2 Sheets—Sheet 1.

C. M. SPENCER.

Magazine Fire-Arm

No. 58,738.

Patented Oct. 9, 1866.

Fig: 1.

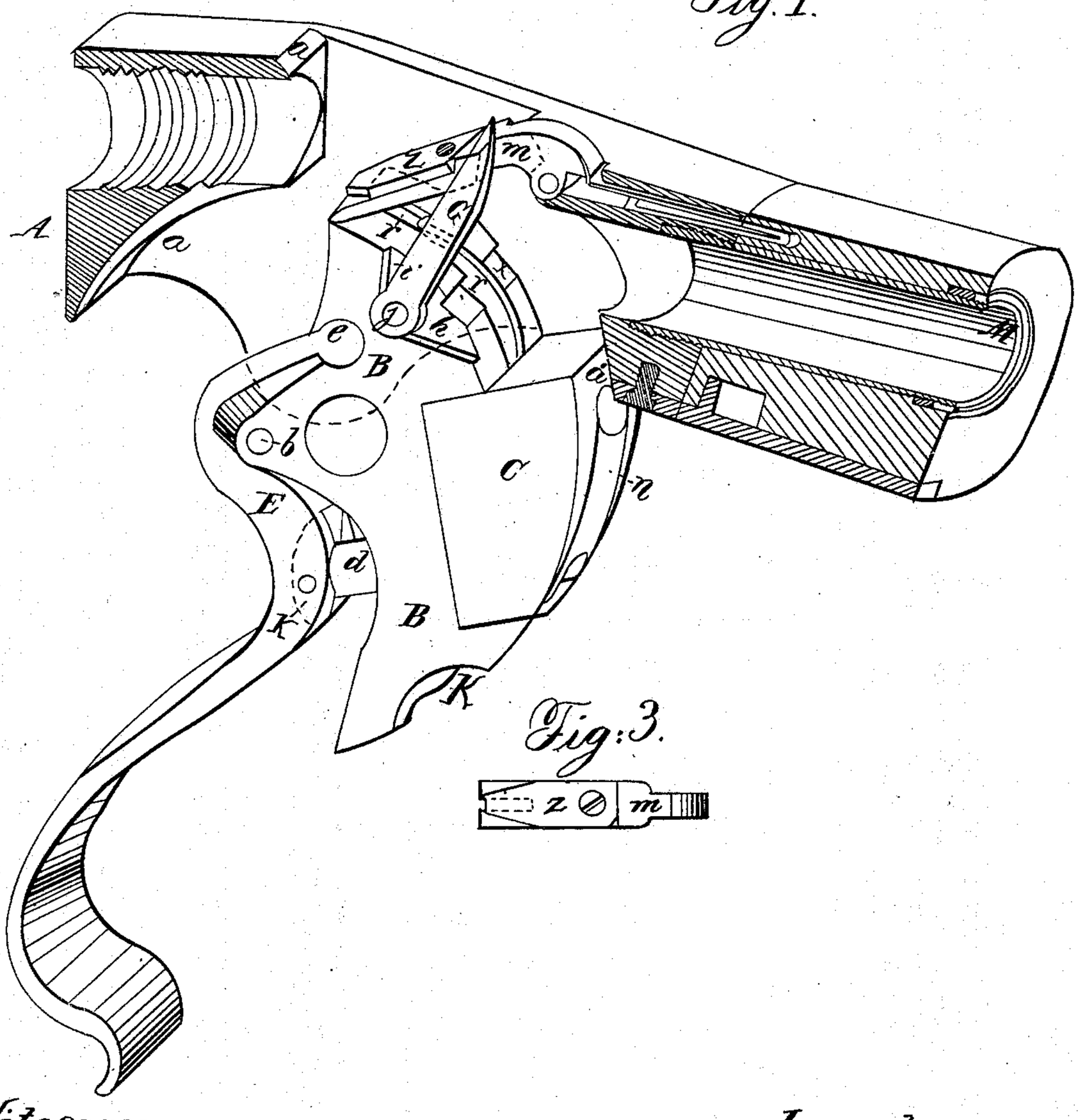

Fig: 3.

