

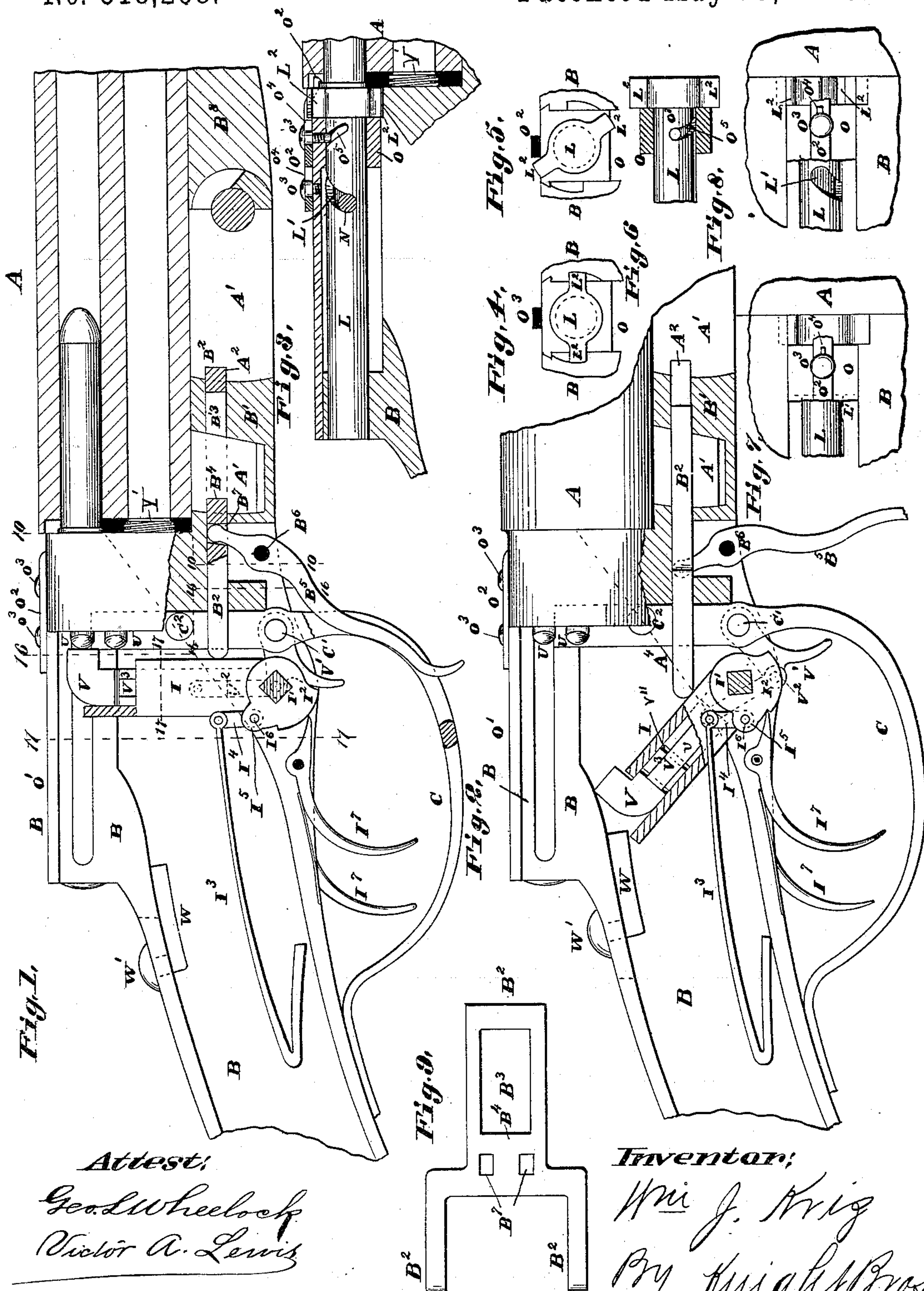
(No Model.)

3 Sheets—Sheet 1.

W. J. KRIZ.  
MAGAZINE GUN.

No. 318,268.

Patented May 19, 1885.



Attest:  
Geo. L. Wheelock  
Victor A. Lewis

Inventor:  
Wm. J. Kriz  
By Knight Bros  
attys

(No Model.)

