No. 804,349. PATENTED NOV. 14, 1905.

K. F. P. STENDEBACH.

FIREARM WITH DROP DOWN BARREL.

APPLICATION FILED APR. 24, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

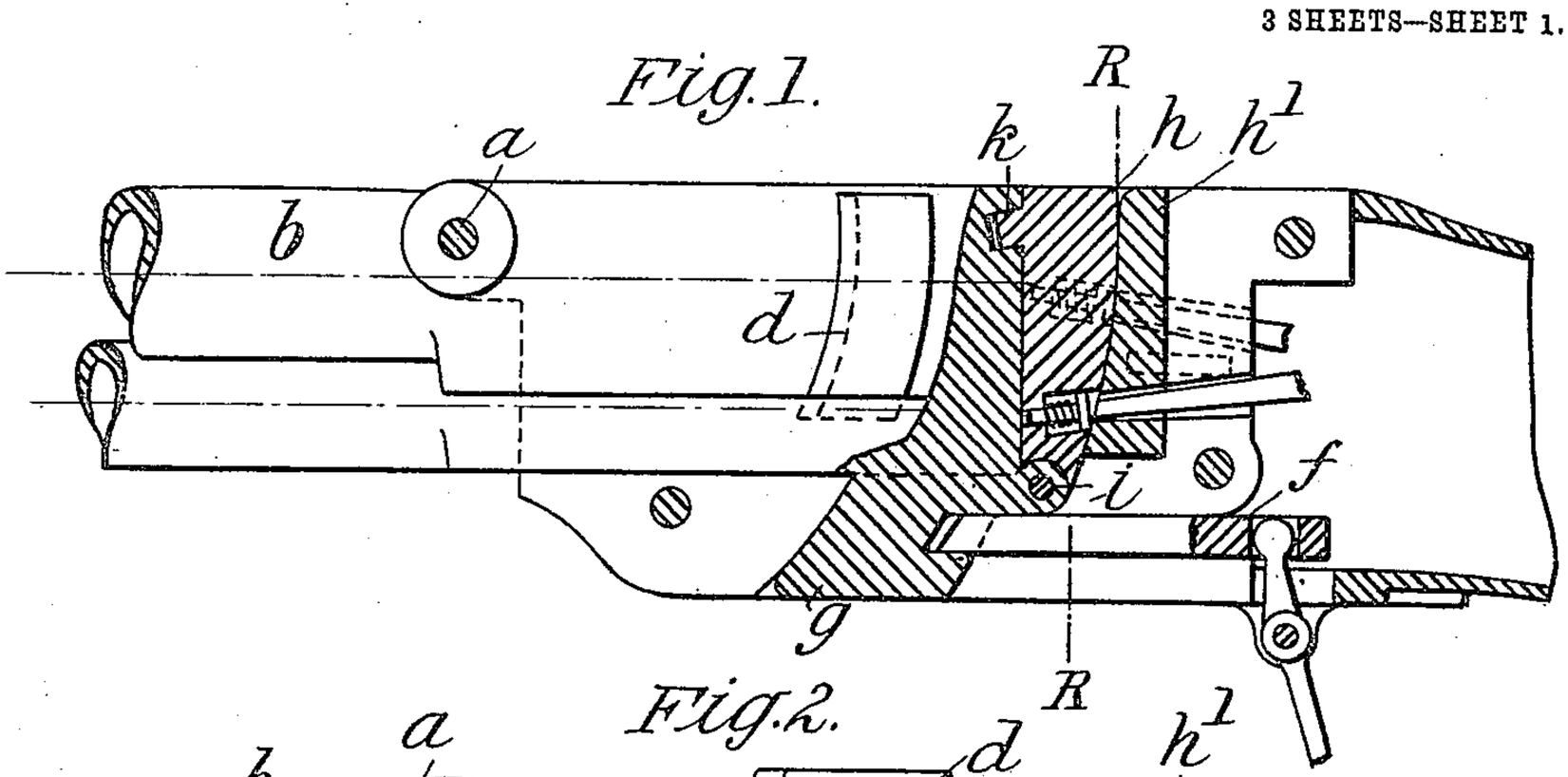


Fig. 2.