Witnesses:

Chauncey Smith

Saml W Bates.

Inventors.

The Spencer Repeating Rifle Co

By their Attorney

Chas F. Fansbury

2 Sheets—Sheet 2.

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Magazine Fire-Arm

No. 58,738. Patented Oct. 9, 1866.

Fig: 2

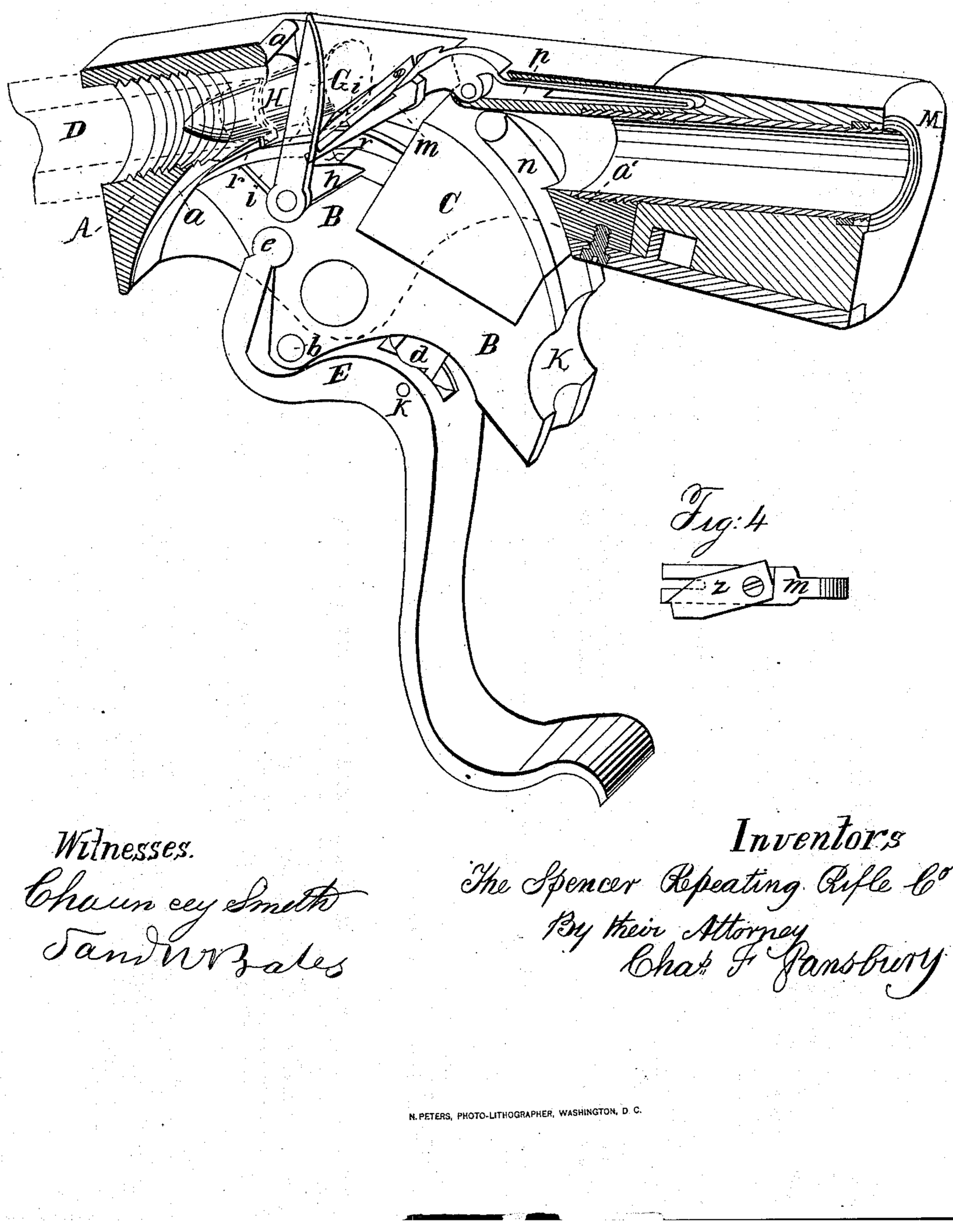

Fig: 4

Witnesses.

