

(No Model.)

F. STOLZENBERG.
TURRET HEAD.

No. 488,152.

Patented Dec. 13, 1892.

Fig. 1

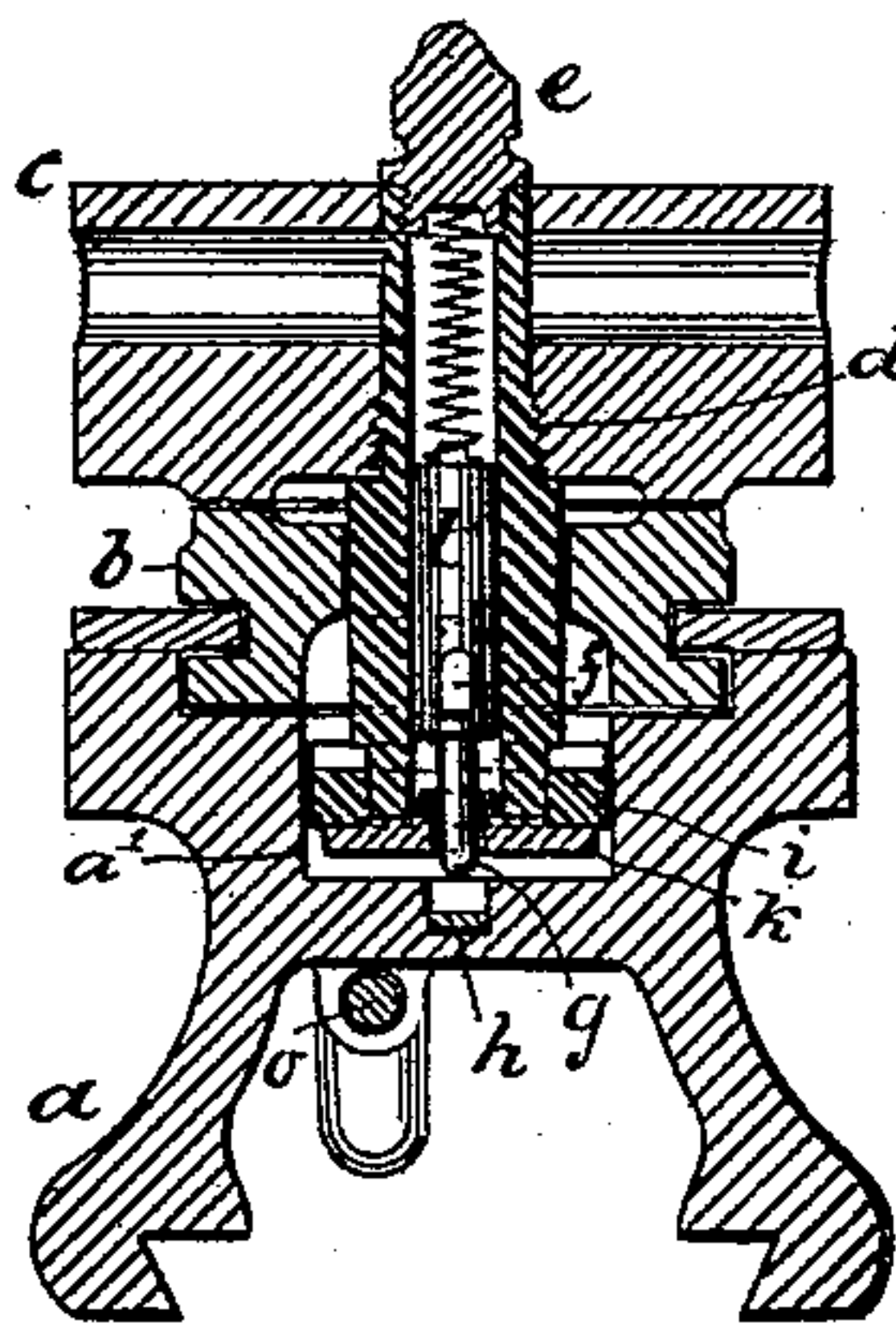


Fig. 2.

