

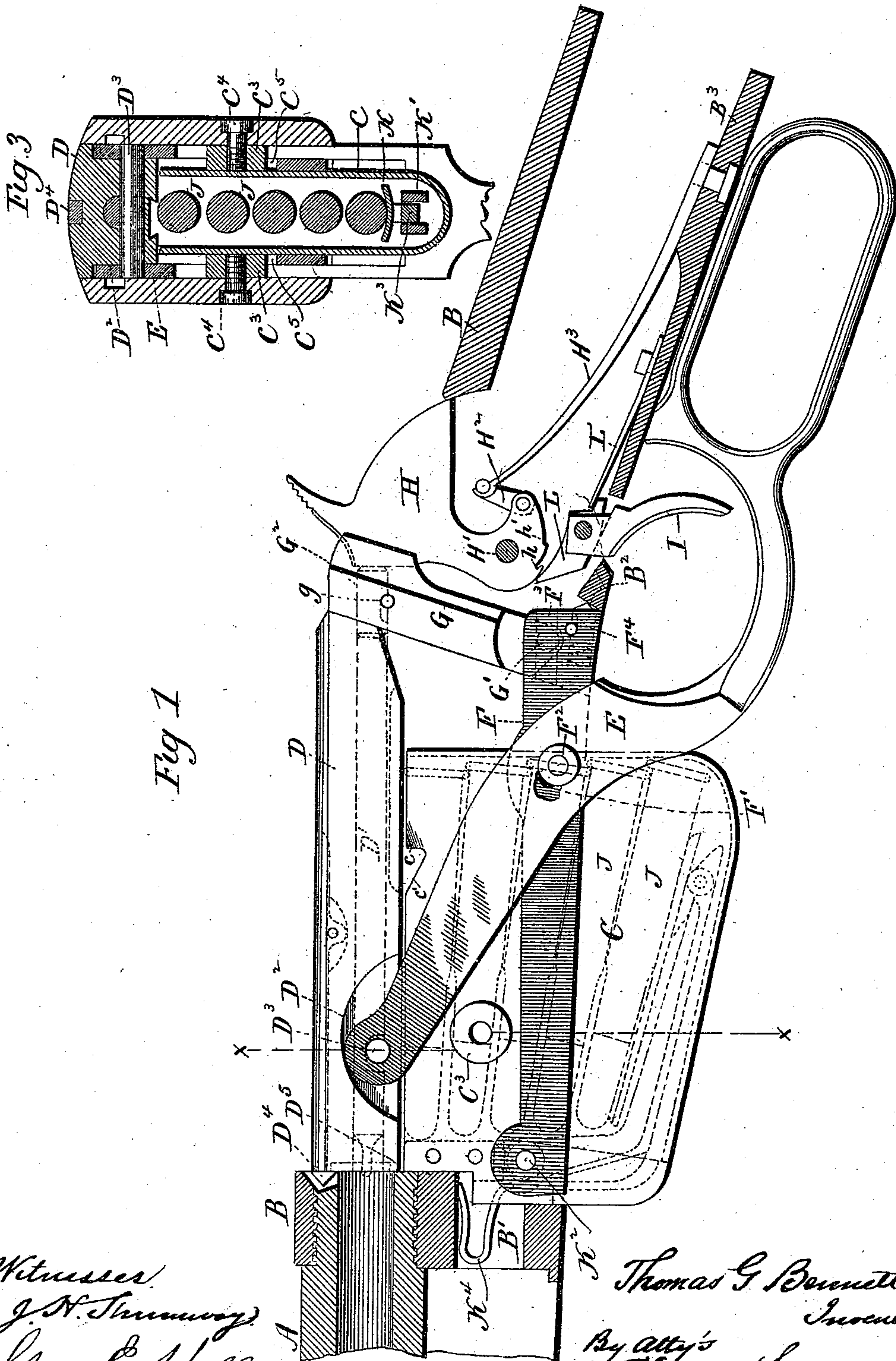
(No Model.)

