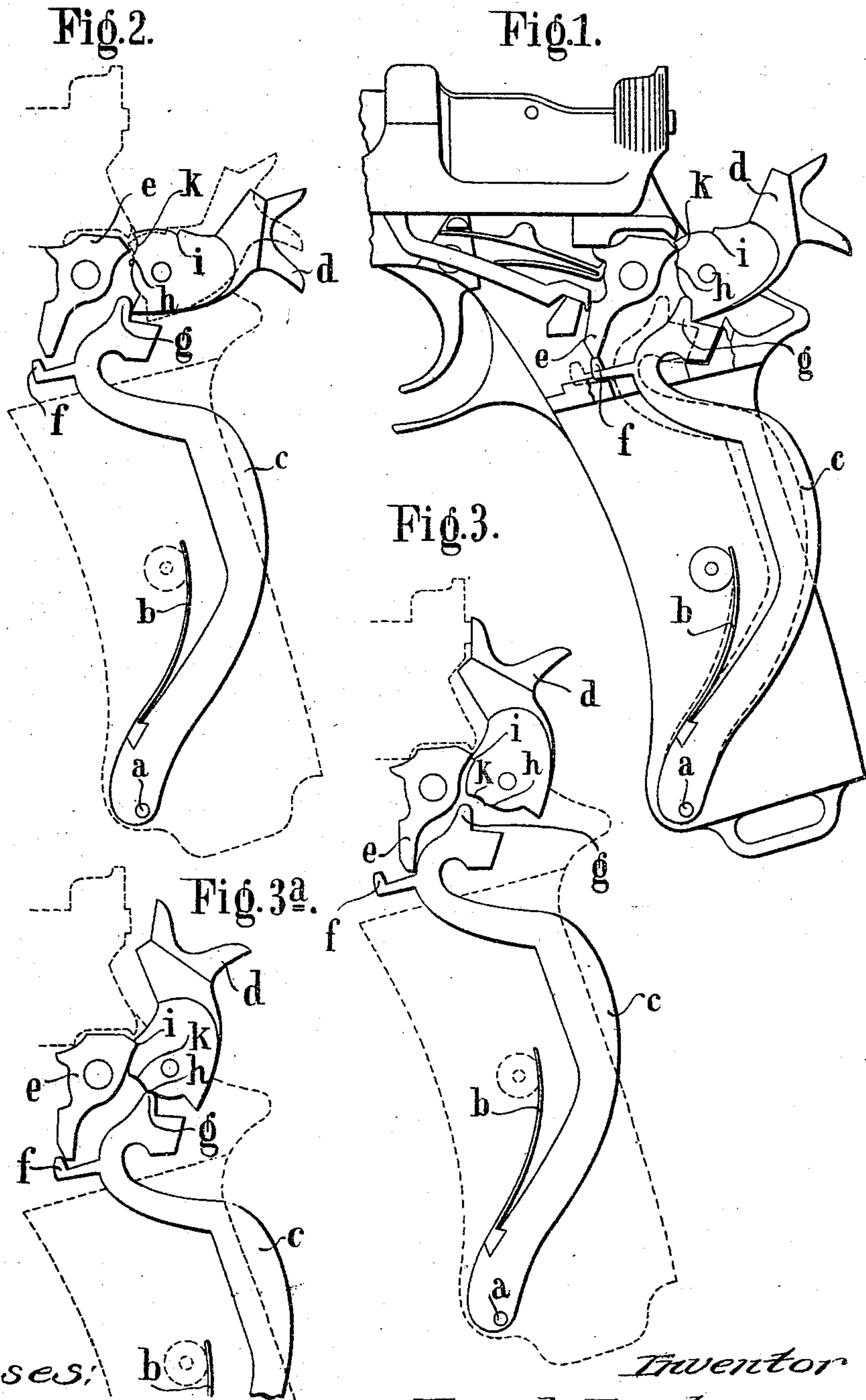


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 AUTOMATIC SAFETY APPLIANCE FOR PISTOLS, &c.
 APPLICATION FILED OCT. 16, 1907.

939,111.

Patented Nov. 2, 1909.
 3 SHEETS—SHEET 1.



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Fig. 5.

