No. 885,868. PATENTED APR. 28, 1908.

A. W. SAVAGE.

MAGAZINE FOR FIREARMS.

APPLICATION FILED NOV. 25, 1904.

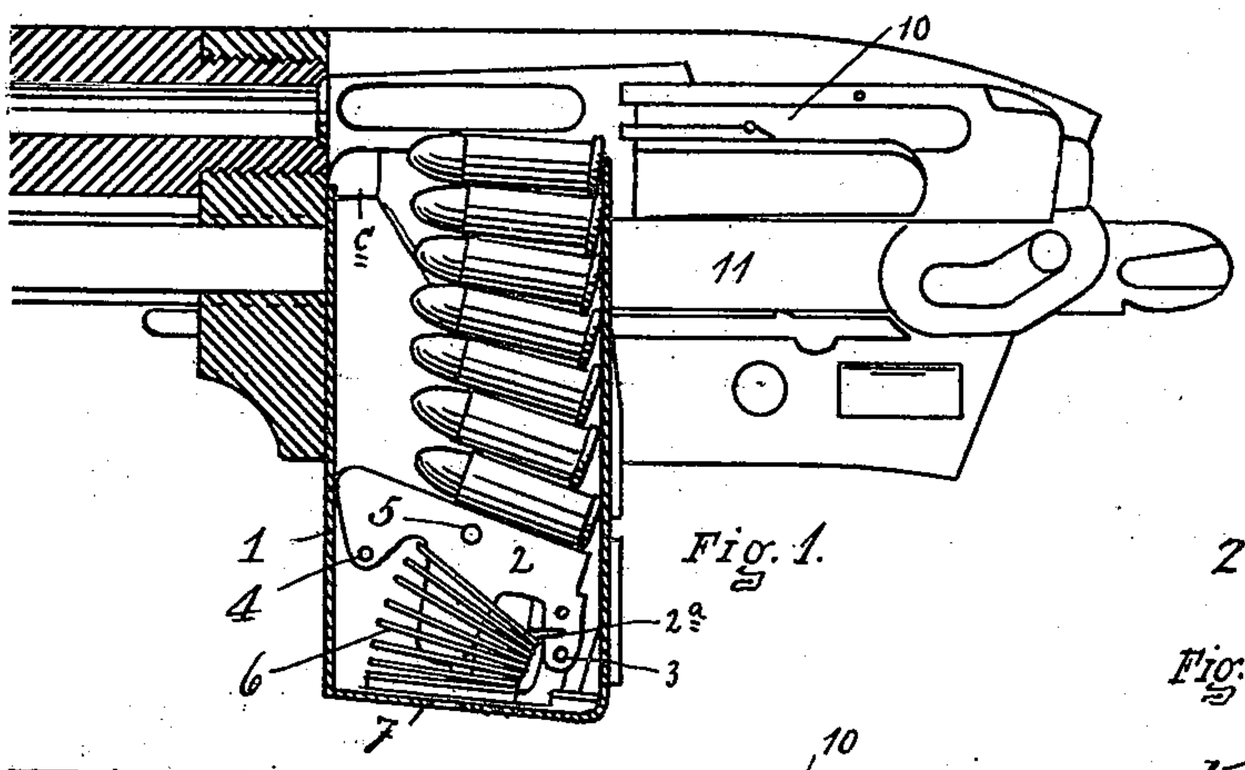

Fig. 1.

