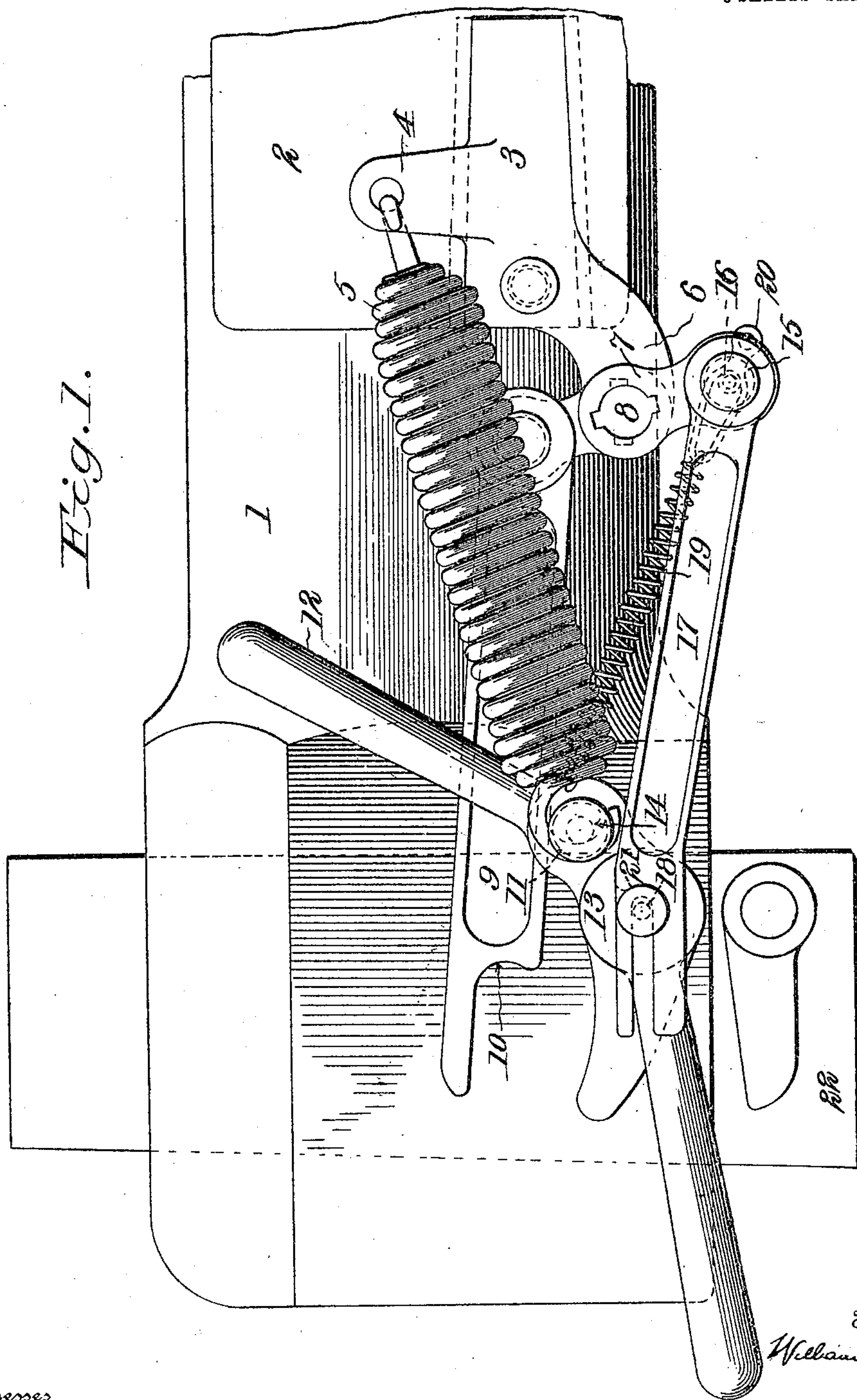


No. 797,550.

PATENTED AUG. 22, 1905.