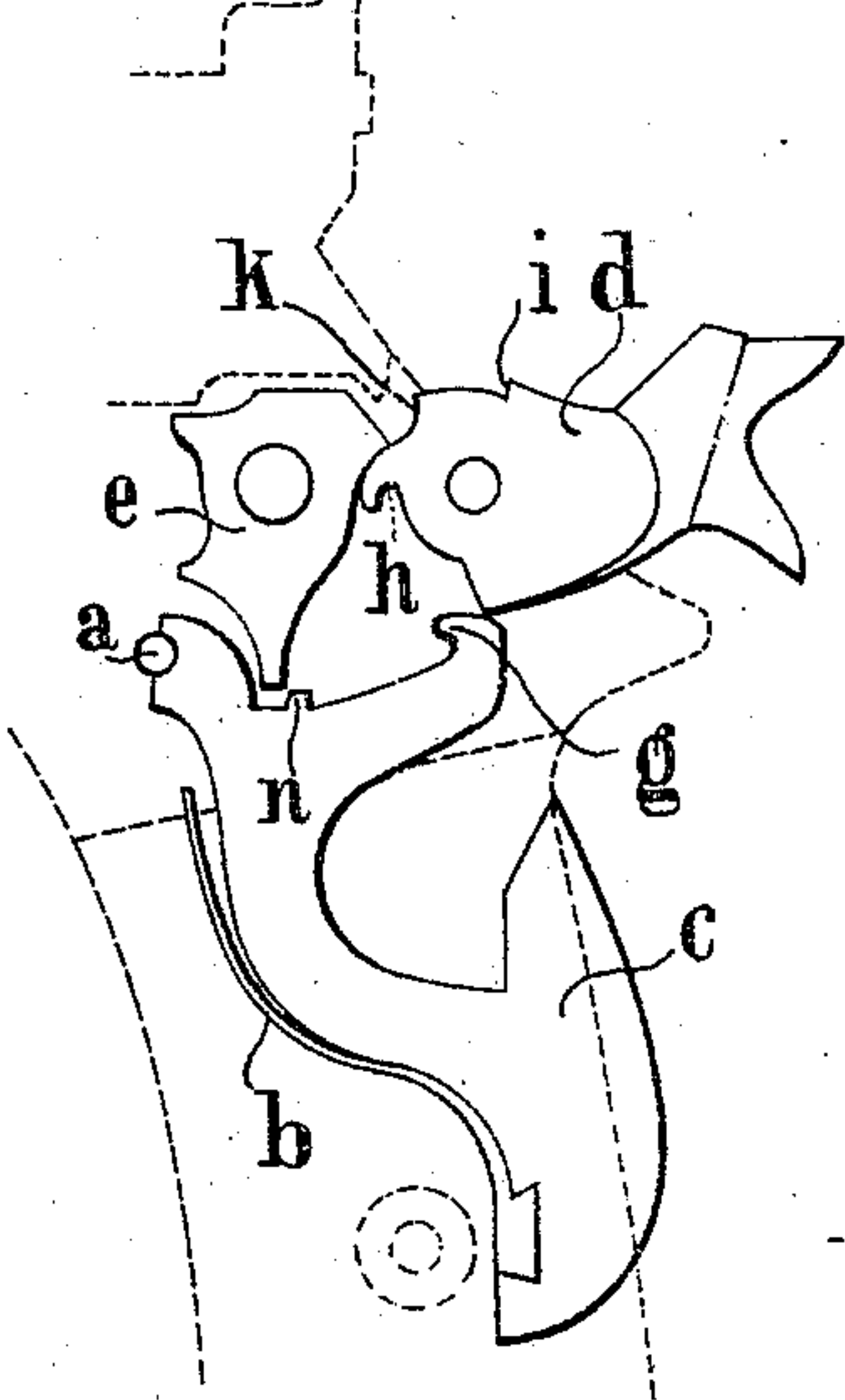


Fig. 4.