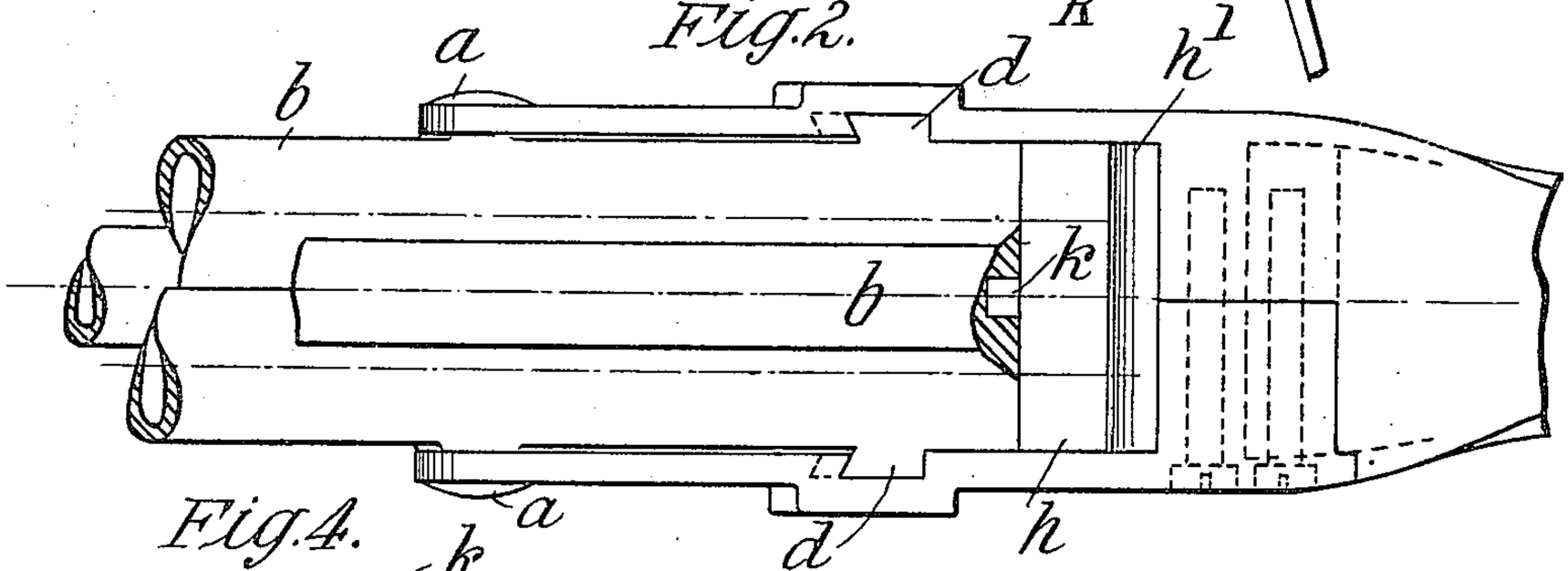
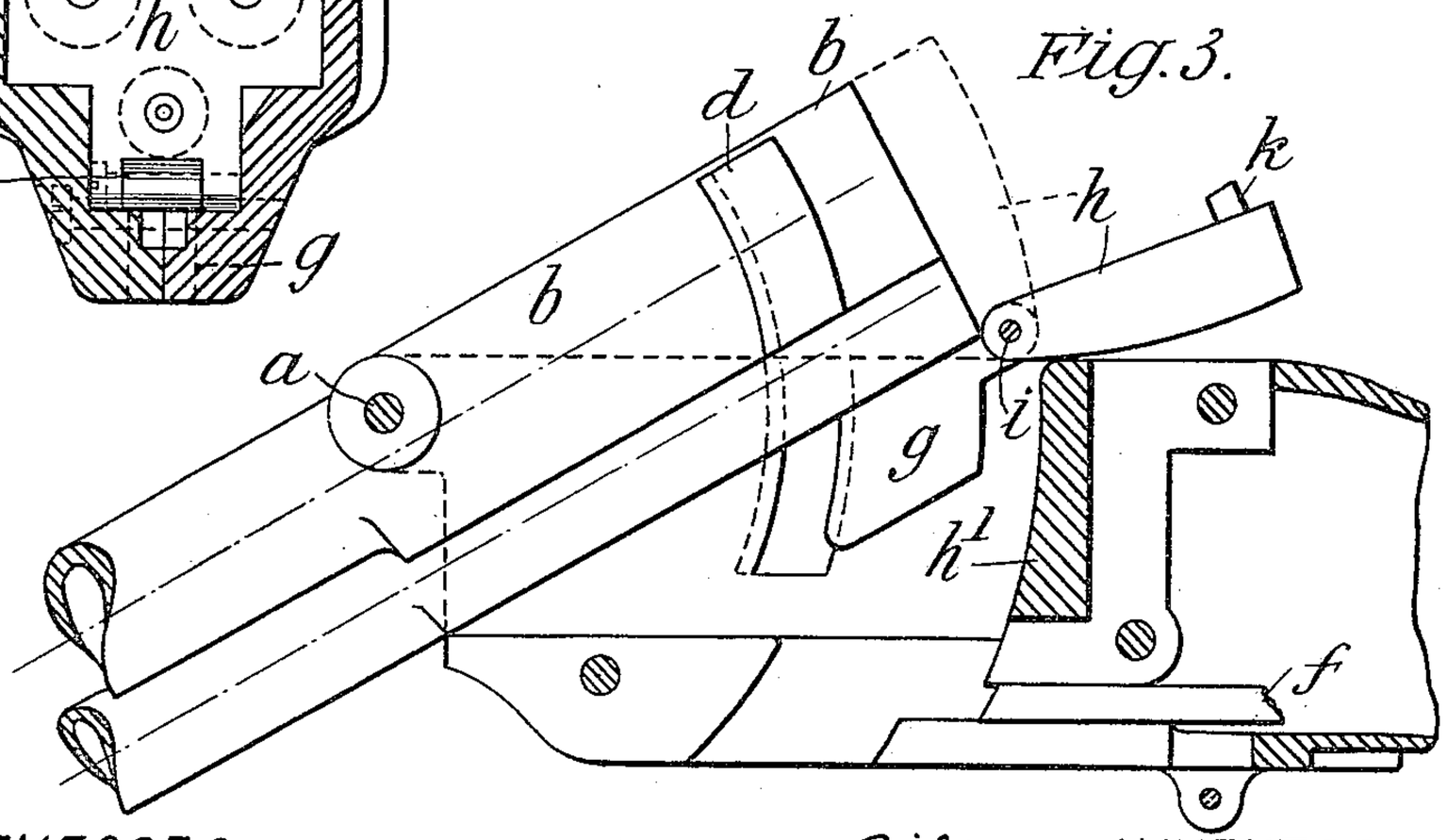


