

No. 798,866.

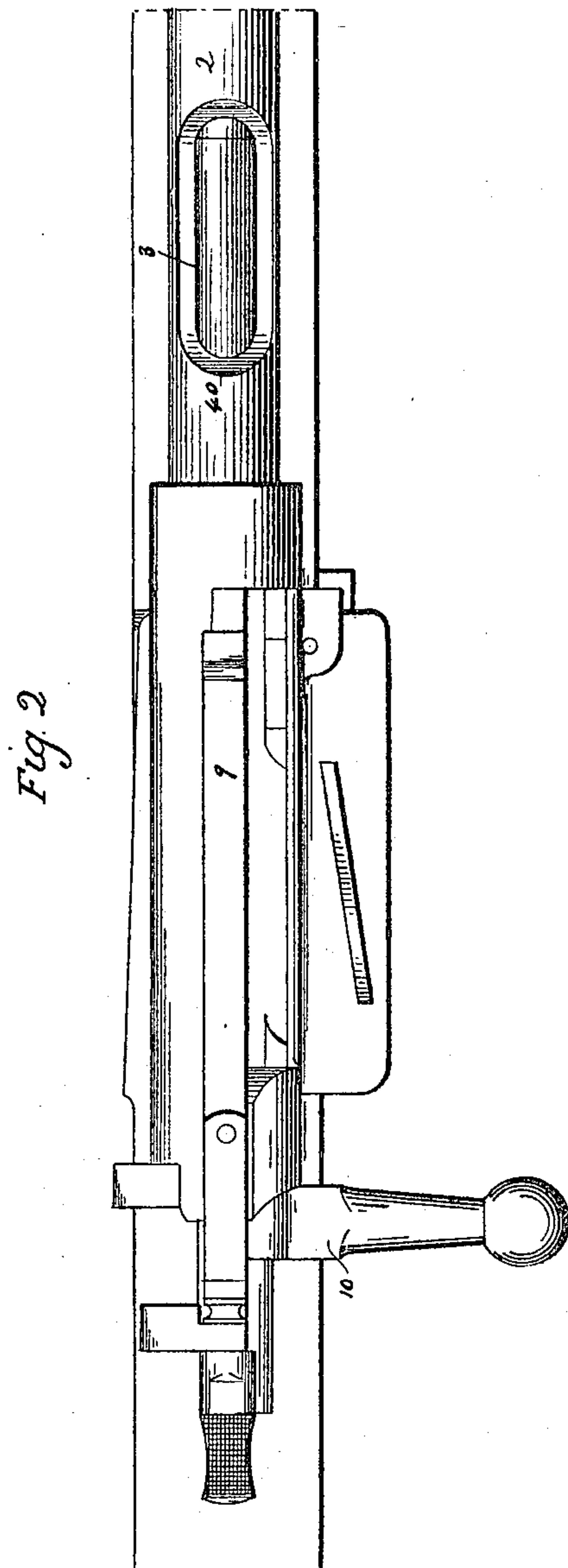
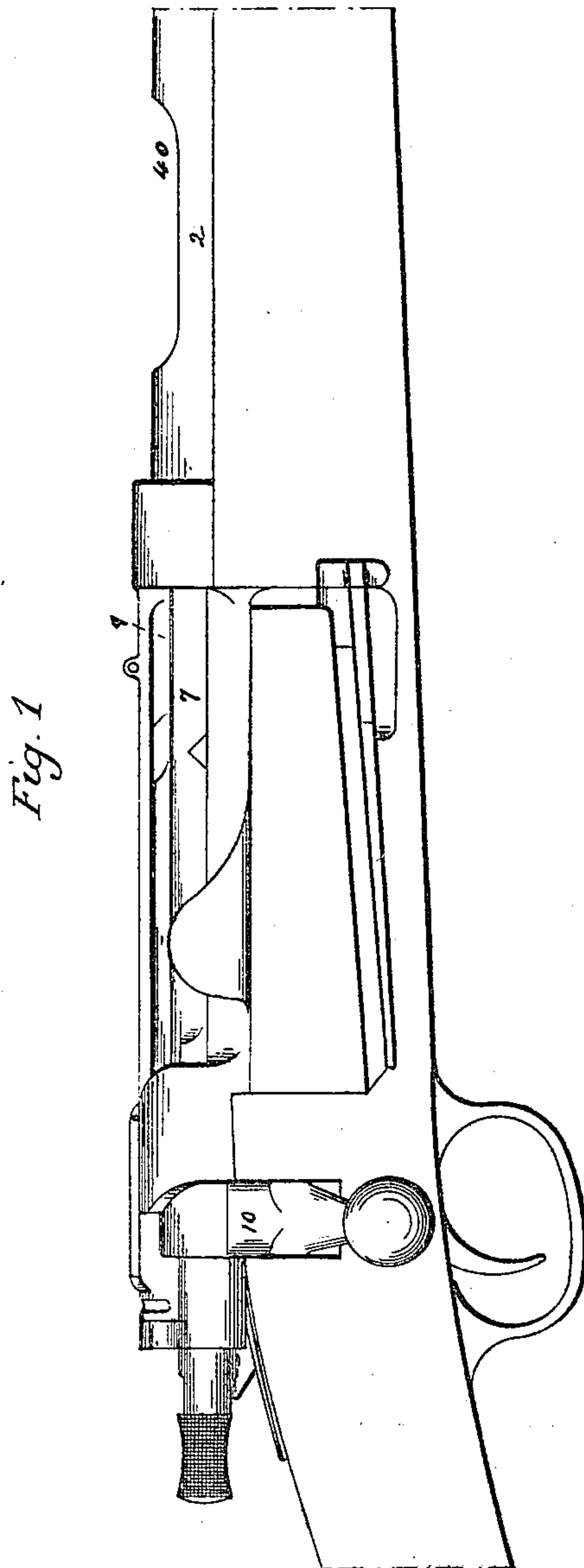
PATENTED SEPT. 5, 1905.