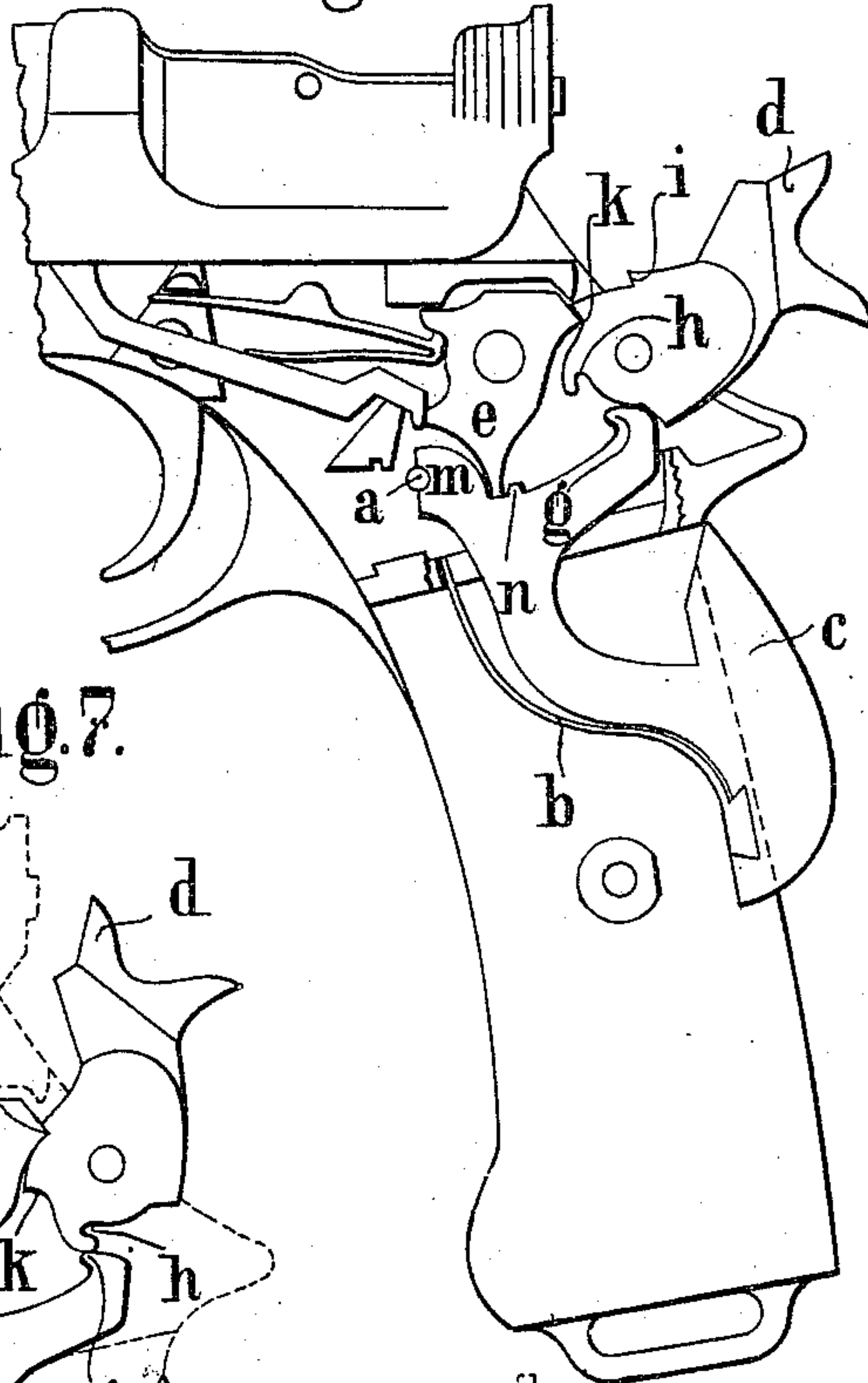


Fig. 7.

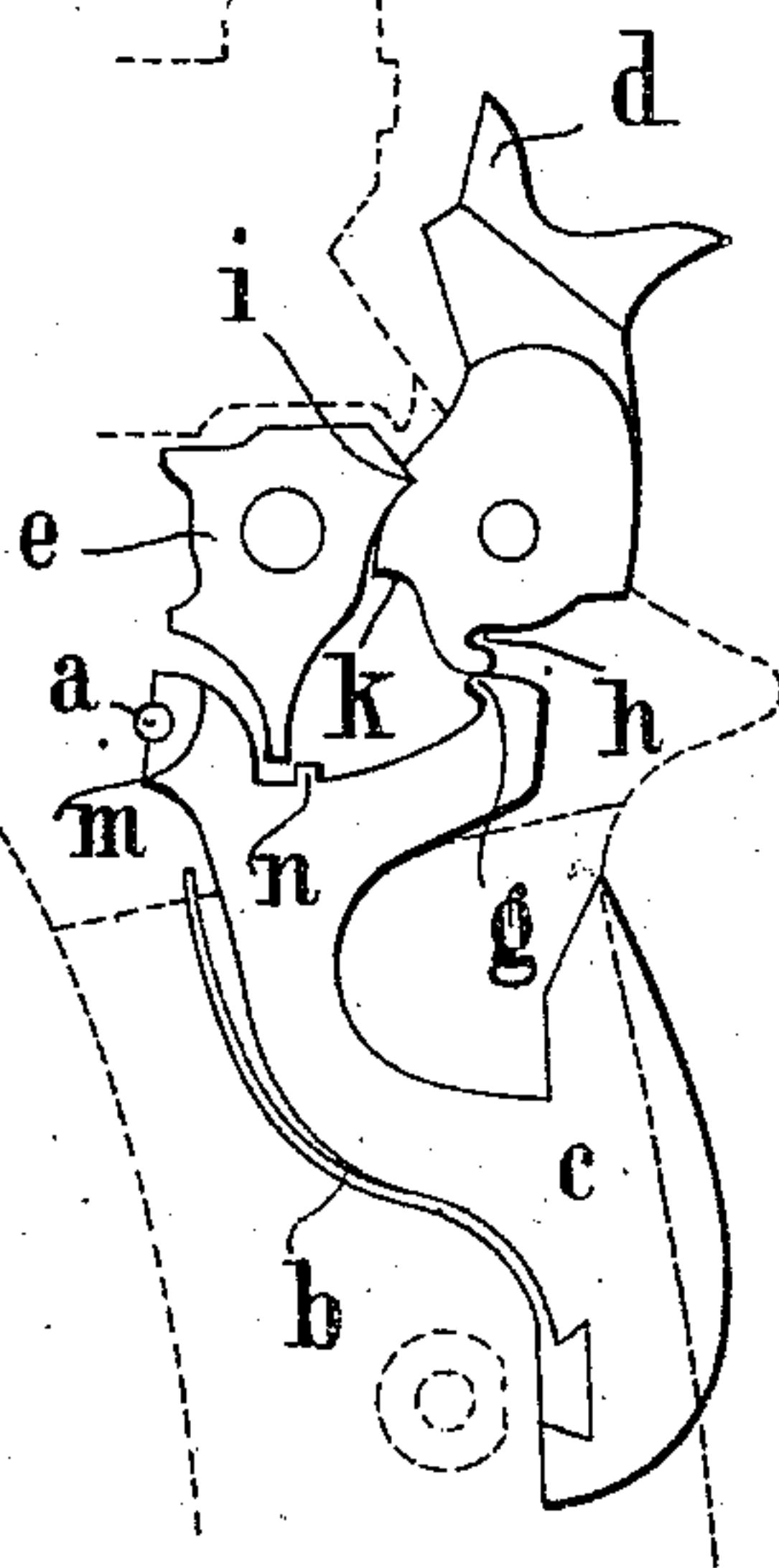


Fig. 6.