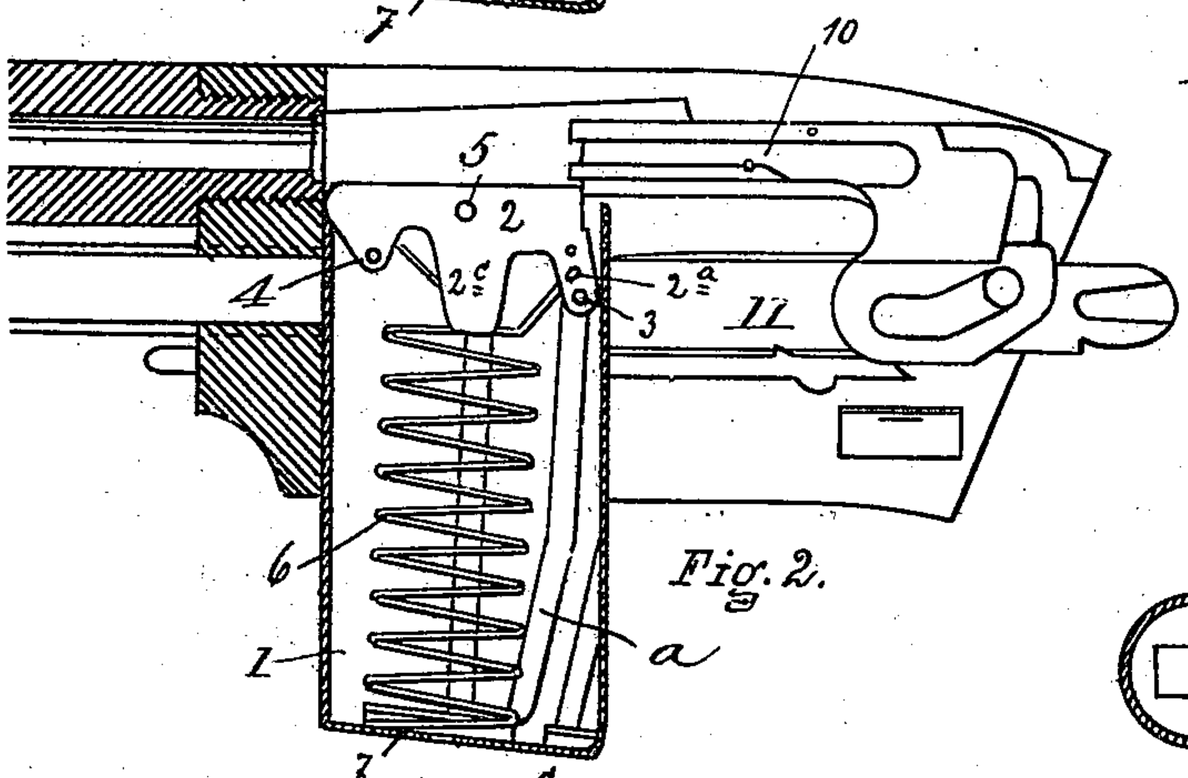

Fig. 2.

