

THE AGILITY
and prodigious leaping powers of the KANGAROO are famed all the world over. Its agility, however, is excelled by the ease and quickness with which

Sunlight Soap

expels dirt from the clothes in the wash. SUNLIGHT SOAP enjoys well-earned and world-wide distinction as a Soap of the first quality. Its reputation is maintained by the 1,000 Guarantee of Purity given with every bar, and by the good report of millions of housewives who use it daily.

WHY NOT TRY IT.



Machine Guns of Allied Armies Marvels of Kind

British and Belgians Use Lewis Weapon, Automatic Rifle—French Prefer Hotchkiss Model—Both Simple in Construction, "Fool Proof" and One Man Model.

The present war may be very aptly described as a war of mechanics rather than of men, and amongst the mechanical contrivances the prolific use of which justifies this definition, the machine-gun takes a leading part. Whilst the capability of this weapon as a man-killing device has never been in doubt, the weight and constant immobility of the existing models materially reduce their value when employed by an attacking force of infantry. The extraordinary efficiency of the best machine-guns, when suitably mounted, has encouraged inventors to investigate the possibilities of a lighter form to be easily carried, and operated when necessary, by one man.

Amongst the best weapons of this type now in use may be placed the Lewis Automatic Machine-gun (which is largely used in the British and Belgian trenches, and with which the aeroplanes of these two forces are armed) and the Hotchkiss "mitrailleuse portative" used by our French Allies. Both these arms may be termed automatic rifles, in that they are light enough to be moved by one man; though the Lewis—which, complete with its tripod, weighs slightly less than thirty pounds—is the lighter of the two and can be fired from the shoulder by a powerful man without the support of a tripod or other barrel-rest.

Novel Mechanism.

The mechanism of both these guns is operated by a portion of the propelling gas and not by the recoil, as in some other makes and, although these two models vary in detail, as will be explained later, the broad principle employed is the same, and is as follows:—

A detachable magazine loaded with a number of cartridges (forty-seven in the case of the Lewis) is attached to a suitable fixing on the barrel near its after end, the first cartridge being fed from the magazine into the firing-chamber by the first forward movement of the firing pin, which is however, arrested before the striker reaches the cartridge unless the trigger is held back. When the trigger is pressed, the striker, carried forward by the mainspring, explodes the cartridge in position in the firing-chamber. Before

the bullet leaves the barrel, under the influence of the gas-pressure, it uncovers a hole connecting the barrel with a cylinder below lying parallel with it, and a portion of the gas passes into the lower cylinder, driving back the piston, and, with it, the rod against the pressure of the mainspring. This movement of the rod recocks the gun, throws out the exploded cartridge case, and during the early stage of its return journey, under the mainspring's influence, transfers a live cartridge from the magazine to the chamber.

If the gunner lets go of the trigger the firing ceases, and the gun remains cocked until the trigger is again pressed; if, however, he keeps a continuous pressure on the trigger, the weapon continues to fire until all the cartridges in the magazine are exhausted, the rate of continuous fire being as high as 440 rounds per minute in the case of the Lewis gun, including the interval occupied by replacing empty magazines with loaded ones.

Heat Rapidly.

The dissipation of the intense heat developed by the almost continuous combustion of explosive charges in the barrel of the machine-gun presents a somewhat difficult problem, and failure to accomplish this efficiently causes the barrel to become red-hot and prematurely to explode the incoming cartridge. The barrels of the Lewis and the Hotchkiss guns are both cooled by means of ribs which radiate the heat into the atmosphere, those of the Lewis being placed longitudinally and contained in a steel casing, through which cool air is drawn by the "exhausting" effect of the powder blast in the muzzle end of the casing, in the same way that the air is drawn through the fire box of a locomotive by the blast of the exhaust steam in the chimney.