3 Sheets—Sheet 1.

T. G. BENNETT.
BOX MAGAZINE FIREARM.

No. 551,572.

Patented Dec. 17, 1895.



Witnesses:
J. N. Shumway,
Geo. C. Hall

Thomas G. Bennett,
Inventor.
By atty's
Earle Seymour

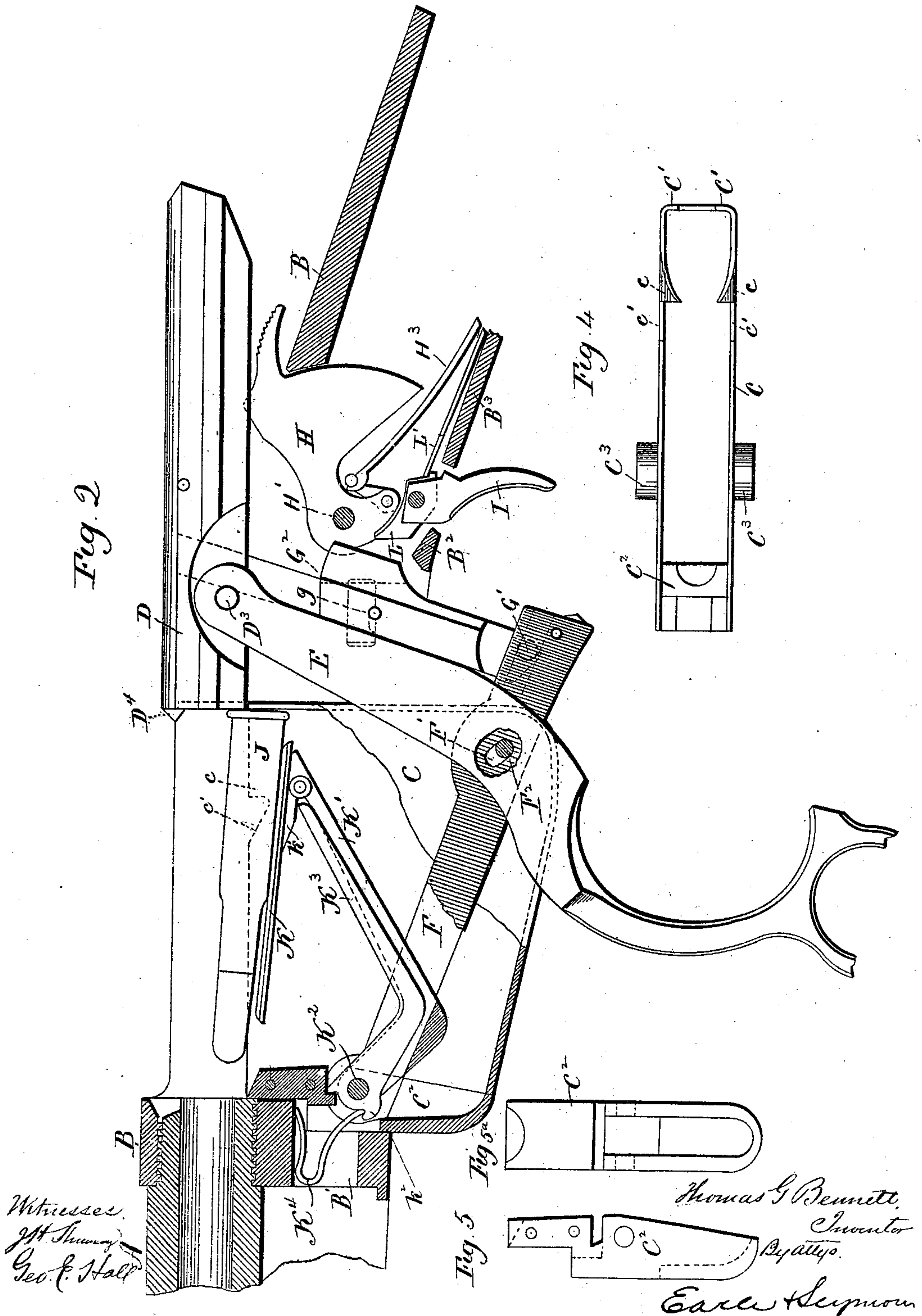
(No Model.)

