No. 616,719. Patented Dec. 27, 1898.

W. MASON.

TAKE-DOWN GUN.

(Application filed May 2, 1898.)

(No Model.)

Fig. 4

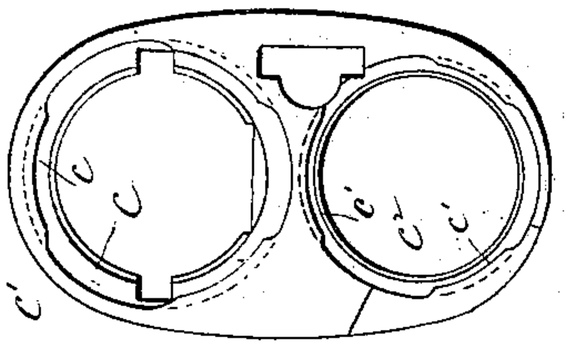


Fig. 2

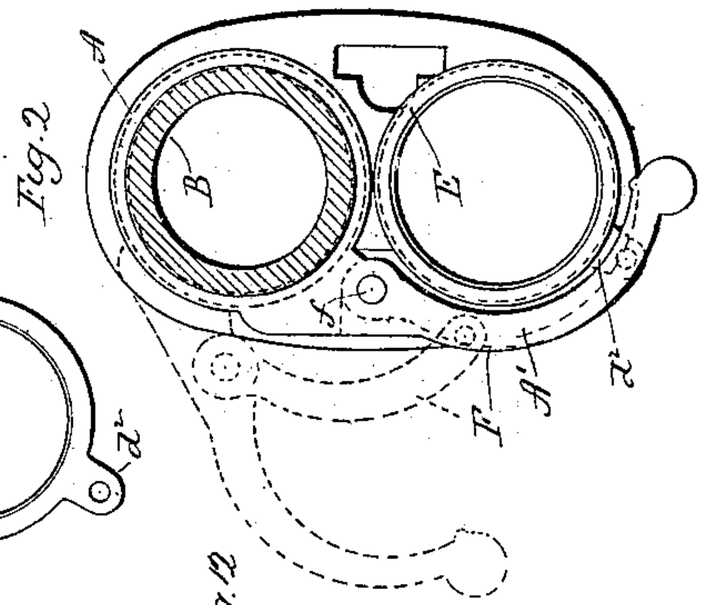


Fig. 10

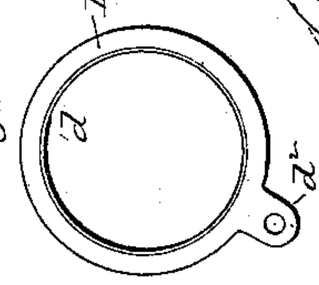


Fig. 3

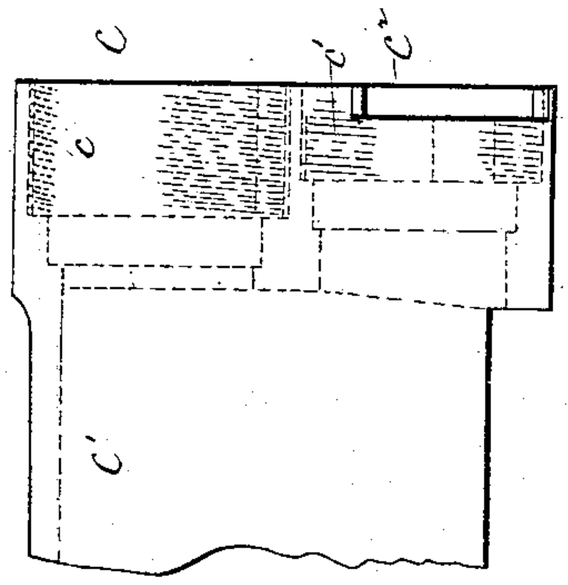


Fig. 9

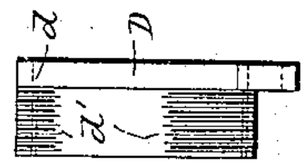