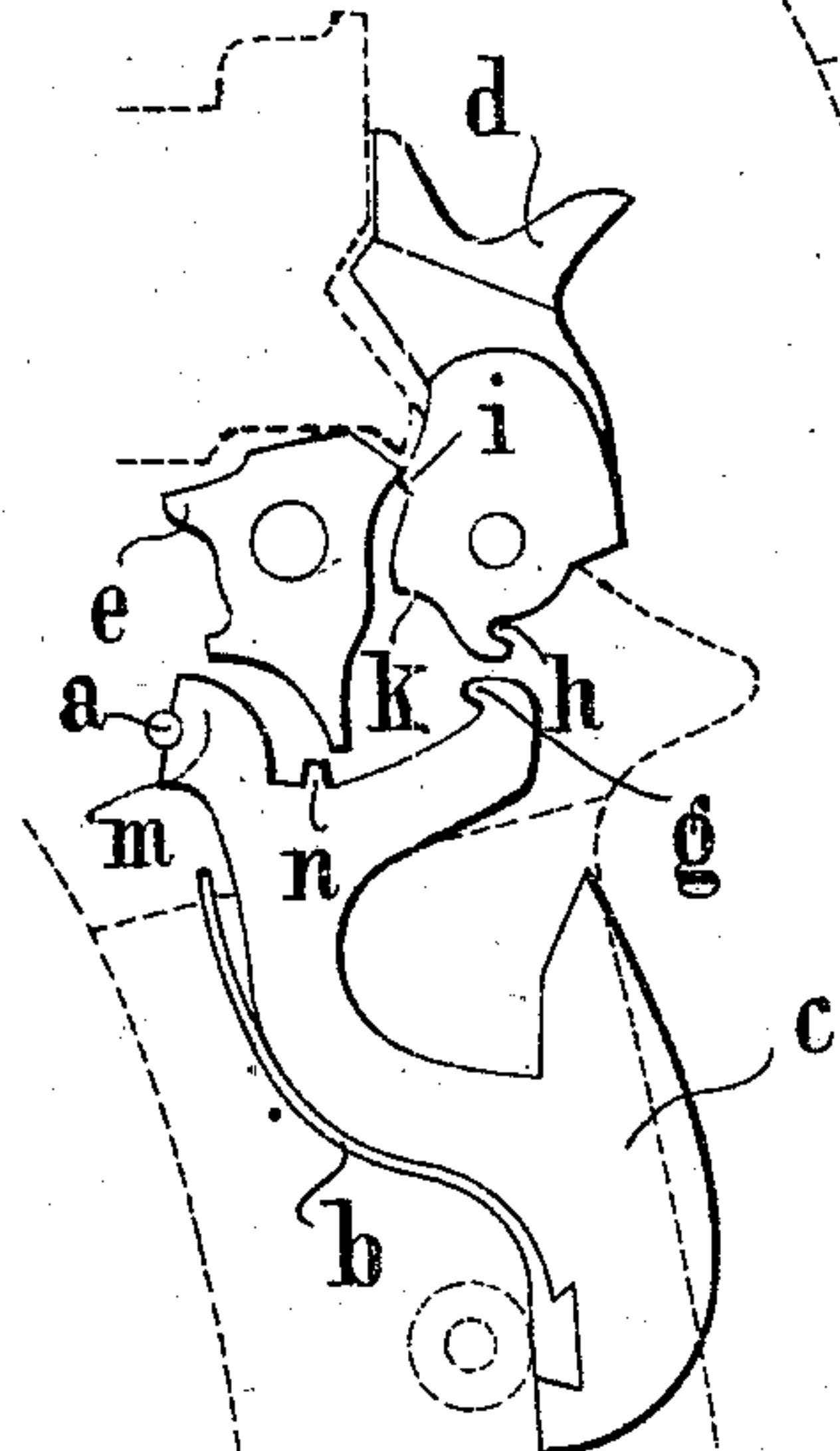
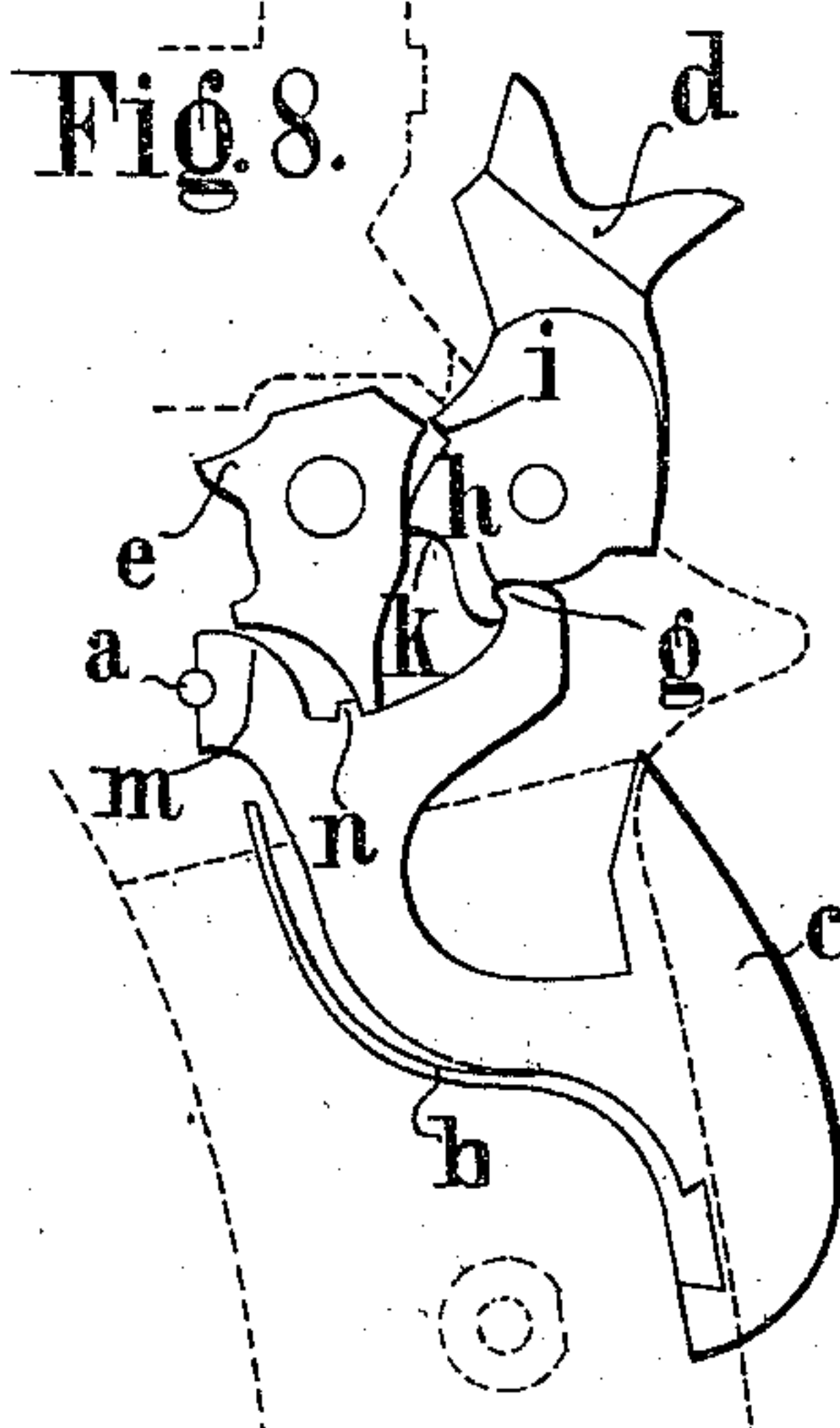