3 Sheets—Sheet 2.

T. G. BENNETT.
BOX MAGAZINE FIREARM.

No. 551,572.

Patented Dec. 17, 1895.



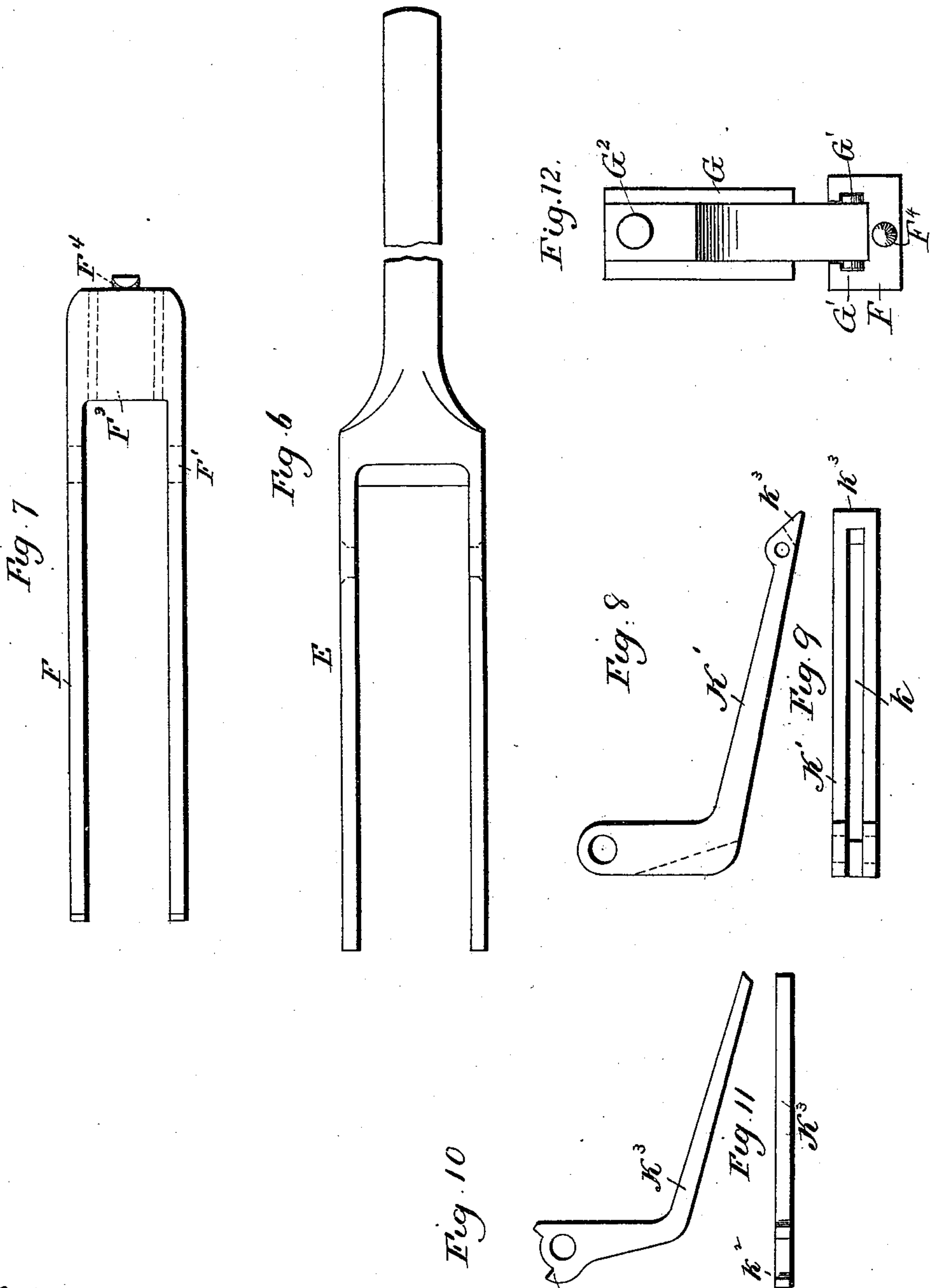
(No Model.)