Fig. 12

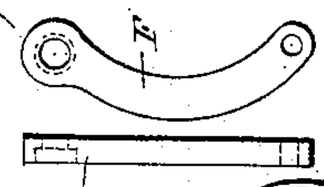


Fig. 11

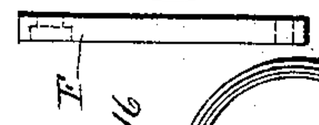


Fig. 16

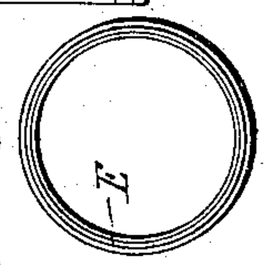


Fig. 8

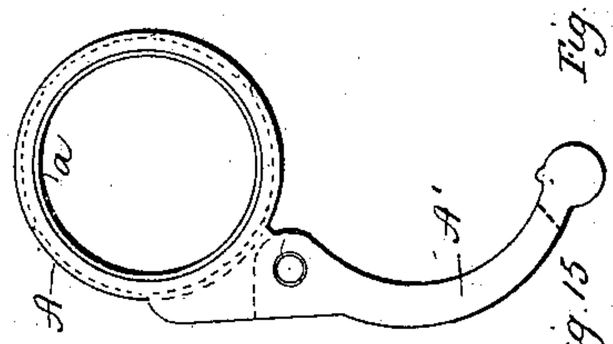


Fig. 15

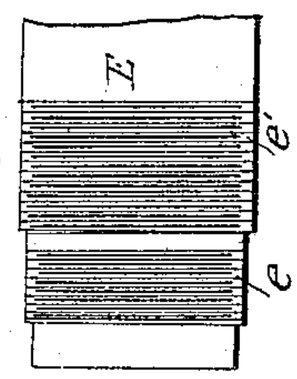


Fig. 7

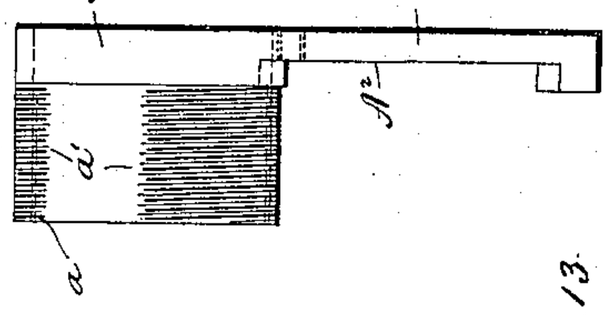


Fig. 13.

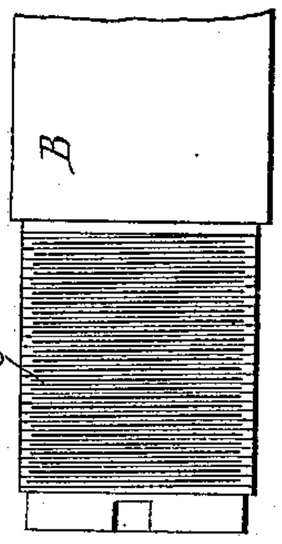


Fig. 1.

