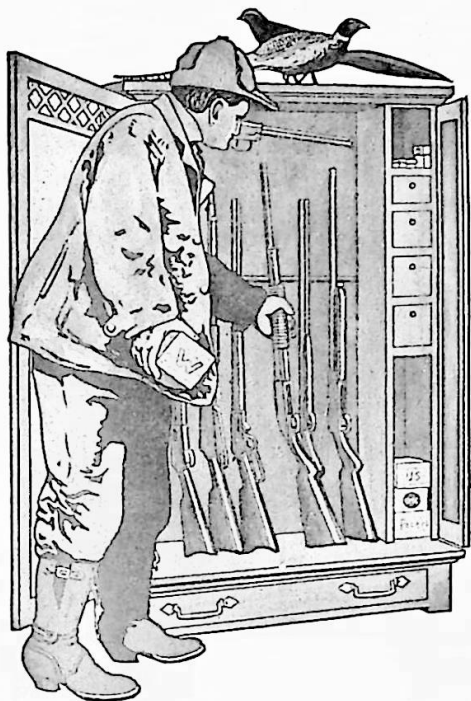


HUNTER TRADER TRAPPER



CLEANING UP AFTER DINNER.
H. C. Harpler and a friend, in camp near Fort Dodge, Iowa.



GUNS AND AMMUNITION

THE LUGER AUTOMATIC PISTOL.

Lately we have received many requests for information regarding the Luger pistol, and believing that these could be answered most satisfactorily by giving a complete description of the arm, we resolved to do so, and this is the result. We do not wish to pose as an authority on foreign firearms, and will say that it is due to the courtesy of H. Tauscher, the American agent for the Luger pistol, that we are enabled to give such a complete description of the arm, as he furnished most of the information contained herein.

The Luger is a German arm, and is made by the Deutsche Waffen und Munitionsfabrik (German Arms and Ammunition Co.) of Berlin, Germany, with factories also at Oberndorf and Karlsruhe, Germany, and Liege, Belgium. This is one of the largest of the foreign arms companies, and makes repeating rifles and machine guns, also, supplying one or other form of arm to twenty-eight different governments. The Luger itself has been adopted for military use by eight governments, including Germany, Switzerland, Portugal, Holland, and some of the South American countries, which should be proof conclusive, to even the most skep-

tical, that the pistol is a dependable and effective weapon.

The Luger pistol must not be confounded with the pocket automatics, as it is of the military class, and is quite powerful and of long range. It is made in two calibers, 7.65 m/m, or .301 caliber, as we measure it, and 9 m/m, or .354 caliber. Of these, the 7.65 m/m seems to be a little the most powerful, as the bullet has a higher velocity, a somewhat longer maximum range and a greater penetration. The 9 m/m, on the other hand, has a greater energy, and greater stopping power—at least the stopping power is greater from the military viewpoint, as in war, only the full metal-jacketed bullets can be used, and in such a case, the larger caliber is most effective. When both are loaded with expanding bullets the effects may be different, and without having had an abundance of experience with each caliber, I would choose the 7.65 m/m for hunting purposes, and chance shots at big game on the trap line.

The pistol is an eight-shot, recoil-operated arm, and the magazine is contained in the handle. By this, is meant that the magazine holds eight cartridges, but if the barrel already contains a cartridge and a fully charged cartridge-holder is placed in the magazine, the shooter has nine shots at command. The recoil from the first shot opens and closes the breech, ejecting the empty shell, cocking the gun and seating a second cartridge in the barrel, thus leaving the arm ready for firing the second shot. If desired, the entire eight cartridges may be fired as rapidly as one can pull and release the trigger, or as slowly as desired. If one or more shots are fired the arm may be made perfectly safe by means of the safety arrange-

ment, and the cartridge-holder may be withdrawn, recharged, and placed back in the gun at the shooter's convenience.