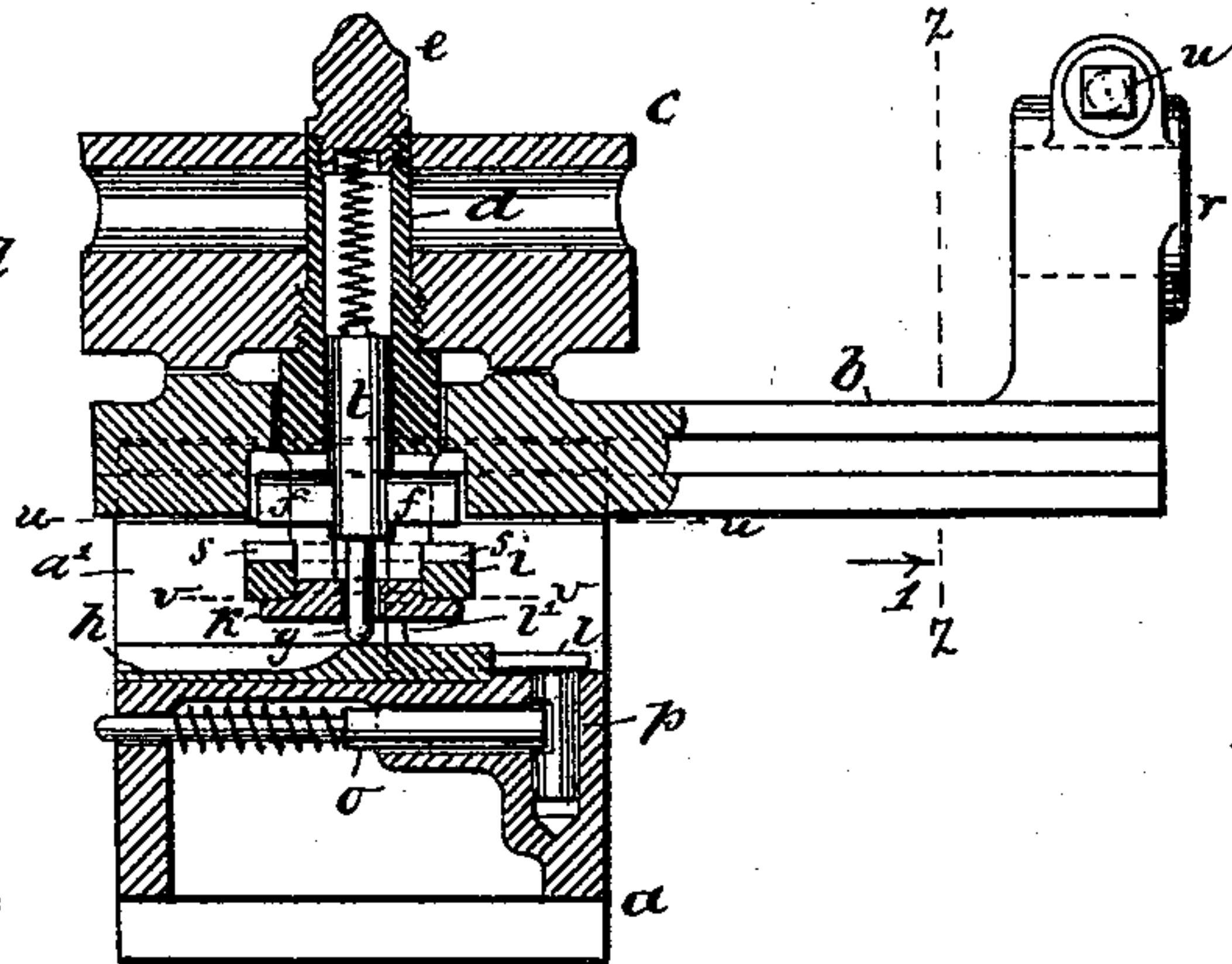


Fig. 4.