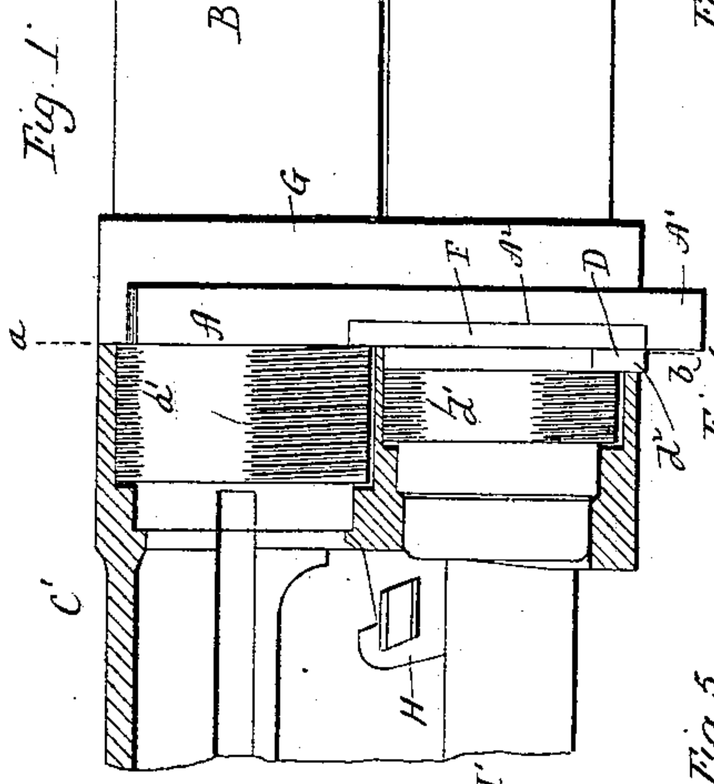


Fig. 6

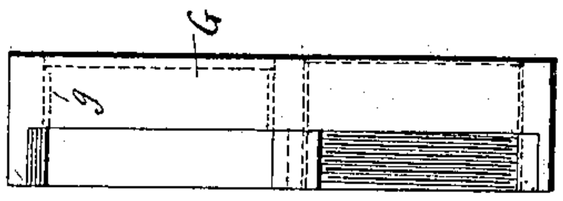


Fig. 5

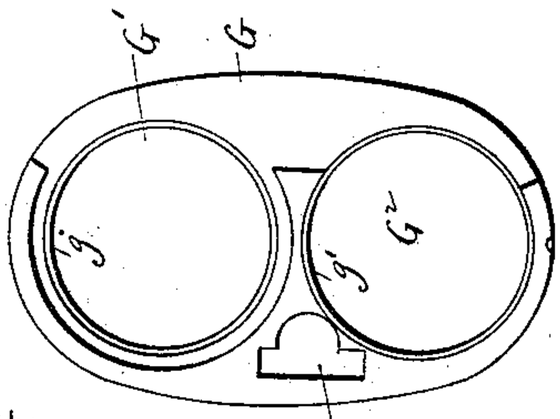


Fig. 14

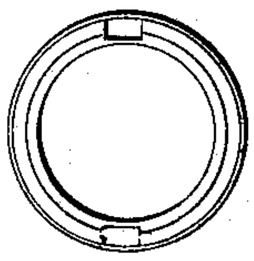
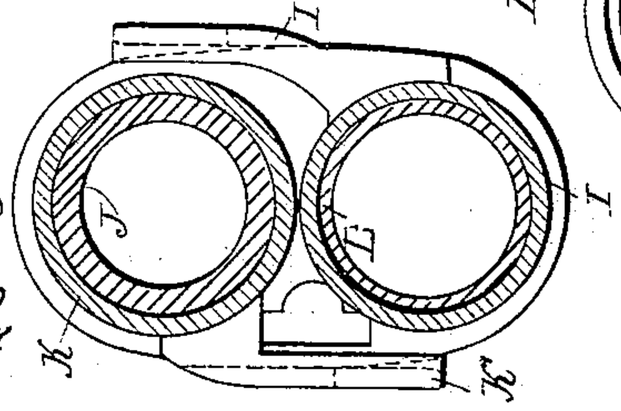


Fig. 17



Witnesses.
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Lillian D. Kelsey

William Mason
Inventor.
By attys. Earle & Seymour

UNITED STATES PATENT OFFICE.

WILLIAM MASON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

TAKE-DOWN GUN.

SPECIFICATION forming part of Letters Patent No. 616,719, dated December 27, 1898.

Application filed May 2, 1898. Serial No. 679,451. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MASON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Take-Down Guns; 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 broken view, partly in side elevation and partly in vertical section, of one form which a take-down gun constructed in accordance with my invention may assume; Fig. 2, a view of the gun in transverse section on the line *a b* of Fig. 1, showing the sleeve-operating handle in its open position by broken lines and in its closed position by full lines; Fig. 3, a detached broken view, in side elevation, of the forward end of the gun-frame; Fig. 4, a view in front elevation of the gun-frame; Fig. 5, a detached view, in rear elevation, of the band; Fig. 6, a detached view of the band in side elevation; Fig. 7, a detached view, in side elevation, of the barrel-coupling sleeve and the sleeve-operating handle; Fig. 8, a corresponding view, in front elevation, of the said sleeve and handle; Fig. 9, a detached view, in side elevation, of the magazine-coupling sleeve; Fig. 10, a front view thereof; Fig. 11, an edge view of the coupling-link which connects the two sleeves; Fig. 12, a view thereof in side elevation; Fig. 13, a broken view, in side elevation, of the butt-end of the barrel; Fig. 14, a view of the barrel in rear elevation; Fig. 15, a broken view, in side elevation, of the rear end of the magazine; Fig. 16, a view thereof in rear elevation; Fig. 17, a sectional view of one of the modified forms which my invention may assume.

My invention relates to an improvement in that class of guns which are known as "take-down" guns, from the fact that they are constructed for the detachment of the barrel and magazine from the gun-frame to enable them to be more compactly packed for transportation, my present invention being designed to produce a simple, durable, and convenient take-down gun constructed with particular reference to detaching the barrel and magazine from the gun-frame and connecting them therewith without rotating either of them with respect thereto, although screw connections are employed for both barrel and magazine.