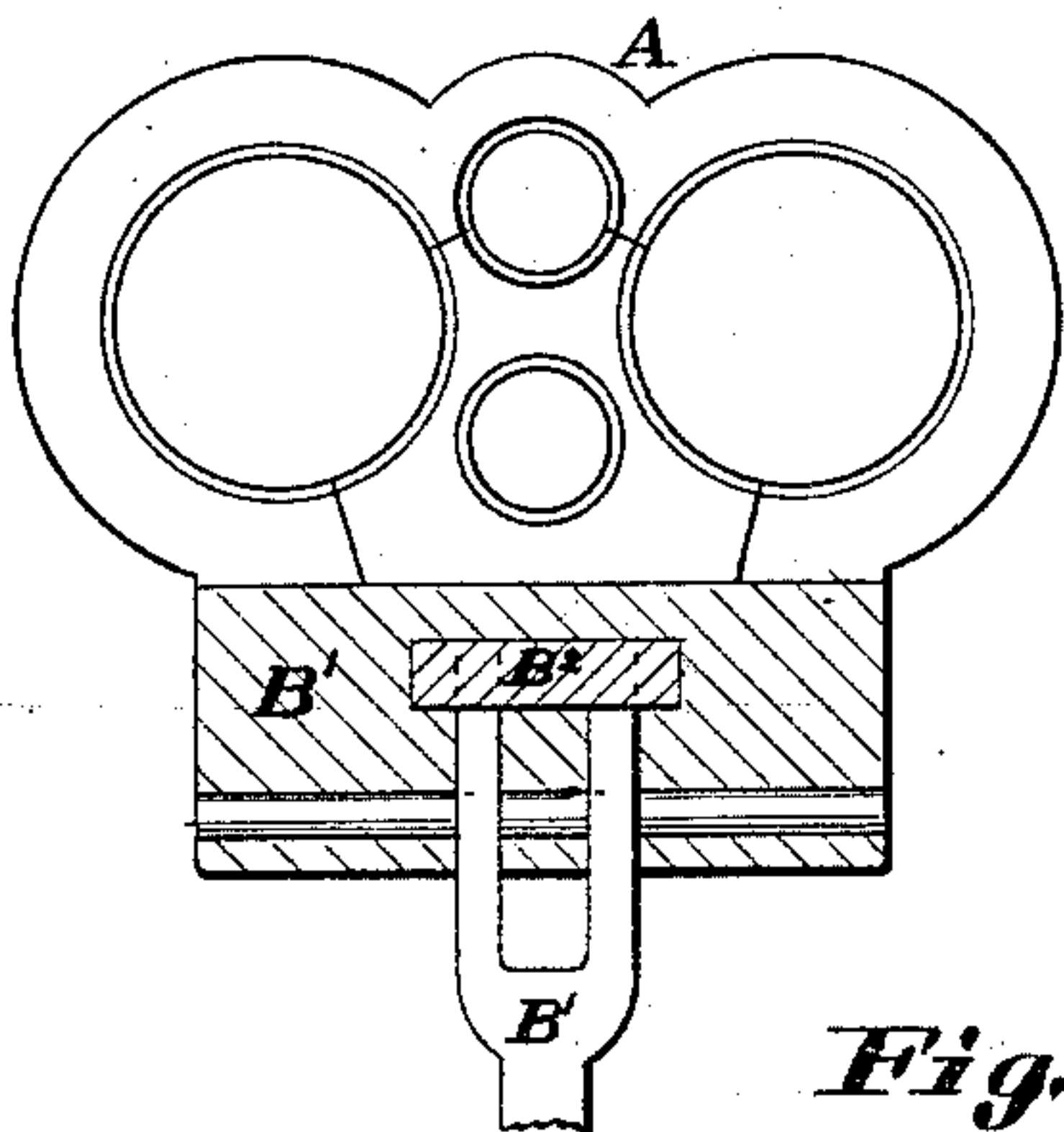
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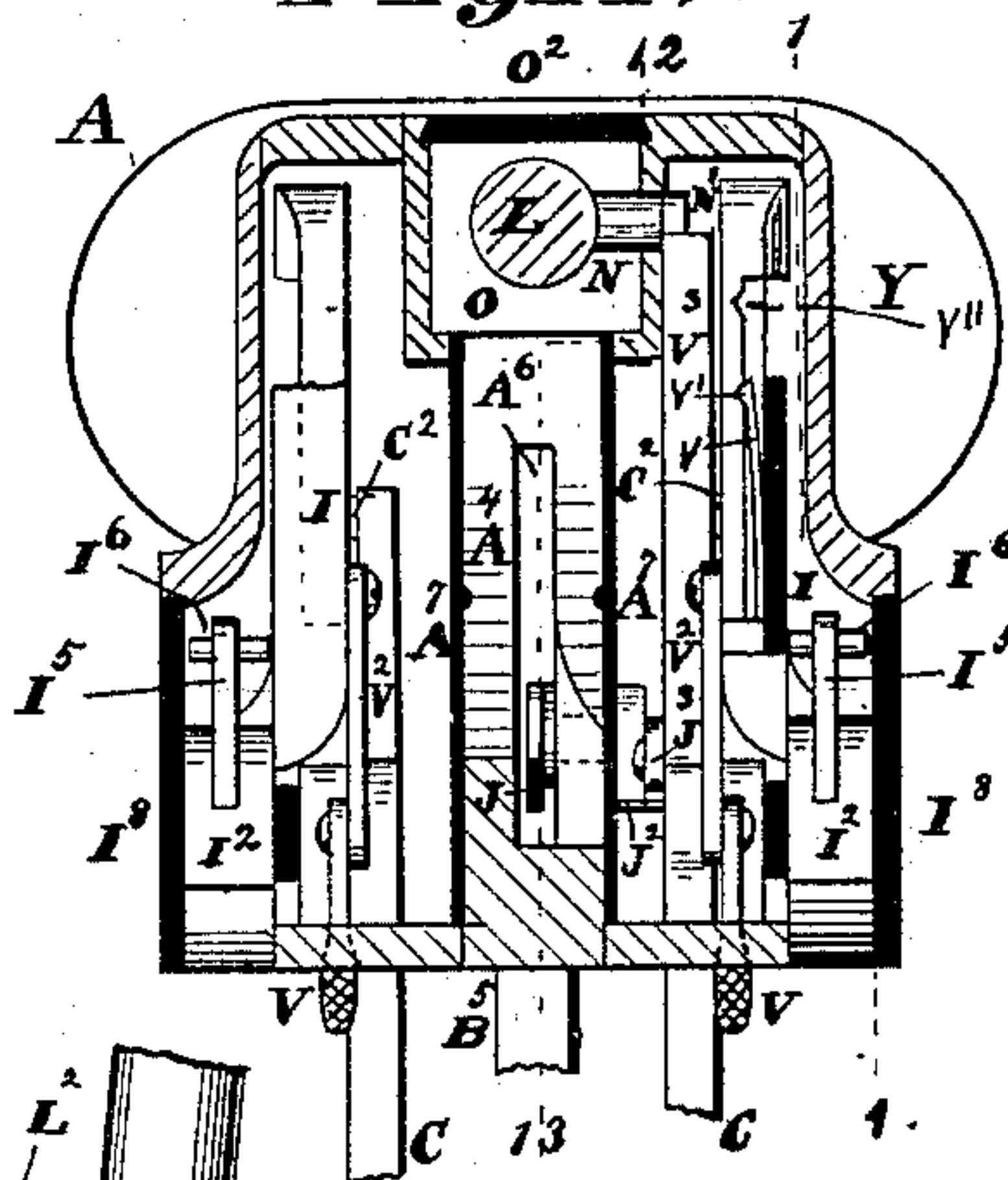