Fig. 4.

Fig. 3.



WITNESSES.

Albert Jones

Samuel Percival

Philipp Karl Friedrich Stendebach INVENTOR

By his Attorneys.

Wheatley & Mackenzie

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3 SHEETS—SHEET 2.

Fig.5.

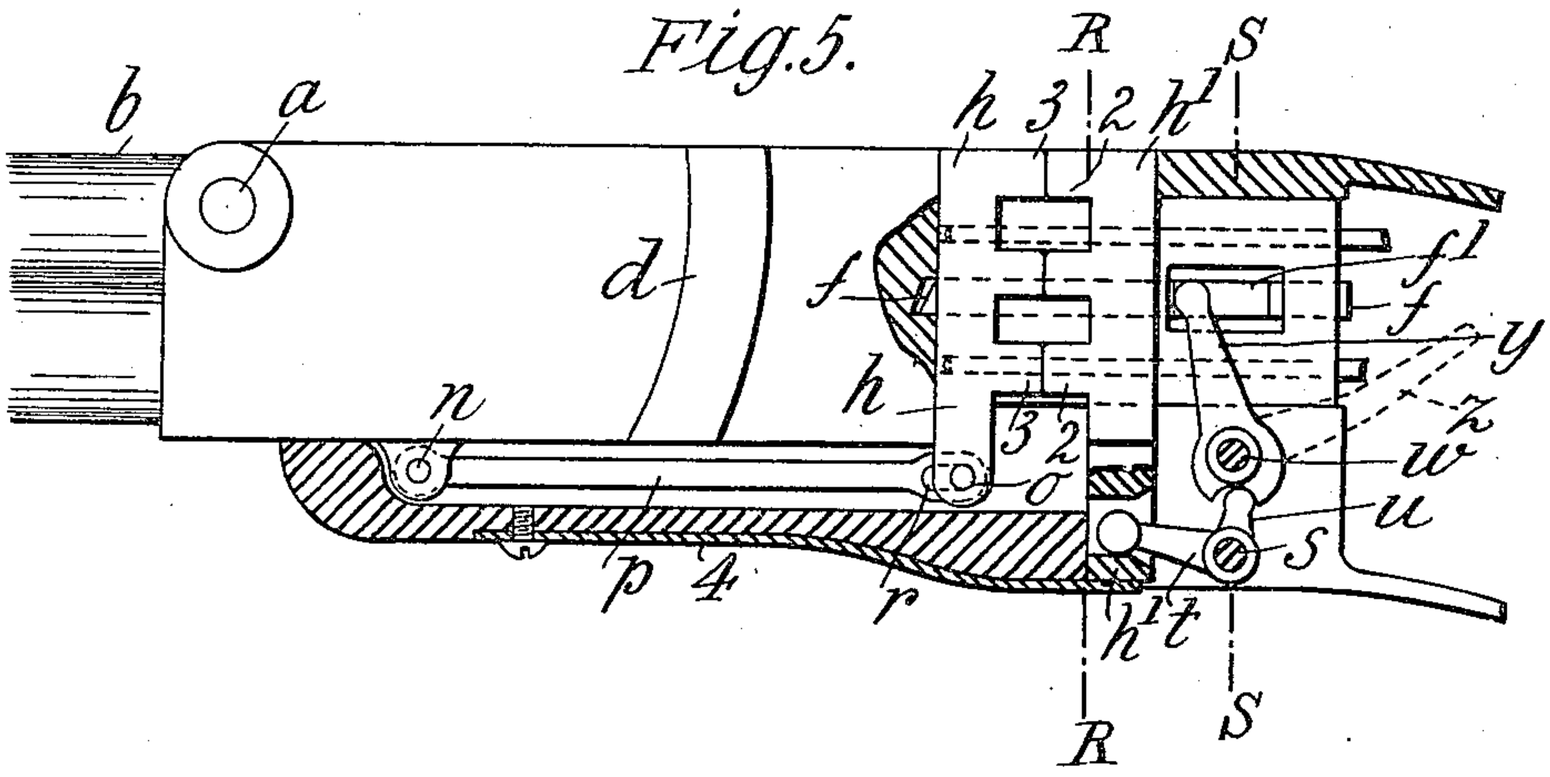


Fig.6

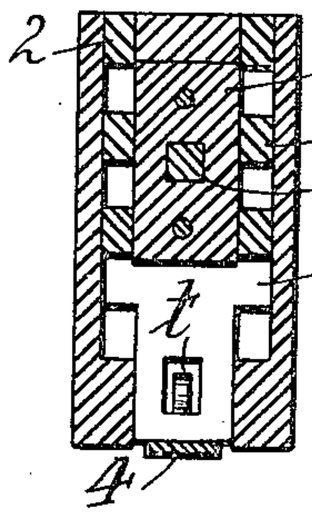


Fig.7.