It is practice in the case of the Hotchkiss gun to carry spare barrels, so that the hot one can be detached and replaced by a cool one before it reaches a dangerous temperature; the air-blast scheme on the Lewis gun, however, keeps it so cool that this never becomes necessary.

The recoil on the Lewis gun is absorber—or rather, counter-balanced—in a very simple and ingenious manner, the gas from the discharge being directed by means of a cone attached to the muzzle of the barrel proper, on to the inner surface of the casing, so that the friction between the gas and the metal casing tends

to carry the gun forward with the stream of gas, and so counter-balance the force of the recoil acting in the opposite direction. The mainspring of the Hotchkiss gun takes the form of an ordinary coil-spring acting in compression situated in the cylinder underneath the barrel; while the same unit in the Lewis is a spring of the type used for the mainspring of a watch, but naturally of a much greater power. This spring is coiled up in a circular case attached to the gun just in front of the trigger, in a position sufficiently far from the barrel to be unaffected by the heat, and, consequently, in no danger of losing its temper from overheating. The Hotchkiss mainspring acts directly on the piston rod, which it surrounds; whilst the Lewis is coupled to its rod by a rack and pinion.

How it Works.

The magazine of the Lewis gun is circular in shape, the forty-seven cartridges with which it is loaded lying radially in two layers with their bullets pointing towards the centre.

The complete cycle operations in the Lewis gun is as follows: The explosion of the cartridge in the chamber causes a gas-pressure, by way of the hole, on the piston. This pressure drives back the piston and its rod, and winds up the mainspring by means of the rack and pinion. In its backward course the piston rod carries with it the bolt, which, when in the firing position holds the cartridge in the chamber. The bolt at the moment of firing is firmly locked against the base of the cartridge, but it is caused to make a partial revolution, under the influence of the backward motion of the piston-rod, by the engagement of the post carrying the striker with a cam-slot in the bolt. This partial revolution disengages the block on the bolt from corresponding blocks in the fixed part of the gun body, and leaves the bolt, to draw the empty cartridge, the piston rod, and, by means of the extractor fitted in the sides of the bolt to draw the empty cartridge case out of the chamber until the ejector, by striking it on the left-hand side, can throw it out through the slot in the right-hand side of the action. The ejector is a flat bar curved towards the bolt at both ends, lying alongside of the latter in such a position that the bolt, on its passage backwards, strikes the after end of the ejector, and, in doing so, throws its front end forward until it strikes the case and so ejects it.

Nearly "Fool Proof."

When the piston rod reaches its extreme backward position the bullet has left the barrel and the gas pressure on the piston is relieved; the mainspring therefore comes into action and the rod travels forward, carrying with it the bolt, the front end of which engages with the after end of a cartridge dropped from the magazine above and carries it forward into the chamber. The bolt, having arrived at its forward position in contact with the cartridge now in the chamber, the piston rod (and with it the striker and post) still travels forward, and, by the action of the cam-slot in the bolt, causes the latter to be partially revolved, and, consequently, securely locked before the striker reaches and explodes the cartridge, which it does at the forward end of its stroke, starting the cycle of operations over again.

The Lewis gun is designed in such a manner that the only tool necessary to dismantle it completely is an ordinary service cartridge, the point of whose bullet is used to disconnect every portion of the mechanism; and this operation is such a simple matter that the gun can be dismantled, and any small damaged part replaced, well inside five minutes. The weapon takes the service ammunition, and its range is similar to that of the service rifle. When used on a fixed mount, the butt stock may be removed and a "spade handle" substituted.

Aeroplane Flew Over Quebec Town.

Affidavits Were Secured by Inspector Rioux, of Enemy Alien Staff.

The first really definite confirmation of the recent reports as to the advent of aeroplanes flying at various places in the Montreal district, was brought to Montreal last week by Mr. G. H. Rioux, assistant to Mr. C. G. Ogden, K.C., Registrar of Enemy Aliens. In his report to the Registrar, Mr. Rioux presented affidavits from reputable citizens of both Rigaud and St. Andre, testifying that they had seen an aeroplane the previous Sunday. These affidavits, made by prominent citizens of both places, were so explicit and tallied so exactly that there can no longer be any doubt that Rigaud was visited by an aeroplane on Sunday night.