W. H. BEVANS.  
SEMIAUTOMATIC GUN.  
APPLICATION FILED JUNE 20, 1903.

3 SHEETS—SHEET 1.



Witnesses  
*C. H. Walker.*  
*J. M. Moore.*

By

*James W. Bevans*  
*his*

Attorney

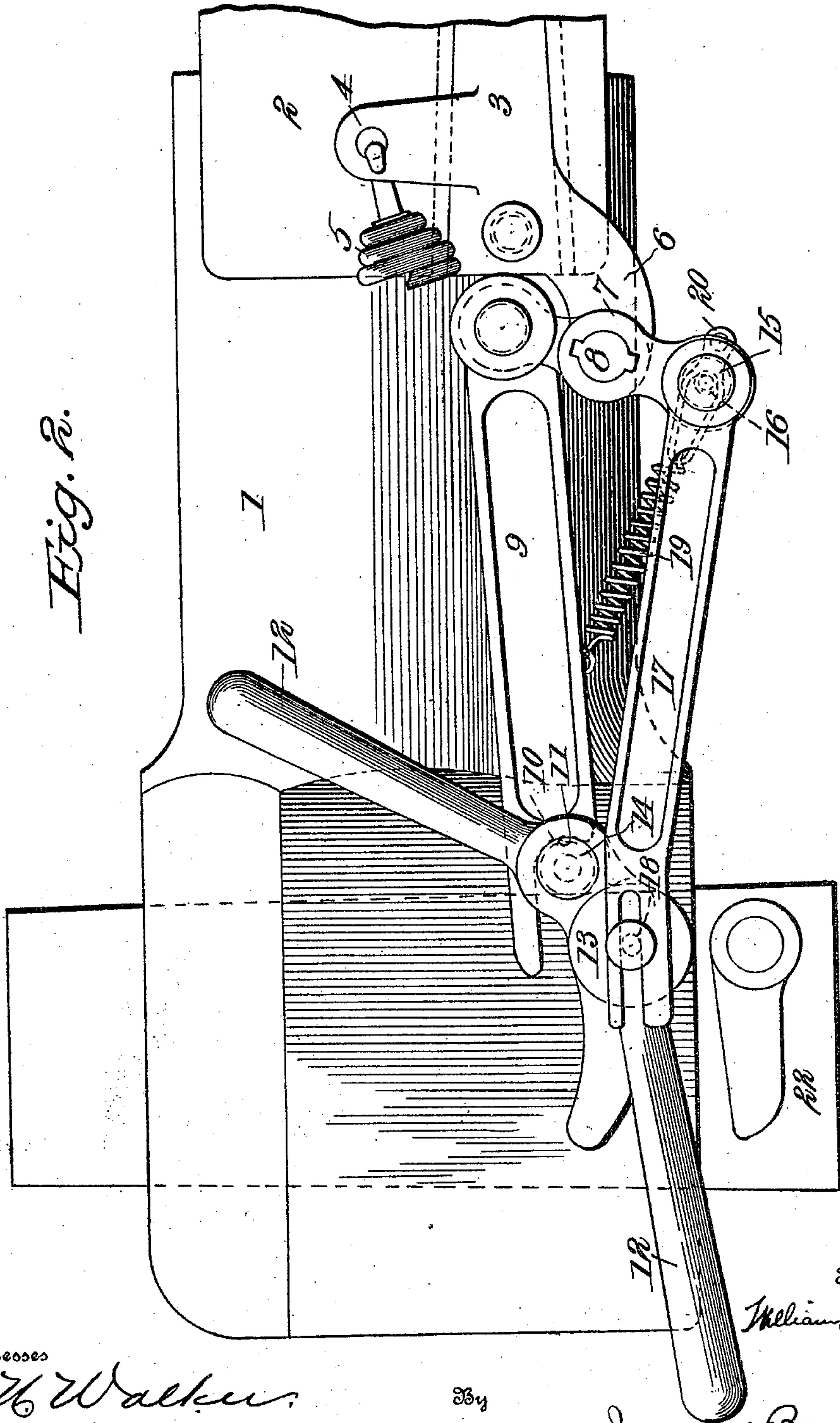
Inventor  
*William H. Bevans*

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*James O. Bevans*  
his *Attorney*