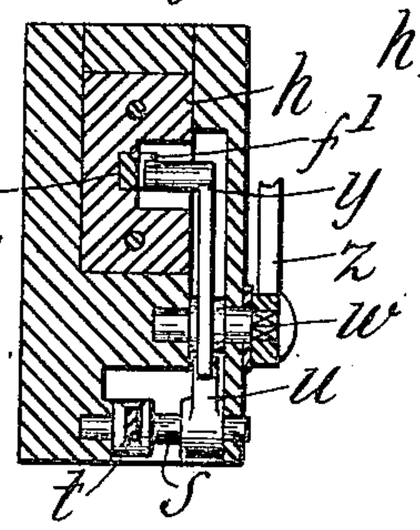


Fig.8.

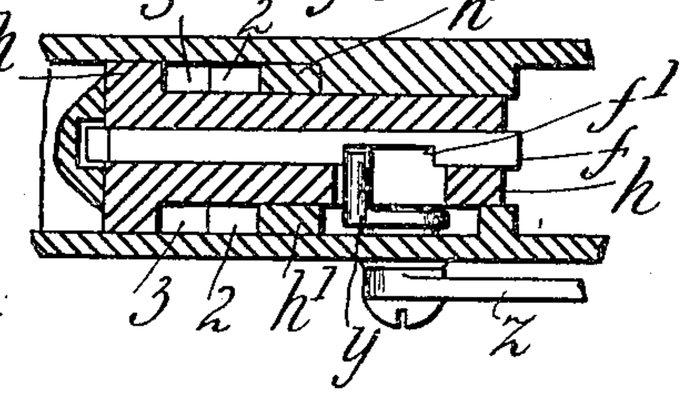
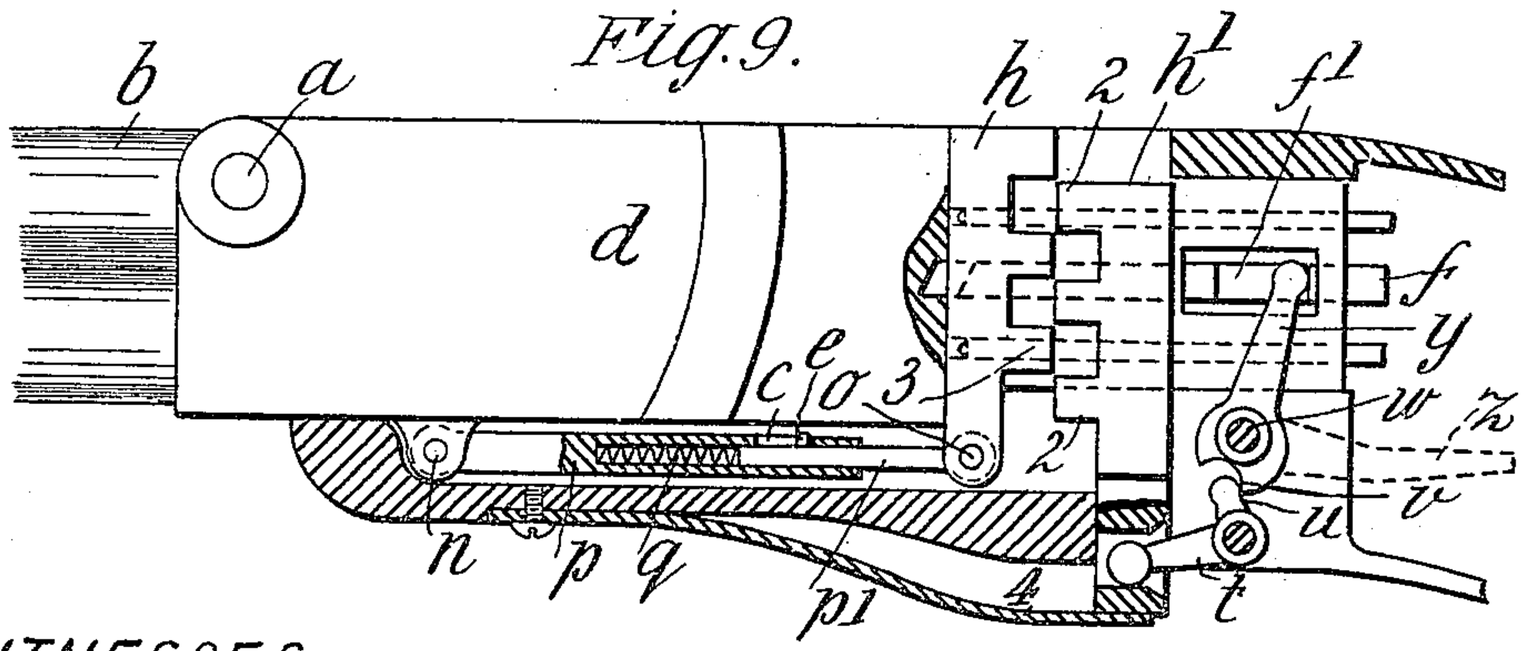


Fig.9.