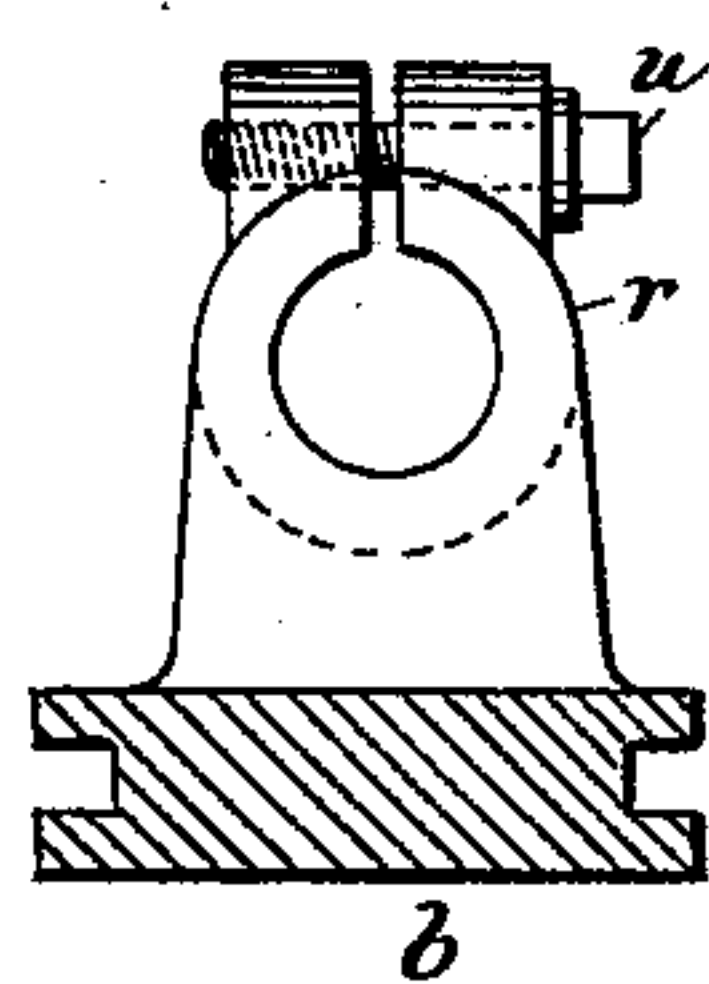


Fig. 3.

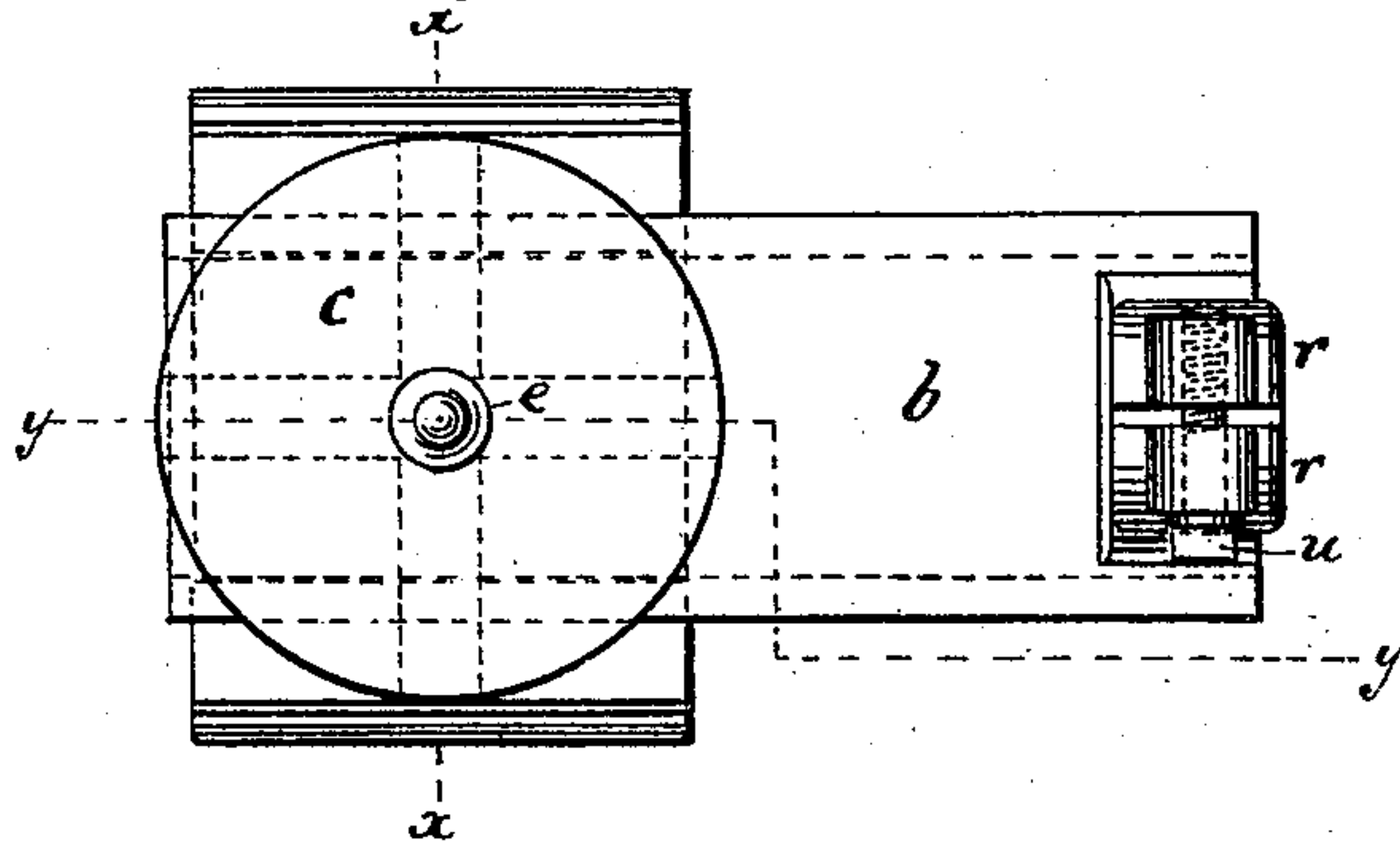


Fig. 6.