The self-loading principle, as represented in this arm, contains many advantages over the revolving pistol, and at the same time

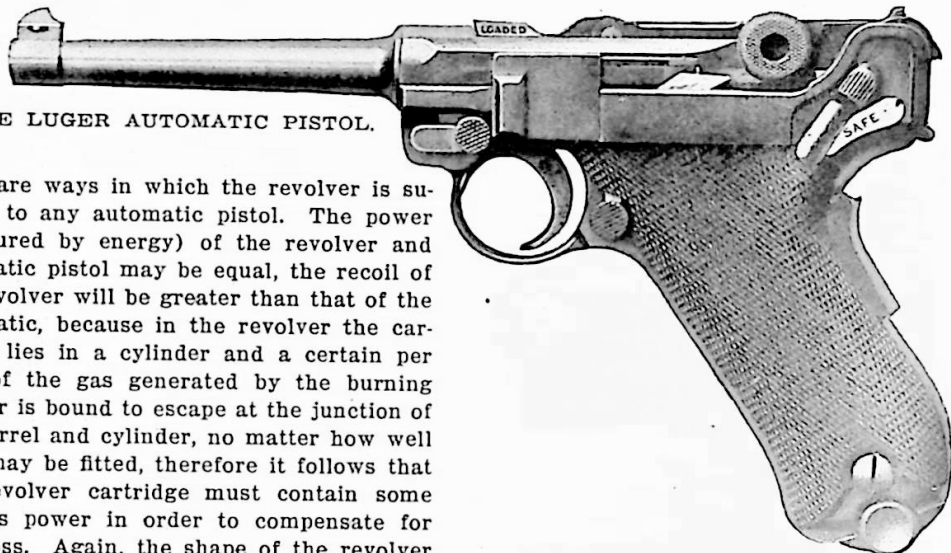
claim even better. The first shot may also be fired from a revolver more quickly than from an automatic pistol, and if one had to deal with "bad men" today, this would be something worth considering, but for the use to which the present-day hunter, trapper, pros-

THE LUGER AUTOMATIC PISTOL.

there are ways in which the revolver is superior to any automatic pistol. The power (measured by energy) of the revolver and automatic pistol may be equal, the recoil of the revolver will be greater than that of the automatic, because in the revolver the cartridge lies in a cylinder and a certain per cent of the gas generated by the burning powder is bound to escape at the junction of the barrel and cylinder, no matter how well they may be fitted, therefore it follows that the revolver cartridge must contain some surplus power in order to compensate for this loss. Again, the shape of the revolver and the position of its grip in relation to the cartridge chamber, causes it to leap up more at the muzzle when fired. Then, too, the automatic takes up a portion of the recoil, and the revolver does not. All of this makes it easier for the amateur, and many experienced marksmen, to do more accurate shooting with the automatic pistol than with the revolver. Other advantages are that the automatic pistol is simpler than the revolver and contains fewer parts, has a greater magazine capacity; can be fully charged as quickly as one could place a single cartridge in the revolver; ejects the shells automatically; is lighter, less bulky (in most cases) and safer.

On the side of the revolver we can say

pector or bushman, puts a pistol, quickness of placing the first shot is not worth considering. The larger revolvers, .38-40, .44-40, and .45 Colt, have greater energy, but it is hardly fair to make this comparison, for these revolvers weigh about 2½ pounds each, while the Luger weighs only 1 pound 13 ounces, and the difference in caliber is even greater. It is better to compare the Luger with the .38 Colt's Special, or the .38 S. & W. Special, as the weights, bulk, and calibers are more nearly equal, and when this comparison is made we find that the Luger is away ahead in velocity and energy, also with the expanding bullet the shocking power is much greater. Anyway, we know that the Luger is powerful enough to kill grizzly



CARTRIDGES ADAPTED TO THE LUGER PISTOL.

that it has a better grip than most of the automatics, though the automatic pistols differ greatly in this respect, and the Luger especially has the grip set at a good angle and holds as nicely as the Colt's revolvers, some

bears, elk, moose and caribou, if the bullet is properly placed. I have myself known of an elk being killed at 200 yards, by a shot from a 7.65 m/m Luger, and in the May number of this magazine we published a photo-

graph of a grizzly bear killed by A. C. Rowell, a Wyoming hunter and trapper, with a Luger pistol.