Fig. 8.



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Fig. 9.

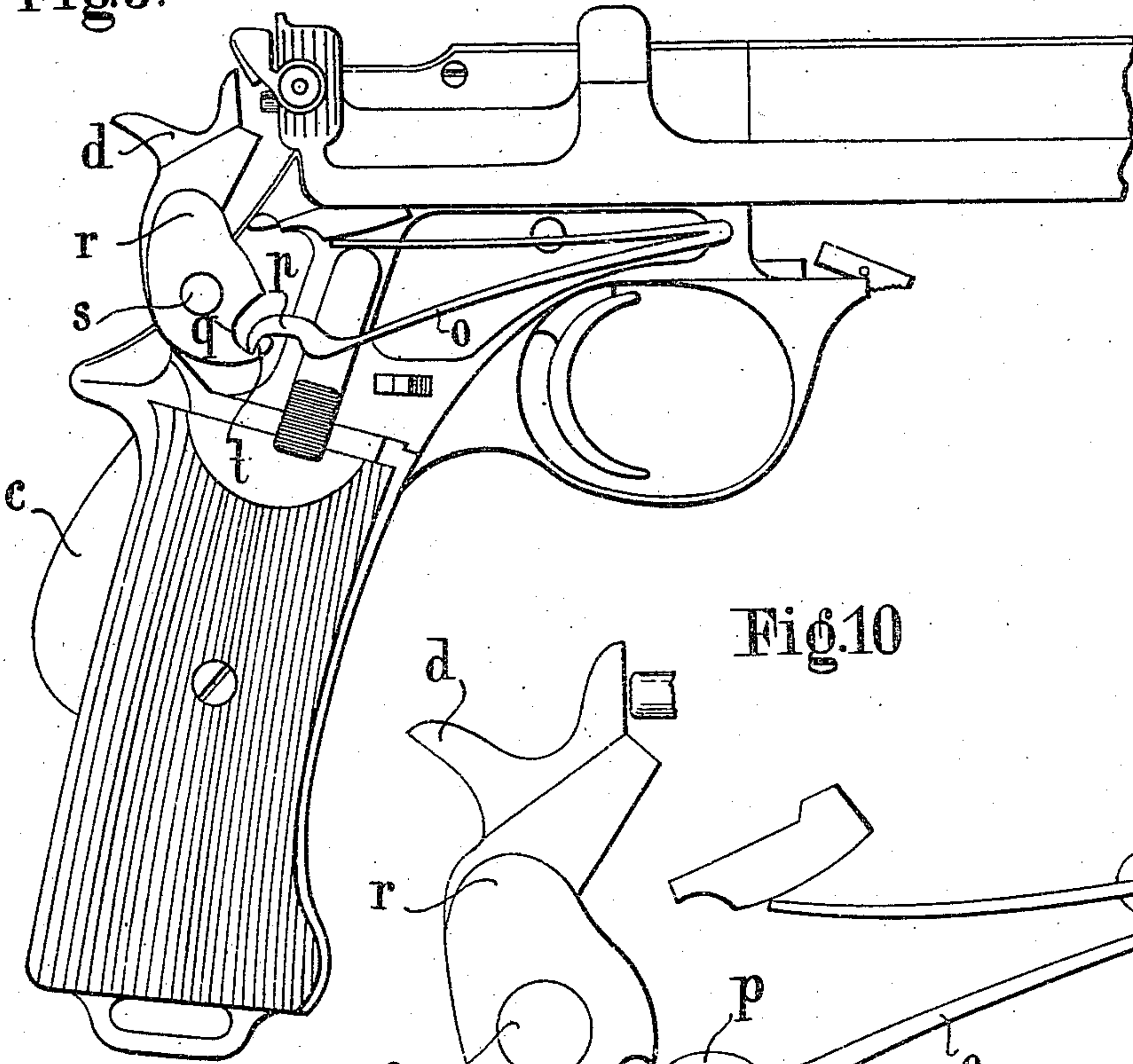


