trousse Premier-Secours 'Tabloid.'"

*L. Paulhan*

by the balloon and the airship, appeared to have conquered. They actually did lift their inventors into the air and sustain them in it, which was more than could be said of the flying machines which had been constructed up to the year 1889. In that year, however, Otto Lilienthal published a remarkable book which gave a fresh stimulus to the subject of flight. It was an account of the experiments of himself and his brother with gliders. They had discovered that arched surfaces driven against the wind had a tendency to rise. With a bird-like osier frame covered with glazed calico and a seat swung below it, so that his head was just above the wing level and his shoulders on a line with it,



Lilienthal's Glider

Lilienthal sprang into the air from a little tower. He faced the wind and regulated his centre of gravity by instinctive movements of the body and legs.

His glides, of which he accomplished more than a thousand, some being on biplanes, emphasised the human element in flight. He taught that the problem was not merely one for the engineer and the mechanic. The airman must learn the way of the air by close observation of the only living creatures who knew it. The sea-gull must teach him to balance, and the eagle to soar.

Sinclair Pilcher in England, Octave Chanute in America and later Captain Ferber on the sand dunes of Berck-sur-Mer, continued Lilienthal's interesting experiments. It would be difficult to exaggerate the value of the contribution made by the gliders to the evolution of flight.

Nor must the box-kite be forgotten, and the pioneer work of Lawrence Hargraves in New South Wales. His power-driven models flew to a height of 800 feet, and probably suggested the form of Santos Dumont's first aeroplane.



### PRIER

Pierre Prier is a Frenchman who came to England to act as instructor at the Blériot School at Hendon. During the motor show, 1910, he flew over Olympia, and subsequently from London to Paris without a stop, using on both occasions a Blériot monoplane. He has recently joined the staff of the British and Colonial Aeroplane Company at Bristol. He reports as follows :—

“La trousse que vous m'avez fournie m'a servi trois ou quatre fois déjà.

“Elle est cependant encore suffisamment garnie pour un certain temps ; j'ai l'intention de la laisser dans la voiture automobile de mes mécaniciens pour le prix du *Daily Mail*.

“Je préférerais donc que vous m'en adressiez une autre pour mettre sur mon appareil ; ces trousses ‘Tabloid’ sont en effet excessivement pratiques.

“Je vous prie d'agréer, Messieurs, mes salutations empressées.”

## THE MOTIVE POWER

Along the several lines of development which have been indicated, remarkable progress towards human flight had been made, and at the beginning of the twentieth century the movement took on a new life.

Again and again the achievement had seemed to be within man's grasp, but always the problem of increasing the driving force without unduly increasing the weight had baffled the inventor.

The lifting power of planes driven against the wind, or what amounted to the same thing, driven rapidly through calm air, had been demonstrated repeatedly. Professor Langley in America had carried out some useful and instructive trials, and Sir Hiram Maxim, who had become interested in the problem of flight, with characteristic thoroughness and originality, constructed a great multiplane weighing  $3\frac{1}{2}$  tons. His machine was completed in 1894. It was driven by a steam engine of unexampled lightness with 360 horse-power. Numerous experiments were made with it and much useful information gleaned. The apparatus ultimately broke from its controlling rails and was wrecked, but not before it had demonstrated the practicability of the inventor's theories by unmistakably lifting from the supporting surface.

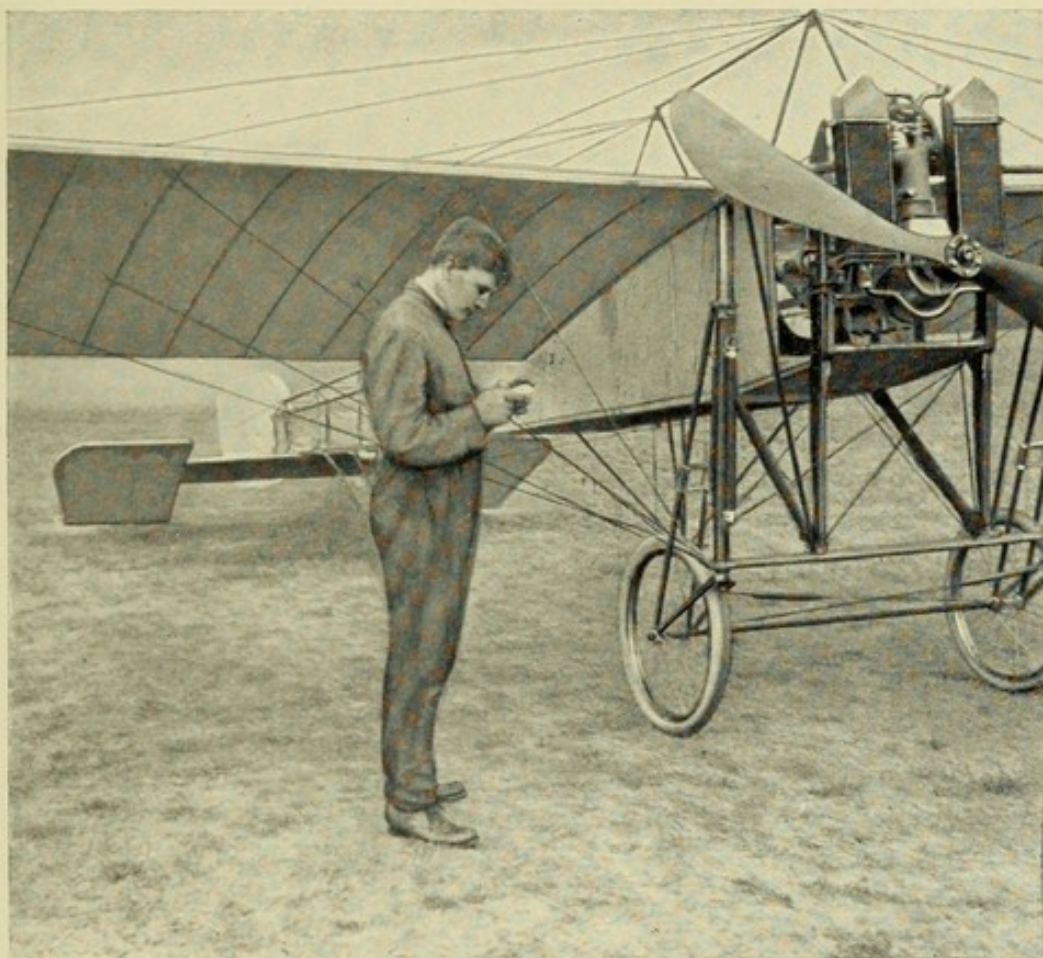
On very different lines was the strange bizarre-looking "Avion" of M. Ader, or that earlier flying machine with which this doyen of airmen actually rose from the



Ader's Flying Machine, 1890

ground, and flew, or hopped, 164 feet on October 9, 1890. All these experimental efforts had been rendered abortive by

the want of the right motive power, but now help was coming from the engineers. The demand for motor-driven cars had stimulated to an enormous extent the production of light motor engines. An



### PÉCQUET

H. Pécquet commenced his career as an aviator on a Voisin biplane at Hamburg in 1909. He was the first flying man in Buenos Aires, where he took part in the Aviation Meeting. He also flew at the Rheims meeting, on which occasion he used a Sanchez-Besa machine. While in India for the Humber Company, he carried the first aerial mail recognised by the Government of India. He always carries a 'Tabloid' First-Aid, and is seen examining it in the above photograph.

He reports as follows:—

"J'ai toujours emporté avec moi l'équipement Premier-Secours 'Tabloid,' et puis vous confirmer qu'il m'a toujours été de très grande utilité aux petits accidents que j'ai eus."

*H. Pécquet*

internal explosion motor had been constructed by Fernand Forest in France in 1888, and the same idea had almost simultaneously arisen in Germany and elsewhere. The Otto cycle of movements greatly enhanced the force production of gas engines, and every year saw an increase in their effectiveness and reliability. Petrol had begun to evince its wonderful powers, which, with increased demands for lightness, were developed to such a pitch that three-quarters of a pint would drive a one-horse-power motor engine for one hour. This was the motive power for which the aeroplane was waiting. The whole science of aeronautics which had been, as it were, poised and ready for the advance, seized eagerly upon the opportunity presented

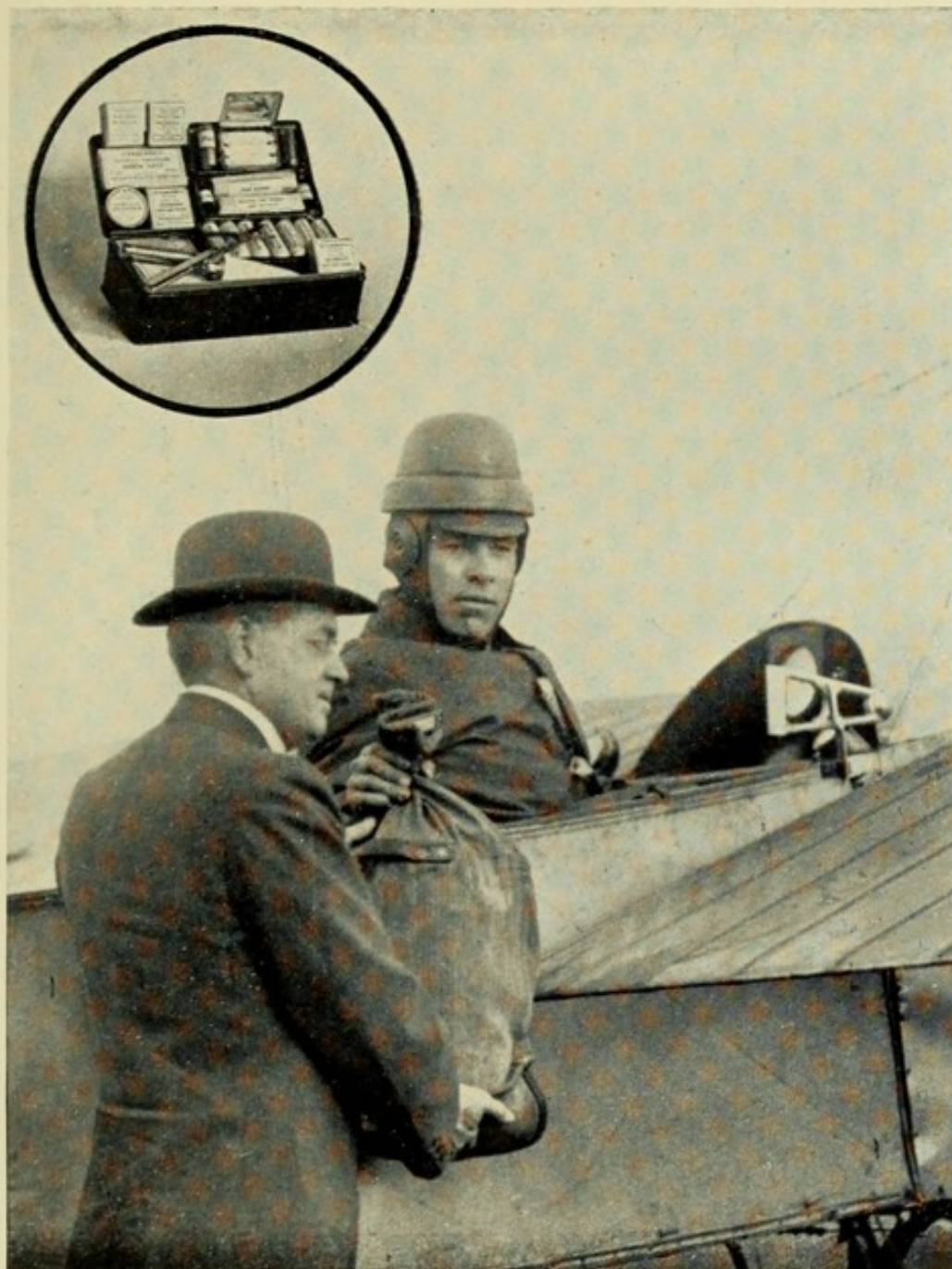
To airships the new motive power gave important assistance—to aeroplanes it gave life itself. They could only live in the air by movement, and the internal combustion engine supplied the continuous movement required, with remarkably small addition to weight. The small rotary engines, such as the Gnome, proved particularly suitable, since the revolving engine acted like a heavy fly-wheel to the propeller, and imparted additional regularity to its revolutions.

Light motor  
engines

#### THE COMING OF THE AEROPLANE

At last the requisite elements were ready, and all that was necessary was the genius and courage to assemble the parts, make use of the experience already collected, and—fly.

Three men, two in America and one in Europe, were to startle the world with aerial flights before the new century was well out of its infancy. The brothers Wilbur and Orville Wright, struck by the extraordinary significance of Lilienthal's gliding experiments, determined to carry them to a further point. Acting on the advice of the U.S.A. Meteorological Department, they chose a remote spot on the coast of North Carolina, where the wind was said to be steadiest, and began



#### OVINGTON RECEIVING THE U.S.A. MAILS

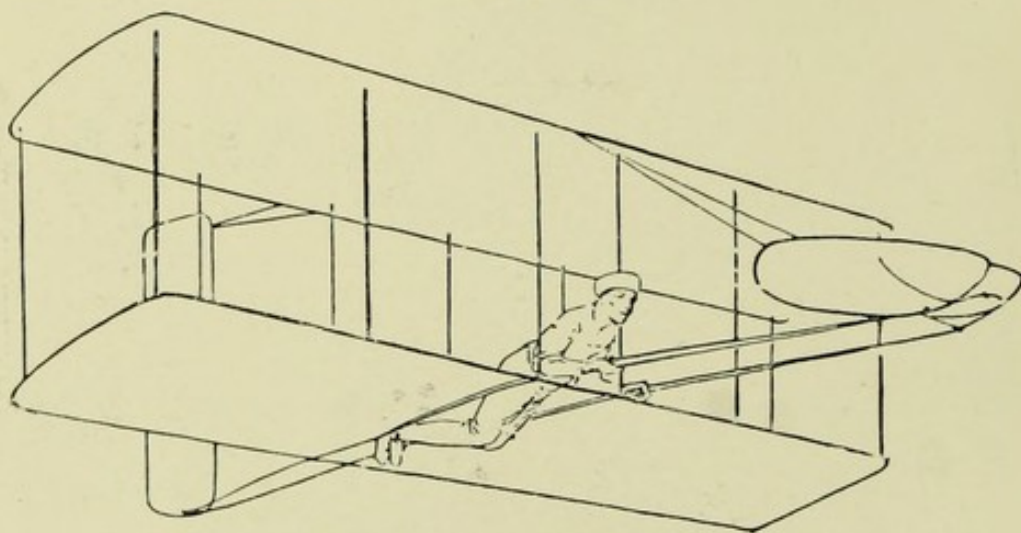
Earle L. Ovington, one of the competitors in the "Hearst" Coast-to-Coast race of 1911, was the first man to carry the official United States mail in America. He was accompanied by Postmaster-General Hitchcock of the U.S.A. Government on one of his mail-carrying trips. Inset in the above picture is a photograph of Ovington's 'Tabloid' First-Aid equipment. On the subject of 'Tabloid' First-Aid equipments Mr. Ovington reported as follows:—

"I shall carry 'Tabloid' First-Aid Outfit with me on my trans-continental flight—the two smaller outfits on my aeroplane and the larger one on my special train. I have looked these outfits over very carefully and wish to compliment you upon the wonderful compactness and efficiency of your products. I feel decidedly more comfortable because I know I have your little outfits along with me to administer to my aid when the necessity arises."

*Earle L. Ovington*

their epoch-making trials. They commenced with a Chanute glider; this was soon to be modified and improved. The tail was abandoned and an elevator attached in front. So successful were their gliding flights from the sand-hills of their secluded trial ground at Kitty Hawk, that a motor was presently attached to their machine.

On December 17, 1903, the first actual flight with a petrol-driven motor was made. Two years later, at Dayton, Ohio, Wilbur Wright\* flew eleven, and upon another occasion over twenty, miles.

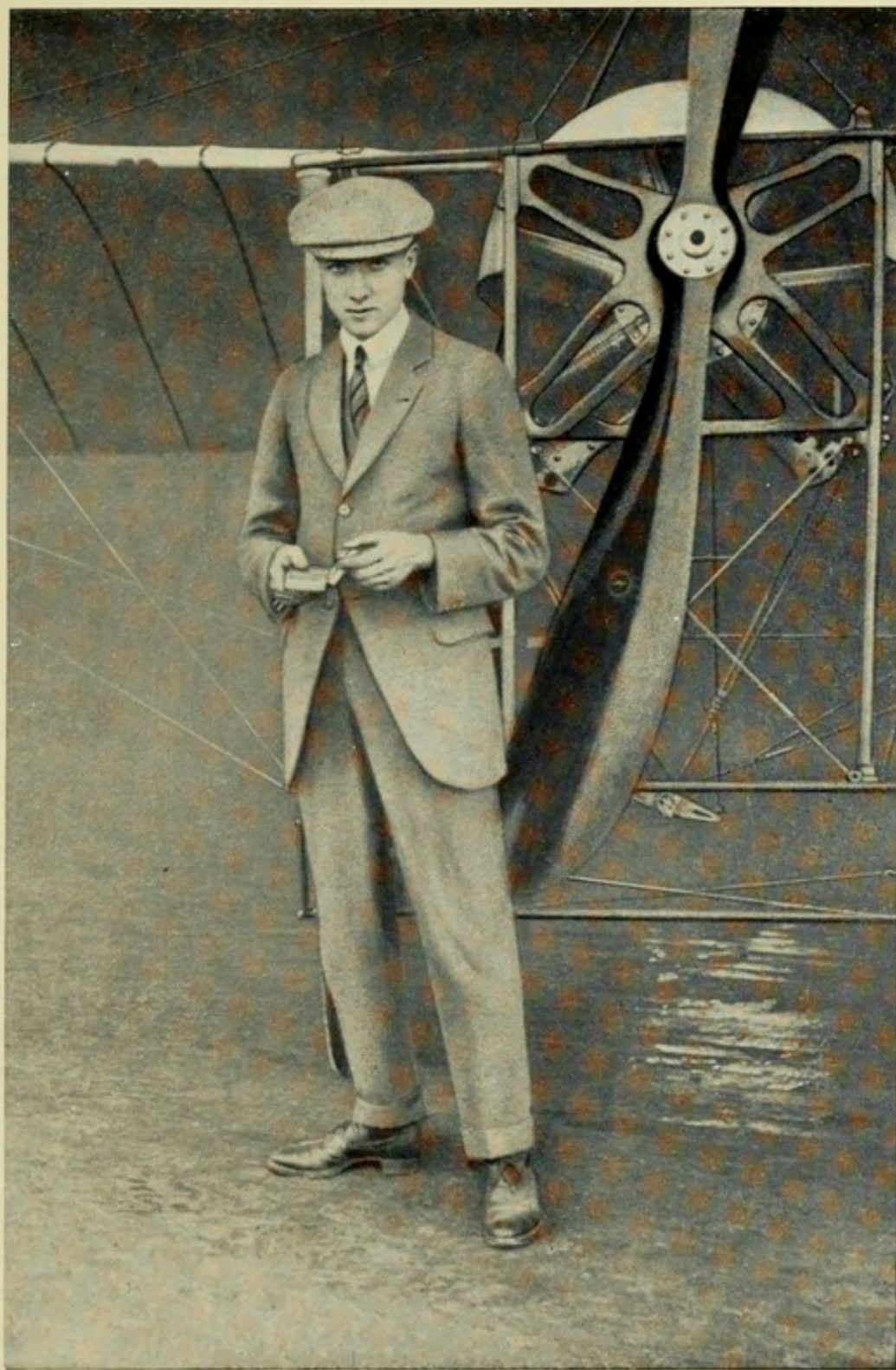


The Wright Glider

Flight by mechanical means was an accomplished fact. Rumours of these exploits reached Europe, but they were little regarded, save in France, that home of ideas.

There, another distinguished pioneer was at work, M. Santos-Dumont, who had already accomplished so much in airship construction. In the autumn of 1906 he electrified the world by a flight at Bagatelle on a strange-looking aeroplane of his own design. The "Bird of Prey," as it was called, appeared like a series of box-kites strung together, with double-decker planes tilted up at a considerable angle. There was no tail, but in front a big elevator.

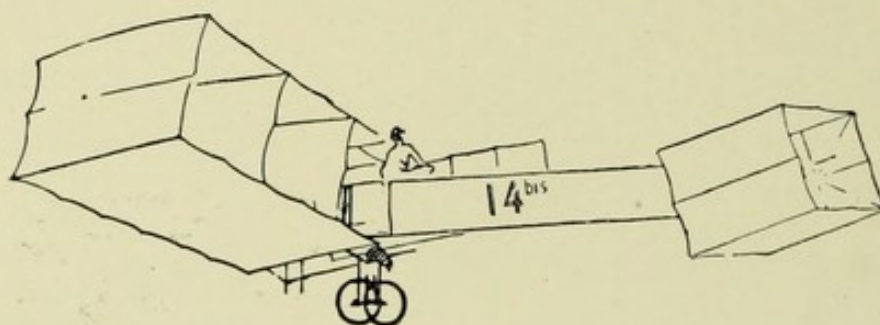
\* To the deep regret of everyone interested in aviation, this distinguished inventor, one of the most active pioneers of flight, fell a victim to typhoid fever and died at his home in Dayton, May 31, 1912.