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3 SHEETS—SHEET 3.

Fig. 10.

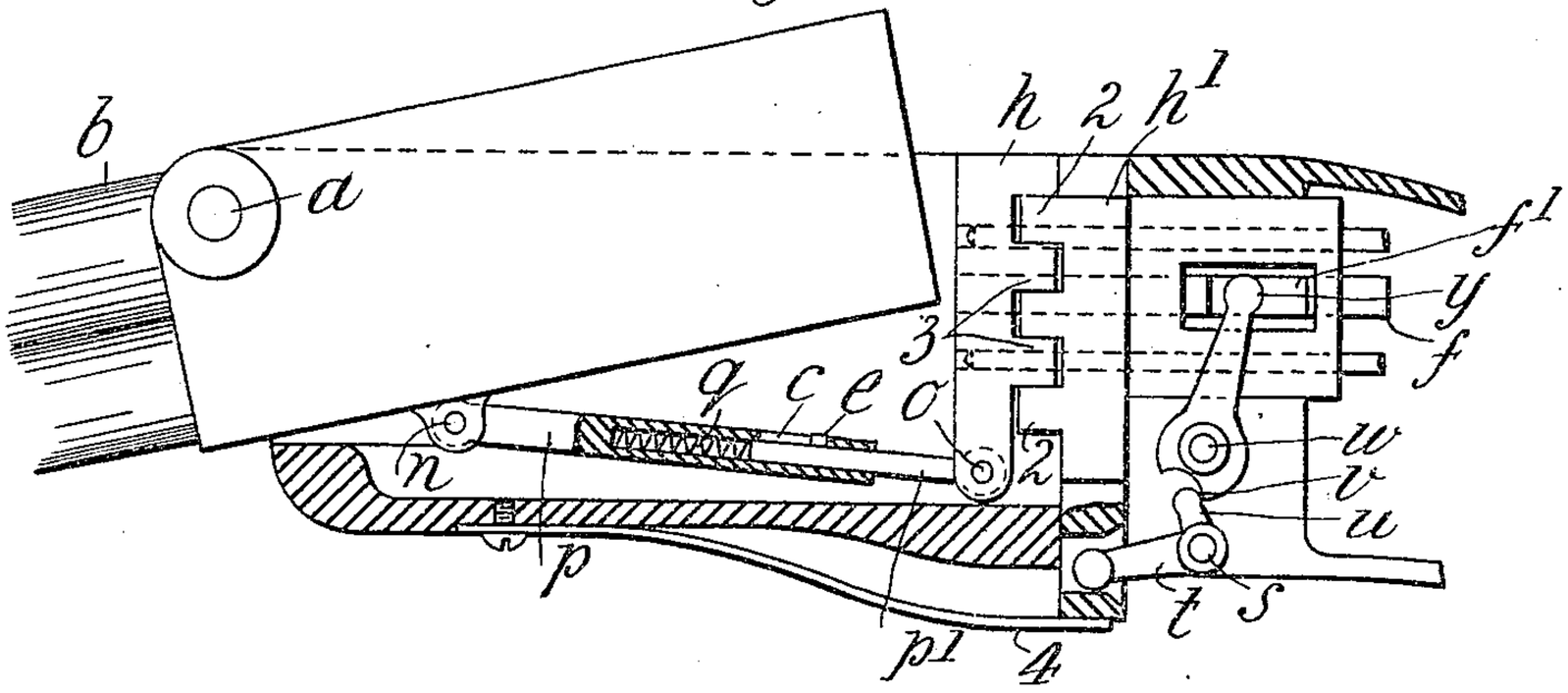


Fig. 11.