As soon as the reports were published in the Montreal papers that aeroplanes had been seen in the vicinity of Rigaud, Mr. Ogden sent Rioux out to investigate. The officer visited Rigaud, and followed the track of the aeroplane thence to St. Andre, which is only 28 miles from the border. He took affidavits from citizens who had seen the air craft, and in

Banish Pimples!

Pimples, Boils, and other skin eruptions are an almost infallible indication that the blood is impure.

Abbey's Effervescent Salt is the simplest and most positive Blood Purifier that can be used. When we have perfect digestion we must have pure normal blood, which supplies healthful nutrition to all the organs and tissues of the body; and as a result we must have healthy functions and the absence of disease in any form. Abbey's Effervescent Salt produces this condition by ensuring healthy digestion and the elimination of all morbid matter from the system.

Sold everywhere at 25c. and 60c.

Sold everywhere.

this way secured an authoritative account of its movements, and even a description of the machine itself.

In his report to Mr. Ogden, Inspector Rioux stated that the aeroplane had been seen by a number of people at Rigaud last Sunday, between nine and half-past ten in the evening. It was flying at a height of about 700 feet, and was clearly visible, carrying a strong light. The machine was described as apparently an ordinary biplane, with two men in it, the pilot and a passenger, and a number of those who made the affidavits swore they had clearly distinguished the machine and observed the two men in it. The machine hovered for some time over Rigaud, and then disappeared in the direction of St. Andre, Que.

Mr. Rioux followed the trail to this place and found numerous citizens who had also seen the biplane. These persons also made affidavits that they had seen the aeroplane, describing it in the same manner as had those at Rigaud. According to this evidence, the last seen of the air vessel, it was travelling rapidly at a height of about 700 feet in a southeasterly direction, toward the American boundary.

What adds to the significance of this aerial incursion is the fact that the powder works of the Curtis & Harvey Explosive Co., are located at Rigaud, and the aeroplane was hovering over this plant for some time. What has not been explained is the fact that the aeroplane was carrying a powerful light, an unusual thing for any aeroplane at night, since it would naturally be guided by the ground lights and a light on the craft would prevent the occupants from seeing those on the earth. In addition to this, any airship coming with hostile intent would certainly not advertise its presence with a glaring light. The whole proceeding adds to the aerial mystery, which is not only exciting the people around Montreal, but engaging the active attention of the Military and other authorities.

PAGE OF SECRET HISTORY.

"Mr. H. Wickham Steer, more than any living writer, knows the secret history of the weeks which preceded the great war," says the Mail. "He has disclosed a good deal that is not yet public property in his little pamphlet 'L'Angleterre et la Guerre' (Colin Puri). In this he shows, inter alia, the extent of German intrigue and influence in this country. He makes three most important statements: That the Kaiser in a letter promised Austria his full support in a great war on July 14, 1914; that there is documentary evidence that one of the Kaiser's advisers saw this letter; and that on the 16th it was believed in Germany that the Austrian Emperor had signed the ultimatum to Serbia that same day."

FERROVIM
The Invigorating Tonic
For Sudden Exhaustion,
Thin Blood, General Debility
\$1.00 per bottle. Davis & Lawrence Co., Montreal

THOMAS TO SEE FOR HIMSELF.

Ottawa, July 27.—After holding several conferences with the Canadian Shell Committee and with members of the Government, D. A. Thomas, M.P., and his associates, representing Mr. Lloyd George, the British Minister of Munitions, have decided to make a tour of inspection of eastern munition factories starting on next Friday. They will visit Montreal, where they will inspect the plants at Vaudreuil, Beloeil, the Ancus shops, etc., and will go thence to Nova Scotia, where the Nova Scotia steel plant, the Dominion Iron and Steel and other firms engaged in the work of making munitions and explosives will be inspected. It is likely that further inspection will be made later on other plants in other parts of the Dominion. It is the purpose of the British representatives to ascertain at Rigaud, having the Canadian plants and their ability to make the various parts required.