#### HAMEL

On September 9, 1911, Gustav Hamel flew from Hendon to Windsor in 12 minutes, with a strong following wind, carrying the mails for the first British Aerial Post. He has become famous as a cross-country flier, and has made many remarkable journeys from England to France and back. He was the first aviator to carry a lady passenger from England to France. Accompanied by Miss Trehawke Davies, he won the First Aerial Derby on June 8, 1912, completing the circuit of Greater London (81 miles) in 1 hour 38 minutes and 46 seconds on a 70-h.p. Gnome Blériot. He is equipped with a 'Tabloid' First-Aid, and is seen holding it in his hand in this photograph.

A 50-horse-power Antoinette motor, on a light open frame-work resting on bicycle wheels, drove a propeller at the back, and the aviator stood in a wicker basket in the centre.



Santos-Dumont's first French Biplane

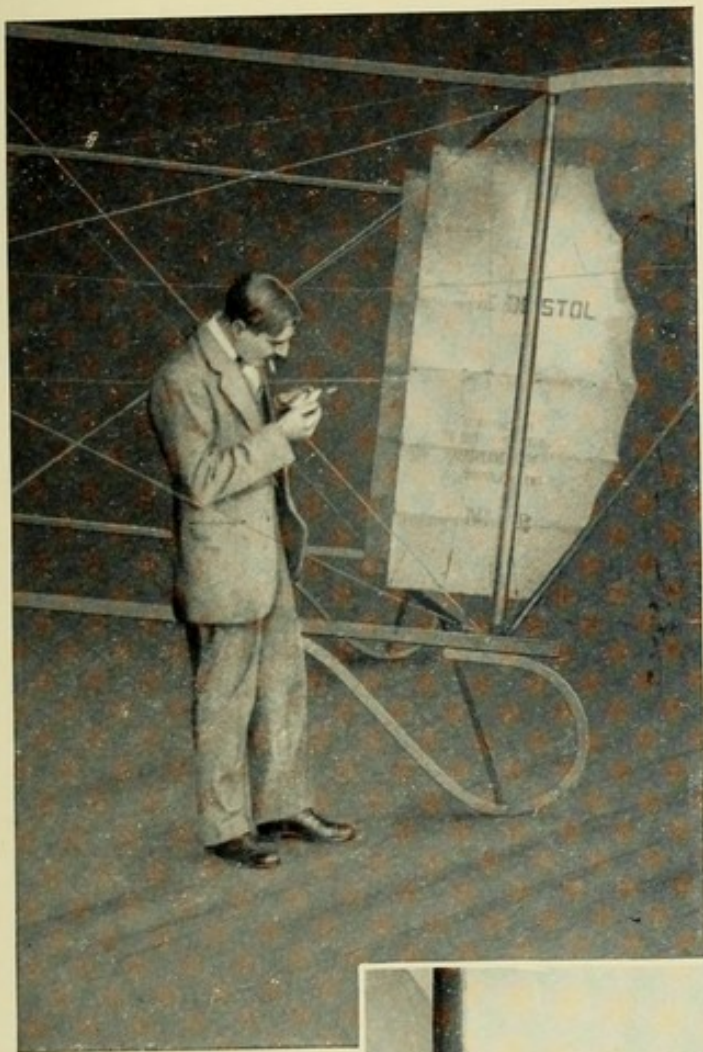
The "Bird of Prey," after being run along the ground a hundred yards at 25 miles an hour, hopped when the elevator was tilted upwards. It hopped to such purpose that on October 24, 1906, Santos Dumont flew for seventy yards, and the following month for three times that distance.

Santos-Dumont's historic hop

Thus, on two separate and independent lines of development, aeroplane flight was challenging the world's attention by the close of 1906. It could no longer be ignored; the wiseacres who had so long laughed at its pretensions began to perceive that a new force, suggesting almost limitless possibilities, had come up over the horizon—a force which must be reckoned with in future, both for peace and war.

It was in regard to the latter that the immediate development of the aeroplane appeared the more important. Captain Ferber, inspired by the example of the brothers Lilienthal, carried out some very instructive gliding experiments on his own account, and it was he who eventually persuaded his Government to try to secure for the French Army the Wright Brothers' invention.

Gabriel and Charles Voisin, Blériot, Delagrangé and Henri Farman flung themselves into the task of



#### TABUTEAU

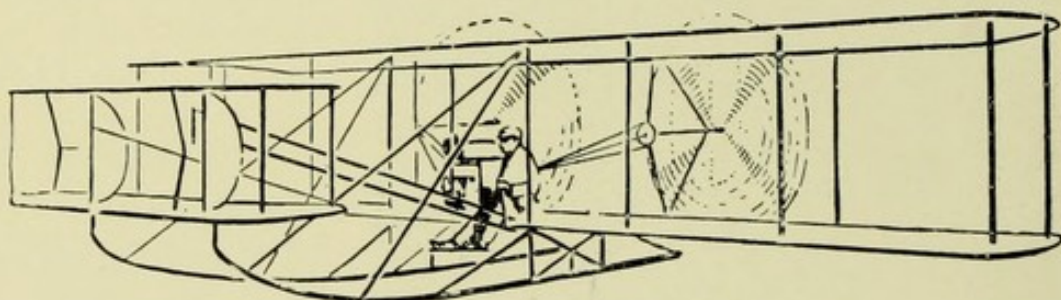
Maurice Tabuteau won the Michelin Cup, 1910, flying 365 miles in 7 hours 48 minutes. He made records for duration, height and distance during 1911, including a non-stop flight of 8 hours 35 minutes. He carries 'Tabloid' First-Aid, which he was in the act of inspecting when this photograph was taken.

#### PIXTON

C. Howard Pixton won the Manville and Brooklands Aggregate Prizes, October 4, 1911, piloting a Bristol biplane with E.N.V. motor and an Avro biplane with a Green motor. In the picture he is seen to have a 'Tabloid' First-Aid Outfit strapped to his Avro biplane.



aeroplane development with fresh enthusiasm. In the spring of 1907, Blériot made a short flight, and in October of the same year, Henri Farman, mounted on a big Voisin biplane with a box tail, flew 300 yards, then 800, and a little later won the Deutsch Archdeacon prize for a circular kilometre. Delagrangé followed with a series of excellent flights, and while the summer days of that eventful year waxed and waned, the records of flight continued to grow; but only by modest

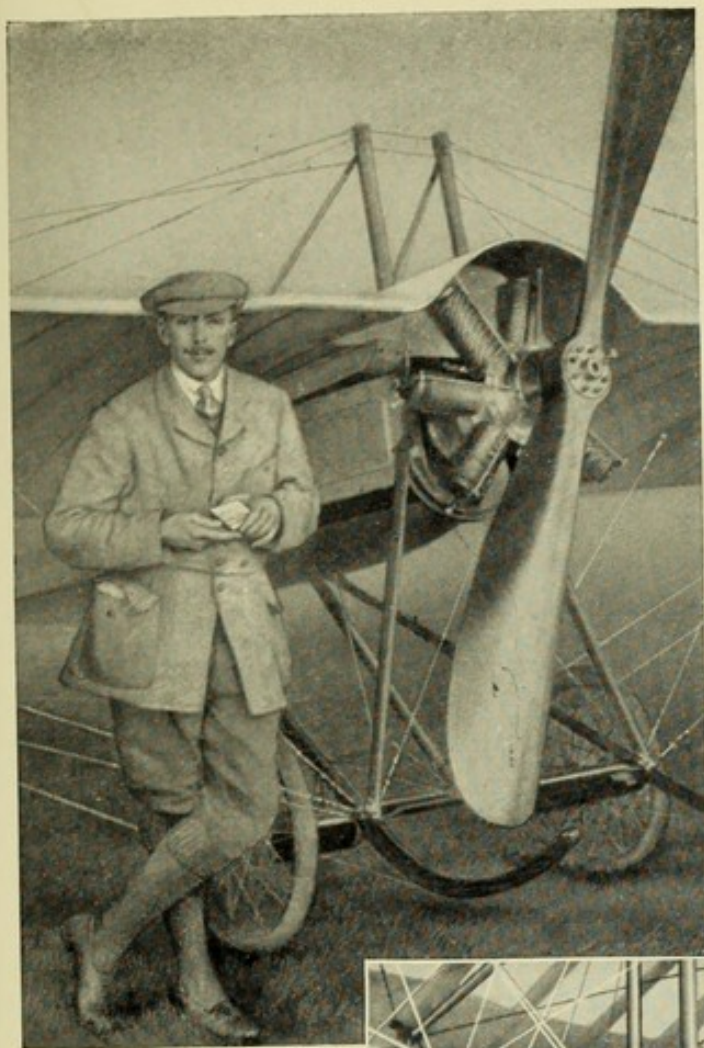


The Wright Brothers' first American Biplane

steps, as though conquering man was reluctant, as yet, to quit for long the mother earth which had nurtured him and bounded his activities for so many ages. It was in 1908 that Wilbur Wright came to France with his machines and exhibited flights; not of a few minutes at a time, but of an hour or more—flights measured not by yards, but by miles. At last the era of mechanical flight had definitely commenced. Its subsequent history has exhibited steady progress, darkened here and there by disaster, but flaming out ever and again with some splendid adventure or epoch-making achievement.

The triumph  
of the brothers  
Wright

Through the upper air, across that sky line of the horizon hitherto punctuated only by the flight of birds, a new race of aerial beings passes—creatures compact of the courage and resource of man, the ingenuity and precision of machines. There is the Voisin biplane with its lofty frame and boxed-in cellules—the first aeroplane to rise from French soil with a British subject (Moore-Brabazon) as pilot. The Farman, with its fine air of elegant solidity, its long fuselage and



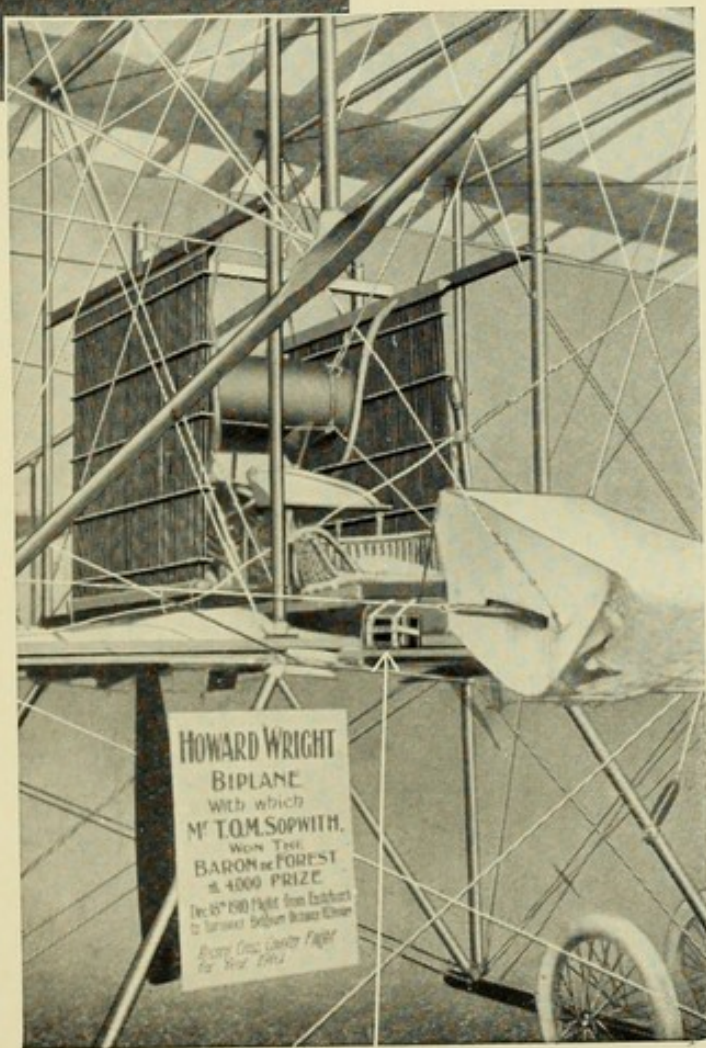
## VALENTINE

James Valentine was a competitor in the British Circuit of 1911, upon which occasion he was the first Englishman who finished the course. Arrived third at Brooklands in a Deperdussin Monoplane. Secured the third place at the First Aerial Derby, June 8, 1912.

He is equipped with a 'Tabloid' First-Aid, No. 706, which he holds in his hand as he stands by his monoplane.

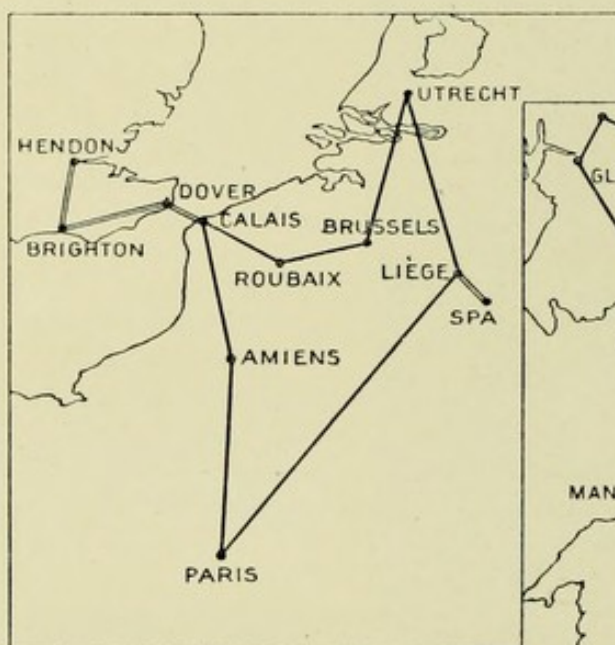
## SOPWITH'S BIPLANE

T. O. M. Sopwith was the winner of the de Forest £4000 All-British Contest on December 18, 1910, when he flew 169 miles from Eastchurch to Thirimont, Belgium. In Feb., 1911, he flew from Brooklands to Windsor, where he was received by H.M. the King. His 'Tabloid' First-Aid is here seen strapped to the seat support of a Howard-Wright biplane.



fluttering ailerons, on which its inventor has won so many laurels, and on which Grahame-White has flown with such distinction, both in England and America.

This is the type with which Paulhan won

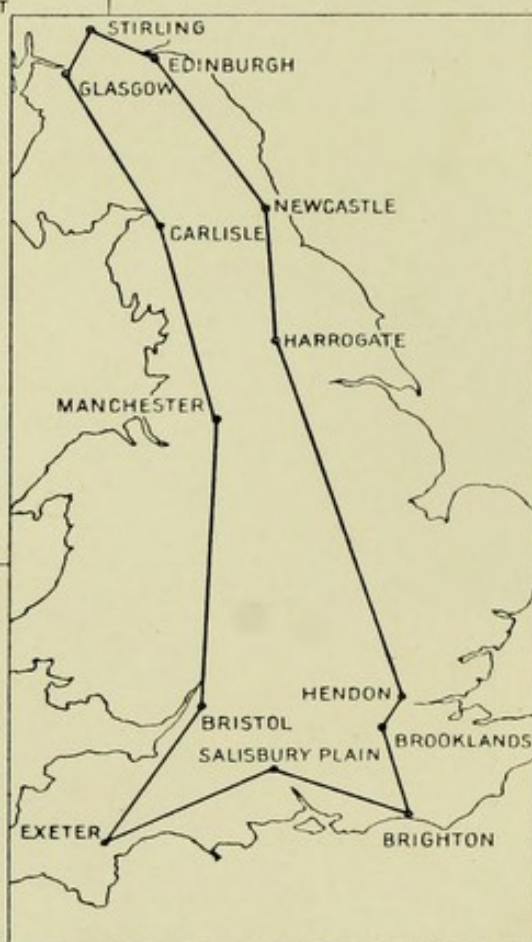


Route Map of Circuit of Europe flying contest, 1911

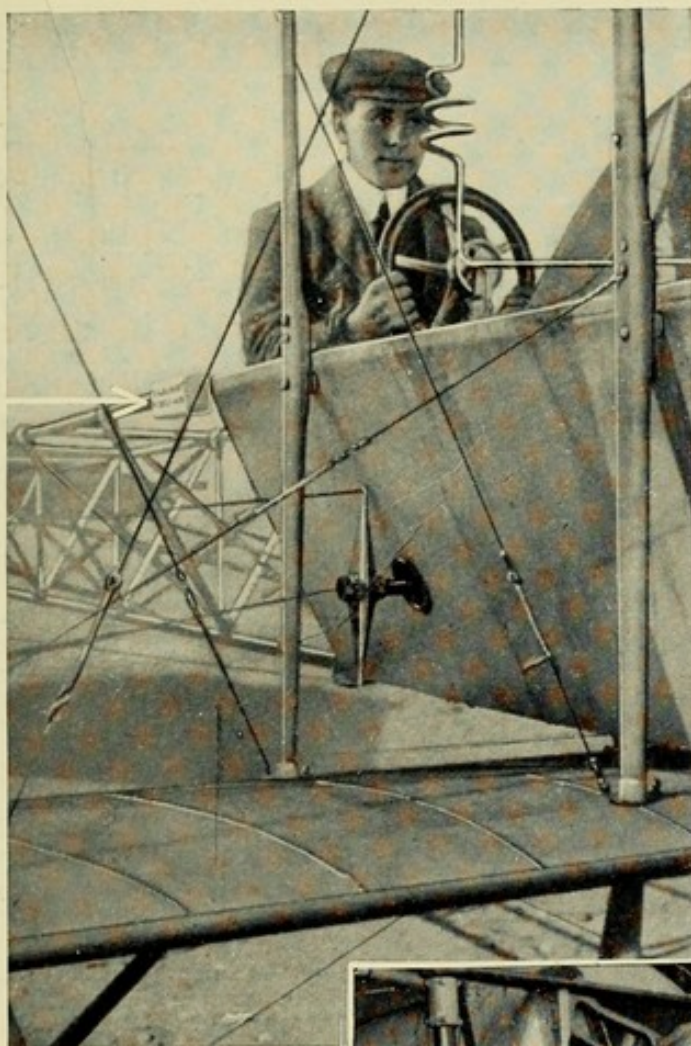
his way from London to Manchester on April 27, 1910, when he captured the *Daily Mail* £10,000 prize. Then there is the Blériot monoplane, with its wide wings curved from back to front, and the chassis cosily tucked away under the

Types of  
aeroplanes

covered fuselage. It was in one of these that Louis Blériot flew the Channel (July 25, 1909) and won the first of the famous *Daily Mail* prizes which have done so much to stimulate the progress of aviation. The great boat-shaped Antoinette, Hubert Latham's favourite, has a long polished body carrying a fixed empennage, and is armed with mighty square-tipped wings.



Route Map of Circuit of Britain flying contest, 1911



## ROE

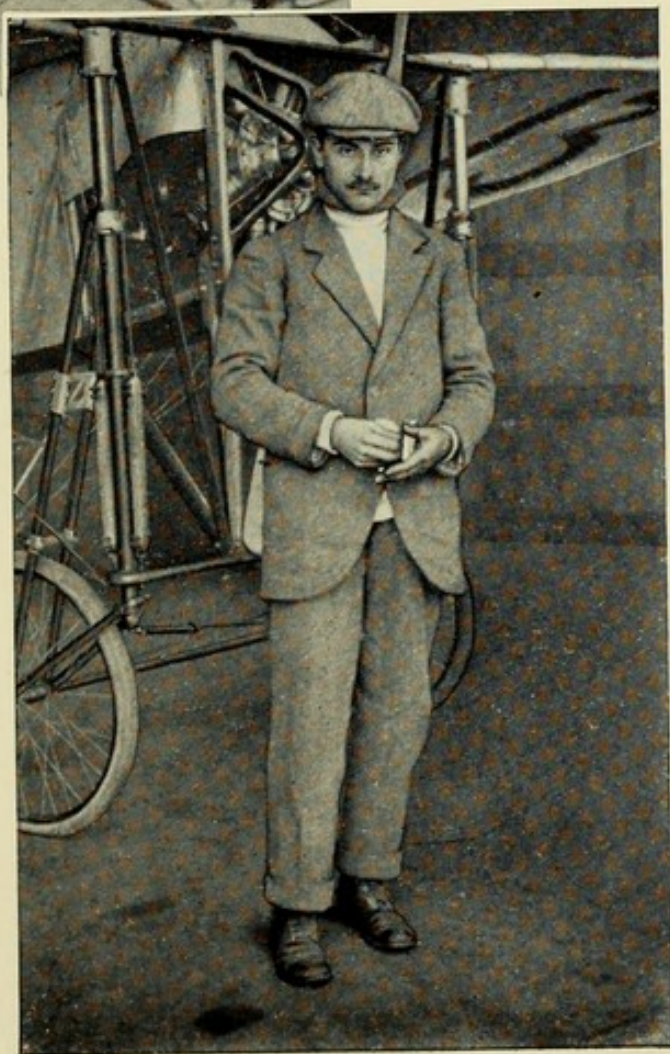
A. V. Roe was one of the first practical experimenters in England, and the first airman to qualify for and obtain his certificate on a triplane. He carries a 'Tabloid' First-Aid, No. 707, the position of which on his Avro biplane is indicated by an arrow in the photograph.

He reports as follows:— "Most useful in the many cases of small minor accidents."