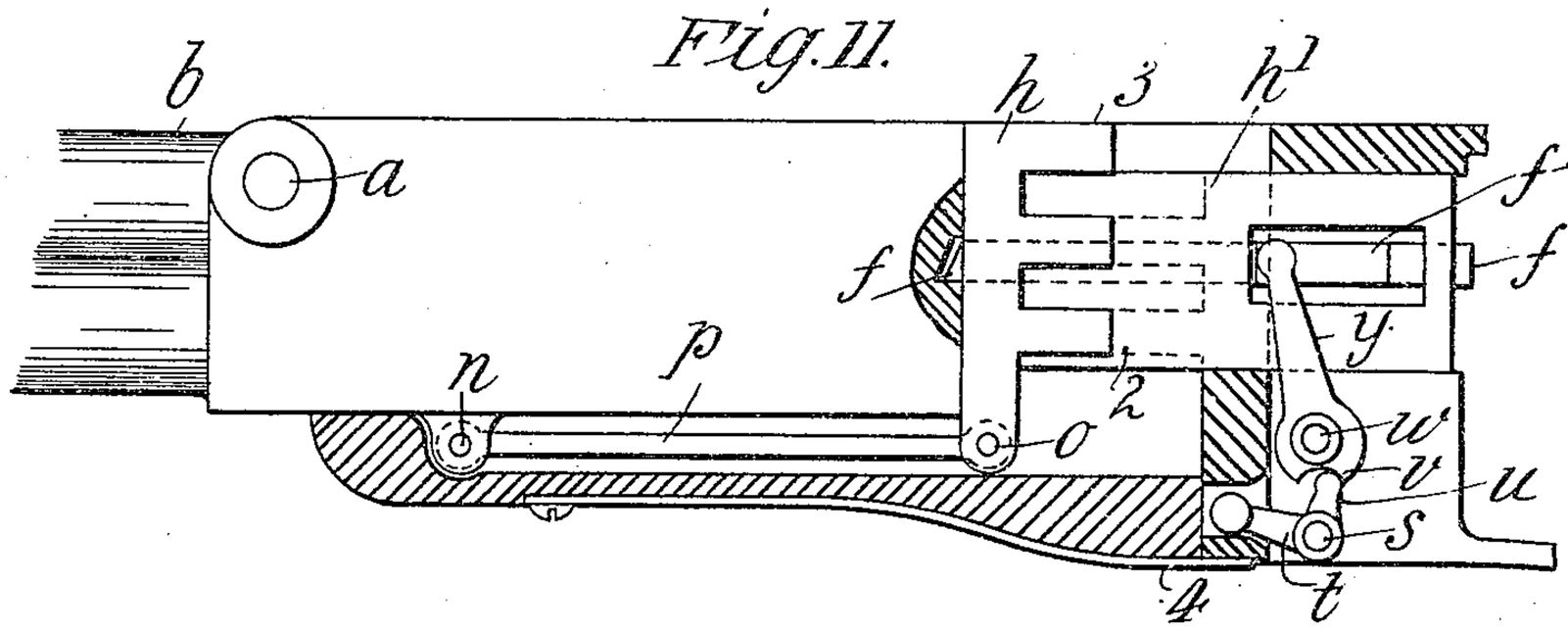
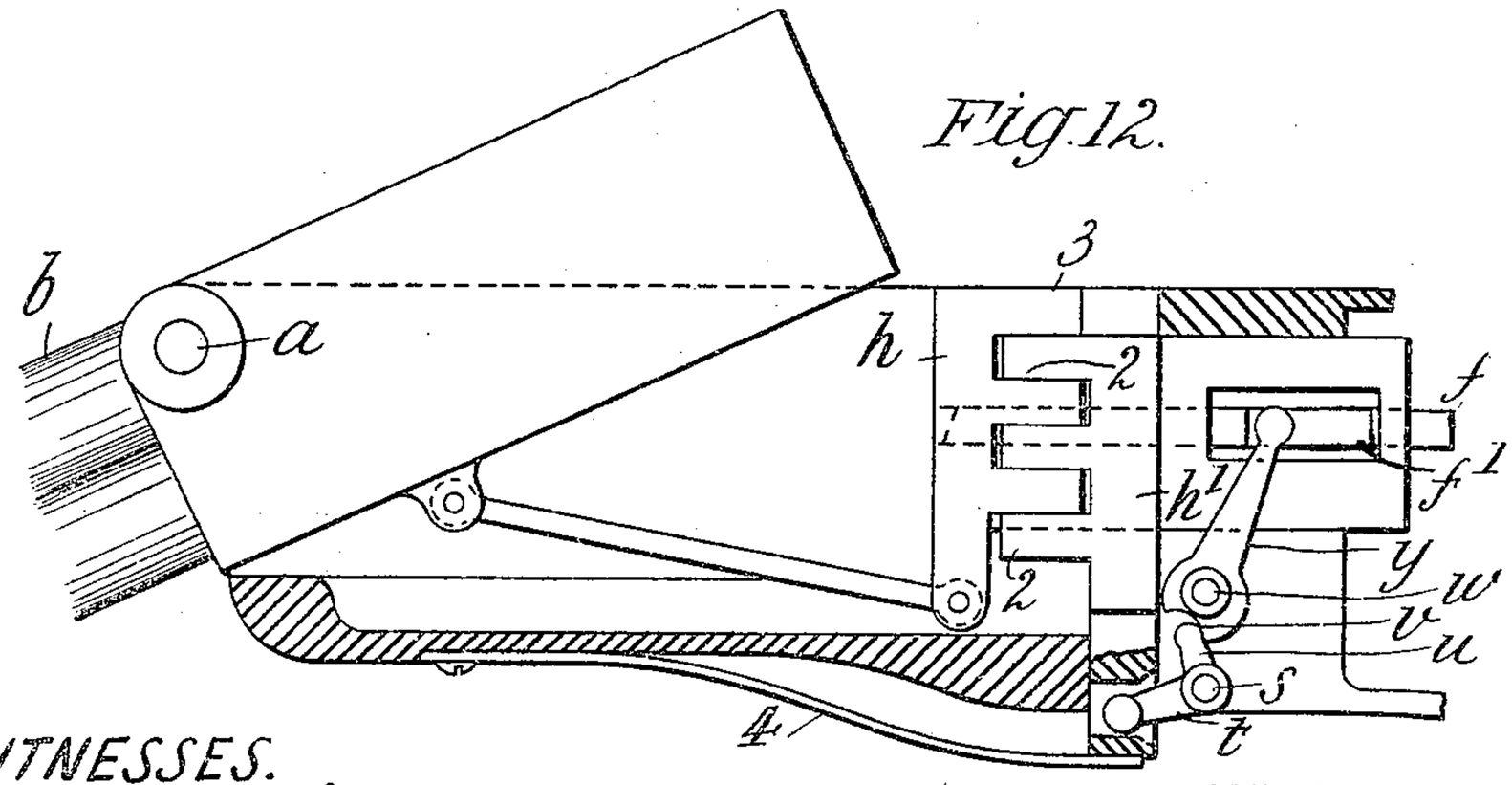