With these ends in view my invention consists in the combination, in a take-down gun, with a gun-frame having a barrel-receiving opening formed with interrupted threads and a magazine-receiving opening also formed with interrupted threads, of a gun-barrel threaded at its butt-end, a tubular magazine threaded at its rear end, a barrel-coupling sleeve having internal threads for being mounted upon the butt-end of the gun-barrel and interrupted external threads for taking into the interrupted threads of the barrel-receiving opening, and a magazine-coupling sleeve having internal threads for being mounted upon the rear end of the magazine and interrupted external threads for taking into the interrupted threads of the magazine-receiving opening.

My invention further consists in certain details of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown I employ a barrel-coupling sleeve A, having continuous internal threads *a* and interrupted external threads *a'*, the said internal thread *a* being adapted to take into a corresponding continuous thread *b*, formed upon the butt-end of the barrel B, and the interrupted threads *a'* being adapted to take into corresponding interrupted threads *c*, formed within the barrel-receiving opening C of the gun-frame C'. By preference the threads *a* and *a'* will be differentiated in pitch in order to quicken the drawing action of the said sleeve upon the barrel and also to compensate for wear; but the same effect may be secured by making the threads right and left hand threads, respectively. The said coupling-sleeve is provided with a depending sleeve-operating handle A', which may be formed integral with it or not, as desired. I also employ a magazine-coupling sleeve D, having a continuous internal screw-thread *d* and interrupted external screw-threads *d'*, the said continuous internal thread *d* being

adapted to take into a corresponding continuous thread *e*, formed upon the rear end of the tubular magazine E, and the said interrupted external threads *d'* being adapted to take into corresponding interrupted screw-threads *c'*, formed within the magazine-receiving opening C^2 of the said gun-frame C'. The said magazine-coupling sleeve D is formed with a perforated lug d^2, which is provided for the connection of the sleeve with one end of a sleeve-coupling link F, the opposite end of which is connected by a screw or pin *f* with the handle A' of the barrel-coupling sleeve A at a point near the base of the said handle, the inner face of which is formed with a recess A^2, Fig. 7, for the reception of the said link. Under this construction the two sleeves may be simultaneously rotated in one direction or the other, as desired, by the operation of the handle A'. Prior to the connection of the gun-barrel B and the tubular magazine E with the gun-frame C' the coupling-sleeves A and D are rotated by pulling the sleeve-operating handle A' outward into its open position, as shown by broken lines in Fig. 2, so as to bring their interrupted threads *a' d'* into registration, respectively, with the interrupted threads *c* and *c'* of the barrel-receiving opening C and the magazine-receiving opening C^2 of the gun-frame C'. This permits the magazine and barrel to be shoved into their home positions by a straight rearward movement, after which the sleeves are simultaneously rotated by forcing the said handle inward into its closed position, as shown by full lines in the said Fig. 2, so as to cause the barrel and magazine to be drawn inward slightly and firmly locked into their home positions. The gun may be readily taken down by pulling the said handle open, and thus simultaneously rotating the two sleeves in the opposite direction, whereby the interrupted threads of the sleeves are disengaged from the interrupted threads of the openings C C^2, after which the barrel and magazine may be drawn straight forward away from the gun-frame. I am thus enabled to assemble and "take down" my improved gun without rotating either the barrel or the magazine, although both are connected with the frame by means of screw-threads.

The rear ends of the barrel and magazine are rigidly united by means of a band G of ordinary construction, the said band G having a barrel-receiving opening G' and a magazine-receiving opening G^2. The said barrel-receiving opening G' of the band is formed, as shown, with a continuous thread *g*, corresponding to the threads *b* upon the butt-end of the barrel, which is firmly screwed into the band, from the rear face of which it projects rearward. The said magazine-receiving opening G^2 of the band is also formed, as shown, with a continuous thread *g'*, receiving the continuous thread *e'* formed upon the rear end of the magazine, which is firmly screwed into the band, from the rear face of which it projects rearward. However, the particular way of securing the barrel and magazine to the band does not form an essential feature of my present invention and may be effected in any other approved manner. I may remark that the said band G is formed in the usual manner with an action-bar opening G^3, permitting the rearward extension through the band of the action-bar H, which communicates to the action mechanism of the gun the motion of the handle, which is not shown, but which slides back and forth upon the magazine.