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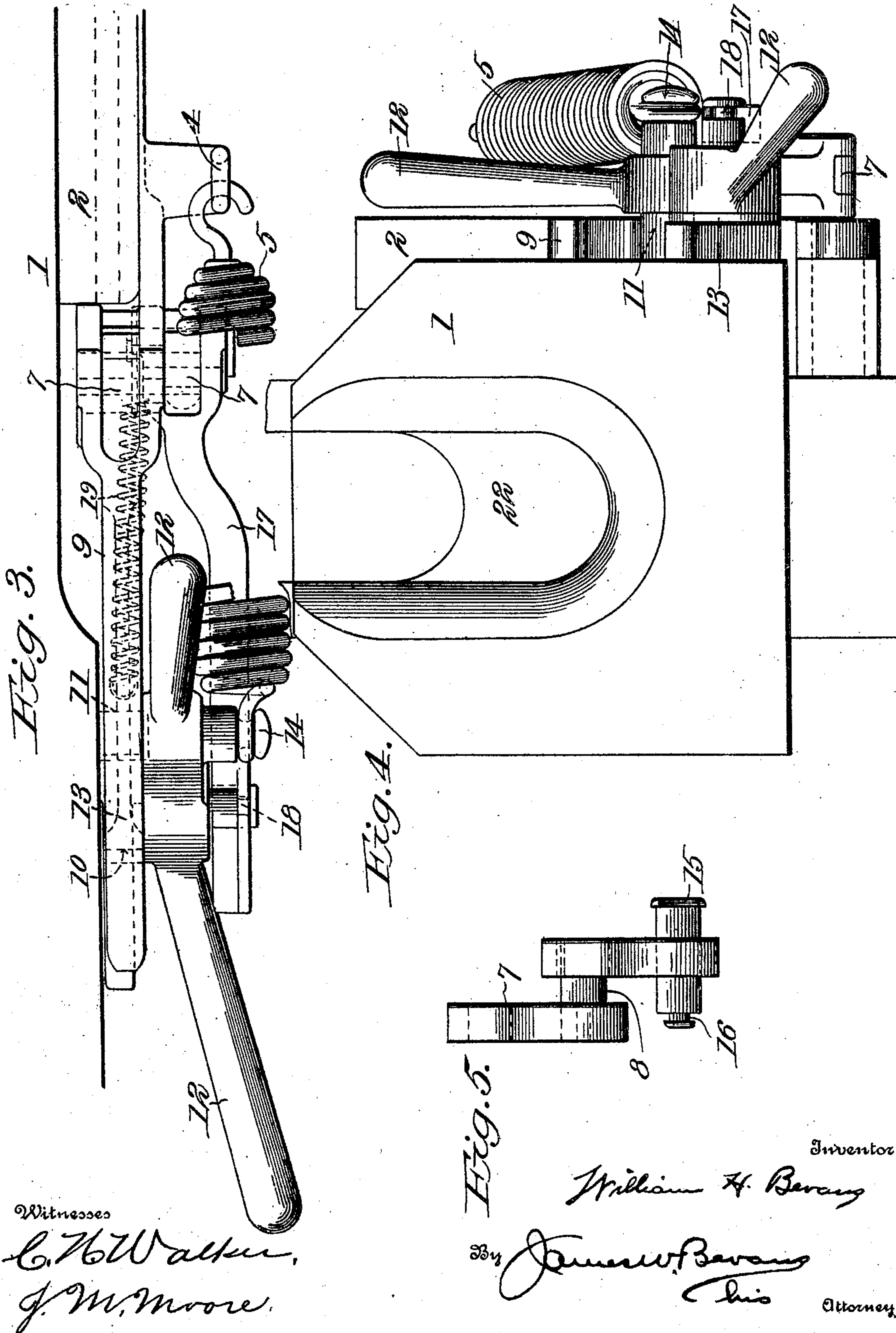


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3 SHEETS—SHEET 3.



Witnesses

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J. M. Moore.

Inventor

William H. Bevans

By

James W. Bevans

his

Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM H. BEVANS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO  
AMERICAN & BRITISH MANUFACTURING COMPANY, OF NEW YORK,  
N. Y., A CORPORATION OF NEW YORK.

## SEMI-AUTOMATIC GUN.

No. 797,550.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed June 20, 1903. Serial No. 162,305.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BEVANS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Semiautomatic Guns, of which the following is a specification.

This invention relates to improvements in semiautomatic guns; and the object is to provide an improved semiautomatic device to be either constructed with or attached to rapid-fire guns and to so construct and arrange the same that it will operate with a minimum amount of recoil of the gun.