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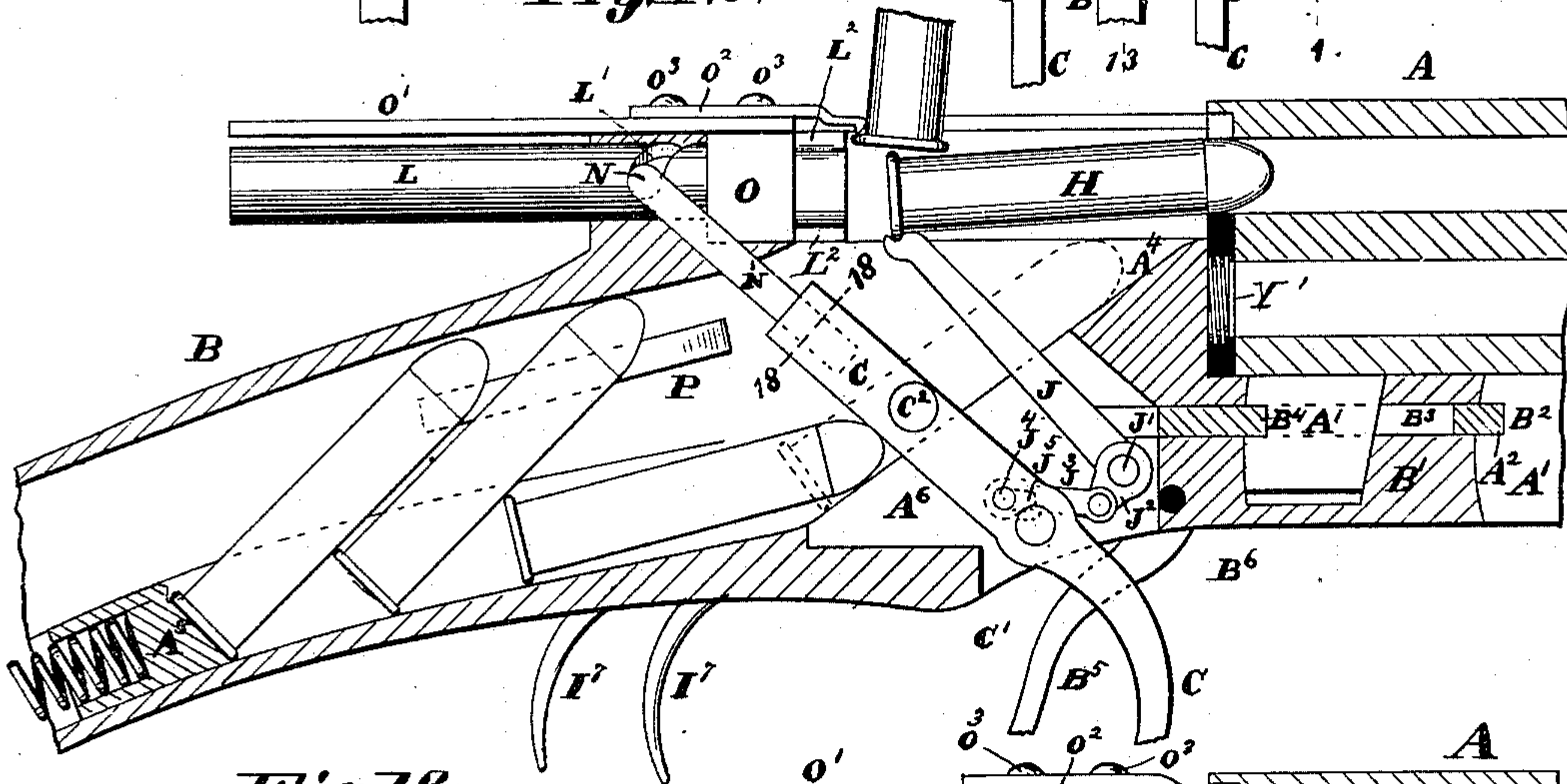
*Fig. 10.*