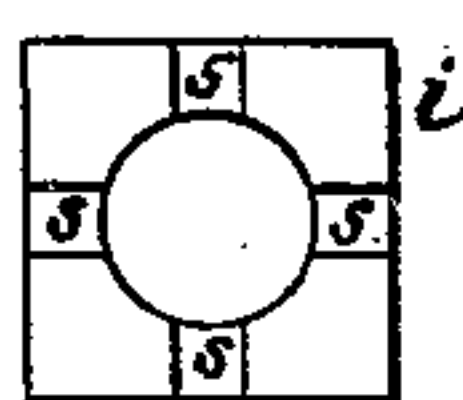


Fig. 7.

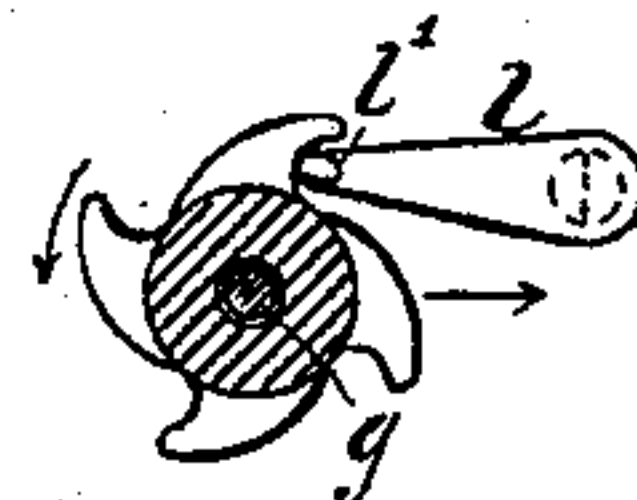


Fig. 8.



Fig. 13.