T. G. BENNETT & F. F. BURTON.

MEANS FOR ADAPTING THE KRAIG AND OTHER BOLT GUNS FOR SMALL
AMMUNITION.

APPLICATION FILED DEC. 6, 1904.

2 SHEETS—SHEET 1.



Witnesses.
J. H. Shumway
Clara L. Keel.

Thomas G. Bennett +
Frank F. Burton
Inventors
By atty Seymour & Carey

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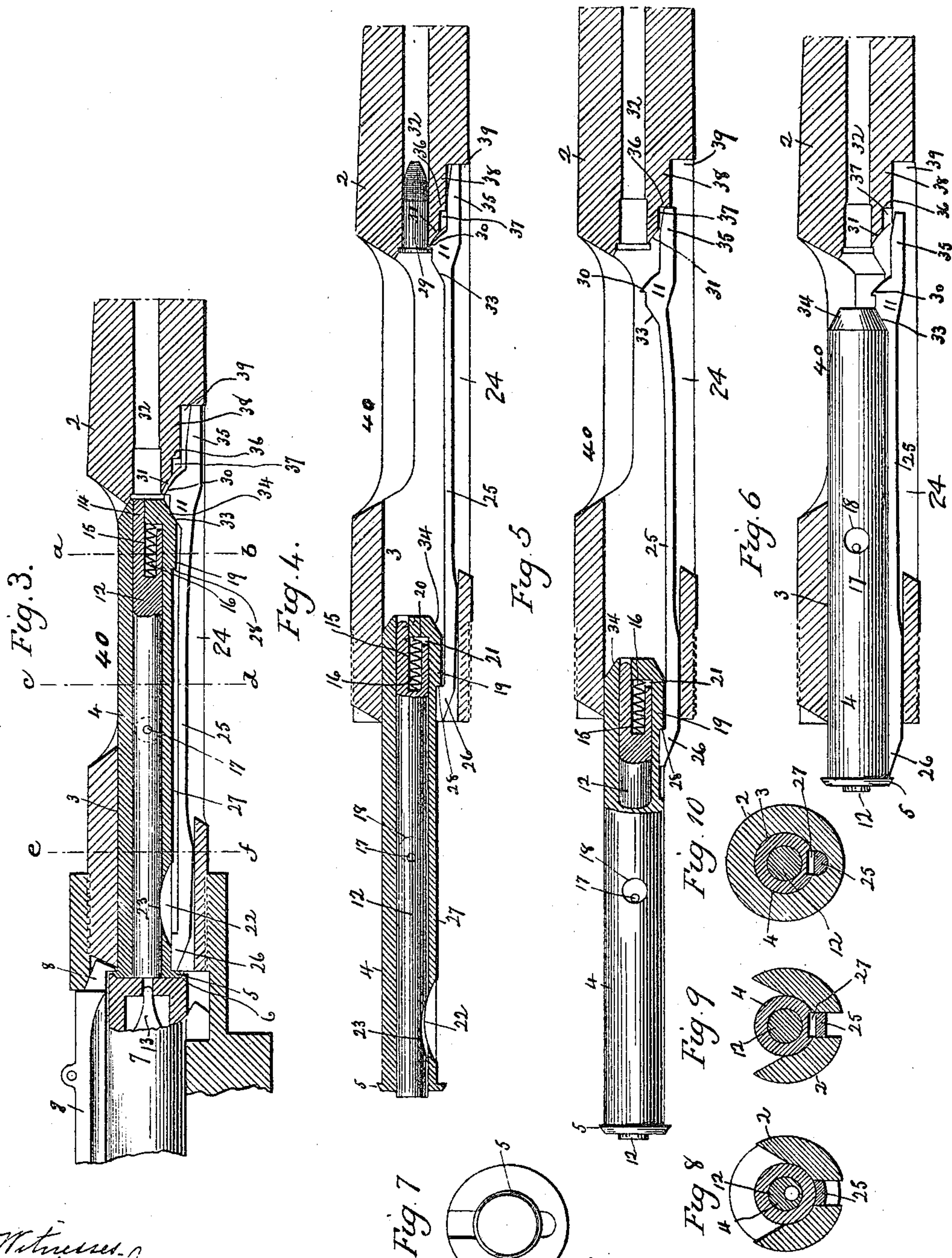
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2 SHEETS—SHEET 2.