THE NEW FRENCH REMEDY, THERAPION No. 1
CURES CHRONIC WEAKNESSES, DRUGS, LOST VIGOR, ETC.
THERAPION No. 2
CURES BLOOD POISON, BAD LEGS, SKIN ERUPTIONS, ETC.
THERAPION No. 3
CURES CHRONIC WEAKNESSES, DRUGS, LOST VIGOR, ETC.
SEND STAMP ADDRESS ENVELOPE FOR FREE BOOK ON THE CURE FOR YOU.
HAYWARD RD., HAMPSHIRE, ENGLAND.
SEE THAT TRADE MARK AND REGISTERED PATENT.
MINARD'S LINIMENT CURES GARTER IN COWS.

Just Received per Stephano:

American Specialties

2500 yards Fine American Shirting, in short ends, 4 to 9 yards, 36 inches wide, worth 12c. to 14c, for **9 cents.**

300 yards Fancy Mercerised Handkerchiefs, 4 and 6 Handkerchiefs to the yard, for **12c yard.**

10 pieces American Curtain Serim, Cream Ground, with dainty Fancy Border, only **25c yard.**

20 pieces American Gingham, fancy checks, **11c yard.**

Pillow Cases, frilled edge, jobs, for **30c**, worth 40c.

A Few More of the

Popular "Congoleum"

Squares.

Get Busy and Secure One.

Bowring Bros., Ltd.

aug7.eod.tf

Our Great Clearance Sale

On Monday we start our MID-SUMMER CLEARANCE SALE preparatory to Fall preparations. We have assembled a large stock of Furniture, Beds, Springs and Mattresses for this Sale and expect to make it the banner sale for the year. Prices are sharply reduced to make speedy clearance, so that you can save from 10 to 50 per cent. by buying now. Goods bought now will be stored free of charge until required. We mention a few of the lines listed:

PARLOUR SUITES, DINING SUITES, LOUNGES, FANCY CHAIRS & TABLES, MORRIS CHAIRS, STUDENTS' CHAIRS, WRITING TABLES, BOOK CASES, WATNOTS, CHINA CLOSETS, SIDEBORDS, EXTENSION TABLES, COUCHES, CHAIRS, BUREAUS & STANDS, TOILET TABLES, WASHSTANDS, PICTURES, MIRRORS.

And we have a large assortment of BEDS from \$3.50 up; SPRINGS and MATTRESSES from \$2.00 up; STRETCHERS, just the thing for country, only \$2.50 (bed and spring combined). Then we have our COMBINATION BED, SPRING and MATTRESS, only \$7.50 set.

Young people contemplating marriage should give us a look in before buying.

Buy
Now
AND
Save
Money.



GOODS
Stored
FREE
OF
Charge.

The C. L. MARCH Co'y, Ltd.,

Cor. SPRINGDALE & WATER STREETS

AJAX TYRES!

We are now carrying in stock, in addition to Columb Tyres, Ajax-Grieb Heavy Iron Skid Tyres, and also carry all kinds of

AUTOMOBILE ACCESSORIES

such as Demountable Rims, Patches, Tire Irons, Liners, Spark Plugs (all kinds), and everything for the Motor Car, which we are selling at very low prices.

GEO. M. BARR.

Grove Hill Bulletin

THIS WEEK.

Wreaths and Crosses,
Wedding Bouquets,
Sweet Peas,
Cut Flowers, &c.
CASH ON DELIVERY.
J. McNEIL,
Waterford Bridge Road,
Phone 247.

Minard's Liniment Cures Diphtheria