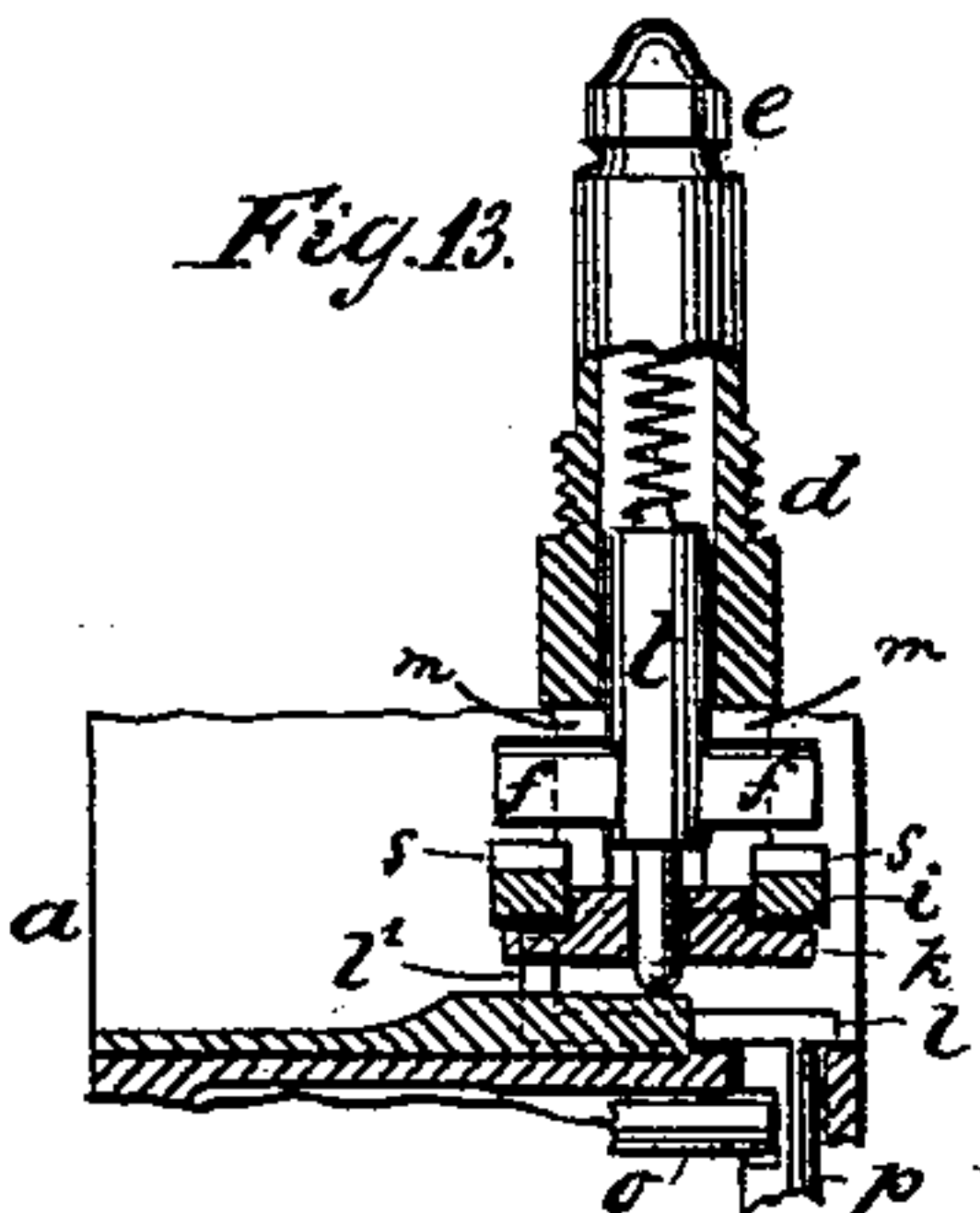


Fig. 5.

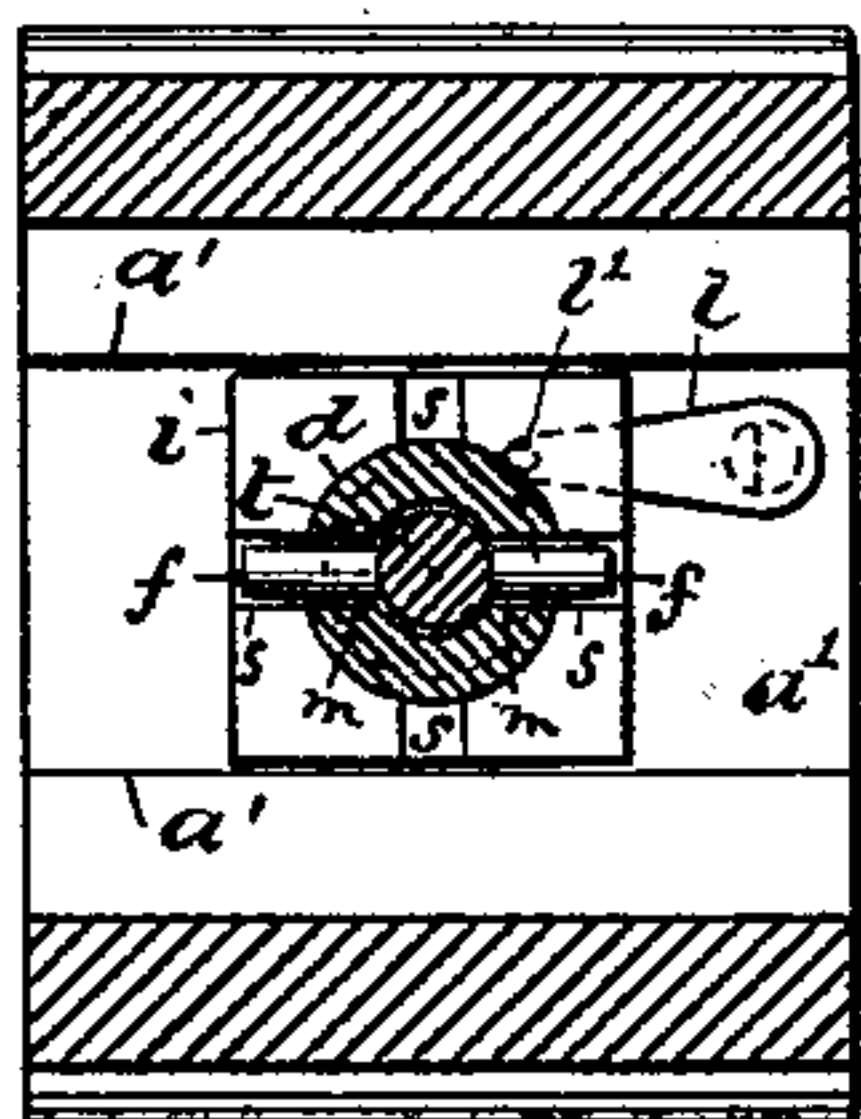


Fig. 10.