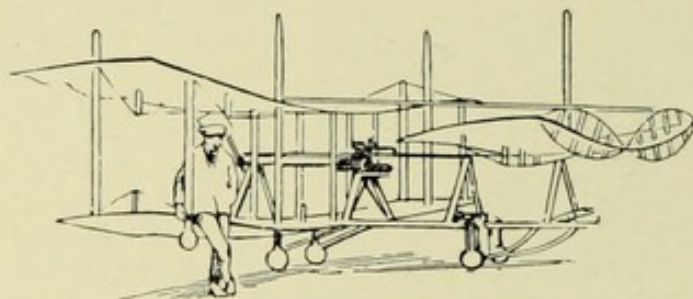
*A. V. Roe*

## GARROS

Roland Garros was second in the European Circuit; time 62 h. 17 m. 7 $\frac{2}{3}$  sec.; Second in Paris-Rome race. He made a height record in September, 1911, of 13,943 feet. He won the "Grand Prix de l'Aéro Club de France," June, 1912. Grasped in his hand is a 'Tabloid' First-Aid, No. 706.



The first British subject to mount into his native air on an aeroplane was A. Verdon Roe, who flew at Brooklands in June, 1908, on an Avro biplane, a



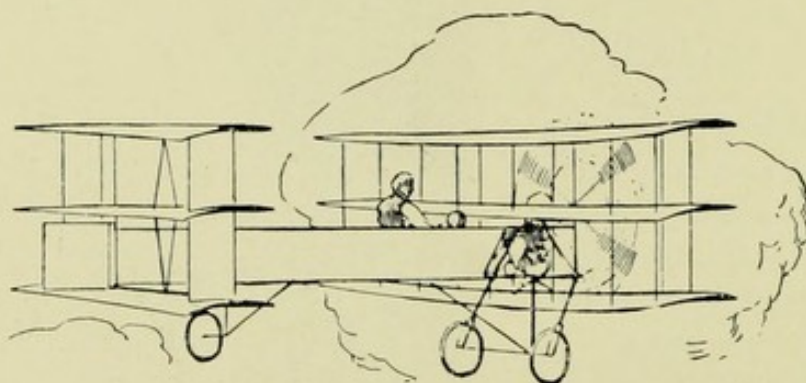
The first British Biplane (the Avro)

machine all-British save the engine, which was an Antoinette. In the previous year Roe had made some interesting touring flights with

the same structure, using it as a glider, so that in fixing engine and propeller to his machine he was following the same logical line of development so successfully pursued by the brothers Wright at Kitty Hawk.

In 1909, Roe again took to the air, making successful flights across the Lea marshes with his all-British

Avro triplane, equipped with a tractor driven by a British-built motor engine.



The first All-British Triplane (the Avro)

On original and hopeful lines is the huge, sturdy biplane, nicknamed the "Flying Cathedral," and designed by Cody, which is said to have carried no less than 2300 pounds weight into the air. Its planes have a span of forty-six feet. Cody won the British Empire Michelin Cup by his flight of 187 miles over Laffan's plain on the last day of 1910.



## FOWLER

Robert G. Fowler started for the "Hearst" Coast-to-Coast race from the Pacific slope in September, 1911.

The prize was withdrawn owing to the fact that no aviator accomplished the journey in the stipulated time—30 days.

He is equipped with 'Tabloid' First-Aid.

## RODGERS

*(Died 1912)*

Calbraith P. Rodgers made a famous coast-to-coast flight across U.S.A., starting from New York on September 17, 1911, and arriving at Los Angeles on November 5, 1911, carrying a 'Tabloid' First-Aid Outfit. He met Fowler flying eastward at Tacson, Arizona.



## THE AIR POST

The carrying of intelligence with great rapidity from one point to another when other means of transit are interrupted is one of the obvious uses of the aeroplane, which would be of signal advantage in war, and may be capable of utilisation commercially at no distant date in countries where railway communication is as yet undeveloped. Already some exceedingly interesting trials have taken place. On September 9, 1911, Gustav Hamel flew from Hendon to Windsor, carrying the mails, in 12 minutes. The wind was behind him and he attained a speed of 105 miles an hour.

Ovington in America, and Pécquet and Keith-Davies in India, have also carried the mails and demonstrated the practical utility of flight in this direction.

## INCREASED SAFETY OF AEROPLANES

Flight through the air to a height of thousands of feet above the earth's surface is in itself so astonishing a performance that it has been taken for granted that aviation must always be an extremely dangerous pursuit.

Yet in spite of the regrettable accidents and fatalities which have marked its history, many of the dangers have now been surmounted.

The heroic martyrs of the advance guard have not perished in vain.

Just as railway locomotion and motoring passed out of the danger zone of their early developments, so flight, armed with the latest resources and devices which experience and science have suggested, is emerging into a new epoch, in which the aeroplane is destined to be not merely the instrument of a matchless sport, but also the ally and servant of man both in peace and war.

Accidents with aeroplanes, when they have occurred, have been so spectacular and so dramatic that they have impressed the public mind with an exaggerated idea of danger. Aviation, like every other mode of

Railways,  
motoring  
and flight



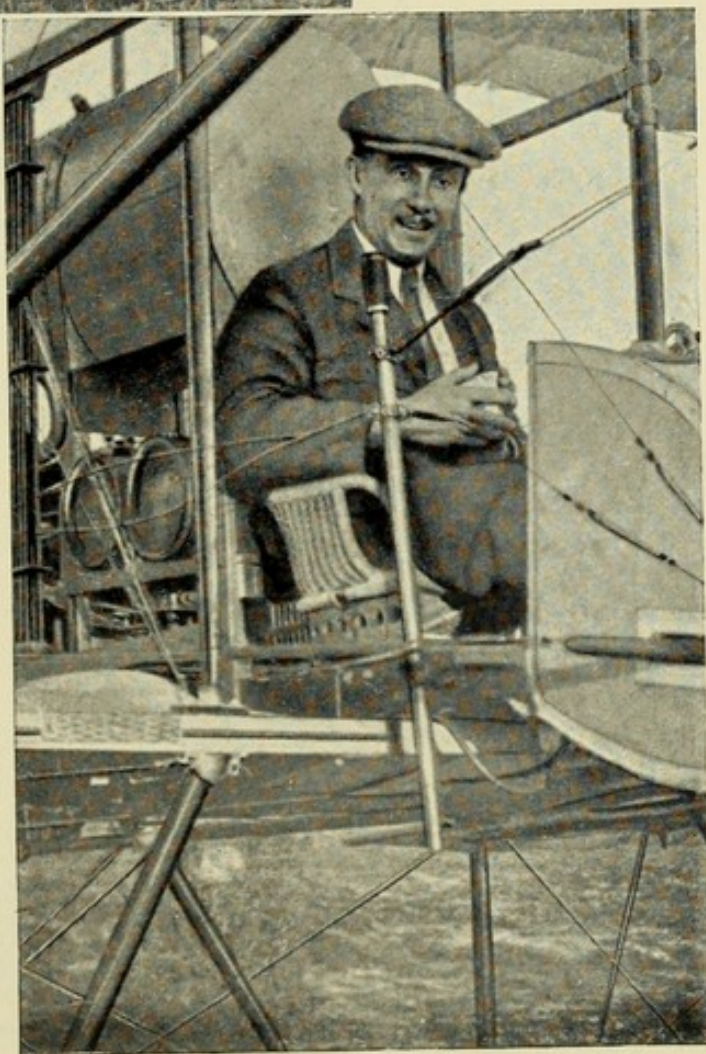
#### WIJNMALEN

H. Wijnmalen won the £4000 prize offered in 1910 by the Automobile Club of France for a flight from Paris to Brussels and back with a passenger.

He is here seen carrying a 'Tabloid' First-Aid Outfit in his hands.

#### REYNOLDS

Lieutenant Reynolds took part in the Circuit of Britain *Daily Mail* Competition, 1911. He flies a Howard-Wright biplane and is equipped with 'Tabloid' First-Aid, which was grasped in his hand when this photograph was taken.



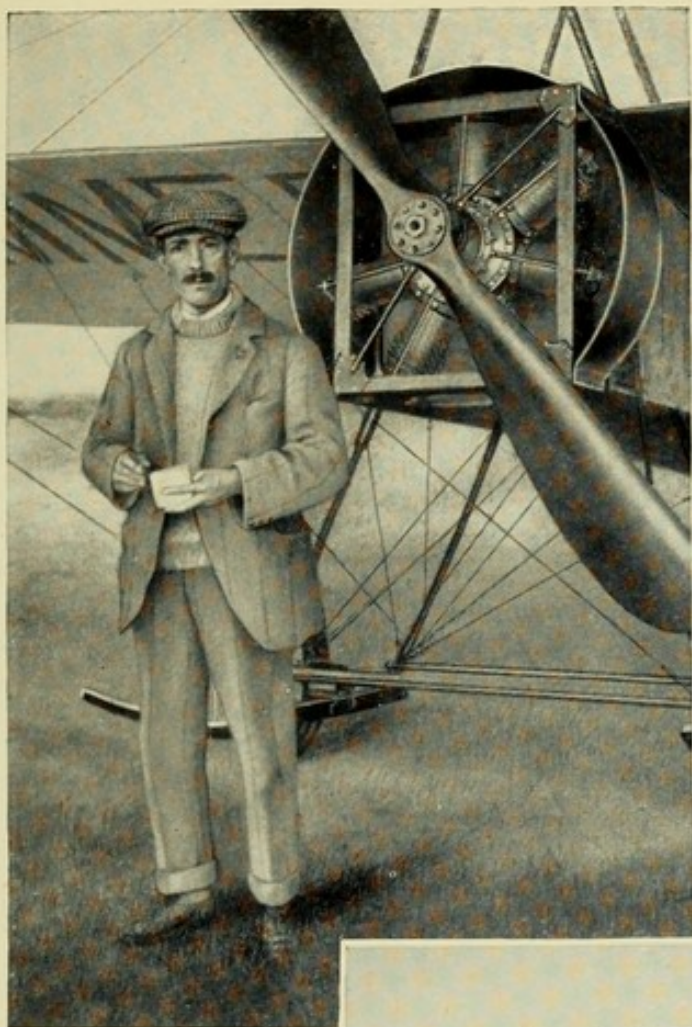
rapid motion, has its risks, but those risks are diminishing. To-day, flight is less dangerous than mountain climbing, and its statistics compare favourably with those of other outdoor sports. From every one of the regrettable mishaps which have taken place, some useful lesson has been learnt, either for the conduct of the airman or the construction of the machine. Not in vain have the heroic pioneers of this new science given their lives to the cause of progress. Their work remains and their memory is an inspiration. Rolls, Grace, Chavez, Nieuport, Cammell, Gilmour and the rest have made mankind their heirs and their debtors. One effect of the sacrifice of these brave young lives has been to quicken into stern resolve the determination of aeroplane designers to eliminate everything which is faulty or inefficient from their machines.

In the aeroplane of the future there must be no green wood, no soldered control-lever joints, no flimsy bolts or stays. The latest designs show that the constructional lessons of the past are being learnt, and that the aeroplane is only at the commencement of a great era of development which will render the path of the air not only swift but safe for man's adventurous progress.

#### AVIATION AND FIRST-AID

All are agreed that the prevention of accidents and the prompt attention to injuries, whether slight or grave, whenever they do occur, is of the utmost importance to the progress of flight, and that it is progressing none can doubt. Since those first tentative efforts which have been very briefly recorded, the number of flying men, and the distance flown, have increased by leaps and bounds.

Flight is no longer an experiment, but an accepted fact. This magnificent achievement owes much to the *personnel* of the flying movement. What skill, what



## KIMMERLING

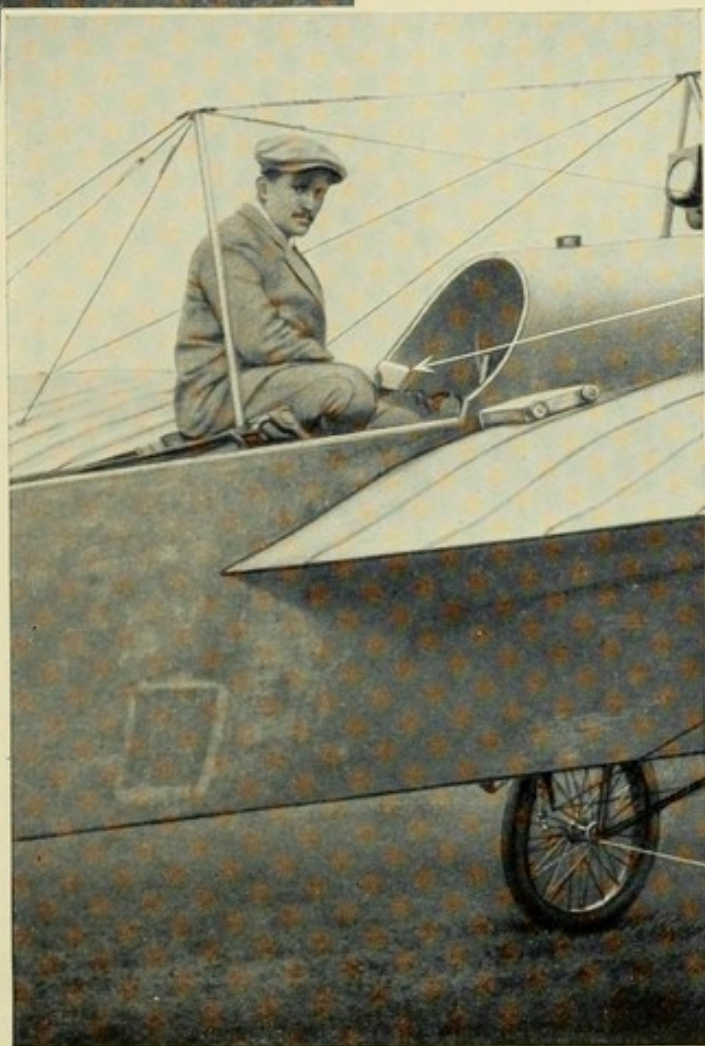
(Died 1912)

Albert Kimmerling was the first man to fly a heavier-than-air machine in South Africa on a Voisin biplane in 1910.

Took part in the European Circuit. The accompanying photograph was taken while he was examining the 'Tabloid' First-Aid with which he was equipped.

## GIBERT

E. Gibert took part in the Paris-Madrid race, and came in fifth in the European Aviation Circuit. Won a £100 trophy for quick crossing of the English Channel. He rides a R.E.P. monoplane, and is equipped with 'Tabloid' First-Aid, the position of which is indicated by an arrow on the accompanying picture.



intrepid courage, what immense energy have been devoted to this task! The airmen are the heroes of our modern world, and deserve to be enumerated in a roll of honour by themselves.

Their mastery of a new element has been rendered possible by the united labours of many minds and many diverse activities on the part of scientific collaborators.

Every item in the internal fitting of an aeroplane or an airship must be light, compact and efficient; and to discover for each want the most perfect and apt fulfilment has been the constant study of their constructors.

This principle of selection has been applied even to such accessories as medical and first-aid supplies, which, on the prolonged aerial voyages now undertaken, are necessary adjuncts, and some particulars are given in the following pages of the first-aid outfits used for this purpose.

Lightness, compactness and efficiency are the characteristics of 'Tabloid' First-Aid, and it is, therefore, not surprising to find these admirable equipments on board modern aircraft, and in use by the famous aviators who are winning fresh laurels, and making new records, day by day, in the world of flight.

Such appliances have not always been available.

In fact, the evolution of medical and first-aid equipments closely resembles that of flight. Bulky and unwieldy bottles of liquid medicaments, easily broken and

difficult both to carry and to preserve in good condition, were once the order of the day. But by dint of careful experiment and research a new era dawned

upon the world of pharmacy. The same keen spirit of criticism and of selection, which produced wondrous effects in engineering, has been brought to bear upon the problems of medical supplies, and in the result, 'Tabloid' medicaments have been evolved to meet the

Characteristics  
of aeroplane  
fittings

Lightness and  
efficiency of  
'Tabloid'  
First-Aid



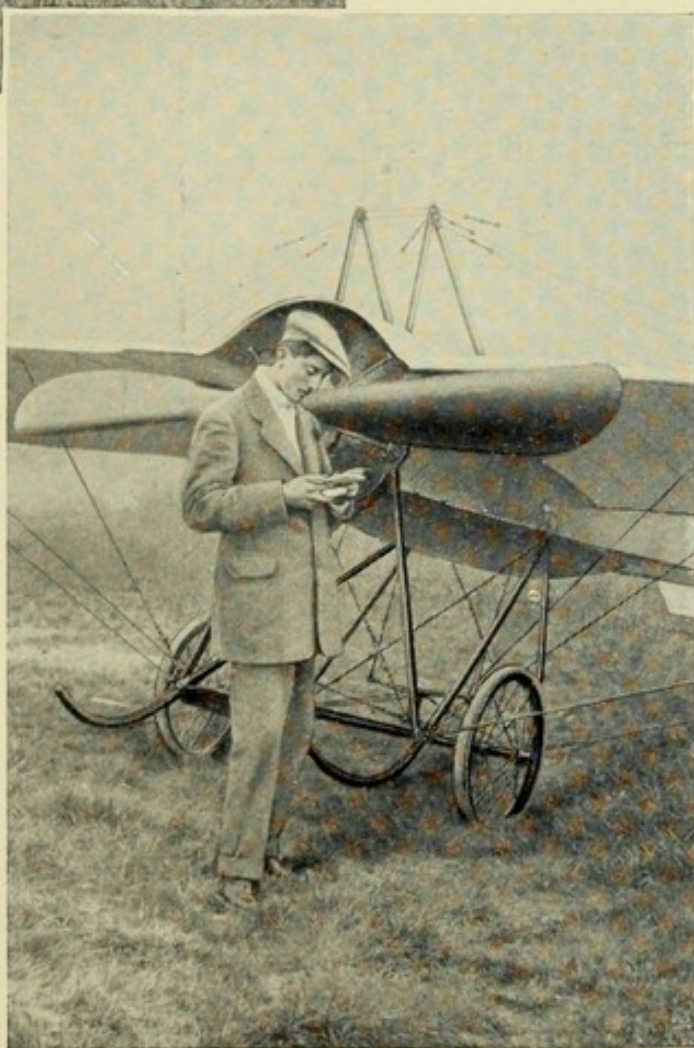
#### CHEVALIER

Louis Chevalier flew in the Gordon-Bennett Cup contest of 1911. He pilots a Nieuport monoplane, and is here seen standing in front of his machine holding a 'Tabloid' First-Aid Outfit in his hand.

#### VIDART

René Vidart flies a Deperdussin monoplane. He made a 40-kilometre speed record with one passenger at Mourmelon, December 3, 1910, doing the distance in 29 minutes.

Vidart won the Paris-Liége and Calais-Paris sections of the European Circuit. He carries a 'Tabloid' First-Aid Outfit, and is seen examining it in this photograph.



needs of modern requirements in first-aid. They bear the same relation to the cumbrous, old-fashioned medical and surgical equipments, as does the modern fast flying aeroplane to the balloon. 'Tabloid' Brand First-Aid equipments are admirably adapted for all sudden emergencies, and on account of their lightness may be carried without the least inconvenience under all circumstances.

From the first these qualities have rendered them specially acceptable to airmen.

Balloon and airship pilots and designers like Andree, Wellman and Zeppelin have carried 'Tabloid' First-Aid equipments aboard their vessels; the pioneers of the aeroplane have followed their example, and for their personal use a special 'Tabloid' First-Aid outfit, no larger than a cigarette case, has been devised. This is known as the 'Tabloid' First-Aid Pocket-Case, No. 706 (Aviator's). *La Presse* (Paris), in commenting on the first great aviation meeting at Rheims in 1909, remarked upon this aspect of aeroplane equipment as follows:—

“ Bien mieux, cette petite boîte pratique, ingénieusement établie par MM. Burroughs Wellcome et Cie de Londres, a été adoptée par nos plus fameux aviateurs, MM. Blériot, Paulhan, Latham, Rougier, Santos-Dumont, Jean Gobron, Curtiss, Henri Fournier, Delagrangé, Leblanc, Lefèvre, Demanest, Anzani, Bréguet, etc.

“ Ajoutons que nos aéronautes sont également des clients de cette admirable invention.”

Writing from Boulogne, August 31, 1909, M. Jean Gobron reported:—

“ I have already had occasion to use the 'Tabloid' First-Aid box for different small accidents which have happened to us during the aviation week, and I have quite appreciated its usefulness. I have never seen anything so complete or well presented.”

'Tabloid' First-Aid has been carried on the famous circuits and cross-country contests which have marked the progress of aviation during recent years.

Védrines, the winner of the Paris-Madrid race, habitually carries a 'Tabloid' First-Aid, No. 706. "Beaumont," the heroic victor of both the European and British Circuits of 1911, has shown his appreciation of this aid to efficiency. Blériot, the first man to fly across the English Channel; Paulhan, of London-to-Manchester fame; and Grahame-White, his English adversary, and subsequently winner of the Gordon-Bennett Cup, are all equipped with 'Tabloid' First-Aid.