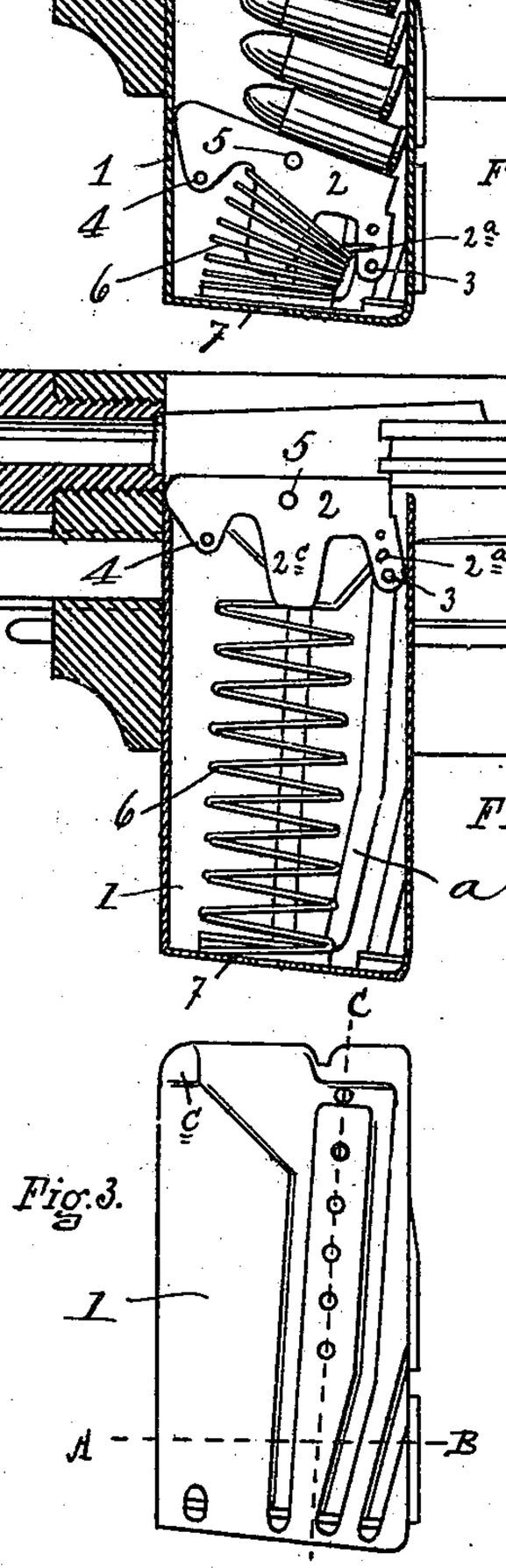

Fig. 3.

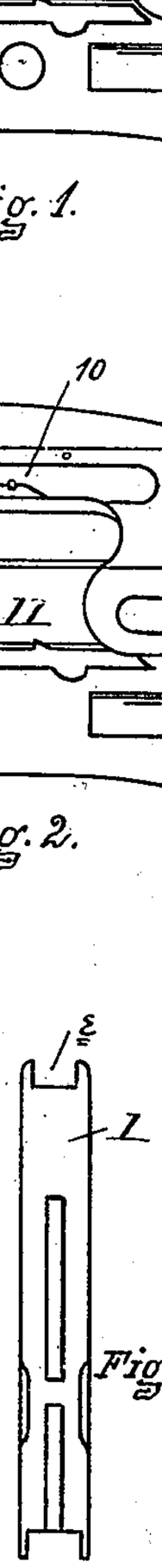

Fig. 4.

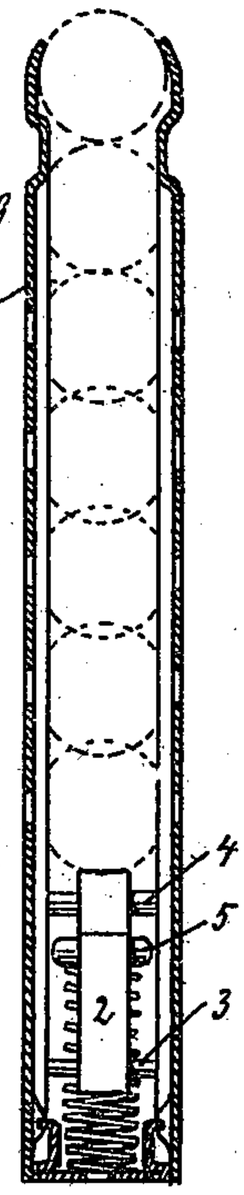

Fig. 9.

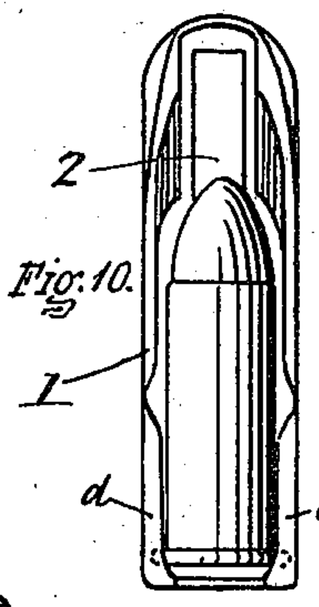

Fig. 10.

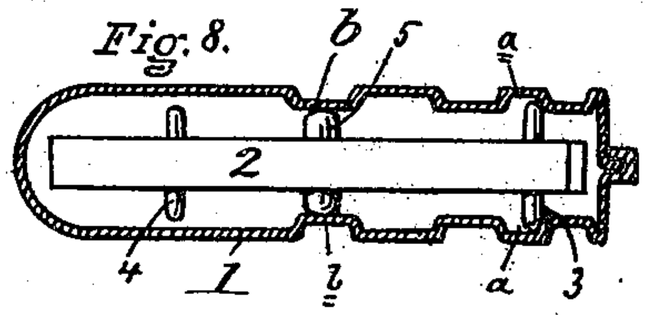

Fig. 8.