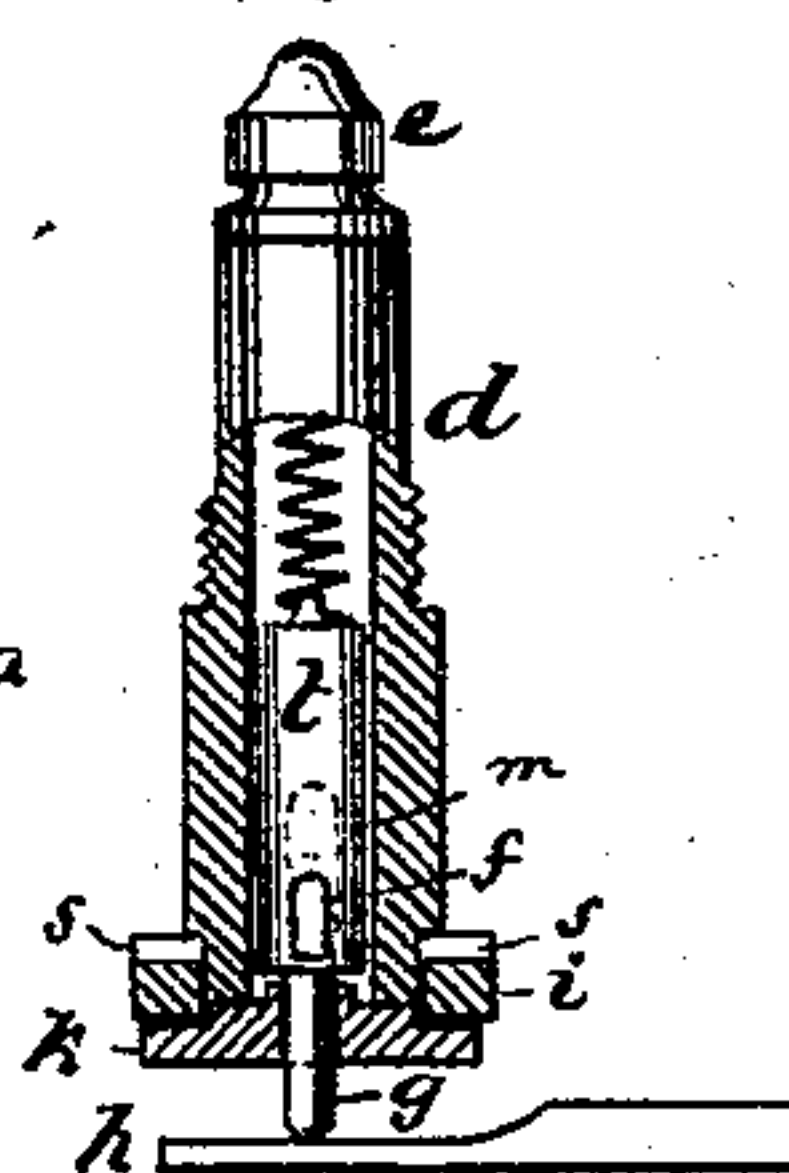


Fig. 9.