Fig. 12.



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Wheatley & Mackenzie

UNITED STATES PATENT OFFICE.

KARL FRIEDRICH PHILIPP STENDEBACH, OF LEIPSIC-GOHLIS, GERMANY.

FIREARM WITH DROP-DOWN BARREL.

No. 804,349. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed April 24, 1905. Serial No. 257,125.

To all whom it may concern:

Be it known that I, KARL FRIEDRICH PHILIPP STENDEBACH, a subject of the German Emperor, residing at 5 Weinlisstrasse, Leipsic-Gohlis, Germany, have invented certain new and useful Improvements in Firearms with Drop-Down Barrels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to breech-loading firearms with drop-down barrels, and has for its object to prevent the barrel from accidentally tilting and by suitably mounting the barrel as well as by suitably forming the lock to keep the barrel firmly in position.

It is well known that at the moment when a drop-down firearm is fired there is a different strain on the barrel and on the breech-frame. In the first place the gas-pressure tends either to pull the barrel away from the lock in the direction in which the shot is fired or to cause it to tilt downward and, further, in the case of guns with barrels lying adjacent to one another to cause the barrel to turn and to tilt sidewise. The tilting has already been prevented by altering the position of the pivot of the barrel in the barrel-axis, this having formerly been low, the side tilting or turning of the barrel being prevented by means of ribs arranged below the axis in grooves formed in the breech-frame. It is found that the low-lying ribs do not effectively prevent the side tilting, nor does the arrangement of the pivot in the axis increase the reliable action of the gun to a great extent, as this pivot can never be so precisely arranged in the axis as to exclude the possibility of any tilting. Moreover, with the arrangement referred to the pivot is required to support the main pressure, so that when it is really accurately balanced the barrel is to a certain extent suspended in the breech-frame and without any secure position.

In order that in single drop-down-barrel firearms, but particularly in those with more than one barrel, the barrel may under all circumstances have a permanently-secured position, in the present invention the pivot of the barrel or of the group of barrels is placed above the axis of the upper barrel, which necessitates the break-piece having a form entirely different from what has been usual hitherto.

In the drawings the invention is illustrated as applied to a triple-barrel gun in which the ball-barrel is arranged under the shot-barrels.

Figure 1 is a longitudinal section of the breech-frame; Fig. 2, a plan of Fig. 1. Fig. 3 shows the breech-frame with the barrels tilted down, Fig. 4 being a transverse section at R R, Fig. 1. Figs. 5 to 12 illustrate another form of the arrangement of the breech-frame, Fig. 5 being a longitudinal section of the lock in the locked position; Figs. 6 and 7, transverse sections through R R and S S, respectively, in Fig. 5; Fig. 8, a partial sectional plan of Fig. 5; Fig. 9, a partial longitudinal section of the lock with the break-piece released; Fig. 10, the same with the barrels partially tilted. Figs. 11 and 12 represent a form of the lock in the locked and open position, respectively.

The pivot *a* of the system of barrels *b* is above the axis of the upper barrel. The group of barrels is provided at the sides with the two ribs *d*, which are dovetailed into the breech-casing. The two pieces *d* are chiefly intended for taking up the pressure of the barrels when a shot is fired and, like the hook-like lump *g*, which is arranged to engage below, move concentrically to the point *a* when the weapon is opened and closed, so that these, regarded from the point *a* as the pivot for the whole arrangement of barrels, engage like openings in the breech-frame.

In order to enable the weapon to be opened and closed, it has been heretofore necessary to form the break-piece in two parts *h h'*, or, more correctly, to introduce between the barrels *b* and the break-piece *h'* an intermediate piece *h*, rotatively connected with the barrels at *i* and whose surface remote from the barrels forms the arc of a circle struck from center of pivot *a*. For the purpose of easing the hinge *i* the part *h* is further provided with a central or two side projections *k*, which engage in the barrel arrangement from the back. In case the breech-frame is made of two parts divided longitudinally the part *h'* insures the two halves of the casing being under uniform pressure. It is easily interchangeable, and this enables the whole breech to be subsequently adjusted when worn.