Witnesses:
J. H. Shumway
Clara L. Reed.

Fig. 7
Thomas G. Bennett
& Frank F. Burton.
By Seymour Teare Inventors.

UNITED STATES PATENT OFFICE.

THOMAS G. BENNETT AND FRANK F. BURTON, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO WINCHESTER REPEATING ARMS CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

MEANS FOR ADAPTING THE KRAG AND OTHER BOLT-GUNS FOR SMALL AMMUNITION.

No. 798,866.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed December 6, 1904. Serial No. 235,732.

To all whom it may concern:

Be it known that we, THOMAS G. BENNETT and FRANK F. BURTON, citizens of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Means for Adapting the Krag and other Bolt-Guns for Small Ammunition; and we 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 broken view, in right-hand side elevation, of a Krag gun converted for small ammunition by means of our invention; Fig. 2, a broken plan view thereof; Fig. 3, a broken view of the gun in vertical longitudinal section with the stock removed; Fig. 4, a view showing the special barrel and auxiliary bolt in vertical longitudinal section and the auxiliary extractor in right-hand side elevation, the bolt being shown as drawn back to that point in its rearward excursion at which it engages and "picks up" the extractor; Fig. 5, a view with the auxiliary bolt and the auxiliary extractor fully retracted and the extractor released and in the position it takes after its ejection of the extracted cartridge; Fig. 6, a broken sectional view of the special barrel with the auxiliary bolt and auxiliary extractor in elevation and shown after the bevel at the forward end of the bolt has engaged the cam of the extractor and depressed the same, so as to clear its releasing-finger from the releasing-shoulder in the barrel; Fig. 7, a detached view, in rear elevation, of the special barrel; Fig. 8, a view in vertical transverse section on the line *a b* of Fig. 3 through the special barrel, the auxiliary bolt, the auxiliary firing-pin, and the auxiliary extractor; Fig. 9, a corresponding view on the line *c d* of Fig. 3; Fig. 10, a corresponding view on the line *e f* of Fig. 3.

Our invention relates to means for adapting the Krag and other bolt-guns for use in indoor target practice, and hence with smaller ammunition than primarily designed to be used in them, the object being to simply and cheaply convert such guns without changing their general characteristics or interfering with their reconversion for use as service-

guns and to secure the economy resulting from small ammunition.

With these ends in view our invention consists in certain improved auxiliary parts, as will be more fully hereinafter described, and pointed out in the claims.