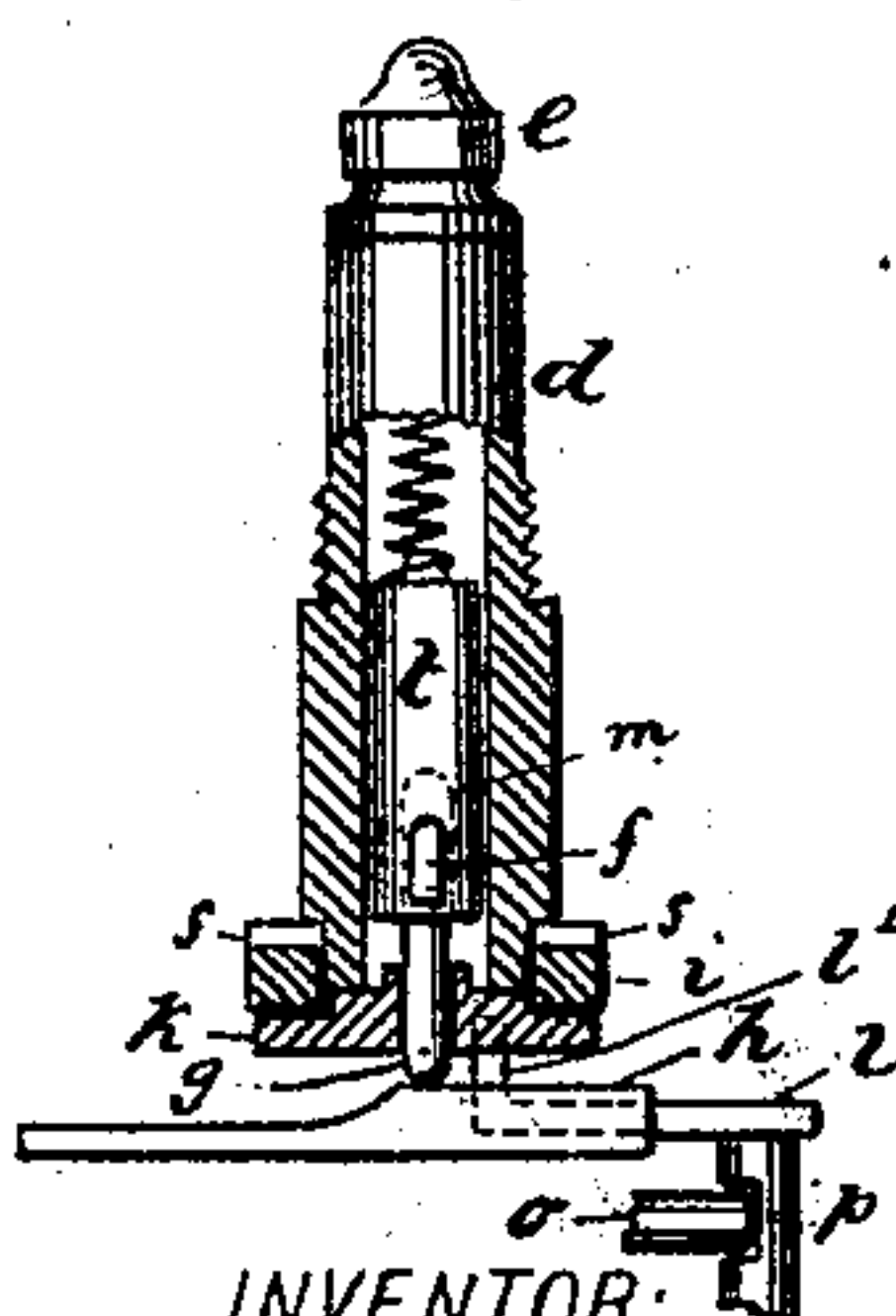


Fig. 12.

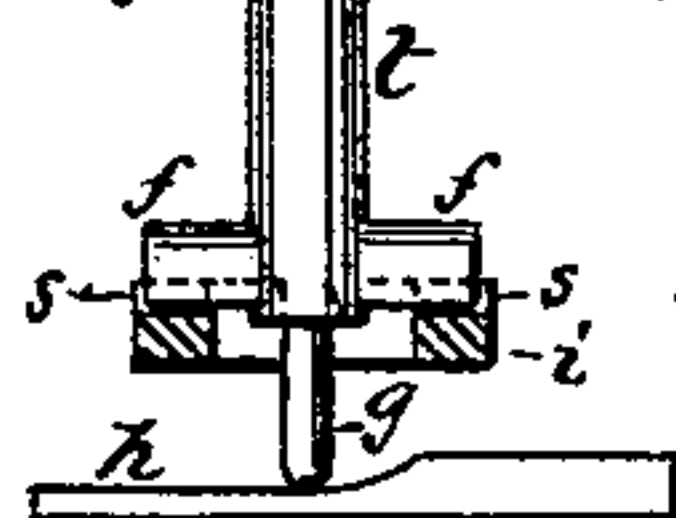
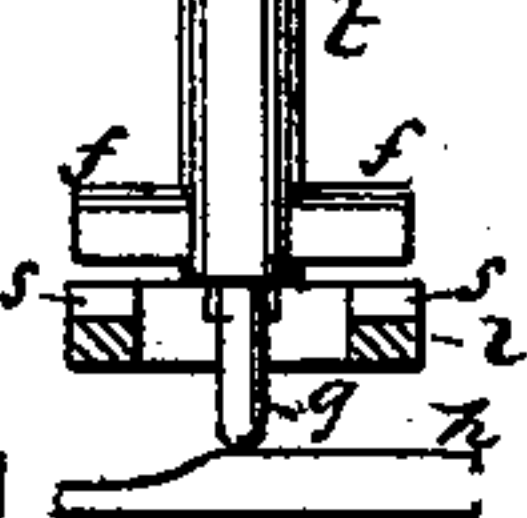


Fig. 11.



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UNITED STATES PATENT OFFICE.

FRIEDRICH STOLZENBERG, OF BERLIN, GERMANY.

TURRET-HEAD.

SPECIFICATION forming part of Letters Patent No. 488,152, dated December 13, 1892.