Fig. 10

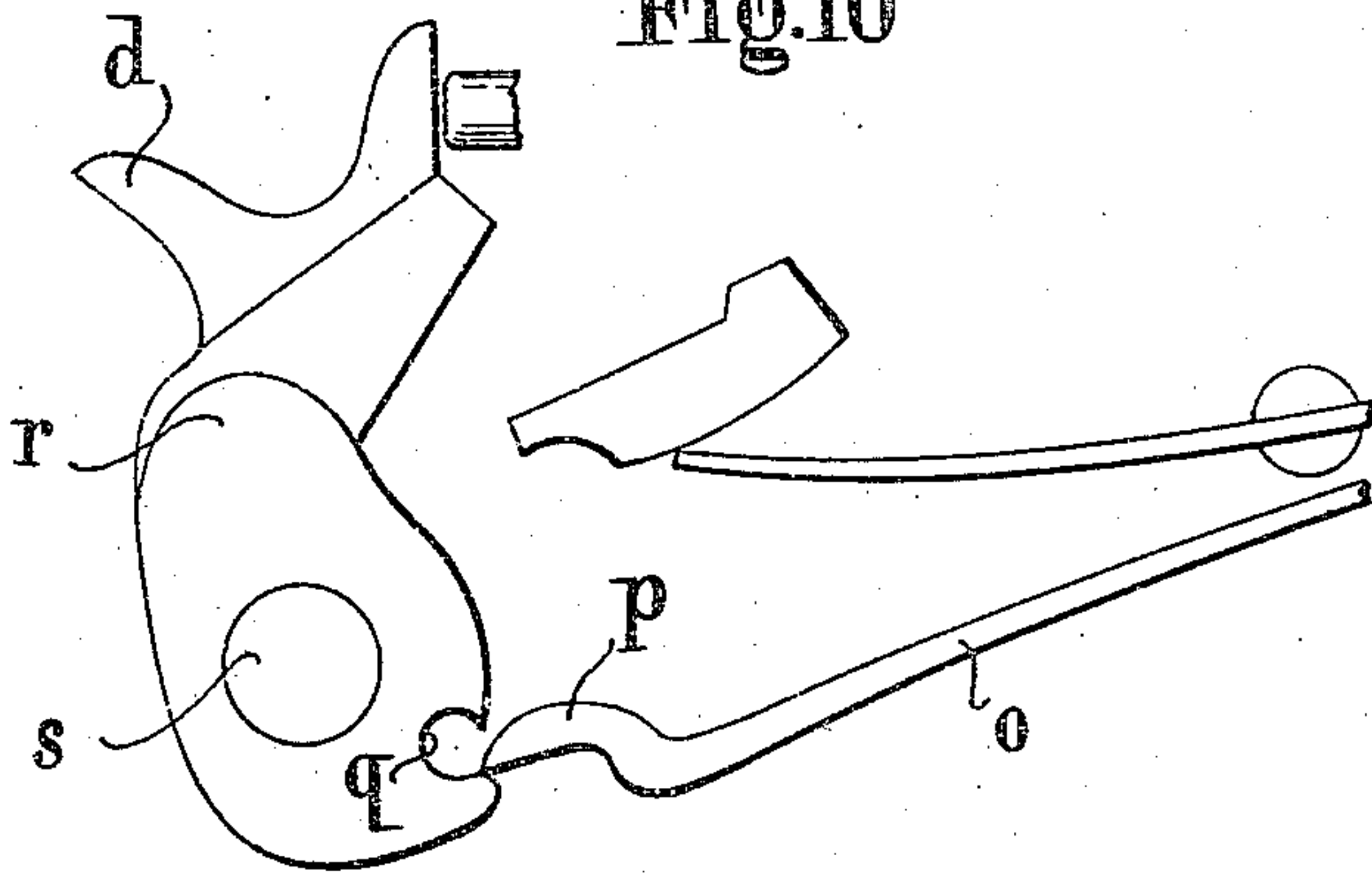
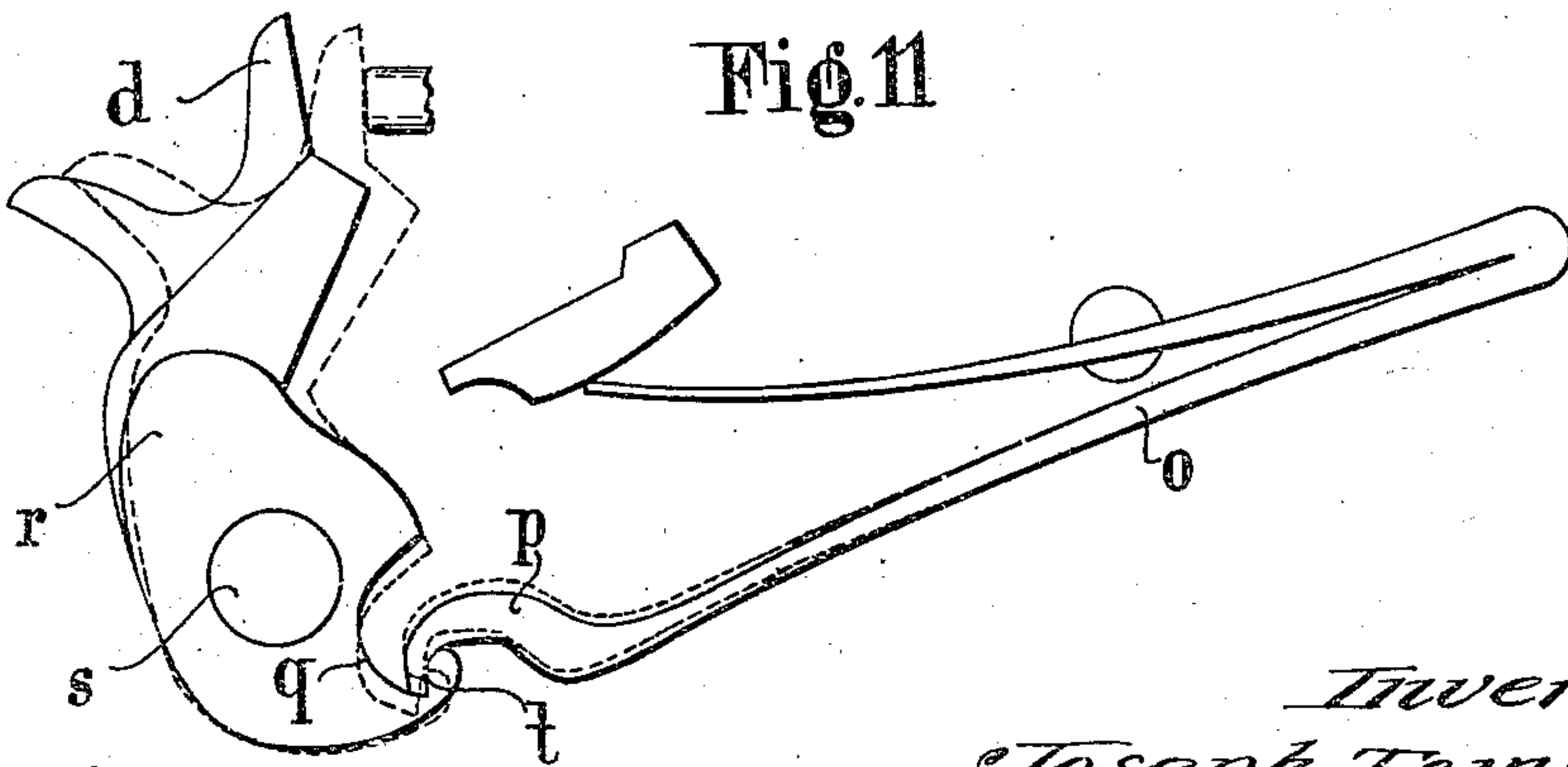