In carrying out our invention as herein shown we have applied it to a Krag gun of the construction supplied to the United States Army under the general term of "Krag Model, 1898;" but it is to be understood that our invention is not limited to this particular gun, but may be applied to other bolt-guns.

To embody our invention in a Krag gun like that shown, we remove its barrel-cover and service-barrel and replace the latter by a special barrel 2, bored, let us say, to take the standard twenty-two-caliber cartridge. The rear end of this special barrel is counterbored to form a relatively long cylindrical auxiliary bolt-chamber 3 for the reception of an auxiliary bolt 4, the extreme rear end of which is provided with an integral annular coupling-flange 5, beveled and otherwise adapted to closely fit into the shallow head-recess 6, formed in the forward end of the main bolt 7, which is wholly unchanged and coupled to the said auxiliary bolt 4 by the engagement of the hook 8 of the main extractor 9 with the said flange of the auxiliary bolt, which is thus coupled to the main bolt so as to form a virtual extension thereof, the two bolts when so coupled moving back and forth together, but the main bolt 7 being left free to be rotated on its longitudinal axis by means of its handle 10 in the ordinary way, while the auxiliary bolt 4 is prevented from rotating on its longitudinal axis by the auxiliary extractor 11, which acts as a key or feather.

The auxiliary bolt 4 is furnished with an auxiliary firing-pin 12, which is acted upon at its rear end by the forward end of the main firing-pin 13 in the main bolt 7. At its forward end the auxiliary firing-pin is formed with a firing-nose 14, offset from the center of the pin in position to impinge against the rims or flanges of small cartridges. The forward end of the firing-pin 12 is formed with a socket or chamber 15 for the reception of the auxiliary-bolt firing-pin retracting-spring 16. To prevent the firing-pin 12 from being forced rearwardly out of the auxiliary bolt 4, it is furnished about midway of its length with a

transversely-arranged stop-pin 17, driven into and removed from it through a transversely-arranged circular hole 18 passing horizontally through the auxiliary bolt 4, the rear walls of the said opening 18 being engaged by the ends of the said stop-pin to limit the rearward movement of the said firing-pin 12, the forward movement of which in the bolt is limited by the engagement of a shoulder 19 at its forward end with the forward end wall 20 of the chamber 21 formed in the bolt for its reception. The lower face of the bolt 4 is formed at its rear end with a clearance cut 22 for the clearance of the regular ejector of the gun, this ejector being of the ordinary construction and not shown. A similar cut 23, forming a prolongation of the cut 22, is made in the firing-pin. The special barrel 2 is also formed with a long narrow slot 24 opening downward from the center of the chamber 3 and extending forward beyond the forward end thereof. This slot receives and permits the longitudinal play of an auxiliary extractor 25, slightly bowed to adapt it to act as a spring and formed on the upper face of its extreme rear end with an operating-lug 26, which rides back and forth in a long shallow groove 27, formed in the center of the lower face of the auxiliary bolt 4 and extending forward from the coupling-flange 5 thereof nearly to the forward end of the bolt, where it terminates in a shoulder 28, by which the forward edge of the said operating-lug 26 is engaged toward the end of the rearward excursion of the bolt, which then "picks up," so to speak, the extractor and pulls the same rearward for the extraction of the small and short twenty-two-caliber cartridge 29, the position of the auxiliary bolt 4 at the time its shoulder 28 engages with the lug 26 of the auxiliary extractor being shown by Fig. 4. It is necessary that the auxiliary bolt 4 shall have this long play independent of the extractor 25 to compensate for the great difference in the length of the service ammunition which the Krag gun was primarily designed to use and the short twenty-two-caliber cartridge.