3 Sheets—Sheet 3.

T. G. BENNETT.
BOX MAGAZINE FIREARM.

No. 551,572.

Patented Dec. 17, 1895.



Witnesses.
J. H. Shumway
Geo. F. Hall.

Thomas G. Bennett.
Inventor
By Atty
Charles Seymour

UNITED STATES PATENT OFFICE.

THOMAS G. BENNETT, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

BOX-MAGAZINE FIREARM.

SPECIFICATION forming part of Letters Patent No. 551,572, dated December 17, 1895.

Application filed August 24, 1894. Serial No. 521,143. (No model.)

To all whom it may concern:

Be it known that I, THOMAS G. BENNETT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Box-Magazine Breech-Loading Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view partly in elevation and partly in longitudinal section of a box-magazine breech-loading firearm constructed in accordance with my invention, the parts being shown in their closed positions; Fig. 2, a similar but less comprehensive view with the parts shown in their open positions; Fig. 3, a view of the arm in transverse section on line $x x$ of Fig. 1; Fig. 4, a detached plan view of the box-magazine; Fig. 5, a detached side view of the abutment-block located in the forward end of the said magazine; Fig. 5^a, a view of the said block in front elevation; Fig. 6, a detached plan view of the finger or operating lever; Fig. 7, an under side view of the operating or base plate; Fig. 8, a detached view in side elevation of the carrier-arm; Fig. 9, a plan view thereof; Fig. 10, a view in side elevation of the lifting-lever of the carrier; Fig. 11, a plan view thereof; Fig. 12, a detached view in rear elevation of the link F and the recoil-block G.

My invention relates to an improvement in that class of magazine-firearms which have box-magazines as distinguished from tubular magazines, the object being to produce a simple, compact, convenient, and reliable arm, having comparatively few parts and not liable to derangement.

With these ends in view my invention consists in a breech-loading box-magazine firearm having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

As herein shown, the gun has a barrel A, a receiver B, a box-magazine C, a longitudinally-movable breech-bolt D, a finger or operating lever E, and base or operating plate or link F, a locking or recoil block G, a ham-

mer H, a trigger I, and other instrumentalities, as will be specifically described later on. The said box-magazine C is located in an oblong vertical slot formed in the receiver, and, as shown, it is adapted to receive at one time five cartridges J, though it may be made to hold more or less. Its body portion is formed of a single piece of sheet metal bent into the required shape, its lower end being closed, its upper end being open, its rear end being virtually closed by its provision at such point with flanges C' C', which form abutments for the heads of the cartridges, and its forward end being provided with a vertically-arranged abutment-block C², details of which are shown in Figs. 5 and 5^a, respectively.

The upper edges of the box are extended, as herein shown, to form two inwardly-turned retaining-fingers $c c$, directly in front of which the said edge is notched, as at $c' c'$, to clear the heads of the cartridges as they emerge from under the said fingers and permit the said heads to rise so that the cartridges may enter the gun-barrel in a horizontal line. The said box is provided at opposite points upon its sides with corresponding outwardly-projecting hubs C³ C³, adapted in length to engage at their outer ends with the inner faces of the side walls of the receiver, as clearly shown in Fig. 3. The said hubs are provided with centrally-threaded openings to receive screws C⁴ C⁴, extending into them through the said walls of the receiver, and supporting the box in place therein. It will be observed by reference to the said figure of the drawings that under this construction two corresponding vertical spaces C⁵ C⁵ are formed between the walls of the receiver and the opposite sides or faces of the magazine.

