

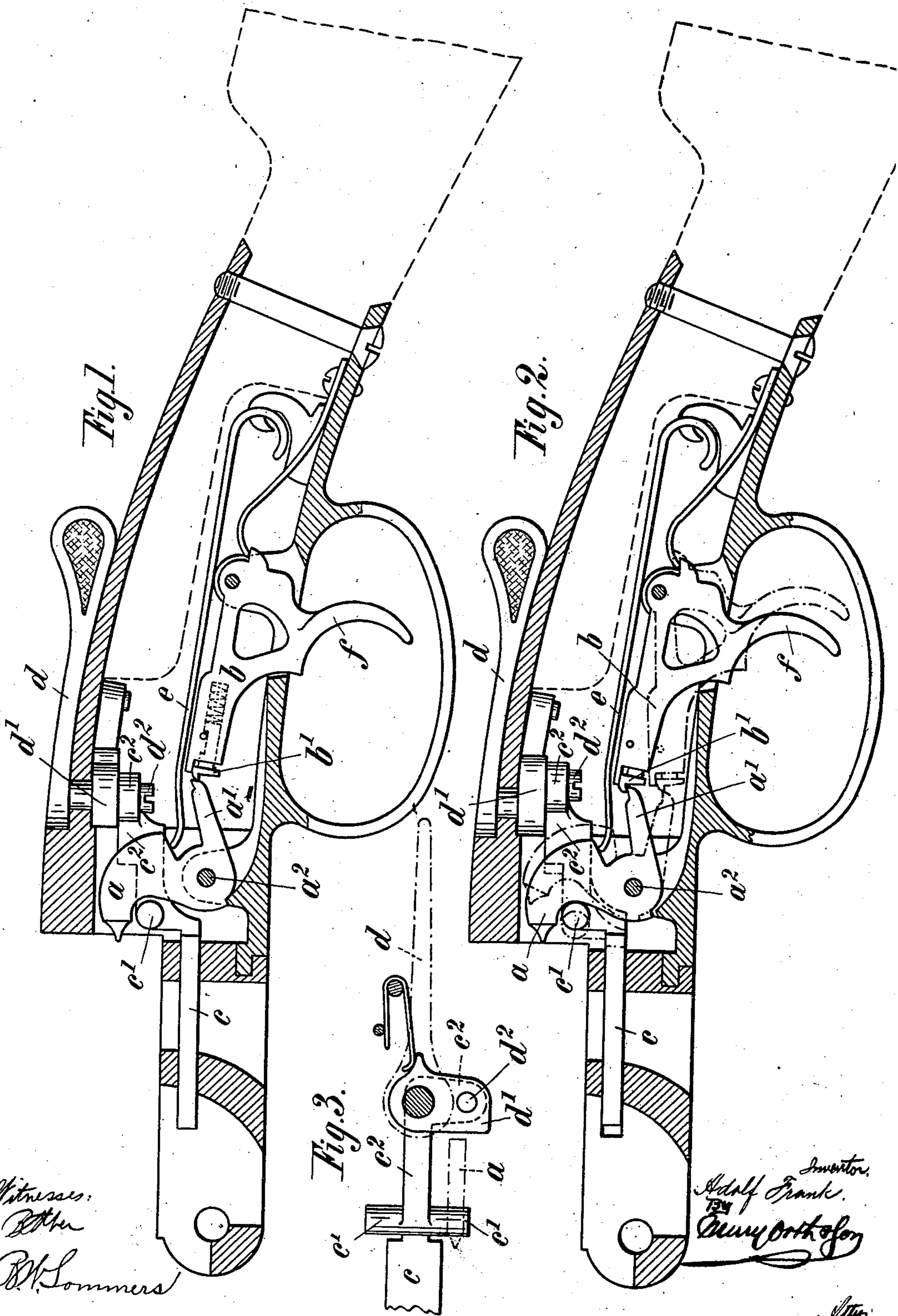
No. 701,321.

Patented June 3, 1902.

A. FRANK.
SMALL ARM.

(Application filed Aug. 22, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

ADOLF FRANK, OF HAMBURG, GERMANY.

SMALL-ARM.

SPECIFICATION forming part of Letters Patent No. 701,321, dated June 3, 1902.

Application filed August 22, 1901. Serial No. 72,943. (No model.)

To all whom it may concern:

Be it known that I, ADOLF FRANK, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements Relating to Small-Arms, of which the following is a specification.

This invention relates to improvements in small-arms, and has for its object to provide an improved cocking device more particularly designed for drop-down guns, said cocking device differing from others by the fact that it has no means for cocking the hammer or hammers when the gun is not in use, so that while firing is interrupted the hammer or hammers are in such an uncocked position as to obviate all danger of imparting sufficient motion to the hammer by external shocks, vibrations, or internal disturbance of the mechanism as to produce unintentional firing of the charge. Each hammer is therefore cocked no sooner until immediately before the firing or discharge of the gun.