At its forward end the auxiliary extractor 25 is formed with an extracting-hook 30, which when the extractor is pushed forward into its home position enters an extractor-receiving cut or recess 31 in position to engage with the forward face of the rim of the cartridge 29, which is located in a suitable cartridge-chamber 32, formed in the special barrel 2. To the rear of the said hook 30 the extractor is formed with an extractor-depressing cam 33 for coaction with a bevel 34 at the forward end of the auxiliary bolt 4. Just before the said bolt moves into its closed position the said bevel rides upon the said cam and depresses the extractor, as shown in Fig. 6, whereby the releasing-finger 35, forming the extreme forward end of the extractor, is

depressed below and cleared from a releasing-shoulder 36, formed by the production of a releasing cut 37 in the special barrel 2. The extractor is now free to move forward with the bolt as the same takes its closed position in which it is shown by Fig. 3. When the gun is opened, the bolt 4 is drawn back nearly its full length and into the position shown by Fig. 4 without starting the extractor; but when the shoulder 28 of the bolt engages with the lug 26 at the rear end of the extractor the same is started rearward and then extracts the spent cartridge with its forward end still under tension, its releasing-finger 35 at this time riding over the upper wall 38 of the cut 39 in the barrel. Then just as soon as the forward end of the finger 35 clears the shoulder 36, and the shell being at this time extracted from the chamber 32, the extractor is released to the action of its spring tension and its finger 35 "snapping" upward into the cut 37 ejects the cartridge through the cartridge-receiving and cartridge-ejecting opening 40, formed in the top of the special barrel 2 and intersecting the chamber 3, formed therein for the reception of the auxiliary bolt 4.

It is apparent that some changes in the construction shown and described may be made, as, for instance, in adapting our invention to some other gun than the Krag. We would therefore have it understood that we do not limit ourselves to what we have set forth herein, but hold ourselves at liberty to make such changes as fairly fall within the spirit and scope of our invention.

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

1. As a new article of manufacture, a barrel for use in converting bolt-guns for smaller ammunition, the said barrel being formed in its rear end with an auxiliary-bolt chamber, with a cartridge-receiving and cartridge-ejecting opening, and with an auxiliary-extractor slot.

2. In a gun, the combination with the main bolt and the main firing-pin thereof, of an auxiliary bolt coupled to the forward end of the main bolt, an auxiliary firing-pin in the auxiliary bolt, an auxiliary extractor coacting with the auxiliary bolt, and a barrel counterbored for the reception of the auxiliary bolt.

3. In a gun, the combination with the main bolt, main extractor and main firing-pin thereof, of an auxiliary bolt provided at its rear end with a coupling-flange engaged by the said main extractor, an auxiliary firing-pin and auxiliary extractor for the auxiliary bolt, and a barrel counterbored for the said auxiliary bolt and slotted for the said auxiliary extractor.

4. In a gun, the combination with a longi-

tudinally movable and rotary main bolt provided with a handle, a main extractor and a main firing-pin, of an auxiliary bolt provided at its rear end with a coupling-flange engaged
5 by the said main extractor for coupling the two bolts together, an auxiliary firing-pin operated by the said main firing-pin, an auxiliary extractor coacting with the auxiliary bolt and holding the same against rotation with the
o main bolt, and a barrel counterbored for the reception of the auxiliary bolt and slotted for the reception of the auxiliary extractor.

5. In a bolt-gun, the combination with the main bolt and main firing-pin thereof, of an
5 auxiliary bolt adapted to be coupled at its rear end with the forward end of the said main bolt, an auxiliary firing-pin, an auxiliary extractor formed at its forward end with a releasing-finger and adapted to be depressed by
o the forward end of the said auxiliary bolt, and a barrel chambered for the reception of the auxiliary bolt, having a cartridge-receiving and cartridge-ejecting opening, and also having a clearance cut for the said releasing-
5 finger of the auxiliary ejector, whereby the said ejector is released at a predetermined

time in its rearward movement with a spent cartridge for the ejection thereof.

6. In a bolt-gun, the combination with the main bolt and main firing-pin thereof, of an
30 auxiliary bolt adapted to be coupled at its rear end with the forward end of the said main bolt, an auxiliary firing-pin, an auxiliary extractor coacting with the auxiliary bolt and formed at its forward end with an extracting-
35 hook, with a depressing-cam and with a releasing-finger, and a barrel chambered for the reception of the auxiliary bolt, having a cartridge-receiving and cartridge-ejecting opening, and also having a clearance cut for the
40 said releasing-finger of the auxiliary ejector, whereby the said ejector is released at a predetermined time in its rearward movement with a spent cartridge for the ejection thereof.

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

THOMAS G. BENNETT.
FRANK F. BURTON.

Witnesses:

DANIEL H. VEADER,
WILLIAM J. DIGNAN.