With the above object in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of the breech portion of a gun with my invention applied thereto; Fig. 2, a similar view showing the positions of the several parts of the invention when the gun has reached the limit of recoil; Fig. 3, a top plan view of the invention; Fig. 4, an end elevation, and Fig. 5 a detail view of the lever to which the two oppositely-acting thrust-bars are pivoted.

The present invention is designed as an improvement upon the structure shown in my Patent No. 673,594, of May 7, 1901, in which structure it is necessary for the gun to have a considerable amount of recoil in order to render the device operative.

My present invention is so constructed as to utilize a very small amount of recoil in performing its functions.

Referring now more particularly to said drawings, 1 designates a recoiling gun, (the one here illustrated being the well-known "Hotchkiss" type,) and 2 a portion of the non-recoiling part of the recoil-mount upon which the gun recoils. Attached to the non-recoiling part 2 or formed integral therewith if the attachment and gun are constructed at the same time is a bracket 3, having a perforated lug 4, to which one end of the closing-spring 5 for the breech-block is attached, and a downwardly and rearwardly disposed arm or hanger 6, in which a lever 7 is intermediately pivoted. For convenience in manufacturing and assembling, this lever, as shown in Fig. 5, is formed of two oppositely-disposed

members locked together and the whole pivotally secured in said hanger by a pin 8. Pivotally attached to the upper end of said lever is a thrust rod or bar 9, which is cut out at its rear end to form a shoulder 10 to engage a roller 11, mounted on a laterally-extending stud carried by the inner side of the hub of the usual breech-block-actuating levers 12, which levers are attached to the projecting end of the block-operating rock-shaft 13. The opposite end of the spring 5 is attached to a headed stud 14, formed on the outer side of the hub of said levers.

Pivoted to the lower end of the rock-lever 7 by means of a pin 15, headed on one end and having a small headed stud 16 projecting from its opposite end, is a second thrust-bar 17, slotted at its opposite end to receive a stud 18, formed as a prolongation of rock-shaft 13 and headed to prevent disengagement of the bar therefrom.

A coiled spring 19 is attached at one end to the under side of the thrust-bar 9 and at its opposite end to a link 20, which is inserted upon the stud 16, said link serving to attach the spring and also to prevent the pivot-pin 15 from disengaging the thrust-bar 17 and lever 7. This spring holds the shoulder 21 of the thrust-bar 17 normally pressed against the stud 18 and also moves the engaging end of thrust-bar 9 downward into operative position when the gun has moved rearward a sufficient distance on recoil.

The breech-block 22 is here shown of the drop-block type and is actuated to open and close the breech by the rocking of shaft 13 and in moving actuates the extractor, which is preferably of the form shown in my application filed June 4, 1902, Serial No. 110,203, said extractor after extracting the empty case being arranged to hold the block open until a fresh cartridge is inserted.

The operation of my invention is as follows: Upon movement of the gun rearwardly upon recoil said thrust-bar 17, being pressed against the stud 18 by spring 19, follows the gun, rocking lever 7 until the forward end of thrust-bar 9 abuts against the mount, which forms a stop or seat therefor when said movement of said bar 17 ceases, and in the further recoil of the gun the stud slides in the slot of the bar. The block-actuating thrust-bar is thus moved a sufficient distance forward for the shoulder



10 thereof to drop in front of the roller 11, the bar being moved downwardly at its engaging end by spring 19. The gun in counter-recoiling, by contact of the roller with the shoulder of bar 9, causes the shaft 13 to rock and effect the downward movement of the block. As soon as the stud 18 comes in contact with the shoulder 21 of the thrust-bar 17 the lever 7 is rocked in a reverse direction, causing thrust-bar 9 to move rearward and the block to move downward at a greater speed. This sudden acceleration of the movement of the block greatly facilitates the ejecting of the empty case by the extractor. The block is held in its open position by the extractor until a fresh cartridge is inserted, when it releases the block, permitting the spring 5 to close it, said spring having been placed under tension by the opening of the block.

By providing the two oppositely-acting thrust-bars the movement communicated to the mechanism by the recoil is greatly increased over the length of recoil, so that the device may be adjusted to operate no matter how small the recoil.