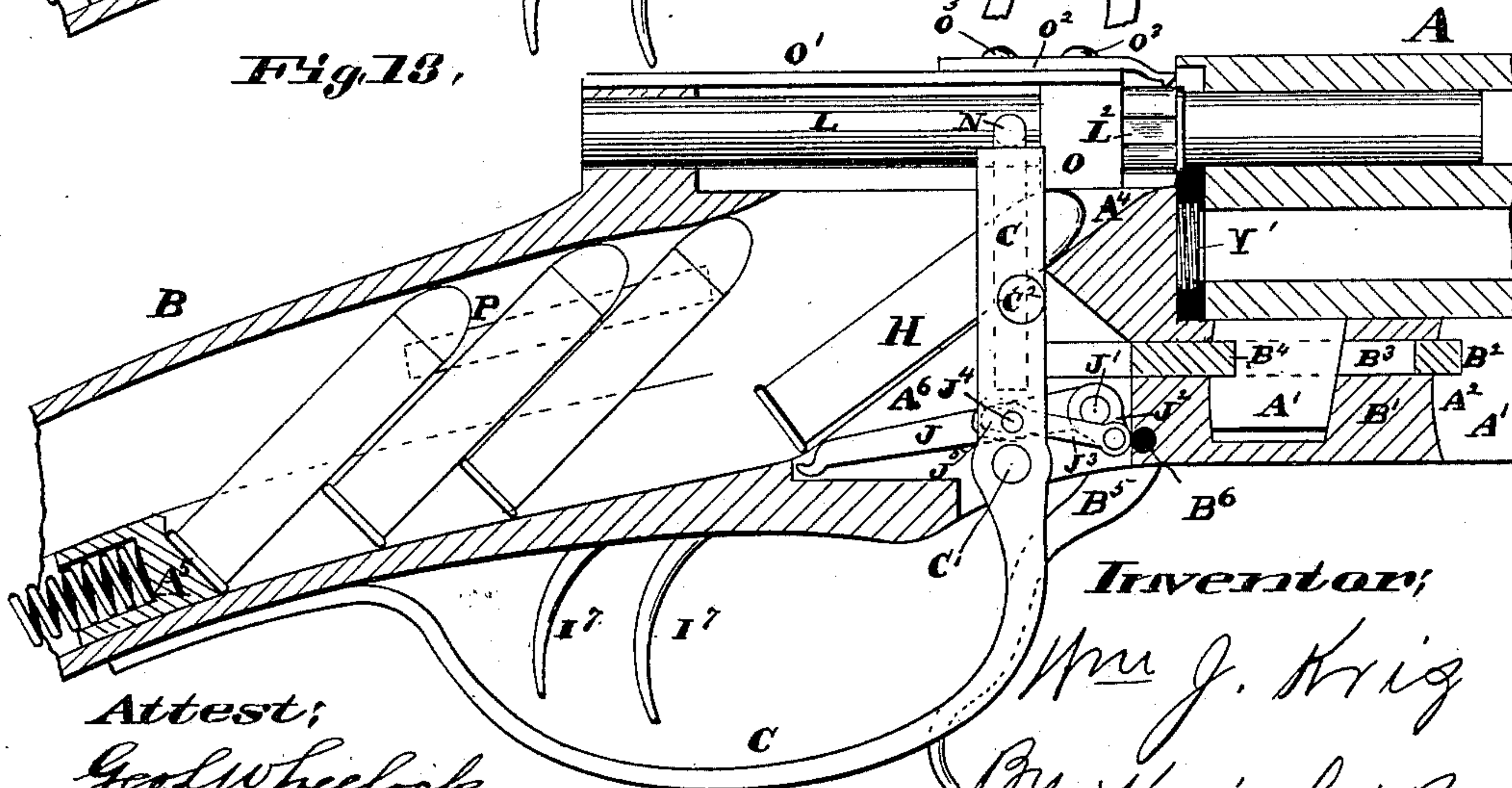
*Fig. 11.*



*Fig. 12.*



*Fig. 13.*



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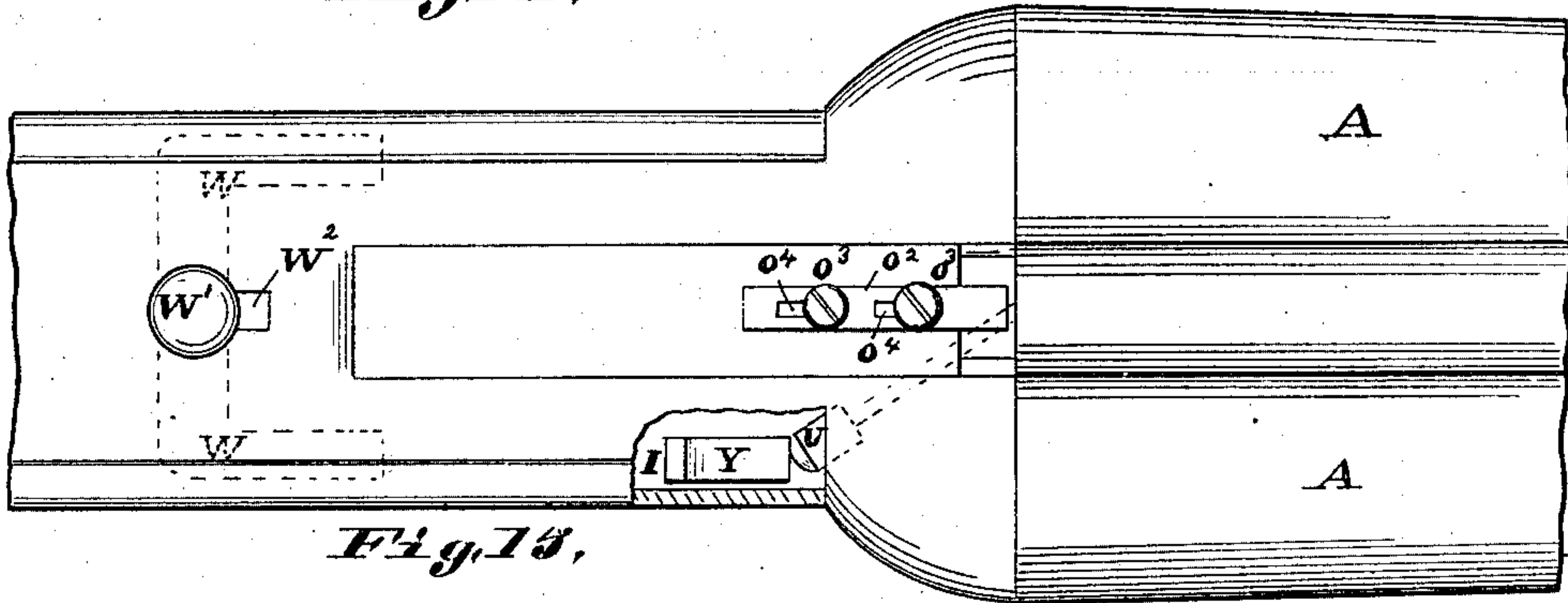