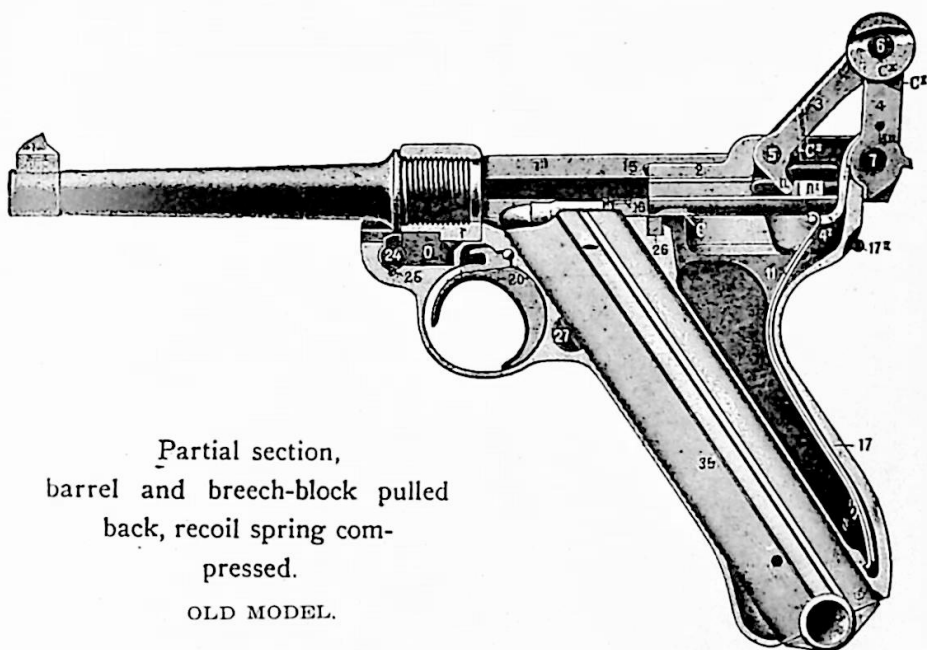
The only American made automatic pistol that can compare with the Luger for stopping power is the .38 Colt automatic, which gives a slightly higher velocity than the Luger, and considerably more energy, but it is an awkward looking and awkward handling weapon, compared with the Luger, and the grip hangs at too near a right angle to the barrel.

As mentioned above, the Luger is made in two calibers. The 7.65 m/m measures 9¼ inches in length, and a little over 5¼ inches

feet per second. This is a higher velocity than that of any revolver bullet. The energy is 271 foot pounds; the maximum range is 1950 yards, and to get this range the pistol must be held at an angle of 27½ degrees.

The penetration at 50 yards is 6.3-10 inches of pine, or 2.76 inches of beech. This penetration, we understand, is obtained with the German made hollow-point, expanding bullets.

The 9 m/m pistol measures 8½ inches in length and a little more than 5¼ inches in height. The length of barrel is 4 inches; distance between sights, 7¾ inches. The rifling is the same as that of the .30 caliber,



Partial section,
barrel and breech-block pulled
back, recoil spring com-
pressed.

OLD MODEL.

in height. The barrel is 4½ inches long, and the distance between sights is about 8¾ inches. The rifling has a right hand twist and consists of four grooves, .005 inch deep. The barrel is throated for a short distance from the forward end of the shell chamber, to start the bullet into the rifling perfectly true. The arm weighs 1 pound 13 ounces, empty.

The cartridge for this caliber measures over all 1.173 inch, and weighs 162 grains. The powder charge consists of 5.4 grains of smokeless powder (foreign), and the bullet (hard lead core, with full or half case of sheet steel, coppered and nickel plated), weighs 92.6 grains.