I do not limit the invention to the particular type of gun here shown and described, as with modification it may be used on guns having different forms of breech-blocks and breech mechanisms; nor do I limit the invention to the exact details of structure here set forth, as many changes and modifications may be made without departing from the spirit and scope of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with a recoiling gun, a recoil-mount, and a breech-block, of a thrust-bar carried by a non-recoiling part of the mount for actuating the block, and means actuated upon the movement of the gun for moving said thrust-bar forwardly on recoil of the gun and rearwardly on counter-recoil thereof.

2. The combination with a recoiling gun, a recoil-mount, and a breech-block, of a thrust-bar carried by a non-recoiling part of the mount for actuating said block, and means actuated upon the movement of the gun for moving said bar to position to actuate the block on recoil of the gun and effecting a reverse movement of said bar to actuate the block on counter-recoil of the gun.

3. The combination with a recoiling gun, a recoil-mount, and a breech-block, of two oppositely-movable thrust-bars, one of which is arranged to actuate the block, and the other to be actuated upon the movement of the gun on recoil and counter-recoil and to communicate movement to the block-actuating bar.

4. The combination with a recoiling gun, a recoil-mount, and a breech-block, of a reciprocating thrust-bar carried by a non-recoiling part of the mount for actuating the block, a reciprocating thrust-bar carried by a non-re-

coiling part of the mount and actuated upon the movement of the gun on recoil and counter-recoil, and an operative connection between said bars arranged so that the movement of the last-mentioned bar imparts a reverse movement to the block-actuating bar.

5. The combination with a recoiling gun, a recoil-mount, and a breech-block, of a reciprocating thrust-bar carried by a non-recoiling part of the mount for actuating the block, a reciprocating thrust-bar carried by a non-recoiling part of the mount and actuated upon the movement of the gun on recoil and counter-recoil, and a rocking connection between said bars whereby the movement of the last-mentioned bar imparts a reverse movement to the block-actuating bar.

6. The combination with a recoiling gun, a recoil-mount, and a breech-block, of an intermediately-pivoted lever carried by a non-recoiling part of the mount, a thrust-bar pivoted to one of the arms of said lever for actuating the block, and a thrust-bar pivoted to the other arm of said lever and adapted to be actuated in reverse directions upon recoil and counter-recoil of the gun.

7. The combination with a recoiling gun, a recoil-mount, a breech-block, and a rock-shaft for actuating the block, of a thrust-bar carried by a non-recoiling part of the mount for actuating said shaft, and means actuated upon the movement of the gun on recoil for moving said bar to position to actuate the shaft and effecting a reverse movement of the bar upon counter-recoil of the gun.

8. The combination with a recoiling gun, a recoil-mount, a breech-block, and a rock-shaft for actuating the block having an eccentrically-arranged shoulder, a thrust-bar carried by a non-recoiling part of the mount having an operating-shoulder, means for moving said bar forwardly on recoil of the gun to interpose said shoulder in the path of the eccentrically-arranged shoulder of the rock-shaft and for moving said bar rearwardly on counter-recoil of the gun to assist in effecting the movement of said rock-shaft.

9. The combination with a recoiling gun, a recoil-mount, a breech-block, and a rock-shaft for actuating the block having an eccentric shoulder, of a thrust-bar carried by a non-recoiling part of the mount having an operating-shoulder, and a thrust-bar carried by a non-recoiling part of the mount having an operative connection with said first-mentioned thrust-bar and adapted to be actuated upon movement of the gun on recoil to move said bar forwardly to interpose the shoulder thereof in the path of the eccentrically-arranged shoulder of the rock-shaft and upon movement of the gun on counter-recoil to move said bar rearwardly to assist in effecting the movement of said rock-shaft.

10. The combination with a recoiling gun, a recoil-mount, and a breech-block, of means



actuated by the movement of the gun for moving said block to open the breech, and means for accelerating the action of said block-actuating means during the last part of the movement of said block.

11. The combination with a recoiling gun, a recoil-mount, and a breech-block, of a thrust-bar carried by a non-recoiling part of the mount and adapted to actuate the block, a thrust-bar carried by a non-recoiling part of the mount arranged to be reciprocated by the movement of the gun, an operative connection

between said bars whereby the reciprocation of one effects the reverse reciprocation of the other, and means for limiting the forward movement of the block-actuating bar.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

WILLIAM H. BEVANS.

Witnesses:

L. E. BRADSTREET,  
W. A. WHEELER.