Fig. 11



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UNITED STATES PATENT OFFICE.

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AUTOMATIC SAFETY APPLIANCE FOR PISTOLS, &c.

939,111.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed October 16, 1907. Serial No. 397,717.

To all whom it may concern:

Be it known that I, JOSEPH TAMBOUR, subject of the Emperor of Austria-Hungary, residing at Nanterre, near Paris, France, have invented certain new and useful Improvements in Automatic Safety Appliances for Pistols or the Like, of which the following is a specification.

This invention relates to an automatic safety appliance for pistols or the like by means of which accidental discharge of the weapon is prevented, while the hammer can be uncocked by hand without operating the safety appliance, so that should the hammer slip during the uncocking it is prevented from striking the firing pin by the safety appliance. For this purpose the invention provides that the sear or the hammer is supported by means of projections on a safety lever subject to spring action. When the weapon is gripped for intentional firing or when the hammer is over-cocked, the safety lever is pressed from the position in which it supports the sear or hammer. To prevent the hammer from catching on the safety lever, should this not have been sufficiently pressed, the projection provided for engaging the sear may hold the latter when the hammer is cocked until the safety lever or a projection thereon has been completely moved out of the path of the hammer or of a notch therein.

In small arms the construction of which excludes the usual mechanism for bringing back the hammer, in order to prevent the hammer from remaining on the firing pin in the event of a misfire, in which case the safety lever would not prevent accidental firing should the weapon be dropped or otherwise shaken, the invention provides on the lower part of the hammer plate catch of such weapon a surface sloping toward the axis on which the hammer turns on which surface a claw on the main spring engages, so that when the spring has been released it is raised a little to effect the recoil of the hammer.

The accompanying drawings illustrate the invention as applied to automatic repeating pistols of the Mannlicher type.

Figures 1 to 3^a illustrate one form of the safety appliance mounted on the left hand

side of the pistol, Fig. 1 showing the weapon cocked and the safety lever in normal position; Fig. 2 showing the safety lever displaced by overcocking the hammer; Fig. 3 showing the position of the parts directly after firing and Fig. 3^a the position of the parts when the hammer has been half-cocked or in rebounded position and the trigger released. Figs. 4 to 8 show a modification of the locking appliance. In Fig. 4 the hammer is cocked, in Fig. 5 the safety lever has been moved by overcocking the hammer; in Fig. 6 the parts are in the position which they have directly after firing; in Fig. 7 the position of the parts is that which they have after a misfire and in Fig. 8 the position of the parts is that which they have when the hammer has been released; Fig. 9 shows the right hand side of the pistol with the recoil mechanism according to this invention; Fig. 10 is an enlarged view of the corresponding parts without recoil mechanism as they have hitherto been constructed, and Fig. 11 is a like view of the parts modified according to the invention.