Within the magazine I locate a carrier K, which is transversely bowed, and pivotally attached at its rear end to the upper rear end of a bent carrier-arm K', hung at its forward end on a pin K², mounted in the abutment-block C² before mentioned. This arm is bifurcated by a slot k (see Fig. 9) receiving a lifting-lever K³, the upper outer end of which engages with a lug k' formed upon the lower face of the carrier just in front of the point where the same is pivotally connected with the arm K', which is virtually divided

into two members by the slot k aforesaid. The said lifting-lever K^3 is bent at its forward end and hung upon the pin K^2 between the two members of the bifurcated carrier-arm K' . At its extreme forward end the said lifting-lever is furnished with a shoulder k^2 , which is engaged by a lifting-spring K^4 , located in a chamber B' formed in the receiver B at a point directly under the butt-end of the gun-barrel. The rear upper end of the carrier-arm K' is extended, as at k^3 , to form a bearing for the extreme rear end of the carrier, and prevent the same from being thrown upward beyond a substantially-horizontal position by the lifting-lever K^3 under the action of the lifting-spring K^4 . When the box-magazine C is filled with cartridges, the carrier, carrier-arm and lifting-lever are depressed into the positions in which they are shown by broken lines in Fig. 1 of the drawings against the force of the lifting-spring K^4 , which, however, exerts a constant effort to lift the said parts and the cartridges as fast as the latter are removed until, finally, the carrier-arm and lever come to the positions in which they are shown by full lines in Fig. 2 of the drawings.

The pin K^2 in the abutment-block C^2 forms a fulcrum for the bifurcated operating or base plate F , a plan view of which is given in Fig. 7 of the drawings.

It will be readily understood that the object of bifurcating the forward end of this plate is to adapt it to embrace or straddle the box-magazine just described. Toward its rear end it has formed in it a diagonal slot F' , receiving a pin F^2 , which articulates or connects it with the finger or operating lever E , sometimes designated the "trigger-guard," from the fact that one of its functions is to guard the trigger I . The said operating or finger lever is also bifurcated at its forward end, as shown in Fig. 6, for the purpose of embracing or straddling the bifurcated forward end of the base-plate, which straddles or embraces the box-magazine, which is thus virtually embraced by the arms of the finger-lever, the arms of which are sufficiently separated to receive both the base-plate and box-magazine between them. The vertical spaces C^5 C^5 formed on opposite sides of the said magazine, as before referred to, are provided for receiving the ends of the said plate and lever and permitting them to play up and down.

At its extreme rear the plate F is furnished with a horizontal slot F^3 , the side walls of which are undercut to receive the opposite ends of a trunnion G' , located at the lower end of the recoil-block G , which latter inclines rearwardly and takes at its edges into inclined grooves formed to receive them in the opposite walls of the receiver. At its upper end the said block carries a horizontally-arranged striking-pin G^2 , retained in place by a transverse pin g , and engaged at its rear end by the hammer H , and engaging at its

forward end with the firing-pin D' carried by the longitudinally-movable breech-bolt D .

A spring-pressed friction-pin F^4 , located in the extreme rear end of the base or operating plate F and projecting beyond the same, engages with a beveled bridge B^2 formed at the forward end of the lower tang B^3 , which is secured within the receiver, whereby the said plate and the finger-lever are held in their closed positions. The breech-bolt D is circularly cut away at its forward end upon its opposite faces, as at D^2 , to receive the forward ends of the bifurcated lever E , which are pivotally connected with the bolt by means of a transverse pin D^3 , as seen in Fig. 3. The bolt is therefore positively moved back and forth by means of the finger-lever. It is provided with an extractor D^4 and with an ejector D^5 , both of which may be of any approved construction.