Mr. Gordon-England, pilot and designer to the British and Colonial Aeroplane Co., reported as follows with regard to his first-aid equipment:—

"Just a line to let you know how useful I have found your 'Tabloid' First-Aid Case. When I fell and damaged myself at Blackwater, Isle of Wight, I had to bandage myself. If I had not had your splendid outfit I should have been in a very bad way. As it was, I fixed things up and then was driven into Ventnor, which took an hour. I never fly without my 'Tabloid' case, and never shall. Every aviator ought to carry one."

#### FIRST-AID IN EMERGENCIES

The foregoing remarks, and the illustrations in this book, indicate that some of the most successful aviators, of both British and foreign nationality, are interested in the subject of first-aid, and that they regard a 'Tabloid' First-Aid equipment as among the needful fittings of a well-found aeroplane.

In this they are at one with the most enlightened opinion of the day. A knowledge of the elements of first-aid is now regarded as one of the essentials of a practical education, and should be acquired by all who desire to take part in outdoor sports, and who,

at the same time, wish to be of service to their fellow-creatures should occasion arise.

Medical assistance should be sought with the least possible delay in every case of real injury. Too often, the customary mode of treatment of slight accidents, when medical advice is not available or is not thought to be necessary, is to apply carelessly a bandage or handkerchief and leave the part to heal itself, if it will.

Need for  
promptness

Should it not progress favourably, a doctor is called in—often too late to prevent serious complications, due to the absence of proper treatment at an earlier stage. Science teaches that a neglected wound, or even an uncleansed scratch, may be a source of danger.

First-aid treatment, by applying prompt antiseptic measures, obviates such risks.

Nor are skill and knowledge of first-aid all that is required. The requisite materials must be at hand, and in so compact and portable a form as to permit of their being carried everywhere, without inconvenience.

Recognising this real need for reliable and efficient equipments for use in cases of emergency, Burroughs Wellcome & Co. have issued a series of outfits, under the title of 'Tabloid' First-Aid. These equipments are models of convenience and reliability, and their general excellence has gained for them many awards at the great exhibitions of the world. A great variety of styles and sizes can be obtained to suit all requirements.

In the latter part of this book some Notes on First-Aid are given which may be of value in an emergency pending the arrival of the medical practitioner.

In order to carry out the instructions given, it is necessary to familiarise oneself with the various helps to first-aid—bandages, dressings, etc.—and to consider the outfits and equipments available for this purpose.

Some of the most suitable are illustrated and described in the following pages.

TRADE MARK 'TABLOID' BRAND FIRST-AID

FOR

Aviators, Aeronauts, Automobilists, Yachtsmen, Sportsmen, Travellers, Tourists, Nurses, Boy Scouts, etc.

Compact outfits of bandages and first-aid accessories for emergencies, suitable for placing in hangars, sports pavilions, gymnasias, schools, assembly rooms, also in the home, farm, or workshop, especially where medical aid is not immediately available; and for use when travelling.

NO. 706. 'TABLOID' POCKET FIRST-AID  
(For Aviators)

Contains 'Tabloid' Bandage, 'Tabloid' Boric Gauze, Carron oil (solidified), adhesive plaster, court plaster, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," jaconet, pins, etc. This equipment, which is the size of an ordinary cigarette-case, is used by the leading aviators of the world.



In Aluminium

No. 706. 'Tabloid' Pocket First-Aid  
Measurements:  $3\frac{1}{2} \times 3 \times \frac{3}{4}$  in.

NO. 710. 'TABLOID' FIRST-AID

Contains 'Tabloid' Bandage, 'Tabloid' Absorbent Cotton, 'Tabloid' Boric Gauze and Swab, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax' Boric Acid Ointment, Carron oil (solidified), camel-hair brush, adhesive plaster, court plaster, etc.

A very compact and useful equipment holding an efficient supply of accessories.

In Scarlet Enamelled Metal.



No. 710. 'Tabloid' First-Aid  
Measurements:  $4 \times 3\frac{1}{8} \times \frac{5}{8}$  in.

## NO. 702. 'TABLOID' FIRST-AID

Measurements:  $7 \times 5\frac{1}{4} \times 2\frac{3}{4}$  in. Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' 'Hazeline' Cream, sal volatile, Carron oil (solidified), tourniquet, jaconet, plaster, protective skin, scissors, pins, etc., and eight tubes of 'Tabloid' and 'Soloid' Brand products.

In Rex Red, Royal Blue or Brewster Green Enamelled Leather.

## NO. 707. 'TABLOID' FIRST-AID

Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' Carron oil (solidified) and jaconet, castor oil, plaster, protective skin, scissors, pins, etc., and seven tubes of 'Tabloid' and 'Soloid' Brand products.

In Rex Red (*as illustrated*), Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal.



No. 707. 'Tabloid' First-Aid  
Measurements:  $6\frac{1}{2} \times 3\frac{1}{4} \times 2$  in

## NO. 708. 'TABLOID' FIRST-AID

(For Nurses)



No. 708. 'Tabloid' First-Aid (for Nurses)  
Measurements:  $6\frac{1}{2} \times 3\frac{1}{4} \times 2$  in.

Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' Carron oil (solidified), jaconet, plaster, protective skin, camel-hair brush, pins, etc., and two tubes of 'Tabloid' and 'Soloid' Brand products.

In Rex Red, Royal Blue or Brewster Green Enamelled Metal (*as illustrated*), or in Aluminised Metal.

Waist-belt or cycle attachment, may be obtained at a small extra charge  
(*see illustration of No. 709 First-Aid, on opposite page*)

### NO. 709. 'TABLOID' FIRST-AID (For Boy Scouts)

Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' Carron oil (solidified), jaconet, plaster, protective skin, camel-hair brush, pins, etc.

In Rex Red (*as illustrated*) or Royal Blue Enamelled Metal.



No. 709. 'Tabloid' First-Aid (for Boy Scouts)  
Measurements:  $6\frac{1}{2} \times 3\frac{1}{4} \times 2$  in.

Waist-belt or cycle attachment (*as illustrated*), may be obtained at a small extra charge.

### NO. 715. 'TABLOID' FIRST-AID

Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' sal volatile, Carron oil (solidified), jaconet, plaster, protective skin, scissors, pins, etc., and eight tubes of 'Tabloid' and 'Soloid' Brand products.

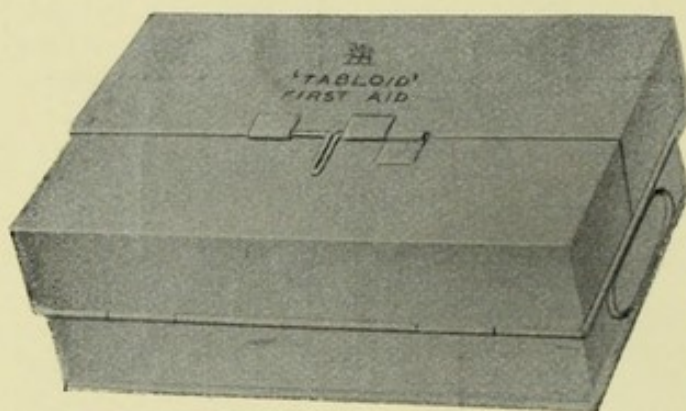


In Rex Red, Royal Blue (*as illustrated*) or Brewster Green Enamelled Metal, or in Aluminised or Black Japanned Metal.

No. 715. 'Tabloid' First-Aid  
Measurements:  $7\frac{1}{2} \times 4\frac{1}{4} \times 2$  in.

## NO. 722. 'TABLOID' FIRST-AID

Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' 'Hazeline' Cream, sal volatile, Carron oil (solidified), tourniquet, jaconet, plaster, protective skin, scissors, pins, etc., and eight tubes of 'Tabloid' and 'Soloid' Brand products.



In Rex Red, Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal (*as illustrated*).

No. 722 'Tabloid' First-Aid  
Measurements:  $6\frac{3}{4} \times 4\frac{3}{4} \times 2\frac{1}{4}$  in.

## NO. 723. 'TABLOID' FIRST-AID

Measurements:  $8 \times 5\frac{1}{2} \times 2\frac{1}{4}$  in. Contains 'Tabloid' Bandages and Dressings, 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," 'Borofax,' 'Hazeline' Cream, sal volatile, Carron oil (solidified), lancet, tourniquet, jaconet, plaster, protective skin, scissors, pins, etc., and nine tubes of 'Tabloid' and 'Soloid' Brand products.

In Rex Red, Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal.

## NO. 905. 'TABLOID' PHOTOGRAPHIC OUTFIT

A complete outfit of the celebrated 'Tabloid' Chemicals for developing, sepia toning, intensifying, reducing, gold toning, fixing, etc.

Fresh, reliable solutions without weighing or waste.

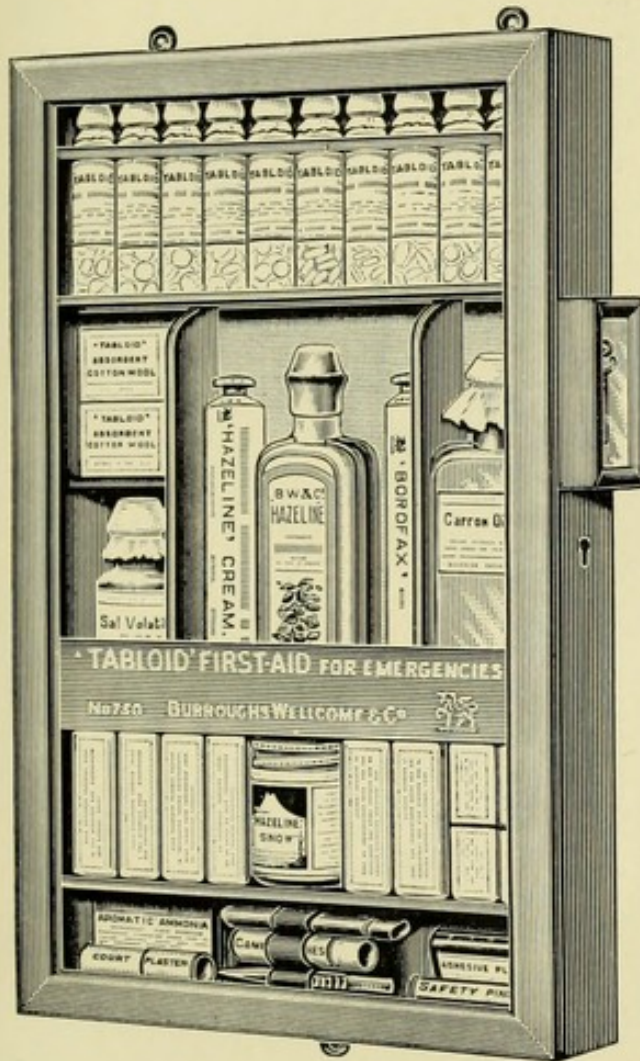
In Rex Red, Royal Blue, Imperial Green or Bright Scarlet Enamelled Metal (*as illustrated*).



No. 905 'Tabloid' Photographic Outfit  
Measurements:  $4 \times 4 \times 2\frac{1}{8}$  in.

NO. 730 'TABLOID' FIRST-AID (*Registered*)

(Wall-case for Offices, Theatres, Assembly Halls, Colleges, Schools, Works, etc.)



No. 730. 'Tabloid' First-Aid

plaster, scissors, forceps, camel-hair brushes, safety-pins, etc., and 10 phials of 'Tabloid' and 'Soloid' Brand products.

In Mahogany, with glass front.

**Price in London, 40/0**

Mr. Chiswell Billing, Business Manager for "The Miracle," Olympia, reported upon this outfit as follows:—

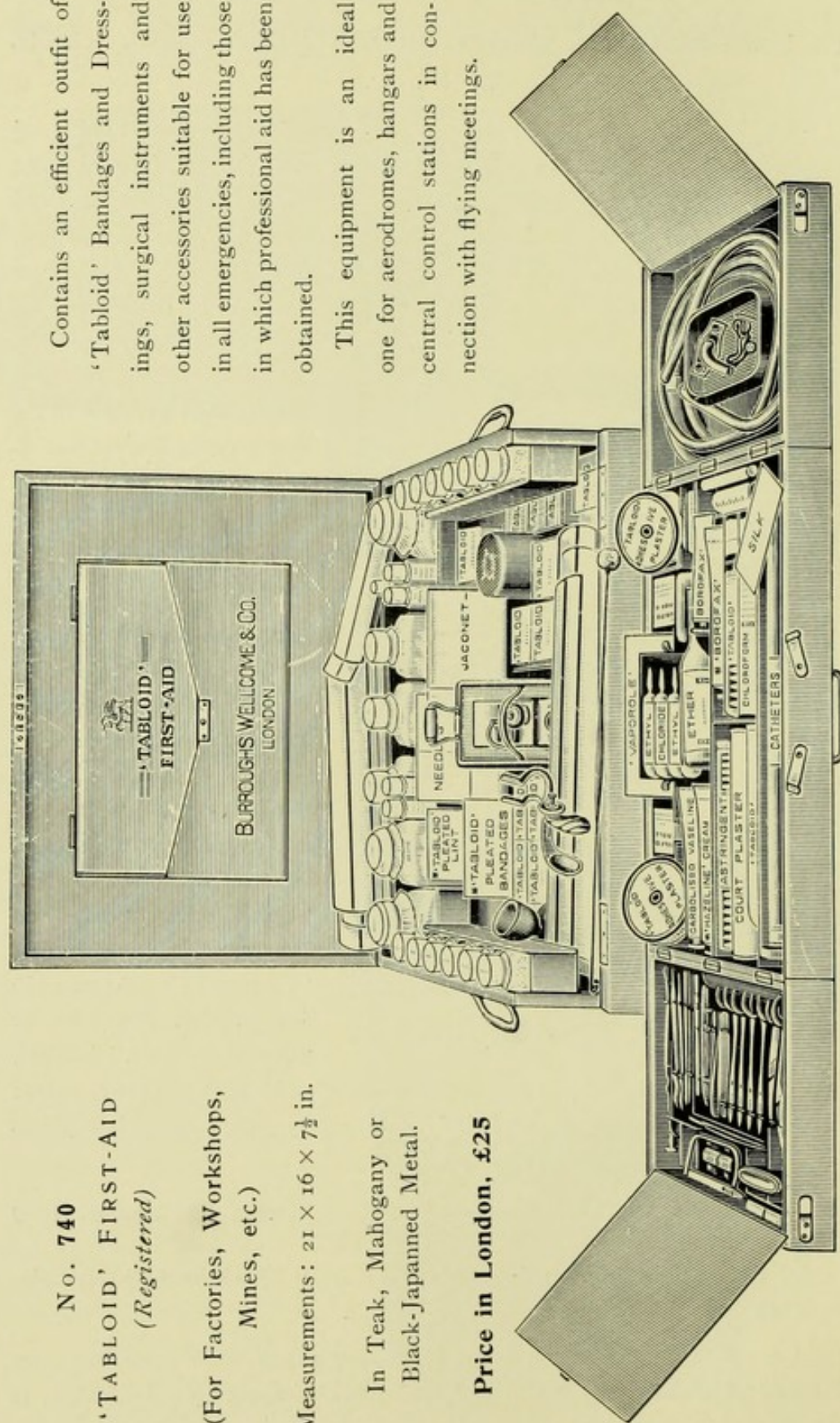
"I am writing to let you know how very useful we are finding your First-Aid Case during the run of 'The Miracle' spectacle. In fact, it is absolutely indispensable, and should, I consider, be in all large institutions, works and places of amusement."

Measurements:  $16\frac{1}{2} \times 10\frac{1}{2} \times 2\frac{1}{4}$  in. This equipment has been specially designed for use in offices, theatres, etc. It forms a handsome addition to the fittings of such buildings, and, since the whole of the contents can be seen at a glance, it is extremely convenient in emergencies. An extra key is supplied in a small glass-fronted receptacle attached to the case.

The contents of this outfit are as follows: 'Tabloid' Brand Roller Bandages, Triangular Bandage, Absorbent Cotton, Lint, Boric Lint, 'Borofax' Boric Acid Ointment, Carron Oil, sal volatile, 'Hazeline,' 'Hazeline' Cream, "Hazeline' Snow," 'Vaporole' Aromatic Ammonia, for use as "Smelling Salts," jaconet, adhesive plaster, court

Contains an efficient outfit of 'Tabloid' Bandages and Dressings, surgical instruments and other accessories suitable for use in all emergencies, including those in which professional aid has been obtained.

This equipment is an ideal one for aerodromes, hangars and central control stations in connection with flying meetings.



No. 740

'TABLOID' FIRST-AID  
(Registered)

(For Factories, Workshops,  
Mines, etc.)

Measurements:  $21 \times 16 \times 7\frac{1}{2}$  in.

In Teak, Mahogany or  
Black-Japanned Metal.

Price in London, £25



## NOTES ON FIRST-AID

In all but the most trivial accidents qualified medical assistance should be obtained at the earliest possible moment.

### **Abrasions**

Bathe the place well with warm water to free it from grit. Dry the wound, and cover it with an antiseptic dressing such as 'Tabloid' Boric Cotton or Gauze.

### **Bruises**

Soak a piece of 'Tabloid' Lint in a spirit lotion consisting of one-third spirit of wine, whisky, methylated spirit or some spirituous preparation and two-thirds water, and apply to the part. If the skin be broken, apply 'Tabloid' Boric Lint, or the part may first be smeared with a soothing ointment and covered with lint. Should there be much swelling, apply pressure to the part by a pad of absorbent cotton or linen fixed by means of a bandage; or keep the injured part constantly moist by means of 'Tabloid' Lint or Absorbent Cotton soaked in Goulard Lotion.

### **Burns and Scalds**

In the treatment of these accidents the main object is to exclude the air as quickly and completely as possible from the injured part. Bicarbonate of soda mixed into a soft paste with cold water may be quickly smeared over. This should be allowed to remain on until the pain ceases, then washed off with cold water, and the wound dressed with a soothing ointment on 'Tabloid' Lint.

Carron oil should be applied if possible. A piece of lint soaked with sweet oil or linseed oil makes a good dressing if Carron oil cannot be obtained.

In more serious cases of burns on the body, the best first-aid that can be applied is to cover the part as quickly as possible with 'Tabloid' Absorbent Cotton, or to powder it thickly with flour or starch.

The clothing should be removed very carefully, bit by bit, care being taken not to disturb any portion sticking to the burnt skin. Collapse from shock should be guarded against by keeping the patient warm with hot-water bottles, wrapped in flannel, applied to the feet.

## Dislocations

Displacement of a bone from its socket, or articulation at a joint, is termed a dislocation. This is liable to occur most frequently at the shoulder, and in the joints of the hand or foot.

A dislocation may be recognised by pain, deformity and swelling, with loss of movement at the joint.

Medical assistance should be obtained at once. In dislocations of the larger joints, rest the limb on a pillow or cushion, in the least painful position. Apply cold or hot fomentations, whichever afford the greater relief, and await the arrival of the surgeon. No attempt should be made to put the bone back into its place.

## Drowning or Suffocation

In cases of apparent drowning, or of suffocation, prompt action is extremely important. Free access of fresh air must be ensured, whilst care must be taken to keep the patient warm. Draw the tongue forward before the patient is placed on his back, then remove all clothing from the neck and chest. This being done, turn him on his chest with one arm bent underneath the forehead, so that any water may escape from the mouth, and cleanse the mouth and nostrils with a handkerchief.

Artificial respiration should be carried out according to Sylvester's or Schäfer's method. Sylvester's method is as follows :—

Lay the person flat on back. Place a small firm cushion or folded article of dress under the shoulder-blades. Draw the tongue forward, and keep it projecting beyond the lips by means of an indiarubber band or tape fastened round the chin. Kneeling at the patient's head, grasp the forearms just below the elbow, draw them well over the patient's head as far back as they will go, and keep them in that position for two seconds—by this means air is drawn into the lungs. Next turn down the patient's arms, bringing them down against the ribs, and, crossing the forearms over the pit of the stomach, press gently and firmly upon the sides and front of the chest ; keep up this pressure for two seconds. Repeat this process alternately and deliberately about *fifteen times a minute, not more*, until the patient begins to take short gasps ; then cease the movement.