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Inventors

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By their Attorney

Chas F Gansbury

UNITED STATES PATENT OFFICE.

CHRISTOPHER M. SPENCER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO SPENCER REPEATING RIFLE COMPANY, OF SAME PLACE.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **58,738**, dated October 9, 1866.

To all whom it may concern:

Be it known that I, CHRISTOPHER M. SPENCER, of the city of Boston, in the State of Massachusetts, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a view, in perspective, of the carrier-block and adjacent parts of a breech-loading repeating fire-arm having my improvements, the barrel, receiver, and magazine having one side removed to show the relations of the parts, and the carrier-block being in position to receive a cartridge from the magazine. Fig. 2 is a similar view, showing the carrier-block stopped at the proper point to allow of the introduction of a cartridge by hand, the magazine being closed and the cartridge-guide being in position to engage the flange of the cartridge as it is inserted by hand into the chamber. Fig. 3 is a top view of the cartridge-guide with its swinging stop attached, the latter being in the position which it has in Fig. 1 when the arm is used as a magazine-loader. Fig. 4 is a top view of the same with the swinging stop pushed to one side and having the position which it holds in Fig. 2, when the arm is used as a hand-loader.

The same part is marked by the same letter of reference wherever it occurs.

This invention is intended to be used in connection with the gun invented and patented by me known as the "Spencer Repeating Rifle." That arm, the principal operative parts of which are represented in the drawings, has a magazine in the stock containing cartridges, which, by a single oscillation of the guard-lever, are transferred singly to the chamber, the arm being what is termed a "self-loader." Circumstances might arise in which it would be desirable, for the sake of reserving the charges in the magazine, to load this gun by hand, and it would, therefore, be convenient to have an easy and instantaneous method of converting the arm at will from a self-loader into a hand-loader, or vice versa, as might be required.

In securing this two objects have to be provided for—viz, the retention of the cartridges in the magazine while the breech is open, and the placing of the shell-drawer in such a position that it will invariably be in advance of the flange of the cartridge as this is pressed into the chamber by hand. The first of these objects will be effected by arresting the rotation of the carrier-block at a point which keeps the mouth of the magazine closed; and the second will be secured by checking the backward movement of the shell-drawer at a point where the flange of the entering cartridge must engage with it as it enters the chamber.

Although no devices for securing these results were introduced into the patent for the original arm, yet they were alluded to as attainable by hand. The slightest touch was sufficient to keep the shell-drawer forward of the flange of the entering cartridge, and the least experience in the use of the arm would enable a person of ordinary intelligence to open the breech to the proper extent to secure all the conditions of hand-loading; but it has been deemed advisable to make these movements positive and certain, and the devices for doing this constitute the present invention.

The arrest of the descent of the carrier-block by means of the conjoint operation of the stop on the face of that block and the fork in the free end of the cartridge-guide has been described in another application. In that case the stop is placed at such a point as to arrest the descent of the carrier-block when the breech is fully open, so as to admit of the passage of cartridges from the magazine to the carrier. In the present instance the stop has been placed at a point which keeps the magazine closed while opening the top of the receiver for the introduction of a cartridge by hand. The device is essentially the same in either case, the location of the notch or stop being immaterial in that sense.