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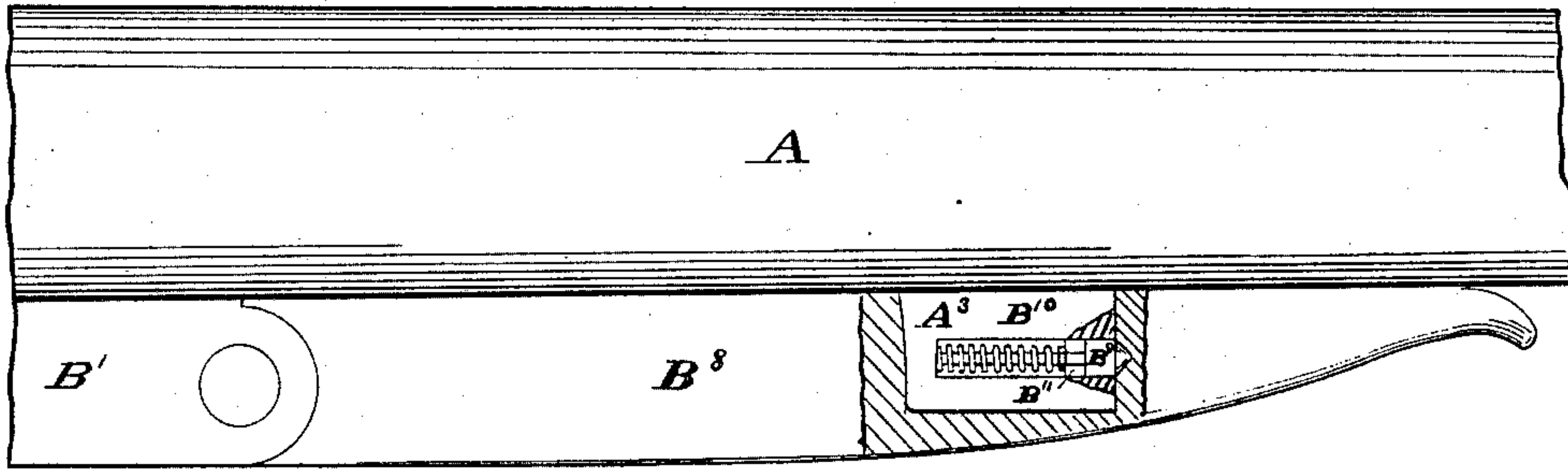
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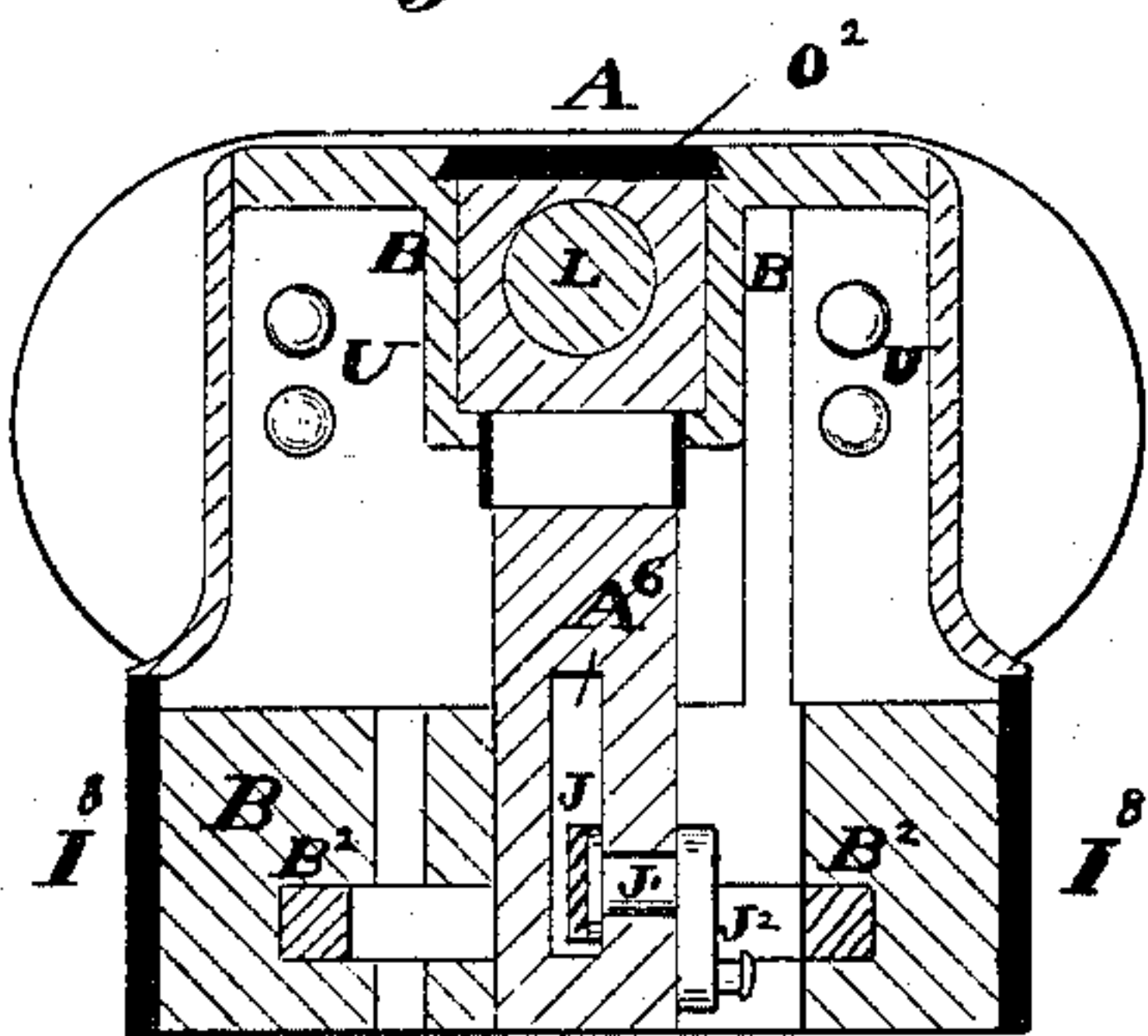
*Fig. 14,*