The velocity of the 7.65 m/m bullet is 1150

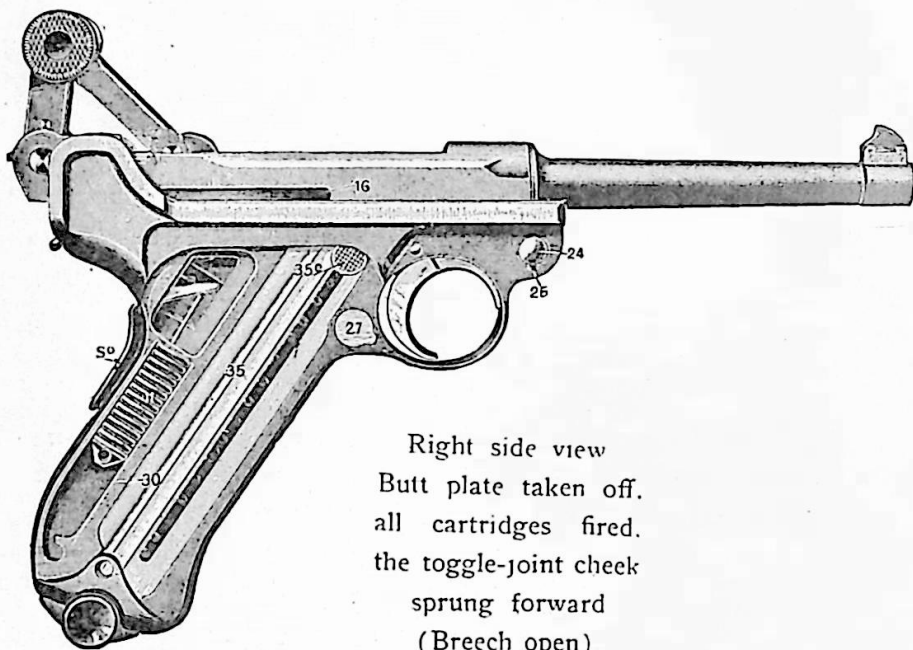
except that there are six, instead of four grooves, and they are narrower than those of the smaller caliber. The weight of the pistol is the same as that of the .30 caliber; 1 pound 13 ounces.

The cartridge for this caliber measures 1.142 inch in length and weighs 193 grains. The powder charge is the same as that of the 7.65 m/m, or .30 caliber, and the bullet, which is also the same style, weighs 123.4 grains.

The velocity of this bullet is 1020 feet per second; energy, 283 foot pounds; maximum range, 1600 yards, to obtain which, the arm must be held at an angle of 30½ degrees. The penetration at 50 yards is 5½ inches of pine, or 2 inches of beech.

In order to describe clearly the working of the Luger pistol, it will be necessary to explain first, that the receiver consists of two parts, the one part being that to which the grip is attached, and which remains stationary when firing, and the recoiling portion to which the barrel is attached, and in which the breech-bolt works, referred to hereafter as the bifurcated receiver. This movable portion, consisting of the barrel, breech-bolt and toggle-joint links, and bifurcated receiver, slide backward and forward in grooves cut in the sides of the stationary portion of the receiver. The breech mechanism consists of the breech-bolt proper (2) in which the firing pin, firing pin

stiff enough for that, the result is, that when the gun is fired the barrel, bifurcated receiver and bolt, all recoil together for a distance of $\frac{1}{4}$ inch, when the knurled cheeks of the toggle-joint (CX) come in contact with the sloping portion of the bifurcated receiver, and the joint is thrown upward, out of line. All of this has, of course, happened in the smallest fraction of a second, but during this recoil, while the bolt is still locked to the barrel, the bullet has left the gun. The energy of the recoil is still there, however, and its influence is still felt, inasmuch as the toggle joint being now thrown out of line, folds up like a jack-knife, rising above the receiver as shown in



Right side view
Butt plate taken off.
all cartridges fired.
the toggle-joint cheek
sprung forward
(Breech open)