Application filed June 9, 1892. Serial No. 436,155. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH STOLZENBERG, a citizen of the Kingdom of Prussia, residing at Berlin, in the Empire of Germany, have invented new and useful Improvements in Turret-Heads, of which the following is a specification.

The turret-heads or multiple tool-stocks at present in use are very complicated in their construction, and hence very expensive.

The object of my invention is a turret-head of a novel and comparatively-simple construction, as pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical section in the plane $x x$, Fig. 3. Fig. 2 is a similar section in the plane $y y$, Fig. 3. Fig. 3 is a plan or top view. Fig. 4 is a transverse vertical section in the plane $z z$, Fig. 2. Fig. 5 is a horizontal section in the plane $u u$, Fig. 2. Figs. 6 to 13 are details which will be referred to as the description progresses.

My turret-head consists of three principal parts: First, the base a , which is secured on the bed of the machine on which the turret-head is to be used; second, the movable carriage b , which is moved by the spindle of a tail-stock; third, the tool-stock proper c , which when the carriage b is moved backward turns on its vertical axis until the tool when the carriage moves forward occupies a position corresponding to the middle of the working spindle.

The fixation or act of fixing the tool-stock in position after the same has been turned, as above stated, is accomplished by the following means: The tool-stock c is mounted in the carriage b by means of a hollow spindle d , which is provided with two slots $m m$, extending in opposite directions, in which the lugs f of a pin t can move. The pin t is provided with a foot g and it is movably fitted into the hollow spindle d . A spring which is placed in the interior of said hollow spindle has a tendency to force the pin t downward. The lower end of the hollow spindle d is fitted into a washer i , which is provided with a series of recesses s (see Fig. 6) and which, together with the lower end of the hollow spindle, can move back and forth in the base a ; but the washer fits into a recess a' in the base

a so that it cannot turn around, and if the tool-stock is thrown in engagement with this washer it is also prevented from turning. Beneath the washer i is situated the feed-wheel k , which is connected with the tool-stock c by means of the spindle d . In the middle of the tool-stock c and beneath the foot g of the pin t is situated a support h with an uneven surface, Figs. 1, 2, 9, 10, 11, and 12, which is fitted into the base a and extends in the direction of the length of the carriage b .

In order to impart to the carriage b the required movement, which is to be imparted by means of a tail-stock spindle, said carriage is provided with a coupling device for the spindle, consisting of an elastic ring r , Fig. 4, which can be closed up by a clamping-screw u .

The rotary movement of the tool-stock c and its subsequent fixation is produced as follows: When the carriage b is moved forward in the direction opposite to arrow 1, Fig. 2, the foot g of the pin t passes upon the low portion of the support h , Figs. 10 and 12, and the lugs f of the pin t are thrown in engagement with the recesses s of the washer i , (best seen in Fig. 12,) so that the tool-stock cannot turn around. When the carriage b is then moved backward, the foot g of the pin t passes upon the high portion of the support h and the lugs f are raised out of engagement with the recesses s of the washer i , so as to allow the tool-stock c to turn round, and one of the teeth of the feed-wheel k is brought in contact with a tappet l' , which projects from a lever l , Figs. 2 and 7, so that when the backward movement of the carriage b is continued and while the foot g of the pin t travels from the position shown in Figs. 2 and 9 to that shown in Fig. 13 the feed-wheel k imparts to the tool-stock c a rotary movement. When the carriage b is then moved forward, so as to throw the foot g of the pin t upon the low portion of the support h , the lugs f are thrown in engagement with the recesses s in the washer i and the tool-stock c is automatically locked in position. The lever l extends from a pivot p , which turns loosely in a hole in the base a (see Fig. 2) and which is retained in position by a spring-bolt o .

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

1. The combination, with the carriage *b*, the multiple tool-stock *c*, fastened to the carriage, and means for imparting to the carriage a reciprocating motion, of a rotatable hollow spindle *d*, carrying the tool-stock, a spring-actuated pin *t*, fitted into the hollow spindle and provided with lugs which extend through slots in said spindle, a washer *i*, provided with recesses *s* and fitted into the base *a*, so as to be prevented from turning, an uneven support *h* for the foot of the pin *t*, a feed-wheel *k*, and a tappet *l'*, substantially as shown and described.

2. The combination, with a base *a* and a

rotatable tool-stock *c*, connected with the base, of a carriage *b*, slidable horizontally between the base and the rotatable tool-stock and provided with a split ring *r*, having a clamping-screw *u*, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRIEDRICH STOLZENBERG.

Witnesses:

L. PORTOUS,
E. WOLFF.