The hammer H , which may also be of any approved construction, is hung upon a horizontal pin H' and furnished with a short link H^2 engaged by the hammer-spring H^3 . The hammer is also constructed with two notches h and h' , representing its cocked and half-cocked positions, and adapted to be engaged by a sear L , hung on the same center with the trigger I . A sear-spring L' engages with the rear end of the sear for throwing the forward end thereof into the notches of the hammer.

When the gun is in its closed position the upper end of the recoil or locking block G stands in line with the rear end of the breech-bolt and takes the recoil of the same. In opening the gun the first downward movement of the finger-lever pulls the recoil-block downward to clear it from the breech-bolt before the finger-lever begins to retire the latter, the operation of the breech-bolt being attended by some lost motion, represented by the slots F' formed in the base-plate F to receive the pin F^2 , the opposite ends of which pass through the said slots and enter the ends of the lever. When the breech-bolt has been moved into its full-open position, the lifting-lever K' will at once act to elevate the carrier K , and so bring the uppermost cartridge in the box-magazine, or the only cartridge therein, into line with the lower edge of the bolt, so that when the bolt is moved forward again the cartridge will be pushed forward into the gun-barrel A . Then when the finger-lever is drawn back into its closed position the breech-bolt will be moved forward into its full-closed position before the recoil-block is lifted into position behind the rear end thereof. When the breech-bolt D moves back, its extractor D^4 brings the spent shell with it, while the ejector D^5 operates to expel the shell from the arm after it has been fully drawn out of the gun-barrel; but the operation of guns of the general type under discussion is so well understood that it seems unnecessary to detail the operation of the gun in hand further.

It is obvious that in carrying out the inven-

tion some changes from the construction herein shown and described may be made, and I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a box-magazine breech-loading firearm, the combination with the receiver thereof, of a box-magazine located therein and including at its forward end an abutment block, a carrier located in the said magazine, a carrier-arm hung by its forward end upon a pivot mounted in the said block, and having the rear end of the carrier attached to its rear end, a lifting-lever hung by its forward end on the same pivot, and engaging at its rear end with the under face of the carrier at a point in front of the attachment of the same to the carrier-arm, and a spring engaging with the lifting-lever for lifting the same and hence the carrier and carrier-arm, substantially as described.

2. In a box-magazine breech-loading firearm, the combination with the receiver thereof, of a box-magazine including an abutment block located in the forward end thereof, a carrier, means for operating the same, pivotally mounted in the said block, a longitudinally movable breech-bolt, a recoil-block for locking the same in its closed position, a finger-lever bifurcated to embrace the box-magazine, and connected with the breech-bolt for

actuating the same, and a base or operating plate hung at its forward end by a pivot passing through the said abutment block, bifurcated to embrace the box-magazine, and having its rear end articulated with the finger-lever and the lower end of the recoil-block, substantially as described.

3. In a box magazine breech-loading firearm, the combination with the receiver thereof, of a box magazine, a base or operating plate hung at its forward end, which is bifurcated to embrace the magazine, an operating or finger-lever articulated with the rear end of the said plate, and bifurcated to embrace the magazine, a breech-bolt connected with the said finger-lever, and a locking or recoil-block, substantially as set forth.

4. In a box magazine breech-loading firearm, the combination with the receiver thereof, of a box magazine located therein with spaces between it and the side walls of the receiver, a base or operating plate pivotally hung at its forward end, which is bifurcated to embrace the magazine, a finger-lever articulated with the rear end of the said plate, and bifurcated to embrace the operating-plate and magazine and extending into the said spaces, a breech-bolt connected with the said lever, and a locking or recoil block, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS G. BENNETT.

Witnesses:

G. E. CODSON,
A. W. HOOPER.