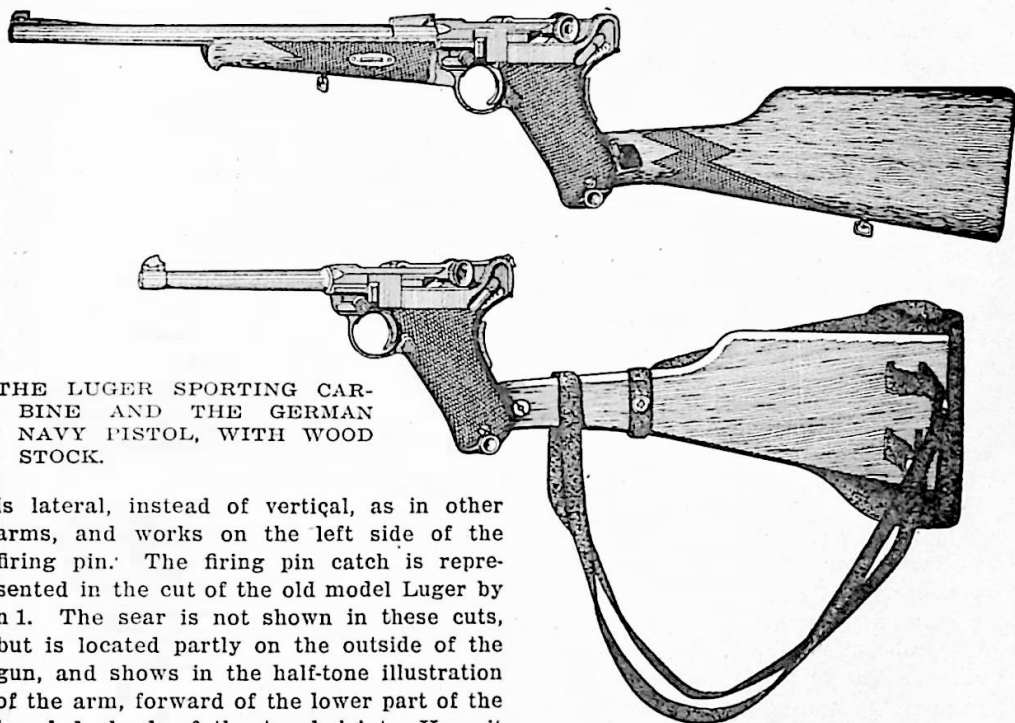
spring and extractor are located, fits up snugly against the rear of the barrel, and behind it, hinged to the breech-bolt and to the bifurcated receiver are the forward link (3) and the rear link (4) of the toggle joint, both of these links being hinged together. The three pivot-points of this toggle-joint are perfectly in line when the arm is closed, and it follows that as long as they remain so, the bolt is locked securely against the force of the explosion. However, there is nothing but the recoil spring (located in the grip, behind the magazine, and represented by figure 11), to hold forward the barrel, bifurcated receiver and its working parts when the arm is fired. This spring is not

the cuts, the barrel remaining stationary now. The small arm (n) of the forward link of the toggle joint, now acts upon the firing pin and cocks the arm as the joint collapses, the breech-block also recoiling in the grooves of the bifurcated receiver, the ejector kicks out the empty shell and a loaded cartridge rises from the magazine to a position before the bolt. The recoil of the barrel, and the farther recoil of the breech-bolt and buckling of the toggle-joint, has all combined, compressed the recoil spring to its fullest extent, and as soon as the energy of the recoil subsides, the recoil spring snaps back to its original position, straightening down the toggle-joint and

thrusting the bolt forward against the breech of the barrel, this action carrying the top cartridge into the barrel. All of this has taken considerable time in explanation, but in action, it all happens quicker than you can say "scat"—in just a small fraction of a second. The trigger must now be released and allowed to go forward slightly, before another shot can be fired.

A safety lever is located on the left-hand side of the receiver and it must be pushed upward to make the gun safe. In order to explain its action clearly, however, it is first necessary to say that the sear action

drawing the cartridge-holder by means of the projecting end at the bottom of the grip. Then by pulling down the checkered guide knob (35e) the cartridges may be fed into the holder bullet end forward one at a time, and are held there by the overlapping lips of the cartridge holder. When fully charged the cartridge-holder is pushed up into the magazine until it engages with the catch and is held fast. A cartridge may then be loaded into the barrel by gripping the knurled cheeks of the toggle-joint and drawing it upward and backward to its fullest extent, then releasing it suddenly,



THE LUGER SPORTING CARBINE AND THE GERMAN NAVY PISTOL, WITH WOOD STOCK.

is lateral, instead of vertical, as in other arms, and works on the left side of the firing pin. The firing pin catch is represented in the cut of the old model Luger by n 1. The sear is not shown in these cuts, but is located partly on the outside of the gun, and shows in the half-tone illustration of the arm, forward of the lower part of the knurled cheek of the toggle-joint. Here it is blocked by the safety sear, which rises automatically into place the instant the grip is released. Pushing up the safety lever locks it in place and makes the arm so safe that it may be handled indiscriminately without danger. When the safety lever is pulled down, and the hand is tightened on the grip, the safety sear releases, and leaves the gun ready to be fired by a pressure of the trigger.

To charge the magazine of the Luger pistol, the cartridge-holder (35) must be removed from the magazine by pressing on the checkered button on the left side of arm, just behind the trigger-guard, and with-

when it springs forward, carrying a cartridge into the barrel. When operating by hand, the toggle-joint may not straighten out completely, and must be pressed down into place. The gun is now ready for firing, but if the shooter does not wish to fire at once, he should move the safety lever to the safe position.