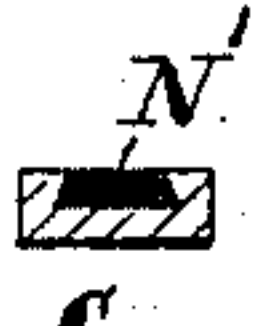
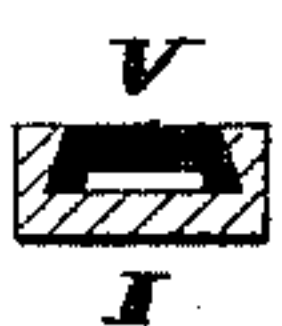
*Fig. 15,*



*Fig. 16,*



*Fig. 17, Fig. 18,*



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# UNITED STATES PATENT OFFICE.

WILLIAM J. KRIZ, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO  
JOSEPH D. LUCAS, OF SAME PLACE.

## MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 318,268, dated May 19, 1885.

Application filed July 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. KRIZ, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Magazine-Guns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a section taken on line 1 1, Fig. 11, showing the parts in firing position, except the hammers are not cocked. Fig. 2 is a similar view with other parts in section and parts broken away, showing the hammers cocked. Figs. 3, 4, 5, 6, 7, and 8 are detail views showing the construction and operation of the breech-bolt, Fig. 3 being a side elevation showing the bolt unlocked and the extractor advanced, Figs. 4 and 5 being face views of the breech-block, showing the breech-bolt in locked and unlocked position, respectively. Figs. 6, 7, and 8 are top views. Fig. 9 is a top view of the bolt for securing the barrels in firing position. Fig. 10 is a transverse section taken on line 10 10, Fig. 1. Fig. 11 is a similar view taken on line 11 11, Fig. 1. Figs. 12 and 13 are longitudinal sections taken through the body of the gun on line 12 13, Fig. 11, showing the working parts in elevation. Fig. 14 is a detail top view, part broken away. Fig. 15 is a detail side view, part broken away. Fig. 16 is a transverse section taken on line 16 16, Fig. 1. Fig. 17 is a transverse section of one of the hammers, taken on line 17 17, Fig. 1. Fig. 18 is a transverse section of the breech-bolt lever, taken on line 18 18, Fig. 12.