A method of artificial respiration which is said to be superior to others is the one known as Schäfer's method. This can be carried out as follows :—

Immediately on removal from the water, place the patient face downward on the ground. Assume a kneeling or squatting position either across or on one side of the patient facing the head. Place the hands flat on the lower part of the back, one

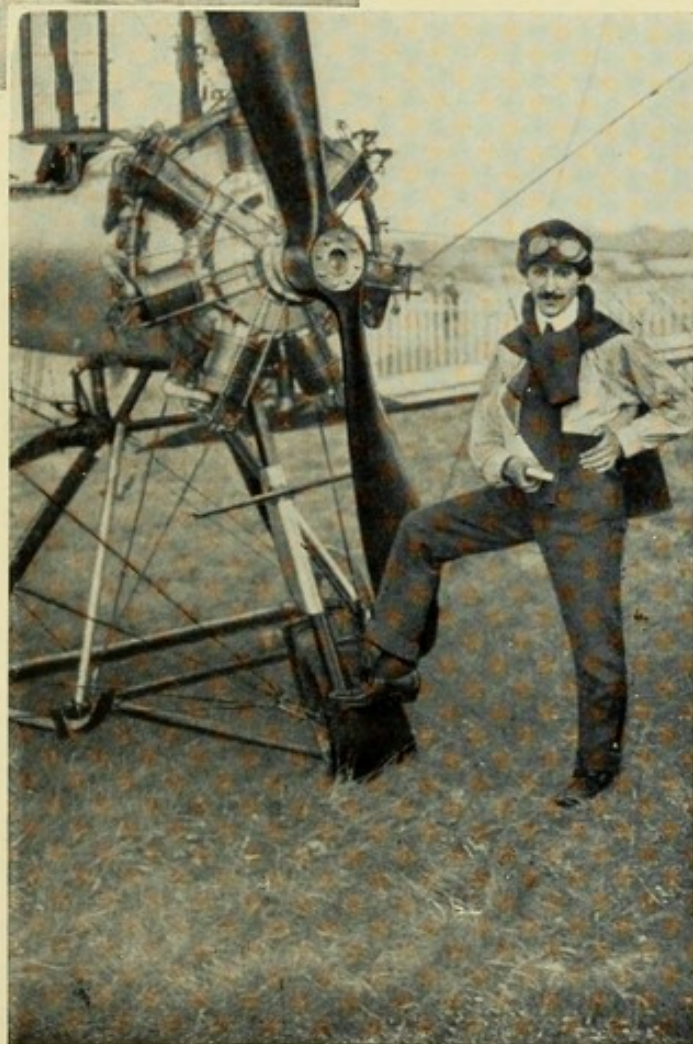


#### BLANCHET

George Blanchet piloted a Bréguet biplane in the *Daily Mail* Circuit of Britain, 1911. In the picture he is closely examining the 'Tabloid' First-Aid equipment, which he carries with him on aerial trips.

#### DE MONTALENT

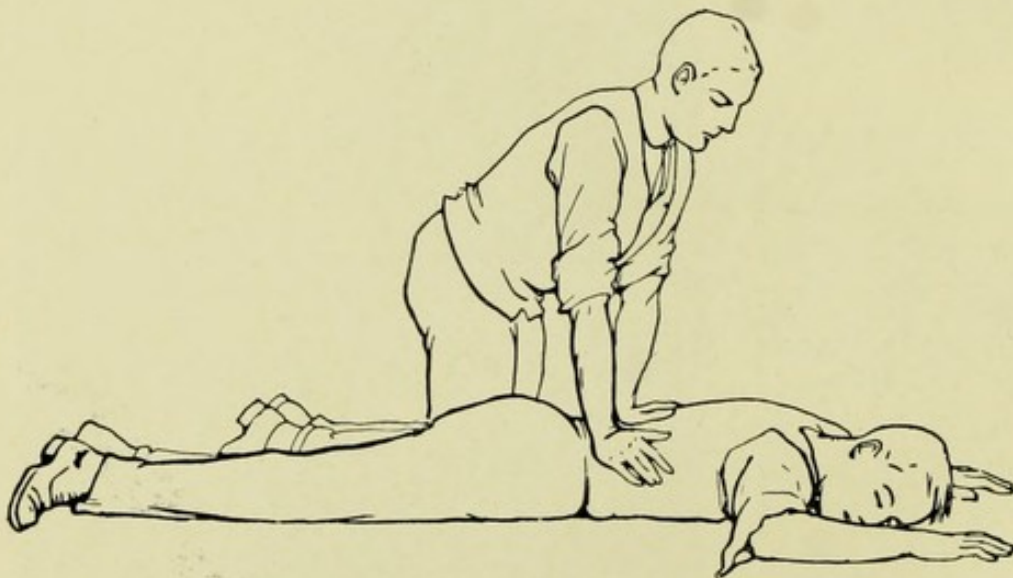
Olivier de Montalent took part in the *Daily Mail* Circuit of 1911, on a Bréguet biplane. He made a world's record by carrying a passenger to a height of 7457 feet at Brooklands, August 8, 1911. He is equipped with 'Tabloid' First-Aid, which he is here seen to be holding in his hand.



on each side (*as illustrations*), and slowly lean forward upon the hands, keeping the elbows extended so as to produce gradually increasing pressure—which must not be too violent—on the patient's chest. The pressure is applied for about three seconds and is then removed by the operator swinging his body



Schäfer's method of Artificial Respiration. First position



Schäfer's method of Artificial Respiration. Second position

back, leaving the hands in position. After two seconds the process is again commenced and is continued in the same way, the operator swinging his body forwards and backwards once every five seconds, or about twelve times a minute. This course must be pursued until natural respiration is resumed. It is of



## KEITH-DAVIES

E. Keith - Davies was the first man to fly in India, where he carried the mails and flew at the Allahabad Exhibition. With reference to his 'Tabloid' First - Aid equipment, he reports:

"I think that no aviator should be without one of these compact cases."

*E. Keith Davies*

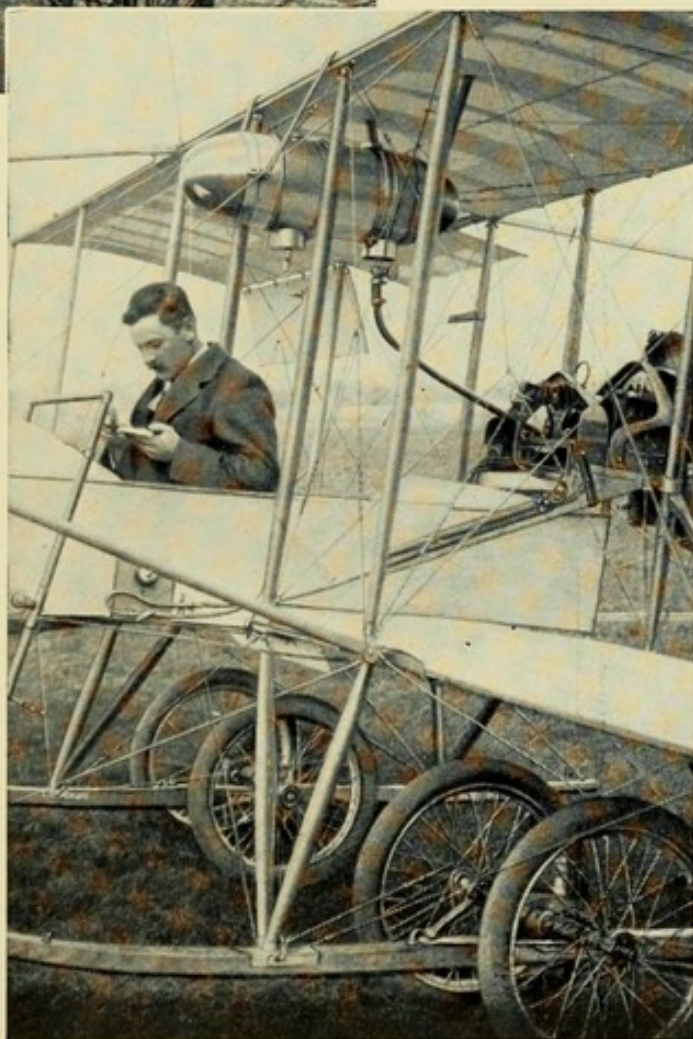
## COMPTON-PATERSON

C. Compton-Paterson took part in the *Daily Mail* Circuit in 1911, and subsequently flew in South Africa. In the photograph he is seen sitting in his biplane ready for flight and examining his 'Tabloid' First-Aid Outfit.

Concerning it he reports:—

"Your aviator's first-aid outfit has done excellent service for me. I carried it during my long flight up country and had occasion to use some of the contents from time to time."

*Compton Paterson*



great importance that not a moment be lost in commencing artificial respiration. Do not stop to remove wet clothing.

Artificial respiration should be continued for two hours if necessary, until a spontaneous attempt to respire is noticed. The movements should then be stopped, and circulation restored by rubbing the limbs upward towards the heart. Whilst one person is carrying out artificial respiration, others may apply hot flannels to the body and limbs, and hot-water bottles to the feet. No attempt should be made to give stimulants by the mouth until natural breathing has re-commenced.

## Electric Shock

This is most frequently caused by the body coming in contact with "naked" wires, *i.e.* uncovered wires having an electric current of high tension passing through them; or it may be caused by a leakage of current accidentally discovered. The sufferer is usually violently convulsed and unable to release himself from the source of danger. The obvious method of affording relief is to cut off the current by means of the "switch," which is always provided for the purpose; but unless this can be done *immediately*, other means of rescue must be resorted to.

It should be remembered that it is dangerous to touch any part of the sufferer, even those parts covered with clothing, whilst he retains his hold on the wires.

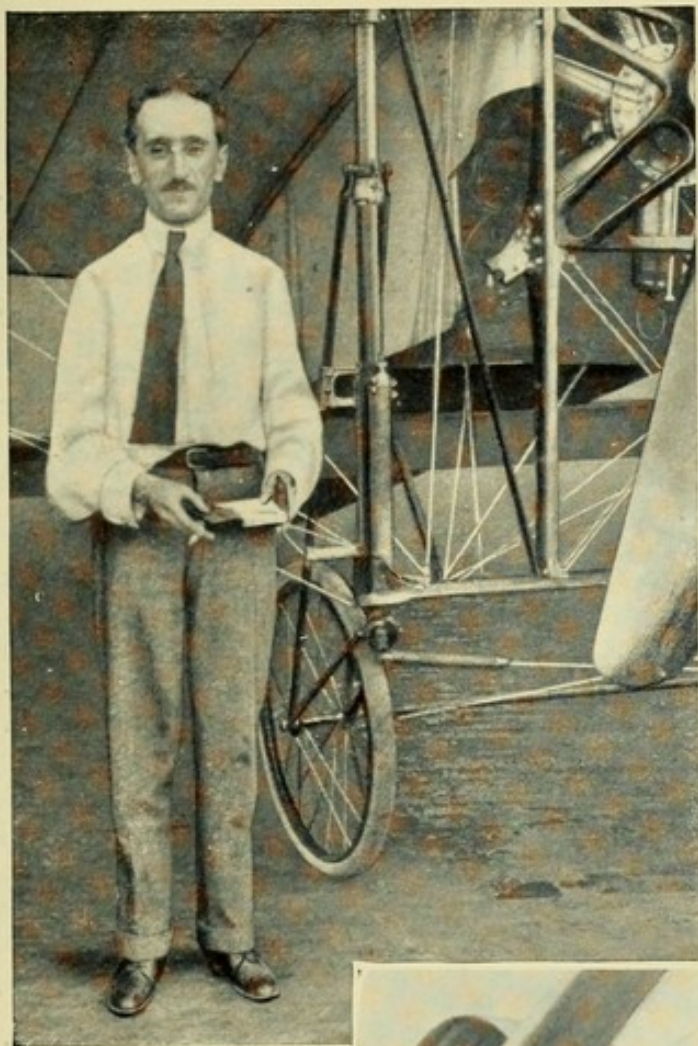
The best method of rescue is for the rescuer to "insulate" himself, with substances which will not conduct electricity, from both the patient and the ground, so that he will be able to handle the patient and draw him away from the current.

The rescuer should stand on *dry* boards, glass or rubber matting, or, if these are not quickly obtainable, *dry* clothes may be used; the hands should be protected by rubber gloves, *dry* mackintosh coat, rubber tobacco-pouches, or *dry* woollen or silk garments. If these precautions be adhered to, the sufferer may be safely withdrawn from his position of danger.

When rescued, place the patient in a recumbent position, loosen all tight clothing, and, if the breathing be weak, perform artificial respiration. Treat for burns, as on *page* 55.

## Fainting

The patient should be at once placed in a recumbent position, with the lower portions of the body slightly raised. Loosen the clothing and allow plenty of fresh air to circulate. Apply wet handkerchiefs, or Eau-de-Cologne, to chest and face, and "smelling salts" to nostrils. When able to swallow, give stimulants. Keep the patient warm.



#### AUDEMARS

E. Audemars is a successful Swiss aviator, who piloted the Demoiselle monoplane at the Bournemouth Meeting in 1910. He was a competitor in the *Daily Mail* Circuit of 1911, when he used a Blériot. In the photograph he holds in his hand a 'Tabloid' First-Aid Outfit, No. 706.

#### HUCKS

B. C. Hucks took part in the *Daily Mail* Circuit of 1911, on a Blackburn monoplane. Has assisted in experiments in connection with the wireless telephone in an aeroplane. In the photograph he is seen examining his 'Tabloid' First-Aid Outfit.



## Fits

If convulsions be present, loosen the clothing and gently guide struggles to prevent patient injuring himself. Place something, such as cork, wood, etc., between the teeth to prevent tongue being bitten. After the attack, allow the patient to sleep if he so desires.

If convulsions be absent and the face flushed, loosen the clothing, raise the head and apply cold-water dressings to it. Withhold all stimulants. Medical assistance should be obtained *immediately*.

## Fractures

The two main classes of fractures are simple and compound. A simple fracture is a broken bone with no outward wound. The fracture becomes compound when the broken ends pierce the skin. The signs by which a fracture may be recognised are pain ; swelling and deformity at the seat of injury ; unnatural movement where none should exist ; loss of power in the limb, and crepitus (a sensation of grating caused by the broken ends of the bone moving against one another).

The first and most important aid to be rendered in the case of a simple fracture is to prevent it becoming a compound fracture. The injured limb should therefore be fixed at once by splints and bandages. From this rule there should be no departure. Anything, provided it be quite rigid and of sufficient length, will answer for keeping the limb fixed ; such, for instance, as a flat piece of wood, a walking-stick, an umbrella, a rifle or other available article.

The chief measures to be taken in first-aid treatment of fractures are—

To attend to patient on the spot where injury has occurred.

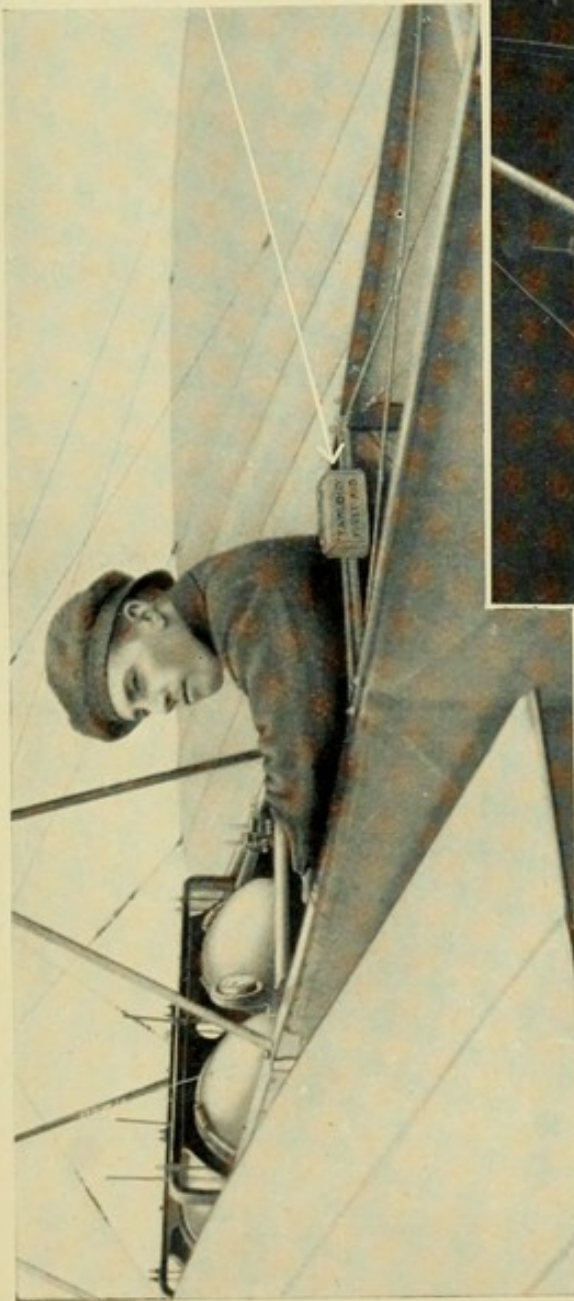
To use care in handling the injured limb.

To bring the limb into its natural position so far as possible.

To fix the limb in this position by means of splints and bandages.

To allow splints to project beyond the joints at the end of the broken bone.

In compound fracture it is of first importance to prevent septic germs, which are usually present in the air, from obtaining an entrance into the wound. Cover the wound with two or three layers of 'Tabloid' Boric Gauze, having 'Tabloid' Boric Cotton between each layer. A splint must be placed on each side of the limb, and firmly secured by bandages, carefully and evenly



#### ASTLEY

H. J. D. Astley learned to fly at Brooklands on a Sommer biplane, and subsequently flew on a two-seated Blériot. He carries a 'Tabloid' First-Aid on his aeroplane, in the position indicated by the arrow in accompanying photograph.

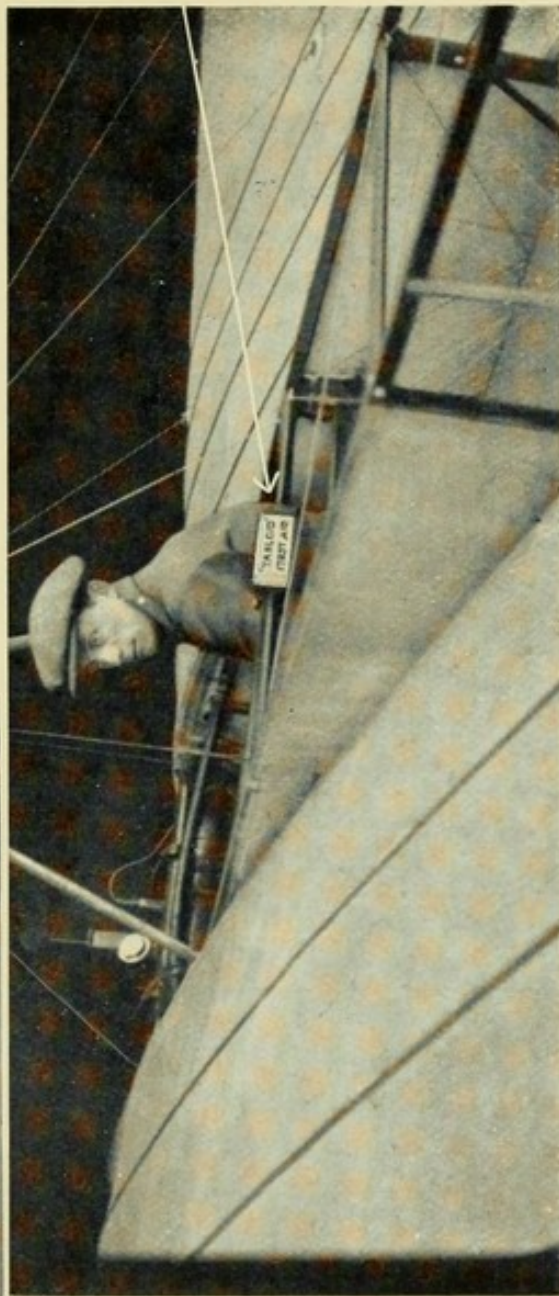
#### GRESWELL

C. H. Greswell learned to fly on a British-built Farman biplane.

He also flies a Blériot monoplane.

He was engaged in the Aerial Post which carried letters between Hendon and Windsor, on behalf of the G.P.O., September, 1911.

The position of the 'Tabloid' First-Aid equipment on his aeroplane is indicated by an arrow.



applied. The limb should then be disturbed as little as possible. When applying splints, free use should be made of 'Tabloid' Absorbent Cotton for padding.

### **Fracture of the Collar Bone**

This is indicated by the shoulder dropping and the arm becoming useless; sometimes the crack in the bone may be felt.

The treatment is to place a pad, such as a two-ounce packet of 'Tabloid' Absorbent Cotton, in the arm-pit, support the arm by a sling passed over the uninjured shoulder and bind it to the body in such a way that the hand of the injured side points to the opposite shoulder.

### **Fracture of Upper Arm-Bone**

Bend the forearm at right angles to the arm; place splints back and front, inside and outside the arm from shoulder to elbow and support the forearm by a narrow arm-sling.

### **Fracture of Forearm**

Bend the forearm at right angles to the arm with the palm of the hand towards the body; place a splint on the front, and one on the back of the forearm from elbow to fingers and support it by a broad arm-sling.

### **Fracture of Thigh**

A splint long enough to reach from the arm-pit to beyond the boot must be placed on the outside of the injured limb. The splint is to be secured in several places by bandages around the body and round the injured limb; a shorter splint, flat if possible, should be similarly applied on the inner side of the limb, and finally, the two limbs are to be firmly bound together.