The nature of this invention consists in attaching to the cartridge-guide a swinging stop, which, when parallel with the side of the guide, closes the fork in the free end of the latter, so as to make it ride over without engaging the stop in the carrier-block, and allows that block to be rotated to the full extent necessary to enable it to receive a cartridge from the magazine, while it also permits the shell-drawer to be drawn back to the utmost extent, but when pushed to one side, so as to form an angle with

the guide, uncovers the fork in the latter and forces it to engage with the stop in the carrier-block and arrest the rotation of that block at the proper point for hand-loading, while at the same time it checks the backward movement of the shell-drawer at a point where it must necessarily be in advance of the flange of a cartridge introduced by hand into the chamber.

To enable others to make and use my improvement, I will proceed to describe it more particularly in connection with so much of the Spencer rifle as may be necessary to a clear understanding of its construction and operation, referring to the accompanying drawings, whereon—

A marks the receiver, which holds the carrier-block B C and connects the barrel D to the stock. To the rear end of the receiver is attached the forward end of the magazine M in the stock. The carrier-block rotates on its center-pin *b* in obedience to the impulse of the guard-lever E, which first unlocks the breech by drawing down the sliding piece C, and then opens it by a continuation of the same movement.

When open to the full extent, as shown in Fig. 1, the carrier-block will receive a cartridge from the magazine M, said cartridge being pressed forward by a spiral spring in the well-known manner, and when the guard-lever is raised the carrier-block will carry the cartridge forward and force it into the chamber of the barrel just as the sliding piece C rises to lock the breech. As the carrier-block rolls forward the flange of the cartridge comes into contact with the rear edge of the shell-drawer G and pushes it into position to retract the shell at the next opening of the breech.

In the operation of opening the breech far enough to receive a cartridge from the magazine, the shell-drawer is moved back so far that a cartridge introduced above the guide *m* might be pushed into the chamber without its flange being caught by the shell-drawer. Hence the necessity of keeping the shell-drawer farther forward when the piece is to be loaded by hand.

There is a groove, *n*, in the top of the slide C, in which is received and guided the free end of a forked cartridge-guide, *m*, which is pressed downward by the operation of spring *p*. In the gun as originally made, this guide served the double purpose of assisting to guide the cartridge from the magazine into the chamber, and guiding the shell of the exploded cartridge from the chamber out at the slot in the top of the receiver. I now, by a slight modification of its construction, make it perform the additional functions of stopping the carrier-block and the shell-drawer at the proper position for converting the arm into a hand-loader at will.

In the free end of the guide *m*, I cut a deep notch, so as to give it the form of a fork, as shown in Figs. 3 and 4. On the upper surface of the guide I pivot a thin flat piece of metal of the shape shown in the drawings, the rear end resting against a shoulder on *m*. This piece I call the "swinging stop" *z*. When in the position shown in Fig. 3, it covers the forked end of the guide, and nowhere projects beyond its sides; but when pushed to the left into the position shown in Fig. 4, it opens the forked end of the guide and projects beyond its side, forming a stop to prevent the backward movement of the shell-drawer.

A deep notch, *x*, is cut in the arched face of the carrier-block B, which receives the free end of the guide *m* when the swinging stop *z* is pushed to one side to open the forked end of the guide. When the stop *z* is in a position to cover the forked end, as in Fig. 3, the projection *r'* on the face of the carrier-block comes in contact with the under face of stop *z* and holds the end of guide *m* up, so that it clears the notch *x*, and does not arrest the rotation of the carrier-block. All that is necessary, therefore, to convert the arm from a self-loader into a hand-loader is to move the swinging stop *z* from the position shown in Fig. 3 to that shown in Fig. 4. The reverse motion converts the arm from a hand-loader to a self-loader.

What I claim, and desire to secure by Letters Patent, is—

Controlling the action of the shell-drawer and of the carrier-block by means of the swinging stop *z*, in combination with the cartridge-guide *m*, in the manner set forth, for the purpose of converting the arm from a self-loader into a hand-loader, or vice versa, as described.

The above specification of my said invention signed and witnessed at Boston, this 15th day of February, A. D. 1865.

CHRISTOPHER M. SPENCER.

Witnesses:

W. H. RICHARDSON,

CHAS. F. STANSBURY.