The whole device is held locked in the known manner by means of the bolt *f*, which is movable longitudinally and engages in the recess in the lump *g*.

As the barrel arrangement has a tendency to slide forward and downward, the bolt *f* and

the pivot *a* are relieved at the moment of firing, for which reason they need only be strong enough to keep the device locked.

In the case of locks put under tension automatically the tension can be effected simultaneously by means of the bolt *f*.

The break-piece, which is arranged movably in relation to the barrels, may also be provided in drop-down weapons, in which the pivot is within the axis of the barrel.

The movable break-piece may also be arranged as shown in Figs. 5 to 12. The break *h* is movable longitudinally in the lock, being blocked or secured by means of the teeth or projections 2 on the blocking-piece *h'* when the weapon is locked. This blocking-piece *h'* is pushed over the back retreating part of the break-piece *h*, which latter is provided with teeth 3 similar to those on the blocking-piece *h'*. By means of a suitable device the blocking-piece *h'* can be moved vertically to the axis of the barrel, so that the teeth 2 take between the teeth 3. The break can be moved away from the barrels by means of a special device operated by hand, or, as shown in the drawings, may be actuated by means of a rod *p*, connected at *n* with the barrels and by the other end to the pin *o*. As when the barrels are tilted out the rod must move to a greater distance longitudinally than the depth of the teeth 2 3 in the form shown in Fig. 5, the rod is furnished with a slot *r*, in which the pin *o* engages, so that when the barrels are tilted out the lower edge of the barrels first slides along the break-face without actuating the same, and the break *h* is only pushed back by the rod *p* when the pin *o* reaches the end of the slot *r*. If, on the contrary, the tilted system of barrels again moves into the lock, the rod *p* first executes a lost motion before drawing the break-piece *h* against the back surface of the barrels. As the teeth 3 have been moved out of the gaps between the teeth 2, the spring 4 can return the blocking-piece *h'* again to its starting position, Figs. 5 and 11. A lever *t*, firmly connected with the shaft *s*, engages with the blocking-piece *h'*. Further, on the shaft *s* is a short lever *u*, which lies in a notch *v* in a lever *y*, fixed to the shaft *w*. The lever *y* comes within the range of a notch *f'*, provided on the locking-bolt *f*, the notch being of such dimensions that the bolt *f* is only moved in the one or the other direction after the lever *y* has moved longitudinally to suitable extent, so that when the hand-lever *z*, fixed outside to the shaft *w*, is lowered the slide *h'* is first moved downward alone by means of the levers *u* and *t* and the shaft *s* and then the locking-bolt *f* drawn back in the course of the further sliding movement. In the reverse direction the parts just referred to are operated by the spring 4, which comes into action without hindrance, when the locking is effected—that is to say, the barrels are tilted in and the break-piece *h* has been moved by the rod *p* out of the teeth of the slide *h'*.

In the form according to Figs. 9 and 10 the necessary lost motion of the tension-rod *p* is compensated by means of a rod *p'*, that telescopes into it and which is pressed outwards by a spring *q*, while its motion is restricted by the slot *c* and the pin *e*. The lost motion of the rod *p* can be entirely obviated if the teeth 2 3 be made of sufficient length, as shown in Figs. 11 and 12.

What I claim, and desire to secure by Letters Patent, is—

1. In a firearm with drop-down barrel, a breech-frame, a barrel pivoted in the frame at a point above the axis of the barrel, and means for locking the barrel in the frame, substantially as described.

2. In a firearm with drop-barrels, a breech-frame, barrels pivoted in the frame at a point above the axis of the top barrel, and means for locking the barrels in the frame, substantially as described.

3. In a firearm with drop-down barrel, a breech-frame, a barrel pivoted in the frame at a point above the axis of the barrel, a break-piece movable longitudinally in the breech-frame and provided with projections or teeth, a spring blocking-piece or slide adapted to move in contact with the toothed face of the break-piece also provided with projections or teeth adapted to abut against the teeth of the break-piece to block the break-piece and thus lock the barrel in the closed position, a locking-bolt adapted to lock the parts in the closed position and means for releasing the blocking and locking parts, substantially as described.

4. In a firearm with drop-down barrel, a breech-frame, a barrel pivoted in the frame at a point above the axis of the barrel, a break-piece movable longitudinally in the breech-frame and provided with projections or teeth, a spring blocking-piece or slide adapted to move in contact with the toothed face of the break-piece also provided with projections or teeth adapted to abut against the teeth of the break-piece to block the break-piece and thus lock the barrel in the closed position, a locking-bolt adapted to lock the parts in the closed position, means for withdrawing the locking-bolt and blocking-piece to free the break-piece and barrel and a lost-motion device connecting the break-piece with the barrel and in such manner that the break-piece is moved longitudinally as the barrel is opened or closed.

In testimony whereof I have affixed my signature in presence of two witnesses.

KARL FRIEDRICH PHILIPP STENDEBACH.

Witnesses:

HERM. SACK,

RUDOLPH FRICKE.