Although my improved arrangement may also be adapted to other constructions of guns, I will now describe my invention as applied to a double-barreled drop-down breech-loading gun with internal locking-bolt operated by an external locking-lever, and for that purpose reference is taken to the accompanying sheet of drawings, in which—

Figure 1 is a vertical longitudinal section of a breech-lock provided with my improved cocking device, the parts being in the position of rest after the discharge of the gun, only so much of the breech-lock being shown as is necessary for the understanding of the invention. Fig. 2 is a similar view showing the parts of the breech-lock in the loading position. The full-cock position of the parts before the discharge of the gun is shown in dotted lines. Fig. 3 is a detailed view showing in plan, partly in section, the mechanism for locking and unlocking the barrel and for removing the hammers out of the path of the cartridge.

Similar letters refer to similar parts throughout the several views.

Each hammer a is pivotally secured at a^2 in the lock in the usual manner; but in lieu of the ordinary mechanism for keeping the hammers cocked the latter are formed each

with an arm a' , adapted to engage with the free end of the corresponding sear b when removed out of the path of the cartridge by the pins or shoulders c' of the locking-bolt c , operated by the arm d' , rigidly connected with the external lever d . The rear end c^2 of the locking-bolt c is at d^2 pivotally connected with the arm d' of the lever d . From Figs. 1 and 3 it is obvious that lateral movement of the locking-lever d places the locking parts $c c' c^2$ into their rear-end position, thereby unlocking in well-known manner the barrel and slightly swinging back the hammers a . In this position (shown in Fig. 2) the hammer is not sufficiently cocked as to be capable of firing the cartridge in case the arm a' of the hammer becomes disengaged from the sear b by reason of shocks, defective mechanism, &c. The hammer-spring e is as yet but slightly flexed; but the hammer is retained by the sear b even after the locking-bolt $c c' c^2$ has been moved away from the hammer into its forward locking position. Thus the hammers are placed out of the path of the cartridge and at the same time are in such an inoperative position as to be incapable of firing the charge.

It is only by drawing the trigger f backward that the sear b fully cocks the hammer and its spring e , which latter impels the hammer against the cartridge when the arm a' disengages from the completely-depressed sear b . This full-cock position of the parts is shown in Fig. 2 by dotted lines.

After the weapon has been discharged the sear, now released by the finger, remains at first beneath the arm a' of the hammer, Fig. 1, and it is only after the hammer has been slightly moved back out of the path of the cartridge that the said arm engages beneath the sear, Fig. 2. To enable this to be effected, the end of the sear is, for example, provided with a spring-actuated slide-piece or catch b' , which being pushed back by the hammer-arm a' allows the latter to move down in front of the sear until it engages underneath the said catch of the sear.

With my improved construction and after the preliminary backward swinging of the hammer it requires but a slight motion of the trigger f to fully cock the hammer and then disengaging it for firing. The hammer and

the trigger mechanism act like a pair of bars or levers, pivoted in such a manner that the ends of said bars or levers move in arcs of circles which have their intersecting points rather close together.

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

1. The combination with a spring-actuated hammer and a to-and-fro movable locking-bolt adapted to move said hammer into half-cock position against the stress of its spring when said bolt is moved in one direction; of a trigger and a sear controlled thereby and adapted to engage the hammer and hold it in its said position to admit of the movement of the locking-bolt out of engagement with the hammer and to move the latter into full-cock position by a pull on the trigger and to release said hammer by a further pull on said trigger, for the purpose set forth.

2. The combination with a spring-actuated hammer and a to-and-fro movable hand-operated locking-bolt adapted to move said hammer into a half-cock position and lock the same against the stress of its spring; of a spring-actuated trigger and a spring-actuated sear controlled thereby and adapted to engage the hammer and hold it in its said position to admit of the movement of the locking-bolt out of engagement with said hammer and to move the latter into full-cock position by a pull on the trigger and to release it by a further pull on said trigger, for the purpose set forth.

3. The combination with a spring-actuated hammer and a hand-operated locking-bolt

adapted when moved in one direction to retract and lock said hammer against the stress of its spring; of a spring-actuated trigger and a spring-actuated sear mounted on said trigger and adapted to engage the hammer when retracted and to release the same by a pull on the trigger against the stress of its spring, for the purpose set forth.

4. In a double-barrel breakdown gun, the combination with the hammer and a to-and-fro movable locking-bolt for the barrels, said bolt adapted to move the hammers to a half-cock position against the stress of their springs when moved to unlock the barrels; of a trigger and a sear for each hammer, said sears adapted to engage and lock their respective hammers into their said half-cock position, to admit of the movement of the locking-bolt out of engagement with the hammers and into engagement with the barrels, and then by a pull on the triggers to move said hammers into full-cock position and by a further pull on said triggers to release the hammers, for the purpose set forth.

5. The combination with a spring-actuated hammer, and means for moving the same into half-cock position and again releasing it; of a sear, and a trigger controlling the same, said sear adapted to engage and hold said hammer in its aforesaid position, to move said hammer into full-cock position by a pull on the trigger, and to release it by a further pull on said trigger, for the purpose set forth.

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Witnesses:

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