The illustrations show both the old and new models. As will be noted, many of the working parts of the new model are heavier, and consequently stronger, and coiled springs are used throughout, except the sear-spring. Coiled springs are more durable than flat springs. In the new model also,

the extractor is so arranged that when there is a cartridge in the barrel the extractor projects, showing the word "loaded."

The Luger pistol has a blue finish, except the safety lever, magazine catch, trigger, ejector and locking lever, which are case-hardened in color. It has checkered wood handles, which fit the hand nicely. A sling-loop is placed on the back of the receiver. The rear sight is a part of the rear link, but the front sight (blue steel) is set in a slot in the sight seat, which is a part of the barrel, and may be moved for side adjustment. Ivory and gold-bead front sights of American make may be substituted if desired. The price of the pistol, with one extra cartridge-holder, is \$25.

Besides the pistol, there is also the Luger automatic sporting carbine. It is similar to the pistol in every way, except that it has an 11¾-inch barrel, with a checkered wooden fore-end, and a detachable wood stock, with checkered grip. It has a rear sight on the barrel, adjustable to 300 yards. It has more power than the pistol, because of the longer barrel. Its weight is 4 pounds 1 ounce.

Then there is the German navy pistol, which is also for sale in this country. It is similar to the pistol described, except that it has a 6-inch barrel, adjustable rear sight, and detachable stock. It is provided with a sling strap, and has a magazine pocket on the right side of the stock, containing two extra magazines, a cleaning rod and a screw driver. The caliber is 9 m/m.

The Luger pistol is machine made and repair parts are carried in stock by H. Tauscher, who also sells the German-made ammunition. The descriptive catalogue that accompanies the arm gives complete directions for handling, cleaning and dismounting the gun. It may be dismounted quickly, so as to expose practically all of the working parts, without tools.

It may seem to some that \$25 is too much to put into an arm of this kind, for use on the trap line, but it is not. Of course it is not adapted to use in a thickly settled country, but as a trap line gun for the Western mountain district, or the Northern bush, it is a fine arm. In the wilderness, there are many times when the trapper must make long trips over the line and cannot carry his rifle with him. In such case the Luger is as fine a weapon as he can wish

for. It is also handy when you go fishing, when prospecting, berry-picking, and similar outdoor occupations.

—o—

AMERICAN FIREARMS

(PART VI)

The series of articles of which this is the sixth, describes the various rifles, shotguns, and pistols marketed by the American manufacturers. It is not an advertisement for the dealer or the maker of guns, but is given for the benefit of H-T-T readers, to inform them of just what each arm will do, what can be expected of it, and to describe the working system of each. The many questions received by us show that such information is needed, and we believe that it will be appreciated by many.—Editor.

.22 Caliber Repeaters (Continued).

The Marlin Firearms Company make a larger line of .22 caliber repeating rifles than any other manufacturer. Their product consists of five models, with variations, namely: the model 1892; the 1897 model; the model No. 20; the same with full magazine, a new production; and the model No. 25. The first two of these, the models 1892 and 1897, are lever action guns, and since the old model 1873 Winchester .22 caliber has been discontinued, are the only lever-operated .22 caliber repeaters on the market. The other arms mentioned are operated by the sliding forearm.

Since the 1892 model is the oldest arm on the list, I will first give a description of that rifle. This arm was made to take the place of the model 1891 over which it is an improvement. It is made in both .22 and .32 caliber, but as this article describes only .22 caliber rifles, the larger size may be dismissed. The gun is furnished in either round, octagon or half octagon barrel, either 24, 26 or 28 inches long, and weighs with shotgun butt plate, 5½, 5¾, 6¼ pounds, respectively, with octagon barrels, and 5¾, 5½ and 5¾ pounds with round barrels of the three given lengths. The gun is regularly furnished with a rubber butt plate, but rifles with rifle butts will be supplied at the same price. The rifle butt will increase the weight of the arm about ¼ pound. Two lengths of magazine are furnished, and either will be supplied, as desired, 16-inch and 24-inch. The 16-inch magazine has a capacity of 16 short, 12 long, and 10 long rifle cartridges. The 24-inch magazine holds