The safety device consists of a lever *c* turning on a pin *a* and subject to the pressure of a spring *b*. In the construction shown in Figs. 1 to 3^a, a projection *f* on this lever supports the sear *e* when the hammer is cocked, as shown in Fig. 1, and supports the hammer by a projection *g* taking into a notch *h* when the hammer is in the normal position, as shown in Fig. 3^a. In the hammer plate there is a notch *i* at such a distance from the notch *h* that when the trigger is released, Fig. 3^a, the hammer is caught simultaneously by the engagement of the safety lever in its normal position in the notch *h*, and by the sear in the notch *i*. Thus, even though the weapon be gripped and the safety lever be pressed inward, the hammer cannot strike the firing pin. When the hammer is cocked, the lever *c* engages with its projection *f* below the sear and supports the latter at the same time that the sear *e* engages in the notch *h*. Thus not only is the sear prevented from being disengaged from the hammer by shaking, but the release of the sear from the cocking notch *h* is only possible when the lever *c* has been

brought out of engagement with the sear which can be effected by the grip on the weapon without any separate grip. If the hammer is to be uncocked by hand (Fig. 1 and dotted position Fig. 2), it is not necessary separately to operate the lever *c*, that is to say the weapon need not be held ready for firing; for by merely overcocking the hammer, as indicated in Fig. 2, the lever *c* is disengaged from the sear and thereupon the hammer can be uncocked after pulling the trigger. When, in being uncocked the hammer has moved part of its way forward, the lever *c* is free to move back again under the action of the spring into its normal position, so that should the uncocked hammer slip from the thumb it will be cocked by the engagement of the lever *c* in the notch *h* and accidental firing cannot occur.

In the construction shown in Figs. 4 to 8, safety lever *c* has a head *m* and a projection *n*, the lower end of the sear *e* lying between this head and projection when the hammer is cocked; in this position the sear is held fast and the trigger is therefore locked. The projection *n* is so high that the trigger can only be actuated when the projection *g* on the lever *c* is removed from the path of the safety notch *h* in the hammer, that is to say when the safety lever has been completely pressed inward. When the hammer is overcocked, Fig. 5, the safety lever *c* as in the former construction, is displaced, so that the sear can be operated by moving the trigger. When the weapon is gripped for intentional firing the safety lever *c* is pressed inward, so that when the trigger is pulled the sear is displaced, its lower end being able to pass over the projection *n*, Fig. 6. Should there be a misfire, Fig. 7, the hammer *d* is cocked by the sear engaging in the notch *i* as soon as the trigger has been released. When the hammer is released from the cocking notch the lower end of the sear rests against the outside of the projection *n*, Fig. 8, and the lever *c* is locked, since its projection *g* is engaged in the notch *h*, so that it cannot be pressed inward. On cocking the hammer, the sear and the safety lever are returned to their normal positions.

The mechanism for bringing back the hammer on the right hand side of the weapon, Figs. 9 to 11, is to prevent the hammer remaining on the firing pin should there be a mis-fire, and thus cause the weapon to fire when shaken. For this purpose the main spring *o* has a claw *p* which engages in the catch *q* in the right hand hammer plate which can turn on the bolt *s*. At the lower end of the catch *q* is an inclined surface *t* which is nearer to the axis of the hammer at its upper end than at its lower end. In consequence of this, as the hammer springs forward at the last portion of its

motion, the spring *o* is slightly raised as shown in dotted lines Fig. 11, as the surface *t* acts as an inclined plane, along which the claw *p* slides upward; as the spring returns the claw *p* slides downward along the surface *t*, so that the parts take up the position shown in full lines in Fig. 11, in which position the opposite side of the hammer plate can come in engagement with the sear and the safety lever. In weapons in which a tumbler coöperates with the main spring, the same arrangement can obviously be used in the corresponding catch of the tumbler.

Claims.

1. In an automatic safety appliance for pistols and the like, the combination with a sear, of a hammer having a shoulder, a spring-actuated safety lever having projections to engage the sear and hammer shoulder, the sear and hammer being free from said projections either by the act of gripping the weapon for intentional firing or by overcocking the hammer, a direct pull on the hammer causing the shoulder of the latter to engage and actuate the safety lever to release the sear, leaving the lever free to return to normal position during the fall of the hammer to arrest the latter before it reaches the firing pin.

2. In an automatic safety appliance for pistols or the like, the combination of a sear, a trigger, a hammer having a hammer plate provided with notches, and a spring-actuated safety lever having projections to engage the sear and the notches of the hammer plate, the notches being so positioned that when the trigger is released and the cocked hammer has been let down, the hammer is supported simultaneously by the sear and the safety lever when the latter is in its normal position.

3. In an automatic safety appliance for pistols and the like, the combination of a sear, a hammer having a hammer plate with notches therein, one of said notches being a cocking notch, and a safety lever having projections to engage the sear and hammer plate, one of the projections engaging the sear when the hammer is cocked until the remaining projection is disengaged from the hammer plate, a direct pull on the hammer causing a part of the latter to engage and actuate the safety lever to release the sear and freeing said lever for return to normal position during the fall of the hammer to arrest the latter before it reaches the firing pin.

4. In an automatic safety appliance for pistols or the like, the combination with a sear and hammer, of a spring-actuated safety lever having projections to engage the sear and hammer, a hammer plate having catch means, and a main spring having an inclined surface and a claw-shaped part whereby as

the hammer moves forward the spring is raised and slides backwardly on the surface of the catch to bring back the hammer to half-cocked position, in order to permit engagement therewith of the sear and the safety lever.

In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

JOSEPH TAMBOUR.

Witnesses:

JOSEF RUBASCH,

ROBERT W. HEINGARTNER.