Fig. 7.

Fig. 5.

Fig. 6.

D

WITNESSES.
Rich. A. George.
Emma S. Hesse.

INVENTOR
ARTHUR W. SAVAGE.
BY Robinson, Martin & Jones
ATTORNEYS.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ARTHUR W. SAVAGE, OF UTICA, NEW YORK, ASSIGNOR TO SAVAGE ARMS COMPANY, OF UTICA, NEW YORK.

MAGAZINE FOR FIREARMS.

No. 885,868. Specification of Letters Patent. Patented April 28, 1908.

Application filed November 25, 1904. Serial No 234,301.

To all whom it may concern:

Be it known that I, ARTHUR W. SAVAGE, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Magazines for Firearms; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my present invention is to provide certain improvements in a magazine, for a class of magazine rifles heretofore invented and patented by me, whereby the utility of the magazine is greatly increased, and particularly its ability to handle long and short cartridges in the same magazine in an entirely satisfactory manner is insured.

A further object attained is to provide a magazine for blocking the movement of the breech bolt and operating mechanism when the magazine becomes empty.

In the drawings Figure 1 shows a vertical section of the magazine of my improved construction filled with cartridges and arranged in its working position in connection with a portion of the fire arm of the kind before referred to. Fig. 2 shows the same as Fig. 1, with the magazine empty and the breech block blocked or stopped by the follower of the magazine. Fig. 3 is an outside view of the magazine detached or removed from the fire arm. Fig. 4 is a rear edge view of the same. Figs. 5 and 6 show a plan and edge view of the removable bottom of the magazine. Fig. 7 is a cross sectional view of the same on an enlarged scale. Fig. 8 is a section of the magazine case taken on line A—B of Fig. 3 on an enlarged scale, with the follower shown in position therein, which follower, however, never passes below the section line A—B. Fig. 9 shows a vertical section on an enlarged scale taken on line C—D of Fig. 3, with the follower in the depressed position, and the positions of the heads of the cartridges shown in dotted outline. Fig. 10 is a plan or top view on an enlarged scale of the magazine, the cartridge of medium length in position therein.

Referring to the reference characters in a more particular description, 1 indicates the magazine casing which is of a flattened tubular form, generally considered, and preferably formed of thin sheet metal. The side walls of the magazine are formed by dies preferably to provide certain inward standing ribs or indentations particularly as seen in Fig. 3, and provided particularly in the opposite side walls with internal grooves *a*—*a*, which extend down the rear walls of the magazine a portion of their length and then diverge inwardly as may be seen by an examination of Figs. 2 and 3. The indentations are also arranged to provide substantially longitudinal of the middle of the casing the inwardly standing ribs *b*—*b*. At the top the walls are formed or pressed inwardly to provide the shoulders *c* and at the upper end to the rear the walls are inwardly turned, as shown at *d*—*d*, to provide shoulders to engage the head of the cartridge and prevent it being moved out of the top of the magazine when in its rearmost position.

Within the magazine there is provided a follower 2, which is preferably of the particular form shown in the drawings, and consists of a piece considerably thinner transversely than the distance between the side walls of the magazine casing, and having at its rear end the downwardly extending part 2^a, and at its forward end the downwardly projecting part 2^b, and intermediate of these two projections the middle projection 2^c. At the lower end of the arm or part 2^a there is provided a cross pin 3, which projects from each side of the follower to engage in the guiding grooves *a*—*a* before mentioned in the inner walls of the magazine and still move freely therein. In the forward projection 2^b there is provided a cross pin 4, which is adapted, when the follower is in its upper position, to engage with the shoulders *c* and limit the upward movement of the follower in the mouth of the magazine.

Intermediate of its length, the follower 2 is provided on either side with knobs 5, which are located so as to engage with the inwardly standing ribs *b*, keeping the follower free from contact with the walls of the casing at either side, while allowing it entire freedom to slide freely in the casing and change its angular position with reference thereto. To the arm 2^a of the follower, there is also pivotally attached the upper end of the spring 6, which spring is of a flattened spiral form and is supported at its lower end on the removable bottom 7. The projection 2^c on

the follower is adapted to pass into the interior of the convolutions of the spring 7 when the follower is forced down and the spring compressed, as shown in Fig. 1, and the spring is maintained by the projection 2^c in proper position for effective action and without any liability to displacement to one side or the other when under compression.