In the modified construction shown by Fig. 17 the magazine-coupling sleeve I is provided with an upwardly-extending sleeve-operating handle I', which extends upward on one side of the gun-barrel J, while the barrel-coupling sleeve K is formed with a sleeve-operating handle K', extending downward on the opposite side of the magazine L. Under this construction the two sleeves are operated independently of each other and at different times, but the same results are secured. The pulling of both handles outward into their open positions causes the rotation of the sleeves, so as to permit the rearwardly-projecting ends of the barrel and magazine to be inserted into the barrel-receiving and magazine-receiving openings of the gun-frame, while the pushing of the said handles inward into their closed positions rotates the sleeves so as to draw the barrel and magazine inward and bind them firmly in the threaded openings prepared for their reception. Then when the handles are pulled outward into their open positions again the said sleeves are reversely rotated, and both the barrel and magazine may be withdrawn from the gun-frame without rotating either of them. Preferably, however, the two sleeves will be connected together so as to turn in unison. In case they are so connected the coupling-link might be connected directly with the barrel-coupling sleeve instead of with the handle thereof. Again, the use of one or more operating-handles might be dispensed with and one or both sleeves adapted to be turned by means of a spanner-wrench or key. Another way of causing the sleeves to rotate in unison would be to provide them with intermeshing teeth. Still another modification would be to dispense with the use of any sleeve upon the barrel and employ only a magazing-coupling sleeve, which would be rotated in the manner described for securing the magazine in place and to permit its detachment from the gun-frame. In the construction last suggested some other means would have to be resorted to for securing the barrel in place. Throughout the description and in the drawings the two sleeves have been shown and described as provided with internal screw-threads for taking into threads formed upon the gun-barrel and magazine; but it is not imperative that the sleeves should be secured to the barrel and magazine in that manner, as some

other form of connection permitting the rotation of the sleeves might be adopted.

It is apparent that in carrying out my invention some changes from the construction herein shown may be made. I would therefore have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes 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 take-down gun, the combination with a gun-frame having a barrel-receiving opening formed with interrupted threads, and a magazine-receiving opening also formed with interrupted threads, of a gun-barrel threaded at its butt-end, a tubular magazine threaded at its rear end, a barrel-coupling sleeve having internal threads for being mounted upon the butt-end of the gun-barrel and interrupted external threads for taking into the interrupted threads of the barrel-receiving opening, and a magazine-coupling sleeve having internal threads for being mounted upon the rear end of the magazine and interrupted external threads for taking into the interrupted threads of the magazine-receiving opening, and means for connecting the said sleeves to cause them to rotate in unison.

2. In a take-down gun, the combination with a gun-frame having a barrel-receiving opening formed with interrupted threads and a magazine-receiving opening also formed with interrupted threads, of a gun-barrel threaded at its butt-end, a tubular magazine threaded at its rear end, a barrel-coupling sleeve having internal threads for being mounted upon the butt-end of the gun-barrel, and interrupted external threads for taking into the interrupted threads of the barrel-receiving opening, a magazine-coupling sleeve having internal threads for being mounted upon the rear end of the magazine, and interrupted external threads for taking into the interrupted threads of the magazine-receiving opening, and a coupling-link for connecting the two sleeves, whereby they are caused to rotate in unison, one of the said sleeves being adapted to be engaged for rotation.

3. In a take-down gun, the combination with a gun-frame having a barrel-receiving opening formed with interrupted threads, and a magazine-receiving opening also formed with interrupted threads, of a gun-barrel threaded at its butt-end, a tubular magazine threaded at its rear end, a barrel-coupling sleeve having internal threads for being mounted upon the butt-end of the gun-barrel and interrupted external threads for taking into the interrupted threads of the barrel-receiving opening, a magazine-coupling sleeve having internal threads for being mounted upon the rear end of the magazine, and interrupted external threads for taking into the interrupted threads of the magazine-receiving opening, a sleeve-operating handle connected with one of the sleeves whereby it is operated, and a coupling-link connecting the two sleeves whereby they are turned in unison.

4. In a tubular-magazine take-down gun, the combination with a gun-frame formed with a barrel-receiving opening having interrupted threads, and a magazine-receiving opening having interrupted threads, of a gun-barrel adapted to be entered into the said barrel-receiving opening, a barrel-coupling sleeve mounted upon the barrel for rotation thereupon, and having interrupted external threads for taking into the corresponding threads of the barrel-receiving opening, a magazine and a magazine-coupling sleeve mounted upon the magazine for rotation thereupon, and having external interrupted threads for taking into the corresponding threads of the magazine-receiving opening.

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

WILLIAM MASON.

Witnesses:
DANIEL H. VEADER,
THOMAS C. JOHNSON.