My invention relates to a breech-loading and magazine fire-arm; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the barrel of the fire-arm, having two rifle-bores and two shot-bores, (see Fig. 10,) the latter of which and the lower one of the former are loaded by throwing up the breech and inserting the cartridges in the ordinary way, and the upper rifle-barrel is loaded from the magazine by an improved device to which my invention relates.

B represents part of the stock of the fire-arm, which is hollow, as shown in Figs. 12 and 13, to receive the cartridges.

B' represents part of the breech-frame slotted to receive the bolt B<sup>2</sup>, which holds the barrel in firing position. The form of this bolt is shown in Fig. 9. It has a slot, B<sup>3</sup>, to receive one of the lugs A' on the barrel, being considerably longer than the lug, as shown in Fig. 1, to allow the movement of the bolt. The other lug A' is notched at A<sup>2</sup> to receive the end of the bolt, and the first-mentioned lug has a similar notch to receive the part B<sup>4</sup> of the bolt. This bolt is moved back to the position shown in Fig. 2 to release the barrels by a bifurcated lever, B<sup>5</sup>, pivoted at B<sup>6</sup> to the frame B', and engaging with the bolt by its arms entering slots B<sup>7</sup>.

B<sup>8</sup> represents the fore-end, held in place by a conical pointed bolt, B<sup>9</sup>, (see Fig. 15,) fitting in a slot in a lug, A<sup>3</sup>, on the barrel, and having a spiral spring, B<sup>10</sup>, located behind it. The piece B<sup>8</sup> is notched to receive the lug A<sup>3</sup>, and has a recess to receive the conical end of the bolt, as shown. This bolt thus holds the fore-end to the barrel, but allows its easy removal by simply pulling its outer end down or away from the barrel when it is desired to disconnect the barrel from the stock. The pin is held in the lug when the fore-end is removed by a plug, B<sup>11</sup>, through which the stem of the bolt passes and behind which the spring B<sup>10</sup> is located.

C represents the main levers, pivoted at C' to the stock B.

I represents the hammers within the stock on shafts I', as usual, on which are also the tumblers I<sup>2</sup>, connected to the mainsprings I<sup>3</sup> by links I<sup>4</sup>, the tumblers having projections I<sup>5</sup>, to which the links are connected by pins I<sup>6</sup>. (See Fig. 11.)

I' represents the triggers engaging with the tumblers, as usual, and I<sup>8</sup> represents the lock-plates to which the hammers, tumblers, and mainsprings are secured, and which are made fast to the stock in the ordinary manner. The hammers are cocked as the levers C are thrown into the position shown in Fig. 12 by means of short pins C<sup>2</sup> on the levers, that come in contact with the hammers and force them back,



where they are held by the triggers until the gun is fired.

The interior of the stock has an inclined surface,  $A^4$ , up which the cartridges are slid by a spring-block,  $A^5$ , (see Figs. 11 and 12,) until they reach the position shown by cartridge H, Fig. 13, and they are then forced from that position to the position shown by cartridge H, Fig. 12, by means of an arm, J, having a hooked or notched end that engages with the flange of the cartridge, as shown. The arm is operated by means of a crank,  $J^2$ , on a shaft,  $J'$ , to which the arm is secured, the crank being connected to one of the levers C by a link,  $J^3$ , and pin  $J^4$ , the pin fitting in a slot,  $J^5$ , in the link to allow a necessary play of the lever before the arm is operated. As the lever and arm are forced from the position shown in Fig. 13 to that shown in Fig. 12, the cartridge is raised, and then as the lever is moved back the arm is moved back and the cartridge H is forced on into the bore by the following means:

L represents a breech-bolt fitting and supported in the upper part of the stock. It has a spiral groove,  $L'$ , which receives a projection, N, on the upper end of an extension,  $N'$ , of the lever, to which the arm J is connected. The extension is dovetailed into the upper end of the lever, as shown in Fig. 18, so that it shortens up and lengthens out as the lever is operated, and the breech-bolt L is thus forced back to the position shown in Fig. 12 when the lever is opened, and then as the lever is closed to the position shown in Fig. 13 the breech-bolt is forced inward, carrying the cartridge H before it, from the position shown in Fig. 12 to that shown in Fig. 13, and also in Fig. 1. When the breech-bolt has reached the limit of its inward movement, the lever is not yet quite closed, and the further movement of the lever turns the breech-bolt through means of the spiral groove  $L'$  and projection fitting therein, and as it is thus turned lugs  $L^2$  thereon, (see Figs. 4, 5, 6, 7, and 8) enter notches in the front wall of the stock, the breech-bolt turning from the position shown in Fig. 5 to that shown in Fig. 4. When the gun is fired, the breech-bolt is thus held from being forced back by the explosion of the cartridge. When the lever is opened again, the first thing done to the breech-bolt is to turn it to unlock it, and then it is forced back, as described.