### **Fractured Leg**

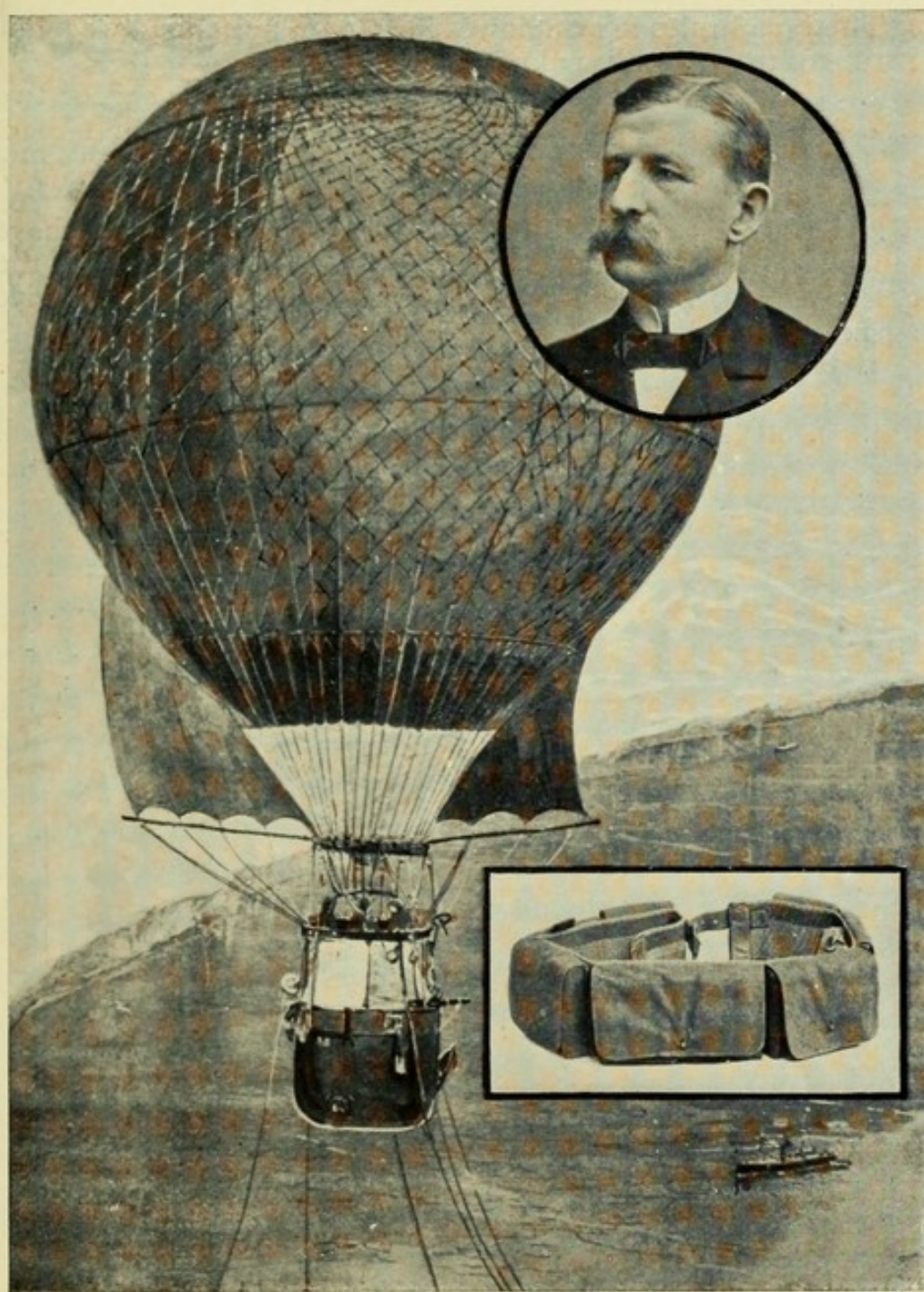
Bring the feet as nearly as possible into the natural position; place splints (walking-sticks, umbrellas, etc.) one on the outside and one on the inside of the injured limb, reaching from above the knee to beyond the foot, and secured by bandages. Finally, tie the two legs together.

### **Fractured Knee-Cap**

When the knee-cap is fractured, the limb is rendered useless, and the crack in the bone may be felt by the finger. Apply a splint down the back of the injured limb from the hip to the heel, secure it by bandages, and raise the heel a foot or so off the ground.

Medical aid should always be obtained after rendering the assistance above recommended.

## BALLOONS AND AIRSHIPS



### ANDREE'S POLAR BALLOON

A 'Tabloid' Medicine Chest formed the medical equipment of Salomon August Andree, one of the bravest of the brave among the many explorers who have been drawn by the magnetic attraction of the Far North. On July 11, 1897, accompanied by two companions, Strindburg and Fränkel, he ascended in a balloon from Danes' Island, Spitzbergen, about 600 miles from the North Pole. From this perilous journey he never returned, and the fate of these heroes of the "lone trail" remains an unsolved mystery to this day.

## Poisoning

The broad rules to be followed in cases of poisoning, when the nature of the poison is unknown, are as follows :—

1. Give at once a tumblerful of milk, or a raw egg or two beaten up with milk or water, or a tablespoonful or two of salad oil, or a cup of strong tea ; whichever is most readily obtainable.

2. An emetic is to be given before or after any of the above remedies, provided the lips are not stained or burned, as is the case if the mischief be due to an acid, alkali or other corrosive agent.

3. If the patient seem drowsy, probably opium is the poison. Keep patient awake at all costs.

4. If, on the other hand, delirium threaten or develop, dash cold water on the patient's head and face and try to prevent the fit coming on.

A simple but efficient emetic can be made by mixing a tablespoonful of mustard, or two tablespoonfuls of salt, in a tumblerful of lukewarm water ; to be repeated if necessary.

## Snake Bites

The bite of a venomous snake can always be recognised by the two circular punctures made by the poisoned fangs. The first thing to do is to apply a tight ligature above the injured part so as to stop completely the circulation in that limb. Suck the wound vigorously for a minute or two, washing the mouth out afterwards. Then cut the bitten part with a lancet to encourage bleeding, and apply pure carbolic acid or caustic potash to destroy the tissues. Great success has attended the treatment by means of potassium permanganate applied in powder to the wound.

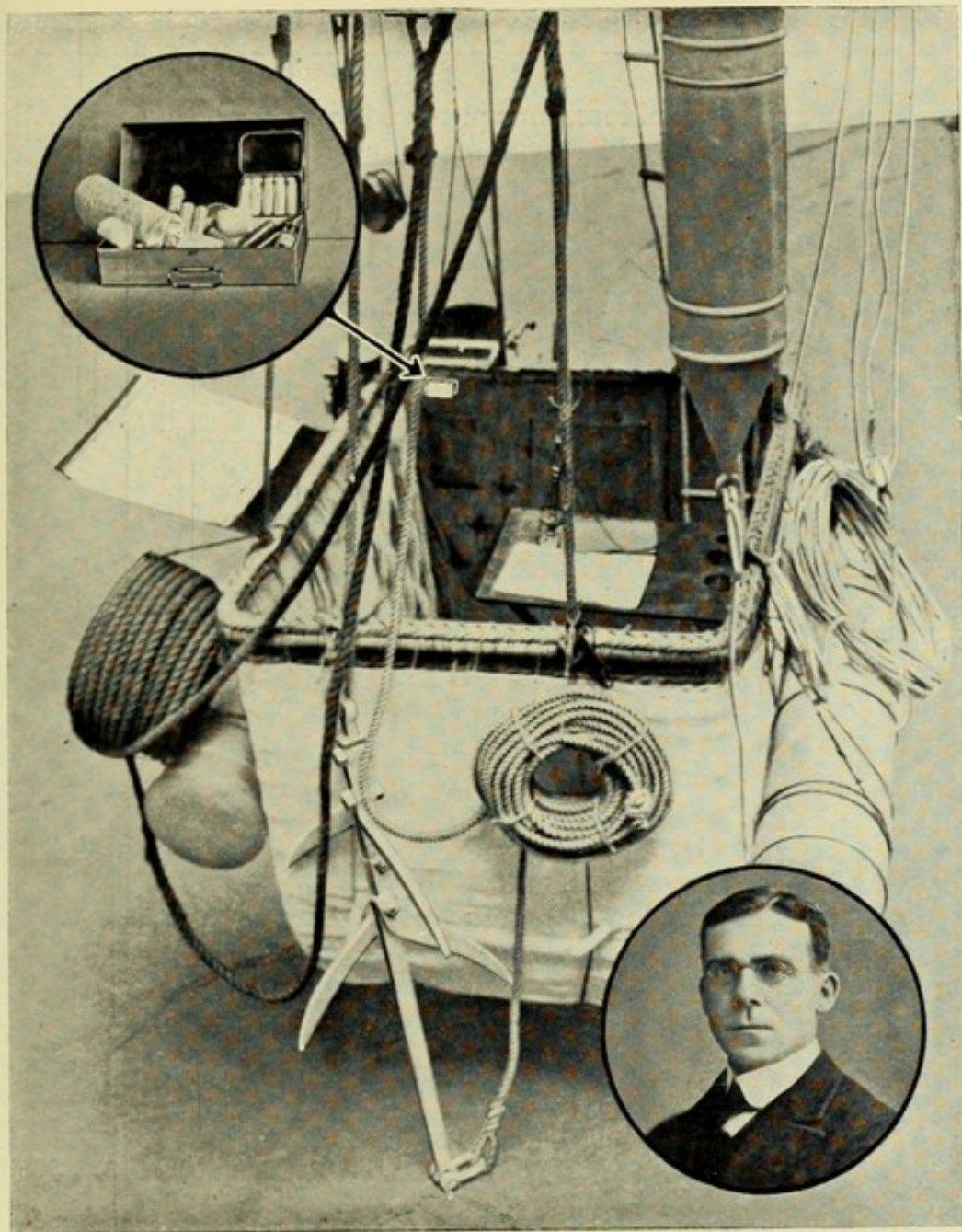
## Sprains

A sprain is generally caused by a sudden wrench or twist, which violently stretches or tears the ligaments that are around the joints.

Apply cold-water dressings so long as they give comfort, and afterwards apply hot fomentations. Rest is the most valuable aid to recovery. If movement of the limb be essential, bandage it tightly.

## Stings, etc.

Stings from bees or wasps should at once be wiped with strong ammonia solution, which gives relief immediately it comes in contact with the irritant. The wound should afterwards be dressed with boric acid ointment. If ammonia be not at hand, sodium carbonate (washing soda), moistened chalk or whitening, spirit of wine, whisky or Eau-de-Cologne should be applied, or a 'Vaporole' Aromatic Ammonia should be broken and dabbed on the part.



### THE "DAILY GRAPHIC" BALLOON "MAMMOTH"

The "Mammoth" started on November 18, 1908, from the Crystal Palace grounds, and came down at Mateki Derevni, Novo Alexandrovsk, Russia, the voyage lasting 31½ hours and covering a distance, as the crow flies, of 1117 miles. Mr. A. E. Gaudron, Captain E. M. Maitland and Mr. C. C. Turner were the occupants. British record for distance.

In the basket of the balloon the position of the 'Tabloid' First-Aid equipment is indicated by the pointing arrow. The upper inset shows the equipment as it appeared after the journey; the lower inset is a portrait of Mr. Turner, who reported as follows:—

"The 'Tabloid' First-Aid aeronaut's outfit proved most valuable during our balloon voyage to Russia. We used the 'Vaporole' Ammonia with excellent results when suffering from the presence of gas in the air. But for the other contents we should probably have suffered considerably. In future voyages I shall certainly take a 'Tabloid' First-Aid Outfit."

*Charles C. Turner*  
(Cert. Av.)

For the bites of spiders, mosquitoes, etc., a solution of carbolic acid, or carbolic acid ointment should be applied. The pain and swelling resulting from such bites may be relieved by the application of menthol to the affected part.

## Wounds and the Arrest of Bleeding

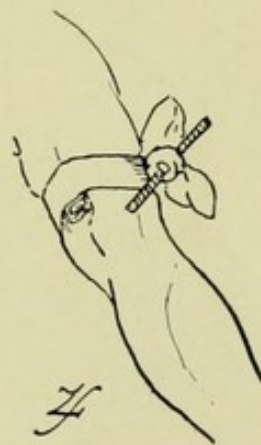
When severe bleeding from a wound occurs, prompt action is imperative. The blood from a cut artery is of a bright red colour, and spurts out in jets, whilst that from a vein is bluish and dark, and flows more slowly.

A pad of several thicknesses of 'Tabloid' Boric Lint should be placed over the bleeding spot, and pressure exerted on it by a bandage. Always elevate a bleeding limb.

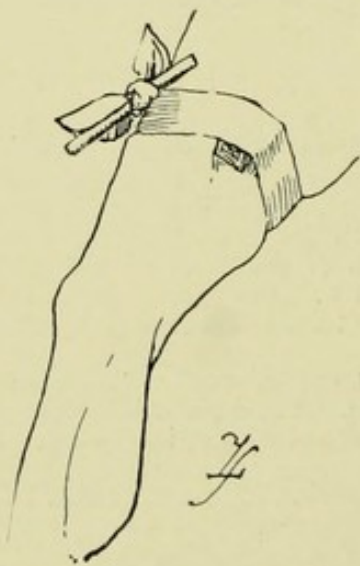
If the blood still continue to flow, a large artery is probably injured; and if the wound be in a limb, a tourniquet must be applied. The simplest tourniquet is an elastic bandage, or elastic tubing, wrapped several times round the limb, fold upon fold. Where this method cannot be utilised, a tourniquet can be improvised from a large handkerchief or triangular bandage. A pad is formed by tying a knot in the middle of the bandage (or by enclosing a piece of cork, smooth stone, etc.). This pad is then placed between the wound and the heart, over the course of the artery leading to the wound. The ends of the bandage are passed round the limb, and firmly tied together. A small rod is inserted between the two halves of the knotted ends and a twisting motion applied to it until the bleeding stops.

*Caution.*—A tourniquet should not be tightly applied for more than an hour. After that time it should be loosened.

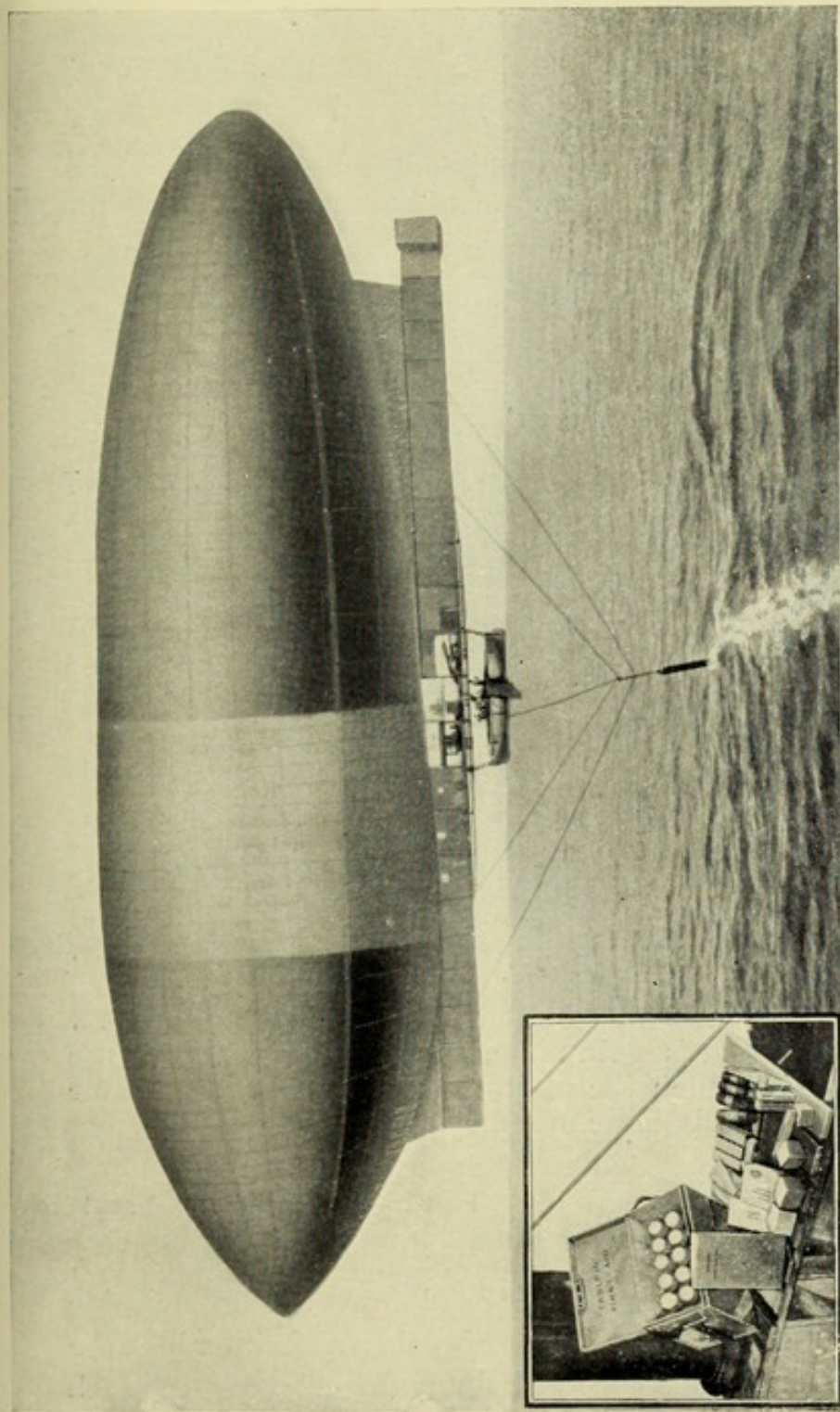
In treating wounds, first cleanse with an antiseptic lotion, such as boric acid dissolved in water which has been boiled; then, whenever possible, draw the edges of the wound together and strap them across with strips of adhesive plaster, leaving a small space between each strip. In any case, cover with 'Tabloid' Boric Lint or 'Tabloid' Boric Cotton, and bandage firmly.



Tourniquet applied to artery in upper arm



Tourniquet applied to artery in thigh



### WELLMAN'S AIRSHIP "AMERICA"

The inset shows the 'Tabloid' Medical Equipment carried on board the vessel

Walter Wellman, with five companions, started from America on October 15, 1910, with the intention of crossing the Atlantic Ocean to Europe. He reported concerning the 'Tabloid' Medical Equipment: "We had several occasions to use its contents for minor troubles, and found it complete and wholly satisfactory."

*Walter Wellman*

Internal bleeding is best treated as follows : Lay the patient flat, with the head low ; undo all tight clothing round neck and chest and allow free circulation of air. Give ice to suck ; apply ice-bag over the injured spot.

## Transport of Sick and Injured

An injured person should never be moved from the place where the accident occurred until First-Aid has been rendered.

When a patient has been badly injured about the head, chest, abdomen and lower extremities, he ought always to be carried from the scene of accident in a recumbent position. The same rule applies in cases of faintness, shock, insensibility and excessive loss of blood.

Stretchers can be improvised by taking two sacks, cutting off the bottom corners, and passing poles inside the mouth of the sack and through the holes thus made ; or from overcoats with sleeves turned inside out, poles being passed through the reversed sleeves, and the coat buttoned over the poles, the turned sleeves being inside. Gates or doors may be used for stretchers if no other method of transport be available. It is always advisable to try the strength of an improvised stretcher before placing the patient on it.

When the injury is not extremely severe, and the patient is conscious, one of the improvised seats here shown may be employed. The value of the two-handed seat is that the patient can be carried, if necessary, in a position very nearly horizontal. It has the disadvantage, however, of being very trying to the bearers, and cannot be endured for long distances. The three-handed seat is probably the most generally useful of the three, but it is unsuitable for patients in a fainting condition. The four-handed seat is a firm one, and can be used when the distance is considerable ; the patient must be able to give some slight assistance in this mode of transport.