The rear wall of the magazine is recessed at the upper end, as indicated at *e*, to allow the passage of the lower portion of the reciprocating breech bolt 10. The cartridges are placed in the magazine through the open top or mouth and are forced back under the retaining lips *d*—*d*, which prevents the cartridges from being expelled by the operation of the spring 6. The magazine shown in the drawings is arranged to receive seven cartridges in a column, as shown in Fig. 1, the top cartridge being engaged under the lips *d* thereby retaining the entire column in position against the tendency of the spring and follower to expel them from the mouth of the magazine.

It will be noted that the rims or heads of the cartridges pass down the groove *a*, which receives the ends of the cross pin 3. As the breech bolt is moved forward in the usual manner, it engages the end of the top cartridge in the magazine, passing through the recess *e*. The cartridge is forced forward by the breech bolt towards the barrel, and, after moving a limited distance, becomes free from the retaining shoulders or lips *d*—*d*, when the column is forced up by the operation of the spring and follower, directing the cartridge into the barrel. The balance of the column is held down while the bolt is in closed position by engaging with the underside of the bolt. When the bolt is retired, the succeeding cartridge is moved up into engaging position with the lips or shoulders *d*—*d*, and on the following forward movement of the bolt it picks up the succeeding cartridge. When all of the cartridges have been removed from the magazine, the follower 2 comes into engagement with the underside of the breech bolt when in closed position. When the breech bolt is afterwards moved into open position, the follower 2 rises into the position shown in Fig. 2 with the front end engaging the rear end of the barrel or the frame adjacent thereto. The forward end of the follower is held down by the cross pin 4 coming in engagement with the shoulder *c*, and as the upper edge or surface of the follower attains a substantial horizontal position, the projection 2^a strikes the rear wall of the magazine, limiting the movement of the follower in any direction, and at a position in the mouth of the magazine. At this time the rear end of the follower will take a position substantially the same as the top cartridge when there are cartridges in the magazine, so that when the bolt is then attempted to be moved forward it will engage the rear end of the follower and become blocked. It is, of course, useless for the operator to continue to operate the gun after the cartridges are exhausted, and in this way his attention is brought to the fact that the magazine is empty; otherwise, he might continue to operate the gun, attempting to make shots which could not be had for want of cartridges. However, the action can be readily completely closed by the operator moving the magazine downward bodily until the breech bolt will pass over the follower, and after the bolt is closed forcing the magazine up again into normal position, bringing the mechanism into convenient condition for carrying or laying aside.

In the form of construction shown, it may be noted that it is intended to remove the magazine from the arm for reloading. Furthermore, it may be noted that in the form of construction shown, the breech bolt 10 is operated by a sliding handle under the barrel in a common manner, connected to the breech bolt by the reciprocating bar 11. The particular form of breech bolt and operating mechanism, however, is not material to the features of this invention.

What I claim as new and desire to secure by Letters Patent is:

1. The combination in a magazine for fire arms of a flattened tubular casing open at one end, and having cartridge engaging lips or shoulders *d*, the angular grooves *a* and the ribs *b* and shoulders *c* of a follower having projections engaging in the grooves *a* and with the ribs *b*, and projections adapted to engage with the shoulder *c* and a spring for actuating the follower, substantially as set forth.

2. The combination in a magazine for fire arms, of a casing adapted to receive a column of cartridges, a follower arranged in the magazine having a downwardly extending part 2^a at the rear end thereof, guide grooves formed in the side walls of the magazine, and projections from the part 2^a engaging in the guide grooves, and an actuating spring also engaging with the part 2^a, substantially as set forth.

In witness whereof, I have affixed my signature, in presence of two witnesses, this 9″ day of November 1904.

ARTHUR W. SAVAGE.

Witnesses:

S. I. De Vine,

Emma S. Hesse.