Fitting over and secured to the inner end of the breech-bolt is a block, O, having an extension,  $O'$ , to which is secured an extractor,  $O^2$ , by screws  $O^3$ , fitting in slots  $O^4$  in the extractor. The inner end of one of the screws fits in a spiral groove,  $O^5$ , in the breech-bolt, turning in the opposite direction to that  $L'$ . As the breech-bolt is turned to lock it the extractor is retracted, and as it is turned to unlock it the extractor is forced forward by means of the groove  $O^5$  and screw  $O^3$  and engaged over the flange of the shell, as shown in Fig. 3, and

then as the breech-bolt is forced back the extractor and shell are carried back with it to the position shown in Fig. 12, where the shell is thrown out by the next cartridge which is brought up, as described, by the arm J. As the breech-bolt is moved forward the extractor is forced back the distance of the length of the slots  $O^4$  by the screw working in the groove  $O^5$ . The arm J works in a slot,  $A^6$ , of the stock B, and it will be seen that it will strike the next cartridge on its downward movement, and for this reason it is made quite thin, as shown in Fig. 11, so that when it strikes the round cartridge it will spring to one side and pass under it.

As the cartridges ascend the incline  $A^4$  they are held from lateral movement by plates  $A^1$ , located in the hollow stock, (see Fig. 11,) between which they are directed by springs P, secured to the interior of the stock.

U represents the firing-pins, of which there are four—one for each bore—as shown in Figs. 1, 2, and 16, two being struck by each hammer by means of adjustable blocks V, (one on each hammer,) which are raised or lowered, according to which pins are to be struck, by small levers or triggers  $V'$ , pivoted to the pintles of the main levers and connected by means of links  $V^2$  to the stems  $V^3$  of the blocks, which fit in the hollow or grooved hammers, as shown in Figs. 2 and 17. By forcing the levers or triggers into the position shown in Fig. 1 the blocks will be raised and will strike the upper firing-pins, and then, by forcing the levers or triggers into the position shown in Fig. 2, the blocks will be pulled down and will strike the lower firing-pins, being held in either position by springs Y, whose heads  $V'$  engage in recesses  $V^4$  in the blocks.

If it is desired to secure the hammers in their cocked position to avoid any accidental discharge of the gun, it may be done by a sliding block, W, held in the upper part of the interior of the stock by a projection, with a head,  $W'$ , on its outer end that fits in a slot,  $W^2$ , of the stock. (See Figs. 1, 2, and 14.) By sliding the block to the position shown in Fig. 2 it will be seen that it will engage with the upper ends of the hammers and prevent their operation. The block is moved by simply pushing on the head  $W'$ .

By the use of the slot  $J^5$  in the link  $J^3$ , the arm J is not operated or its movement started until the lever has turned the locking-pin and started its backward movement.

$Y'$  represents a spiral spring fitting in a counterbore in the lower rifle-bore. When the cartridge is inserted, its flange engages the spring, which is by this means compressed, and then when the barrel is thrown up the spring will start the removal of the cartridge-shell.

I claim as my invention—

1. In a fire-arm, the breech-bolt having a spiral groove and locking-lugs and adapted to have endwise and rotary movement, in combination with the surface of the frame against



which the lugs bear, and the lever having a sliding extension provided with a projection to fit in the groove in the breech-bolt, substantially as and for the purpose set forth.

5 2. In a fire-arm, the breech-bolt provided with lugs and a spiral groove and adapted to have endwise and rotary movement, in combination with the lever having a sliding extension for operating the breech-bolt, and the  
10 stock provided with notches to receive the lugs on the breech-bolt, substantially as and for the purpose set forth.

3. In a fire-arm, the combination of the breech-bolt adapted to have a compound end-  
15 wise and rotary movement, a lever provided with a sliding extension for operating the breech-bolt, and an extractor secured to the breech-bolt by a block and a screw or screws, the inner end of one of the screws fitting in a  
20 spiral groove in the breech-bolt to cause the advance movement of the extractor as the breech-bolt is turned, substantially as and for the purpose set forth.

4. In a fire-arm, the combination of the  
25 breech-bolt, hollow stock, main lever, sliding extension to the lever connecting the breech-bolt directly to the lever, and an arm hinged to the stock and connected to the lever, the

arm adapted to take the cartridges from the stock in rear of the lever, as set forth.

5. In a fire-arm, the combination of the breech-bolt for forcing the cartridges into the barrel, a lever for operating the breech-bolt, and a spring-arm with a hooked or notched  
35 outer end connected to the lever and adapted to raise the cartridges into a position to be operated upon by the breech-bolt, substantially as set forth.

6. In a fire-arm, the combination of the breech-bolt for forcing the cartridges into the  
40 barrel, a lever for operating the breech-bolt, and a spring-arm having a hooked or notched outer end and connected to the lever by a short shaft, crank, slotted link, and pin, substantially as and for the purpose set forth.

7. In a fire-arm, the combination of a hammer, an adjustable block on the hammer, a lever hinged to the stock, and a link connecting the block and lever, the block being ad-  
45 justed by said lever and link to place it in position for striking firing-pins arranged one  
50 above the other, as set forth.

WILLIAM J. KRIZ.

In presence of—

GEO. H. KNIGHT,  
SAML. KNIGHT.