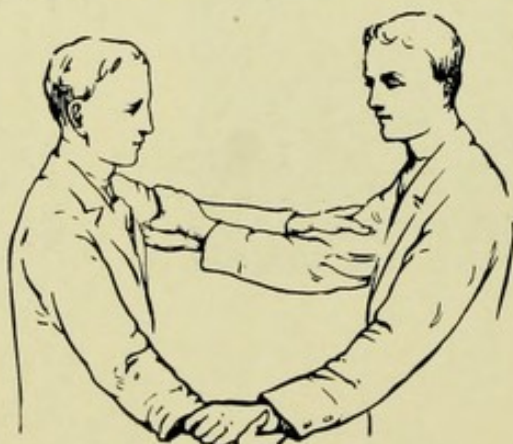


Fig. 1

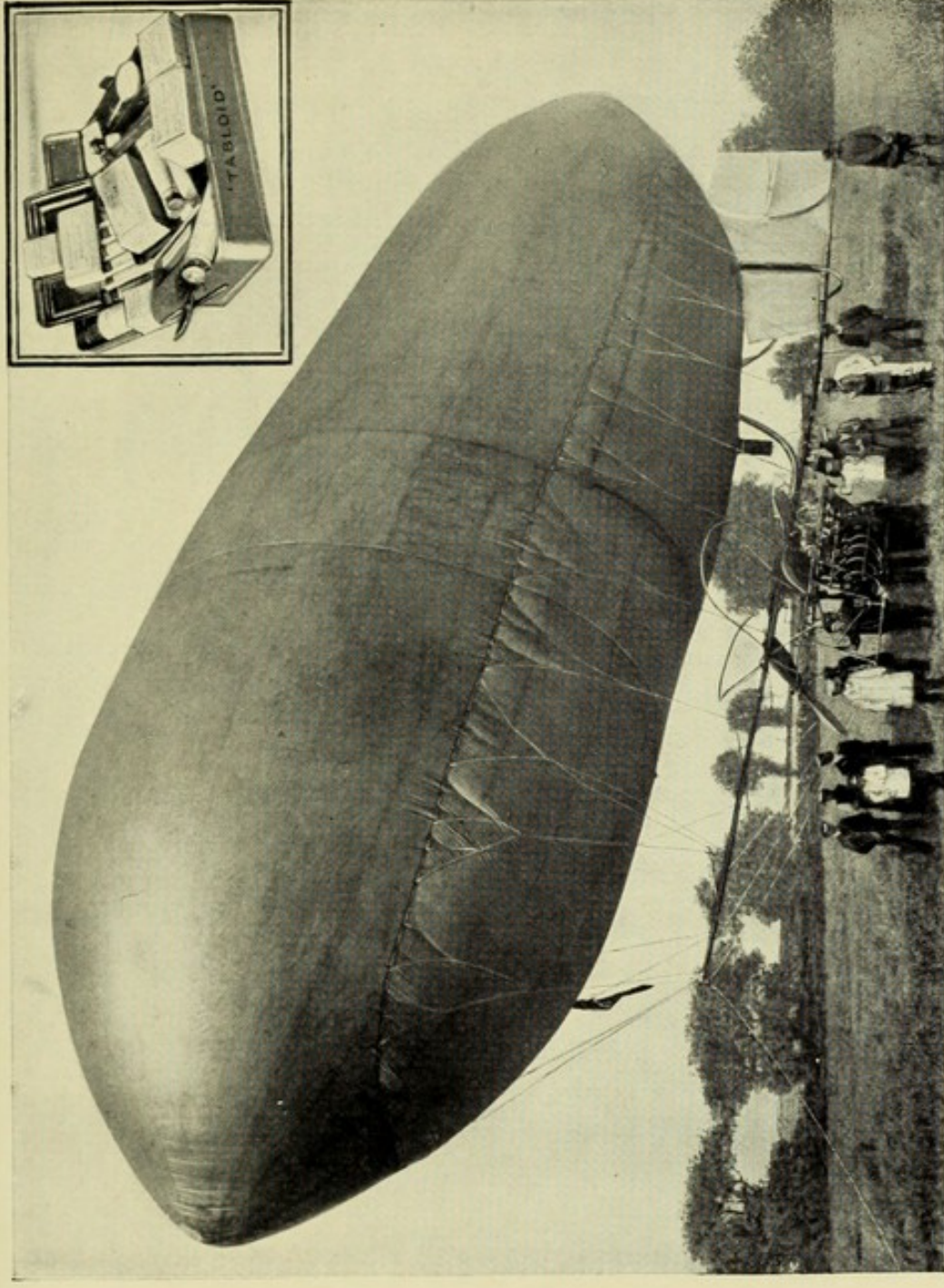
Fig. 1.—The Two-handed seat

The bearers face each other, bend down one on each side of patient and either lock the fingers together or grasp each other's wrists, under the hip of patient. Then each passes his free hand round back of patient and grasps the other's shoulder.

#### WILLOWS AIRSHIP

The "Willows" airship is entirely British built.

On November 4, 1910, after a successful journey from Cardiff to London, the aeronaut, accompanied by a mechanic, flew across the English Channel. In spite of strong winds, fog and other adverse circumstances, the crossing was safely made, and a landing effected near Douai. The medical equipment for this flight was 'Tabloid' First-Aid, No. 715.



The inset shows 'Tabloid' First-Aid, No. 715

Fig. 2.—The Three-handed seat

The bearers face each other, and form the triangular seat, as shown, underneath the patient. One of the bearers then passes his free hand round the upper part of patient and seizes the shoulder of the other bearer.

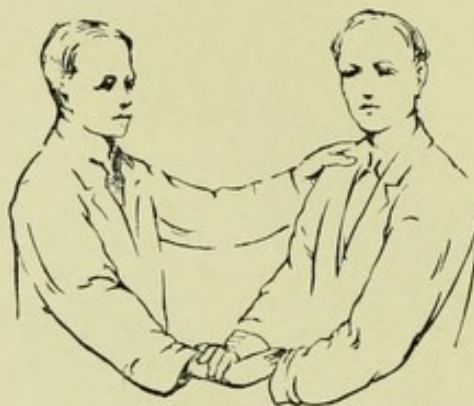


Fig. 2

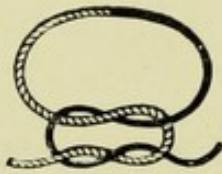


Fig. 3

Fig. 3.—The Four-handed seat

This is formed by the two bearers standing opposite to each other, each grasping his own wrist with one hand, and the forearm of the other bearer with his own disengaged hand.

## BANDAGING

Fig. 1  
Granny-KnotFig. 2  
Reef-Knot

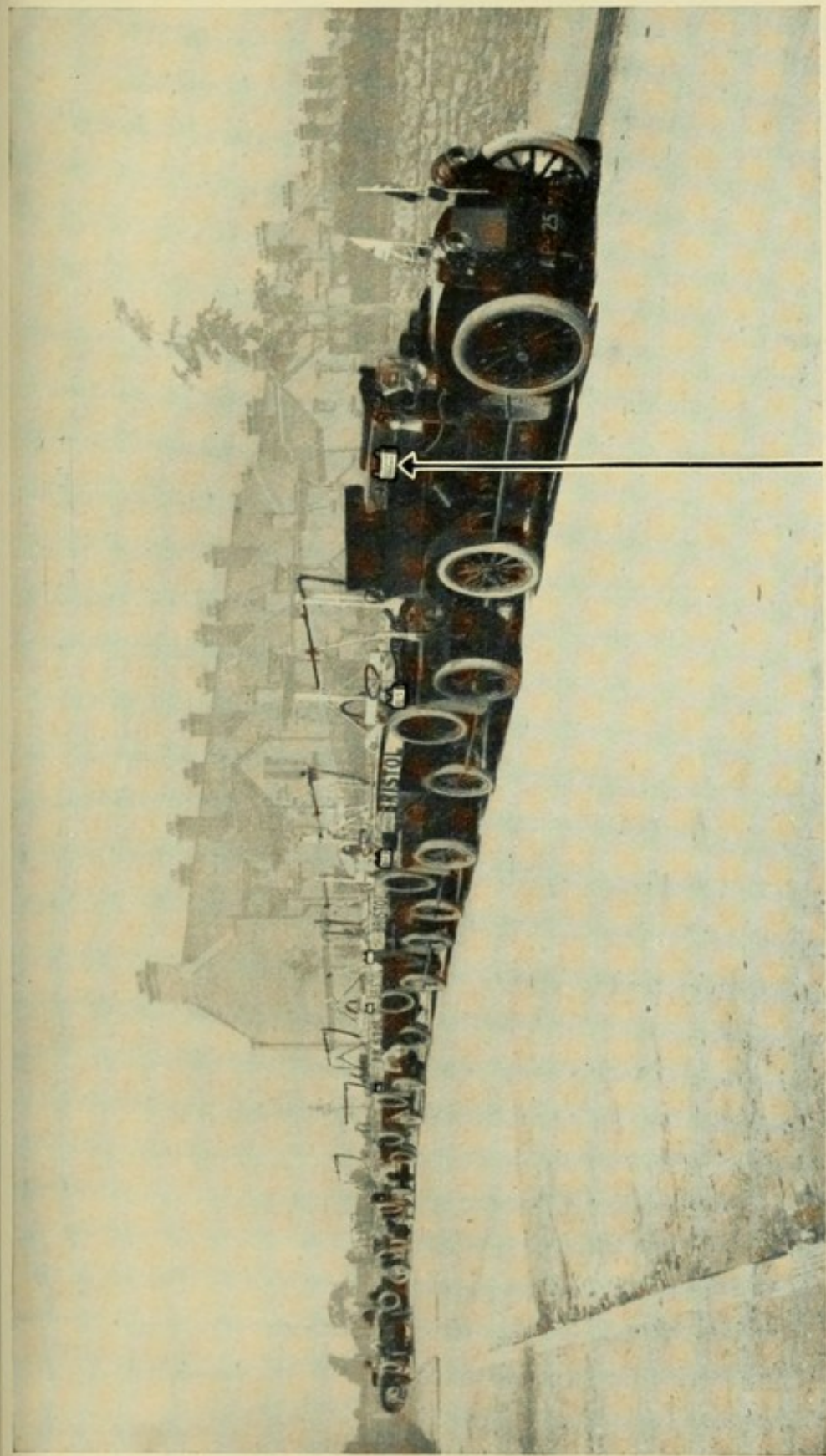
### The Reef-Knot

When a bandage is tied, the reef-knot should always be used. The common method of knotting—producing what is known as the granny-knot—either soon

slips or else becomes too tight to unfasten.

### To Bandage Hand for Severe Cut in the Palm

Place in the middle of the palm a packet of any 'Tabloid' absorbent dressing, with the wrapping removed, and direct the patient to grasp the pad tightly. With a bandage, bind the fingers firmly over the pad, passing the bandage round the hand and wrist.



#### SUPPLIES CARS OF THE BRITISH AND COLONIAL AEROPLANE CO.

Motor-cars carrying supplies, spare parts, etc., for competitors in the *Daily Mail* Circuit of Britain, 1911. Commendable foresight and care were shown by this Company for their pilots. Each of the eleven cars shown in the above picture carried a 'Tabloid' First-Aid Equipment. The position of one of the equipments is indicated by an arrow.

## To Bandage the Wrist and Forearm

Start as indicated in *Fig. 3*, and carry the bandage up the arm, folding the bandage on itself at each turn (*Fig. 4*). In this manner the bandage will fit closely to the limb, and can be taken as far up the arm as required.

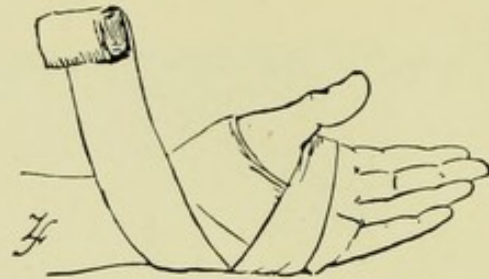


Fig. 3

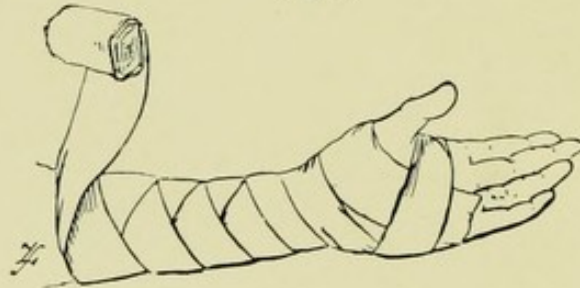


Fig. 4

## To Bandage Elbow

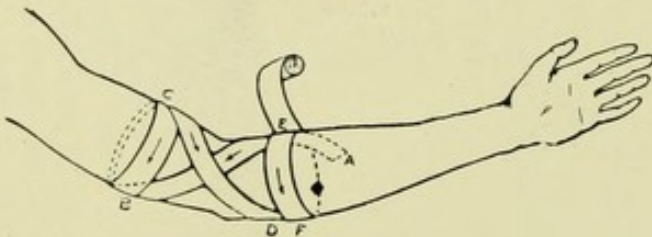


Fig. 5

Lay the bandage over the front of the joint (A B, *Fig. 5*), then take a circular turn round the arm above the elbow and next draw the bandage across the arm (C D, *Fig. 5*), crossing A B at

the bend of the elbow. Next take a circular turn round the arm D E F. Repeat the whole process, each time bringing the turns nearer the joint and having the crossings at the bend of the elbow.

## To Bind a Cut Finger

Well cleanse the wound in warm water. Cover with a small portion of 'Tabloid' Boric Gauze, over which bind two layers of lint. Lay the bandage over back and front of finger (A B C, *Fig. 6*), and, by circular turns up to finger-tip and then back to knuckle, bind the finger firmly. Finally, pass bandage over back of hand and secure by turns round the wrist (*Fig. 7*).

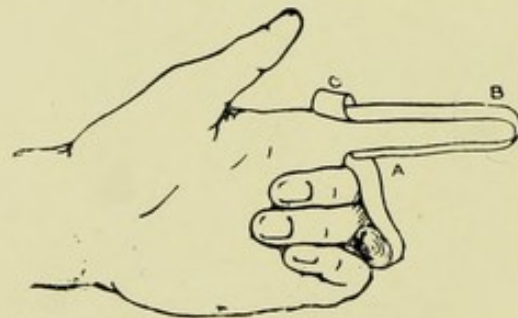


Fig. 6

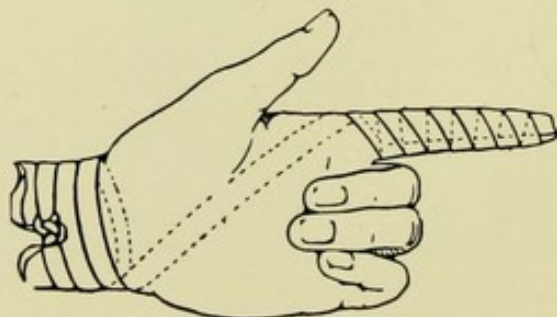


Fig. 7

## To Bandage the Leg

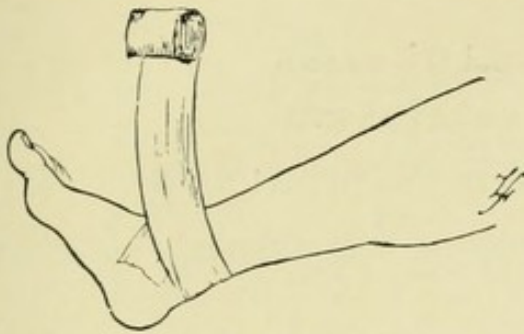


Fig. 8

Raise the foot and secure the bandage round the ankle by crossing the end in the front of it, as represented in *Fig. 8*. The bandage is then carried beneath the foot and again round the ankle once or twice, and then round the leg, each turn overlapping the preceding one. Turn the bandage down

at each turn (*Fig. 9*) and proceed as for bandaging the arm.

## To Bandage the Knee

Proceed in the same manner as for the elbow.

To secure a bandage, safety-pins or needle and cotton are employed. Failing either of these, the method used is to cut the bandage down lengthwise a few inches, knot the end to prevent splitting, pass the ends round the limb in opposite directions and tie.

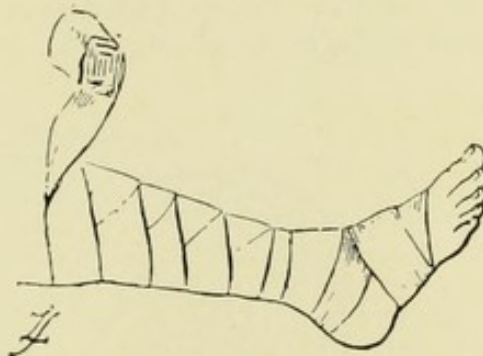


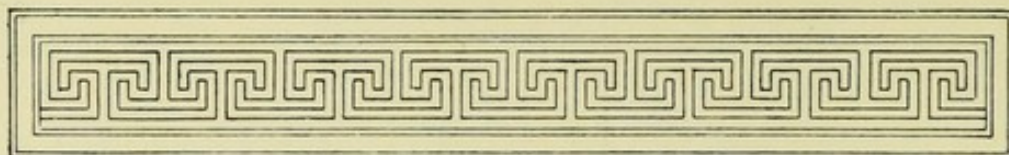
Fig. 9

## General Rules for Bandaging

The following general rules for bandaging should be noted. The tail of the bandage is the free end, the roll which is held in the hand and gradually unwound is called the head :—

1. Fix the tail of the bandage.
2. Bandage from below upwards, and from within outwards, over the front of the limb.
3. Each turn should overlap two-thirds of its predecessor.
4. Pressure throughout should be uniform.
5. Margins should be parallel. Crossings and reversings should be in one line.

NOTE.—The simple spiral is applied to cylinders, the reverse to cones and the figure-of-eight where cones meet. All three are well demonstrated in the bandaging of the foot.



TRADE MARK 'TABLOID' BRAND

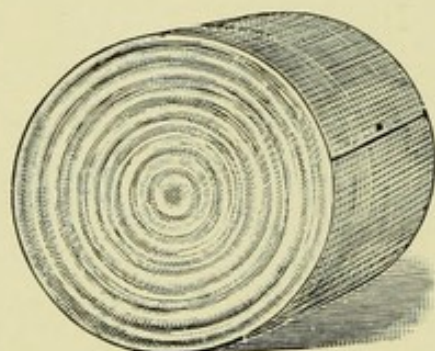
PLEATED COMPRESSED

## BANDAGES AND DRESSINGS

Pleated Compressed Bandages and Dressings were originated and introduced by Burroughs Wellcome & Co.

'TABLOID' BANDAGES AND DRESSINGS have enabled Burroughs Wellcome & Co. to supply compact, reliable equipments in the smallest possible space. These products are made of materials of the finest quality, very highly compressed. Each is enclosed in an efficient protective covering, thus securing freedom from all risks of contamination. The unique compactness of 'Tabloid' Dressings admits of their being packed in any odd space in hand-bag, pocket, cycle- or saddle-case.

Ideal for  
general use



Graphic representation of the relative bulk of an ordinary bandage, 6 yds.  $\times$   $2\frac{1}{2}$  in., and a 'Tabloid' Bandage of the same length and width.

They are also issued *sterilised*, packed in a special impervious coating to ensure that they remain germ-free.

The following, among others, are issued :—

**Absorbent Cotton Between Gauze, Pleated Compressed, 'Tabloid' Brand**

2 oz. packets.

**Bandages, Pleated Compressed, 'Tabloid' Brand**

Open Wove, 1 in.  $\times$  6 yds.

„ „  $2\frac{1}{2}$  in.  $\times$  6 yds.

Flannel  $2\frac{1}{2}$  in.  $\times$  5 yds.

Triangular (Esmarch's Pictorial), in packets of 2

For the benefit of those who are not skilled in first-aid work, illustrations, showing the various uses to which the triangular bandage may be put, are imprinted on the fabric itself.

**Carbolised Tow, Pleated Compressed, 'Tabloid' Brand**

2 oz. packets

**Cotton, Pleated Compressed, 'Tabloid' Brand**Absorbent,  $\frac{1}{4}$  oz., in packets of 4  
(*not supplied sterilised*)

Absorbent, 1 oz. packets

"	2	"	"
Boric,	1	"	"
"	2	"	"

**Gauzes, 'Tabloid' Brand**

Absorbent, 3 yds.

Boric, 3 yds.

Bismuth, in 1, 2, 3 and 36 in. widths, and in lengths of from 1 to 12 yards.

**Lint, Pleated Compressed, 'Tabloid' Brand**

Plain, 1 oz. packets

" 2 " "

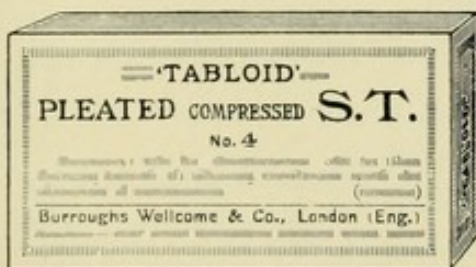
Boric, 1 " "

" 2 " "

Carbolised, 1 oz. packets

**'TABLOID' BRAND PLEATED COMPRESSED  
SANITARY TOWELS**

'TABLOID' PLEATED COMPRESSED SANITARY TOWELS, *originated and introduced* by Burroughs Wellcome & Co., possess several points of superiority over ordinary sanitary towels.

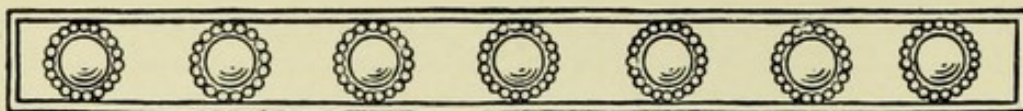


'Tabloid' Pleated Compressed  
Sanitary Towel (No. 4)  
Half Size

They are made of materials of exceptional quality specially adapted for the purpose. Their highly absorbent properties are particularly noteworthy. The delicate texture of the surface of these towels ensures perfect freedom from the slightest sense of discomfort in use. Owing to the extremely small space which they occupy, they are particularly convenient when travelling. Extreme compactness is secured by compression, and perfect cleanliness ensured by the method of packing.

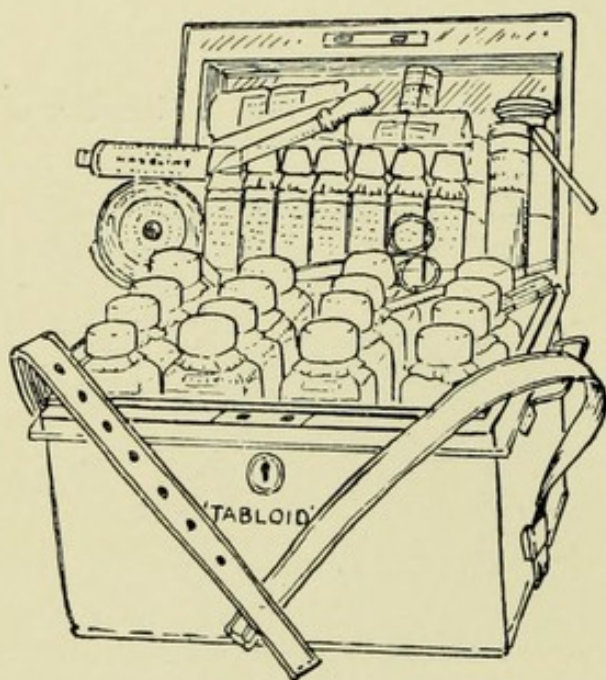
Four sizes are issued, each size in packages of 12

*'Tabloid' Bandages and Dressings are sold at leading Pharmacies in all countries.*



## POLAR PIONEERS

Two aeronauts mentioned in the preceding pages, Andree and Wellman, have already attempted to reach the North Pole by the road of the air, and, as the capacity for making long non-stop flights improves, this method of traversing unexplored regions of the earth will, no doubt, become increasingly useful.



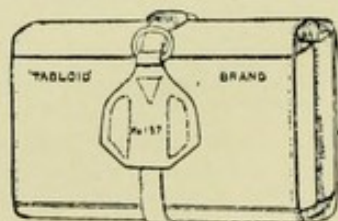
One of the 'Tabloid' Brand Medicine Chests used by Commander R. E. Peary

Polar expedition has not, however, been suffered to wait for that complete mastery of airmanship and the arts of air-travel which the future may bring.

On foot, by pony-sleigh and dog-carriage, the brave pioneers of the two hemispheres have pushed to their goal.

In their prolonged sojourn in frozen regions they

have found that care and scientific skill, spent beforehand on equipments, have been well repaid. The most successful explorers in arctic and antarctic regions have carried with them 'Tabloid' Medical and First-Aid Outfits. Peary, who reached the North Pole in 1909; Amundsen, the first to reach the South Pole; Shackleton, whose record is 88° 23' South Latitude; and Scott, are among the number. Captain Scott is now engaged in a



One of the 'Tabloid' Brand Medicine Cases carried by the Duke of the Abruzzi's Polar Expedition

second attempt to plant his flag at the South Pole, and the news has recently come through that he intends to brave another winter within the Antarctic Belt before returning to civilisation.

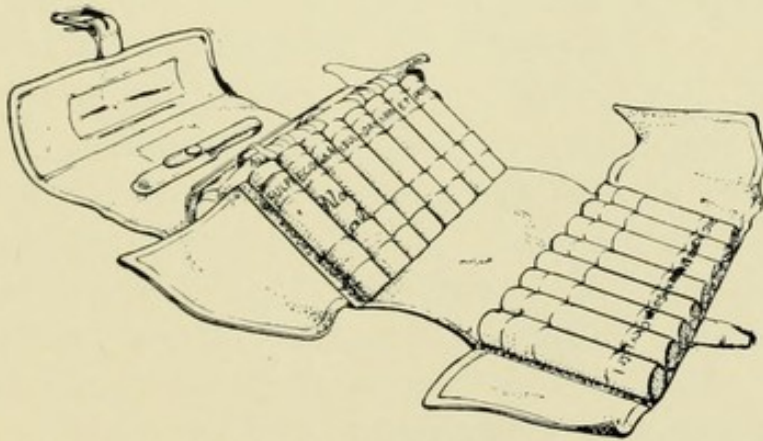
Among other Polar pioneers who have relied entirely on 'Tabloid' Medicine Chests and Cases for the medical portion of their equipment may be mentioned Nansen, Jackson and the Duke of the Abruzzi.

The Scottish National Antarctic Expedition and the Canadian Government Exploration Vessel s.s. *Arctic* also were provided with 'Tabloid' Medical Equipments.

Peary, writing from Etah, Greenland, and referring to the 'Tabloid' Medicine Chest illustrated on page 78, reports:—

"Burroughs Wellcome & Co.'s 'Tabloid' Medicine Field Case and supplies have proven invaluable."

The case here shown is that carried by Sir Ernest H. Shackleton on his famous sledge journey to a point within 97 miles of the South Pole.



The 'Tabloid' Medicine Case carried by Sir Ernest H. Shackleton

*Copy of Report dated September 17, 1909*

"The B. W. & Co. brown leather 'Tabloid' Case herewith was: Taken with party of six that made the ascent and reached summit of Mount Erebus, 13,350 ft., March 5th-11th, 1908.

"Used on Southern Journey under Lieut. Shackleton, October 28th, 1908—March 4th, 1909. Latitude  $88^{\circ} 23' S.$ , Longitude  $162^{\circ} E.$  Distance covered in this journey, 1728 statute miles.

"Used on S. Depot Laying Party, from September 20th—October 15th, 1908. Distance covered, 311 miles.

"Taken on Depot journeys to Hut Point. Aggregating 150 statute miles. Medicines quite satisfactory."

*Signed*

E. P. MARSHALL, M.R.C.S., L.R.C.P.

*Surgeon to the British Antarctic Expedition, 1907-1909*

Burroughs Wellcome & Co. furnished the entire medical outfit of the National Antarctic Expedition, and, on the return of the *Discovery*, the medical officer made a highly satisfactory report on the 'Tabloid' Medical Equipment.

One of the most noteworthy features of the expedition was the arduous sledge journey undertaken by the commander, Captain Scott, accompanied by Lieutenant Shackleton and Dr. Wilson.

On sledge journeys the question of weight is one of serious moment. The traveller must carry but the barest necessities, and of these, the lightest procurable.

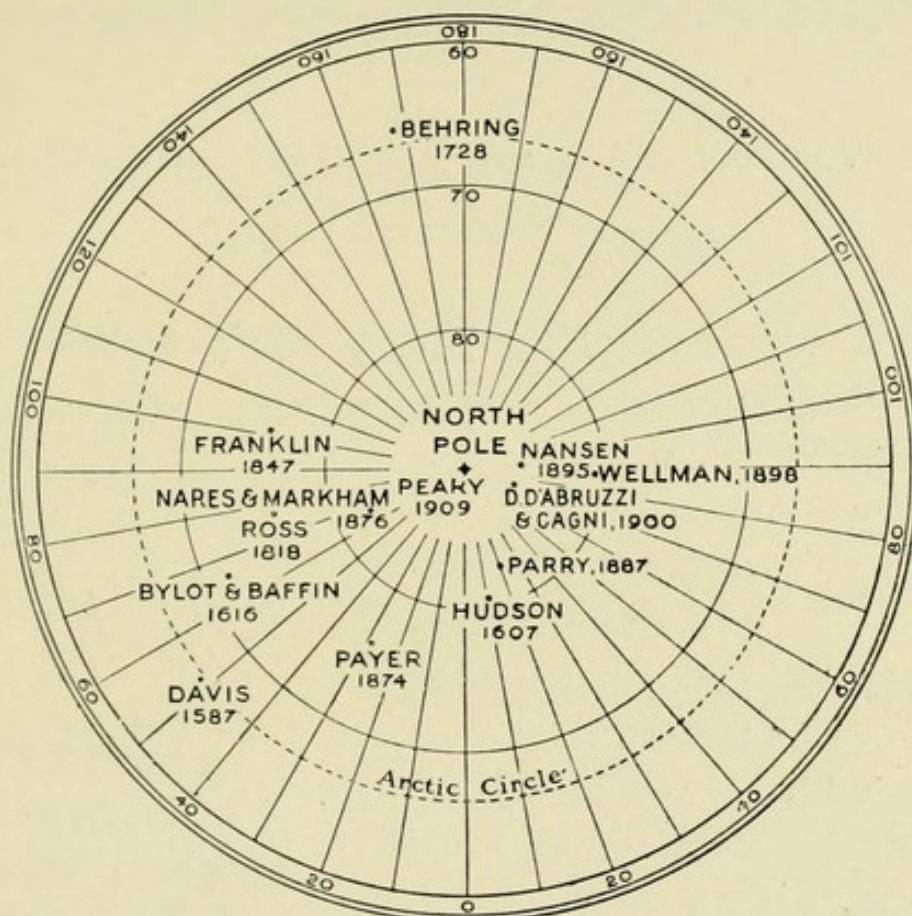
The medicine chest is an important item, for upon the efficiency of its contents the lives of the explorers may depend. Every medicament carried must be of the utmost reliability, in the most compact state, and capable of withstanding an extremely low temperature. In this connection, the following extract from Dr. Wilson's report referring to 'Tabloid' Medicine Cases is of interest; "they experienced temperatures as low as 68° below zero and much rough handling without any loss in efficiency and usefulness."

Importance of  
the medicine  
chest

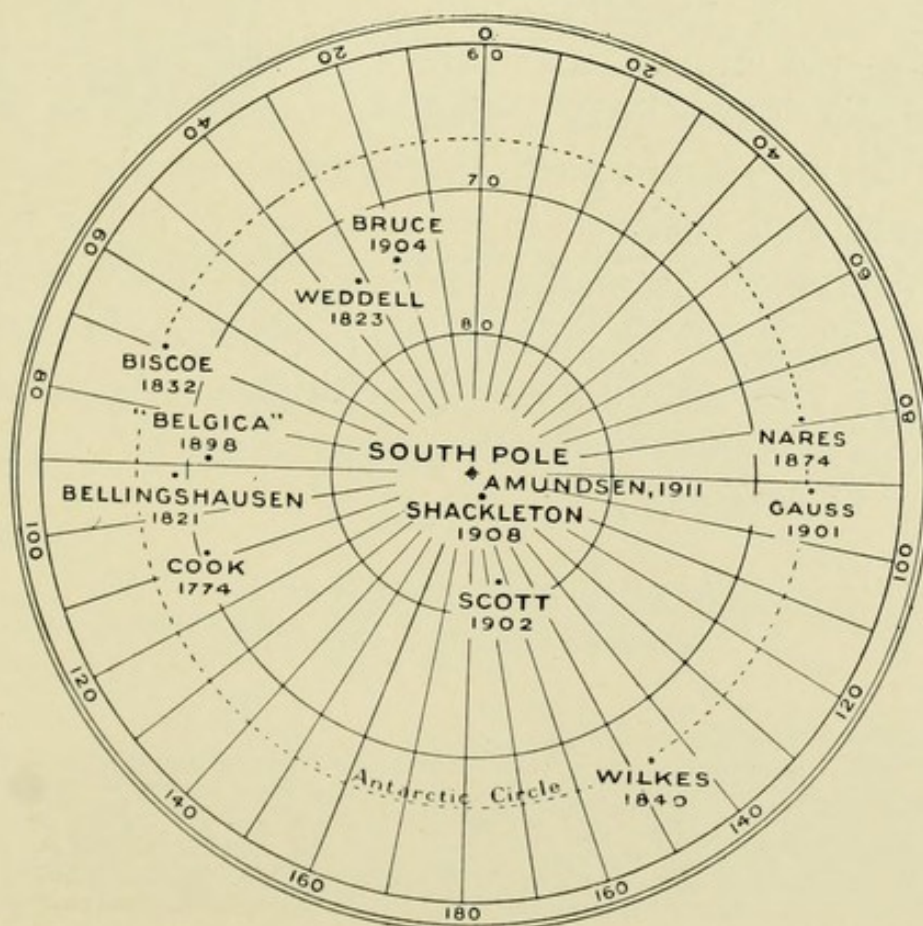
The Scottish National Antarctic Expedition, covering a period of nearly two years, and comprising two separate voyages of the *Scotia*, achieved much useful geographical work. To the *Scotia* belongs the credit of having attained a latitude of 74° 1' South. Burroughs Wellcome & Co. supplied the entire medical equipment, which gave the utmost satisfaction.

The chart on the opposite page gives some idea of the latitudes reached by explorers at the earth's extremities, north and south, during recent years.

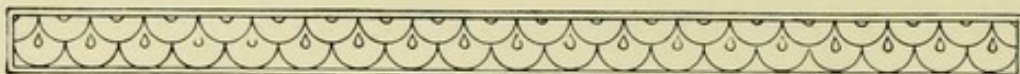
# LATITUDES REACHED BY PIONEERS IN ARCTIC AND ANTARCTIC EXPLORATION



North Polar Regions



South Polar Regions



TRADE MARK 'VAPOROLE' BRAND AROMATIC AMMONIA

For use as "SMELLING SALTS"

THE ideal means of carrying a supply of powerful "smelling salts."

Superior in pungency, portability and efficiency to ordinary varieties.

Superior to "Smelling Salts" Extremely compact for purse or pocket.

Suitable for use in theatre, ball-room, lecture-hall and generally in emergencies.

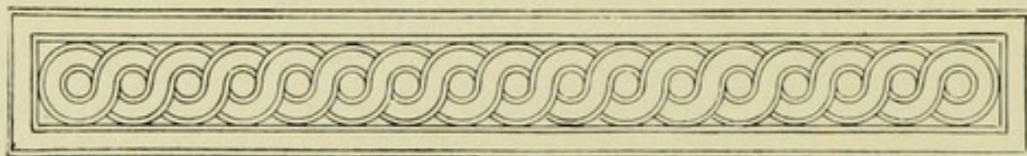
Each 'VAPOROLE' product consists of pungent, delicately - perfumed, aromatic ammonia, hermetically sealed in a friable glass capsule, surrounded by absorbent material and enclosed in an envelope of silken net.

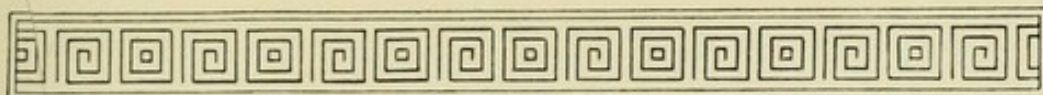
'Vaporole' Aromatic Ammonia has been found extremely useful by mountaineers and aviators in the rarefied air met with at high altitudes. Aeronauts also have found it valuable when subjected to the fumes of escaping gas.



*In dainty aluminised tins of 12*

*Obtainable from all Chemists*





## “‘HAZELINE’ SNOW”

*(Trade Mark)*

“‘HAZELINE’ SNOW” is a dainty toilet preparation for the skin and complexion. It is not greasy, and is immediately absorbed by the skin, imparting that whiteness and suppleness so essential to beauty.

Imparts  
whiteness  
and  
suppleness



Reduced facsimile

After exposure to a scorching sun, and when the skin is inflamed or perspiring uncomfortably, a little “‘HAZELINE’ SNOW” gently rubbed on the face, neck and hands produces a delightful sense of coolness and comfort.

Gentlemen will appreciate its cooling and soothing effect after shaving. It removes any irritation caused by the razor, and produces a most delightful and refreshing effect upon the skin.

After  
shaving

*In dainty glass pots. Obtainable from all Chemists*



TRADE  
MARK

## 'HAZELINE' CREAM

'HAZELINE' CREAM is an ideal dressing for the skin. In it the soothing and restorative qualities of 'Hazeline' Brand *Hamamelis virginiana* are combined with the penetrating and softening properties of a pleasant, natural emollient of exceptional purity.

'HAZELINE' CREAM is far superior to ordinary toilet and cold creams. Its natural fat is readily absorbed, and it never becomes rancid. It is an ideal toilet preparation for use when the skin is rough and dry, and quickly restores suppleness and supplies nourishment to the neglected skin. As a dressing for irritated surfaces and abrasions it is of great service.

Restores  
suppleness



Reduced facsimile

*In collapsible tubes of two sizes, and in dainty glass pots*

*Obtainable from all Chemists*



TRADE MARK 'TABLOID' BRAND TEA

'TABLOID' TEA is a pure tea of fine quality, from which the useless portions, such as the stem and midrib, have been removed. It provides the best available means of carrying the material for obtaining a cup of freshly-prepared tea of the finest quality at any time and in any place. Enough for 50 to 100 cups can be carried in the pocket. Connoisseurs can obtain a unique blend of the choicest varieties by asking for 'Tabloid' Tea, *Special Blend*.

Pure  
portable  
tea

*In tins of 100 and 200*

*Obtainable from all Chemists*

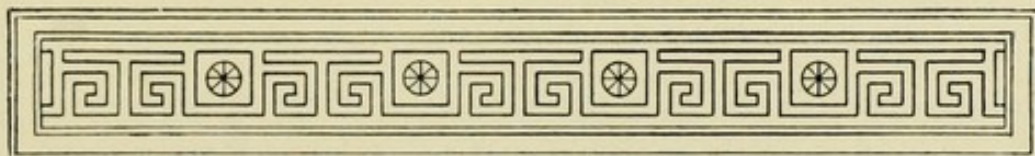
TRADE MARK 'TABLOID' BRAND 'SAXIN' TRADE MARK

'TABLOID' 'SAXIN' is a delightful sweetening agent, about 600 times as sweet as sugar. It imparts a delicate sweetness to tea, coffee, cocoa, etc., and may be used when sugar is forbidden. A bottle containing 100, 200 or 500 products, each of which is equivalent to a lump of the best loaf sugar, can be carried in the vest pocket without inconvenience.

"The  
sweetest  
thing on  
earth"

*In bottles of 100, 200 and 500*

*Obtainable from all Chemists*



COMPOUND MENTHOL SNUFF  
(B. W. & Co.)

THE need for some means of clearing the head is often felt at different seasons of the year, and particularly when exposed to cold winds and to the irritating effects of dust and the pollen of grasses.



Actual size

For this purpose Compound Menthol Snuff (B. W. & Co.) is ideal. It contains menthol, ammonium chloride, camphor and other approved ingredients in suitable proportions, and is neatly packed in enamelled tins

after the style of the old-fashioned black-and-gold snuff boxes.

*Obtainable from all Chemists*

TRADE MARK 'BIVO' BEEF AND IRON WINE

'BIVO' BEEF AND IRON WINE is pleasant to take and easy to assimilate. It contains the concentrated nutriment of choice, fresh lean beef, extracted by a method which preserves the solubility and digestibility of the "goodness" in beef. 'BIVO' BEEF AND IRON WINE is well adapted for invalids and convalescents, and is also a capital tonic for the man in training. It puts the last finishing touches upon the athlete's powers and enables him to withstand the exhaustion due to prolonged exposure and exertion.



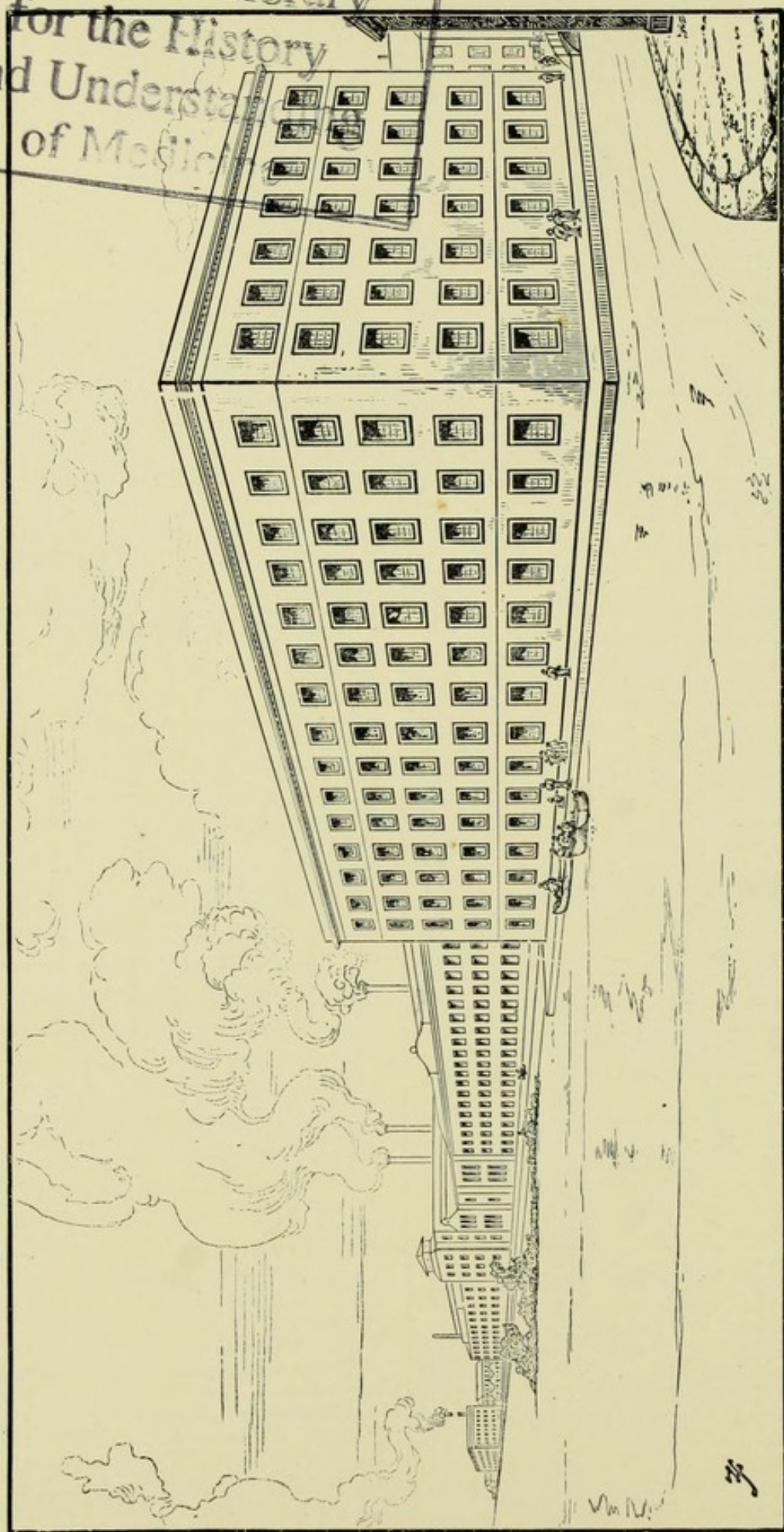
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*Obtainable, in bottles of two sizes, from all Chemists*

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