

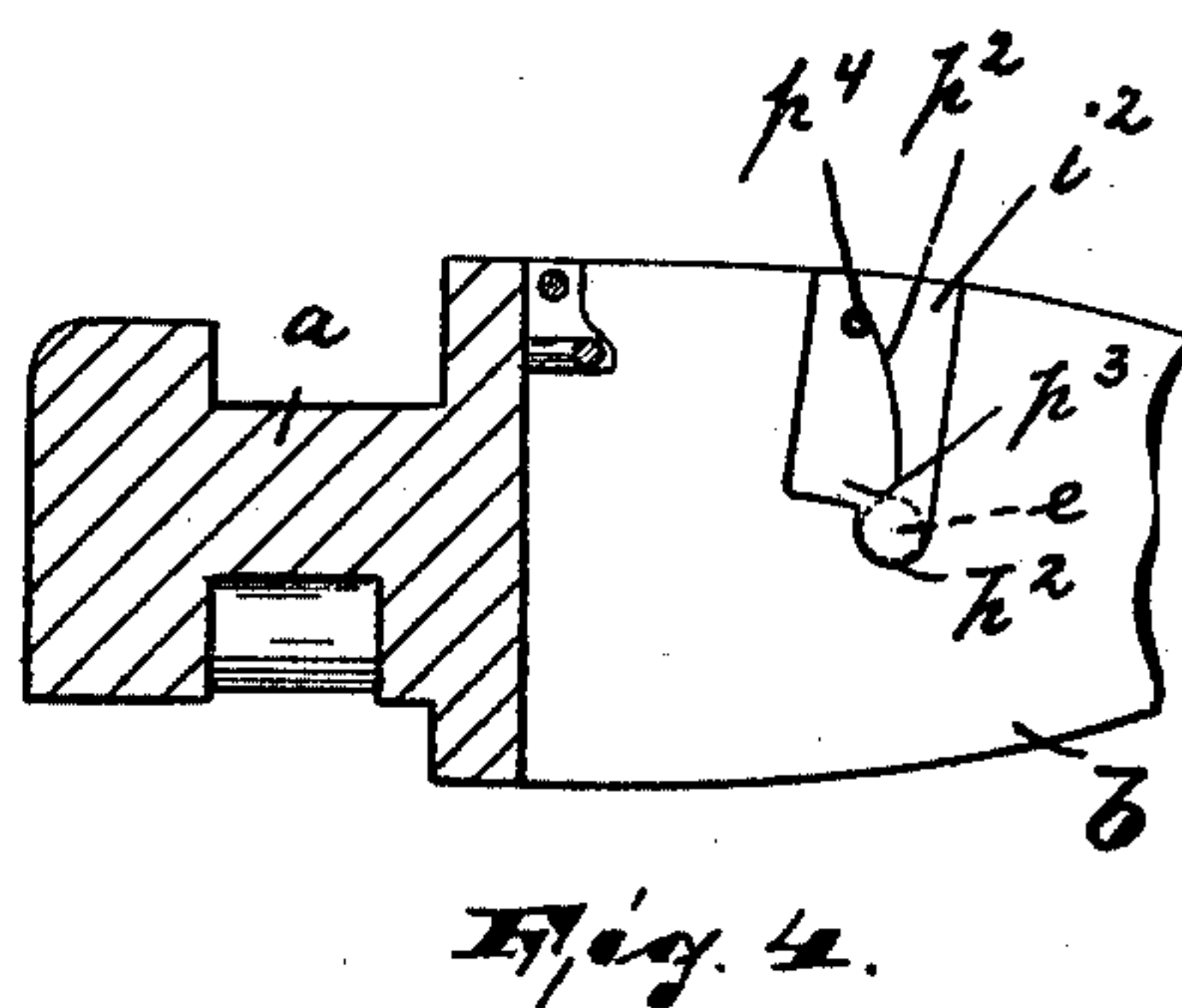
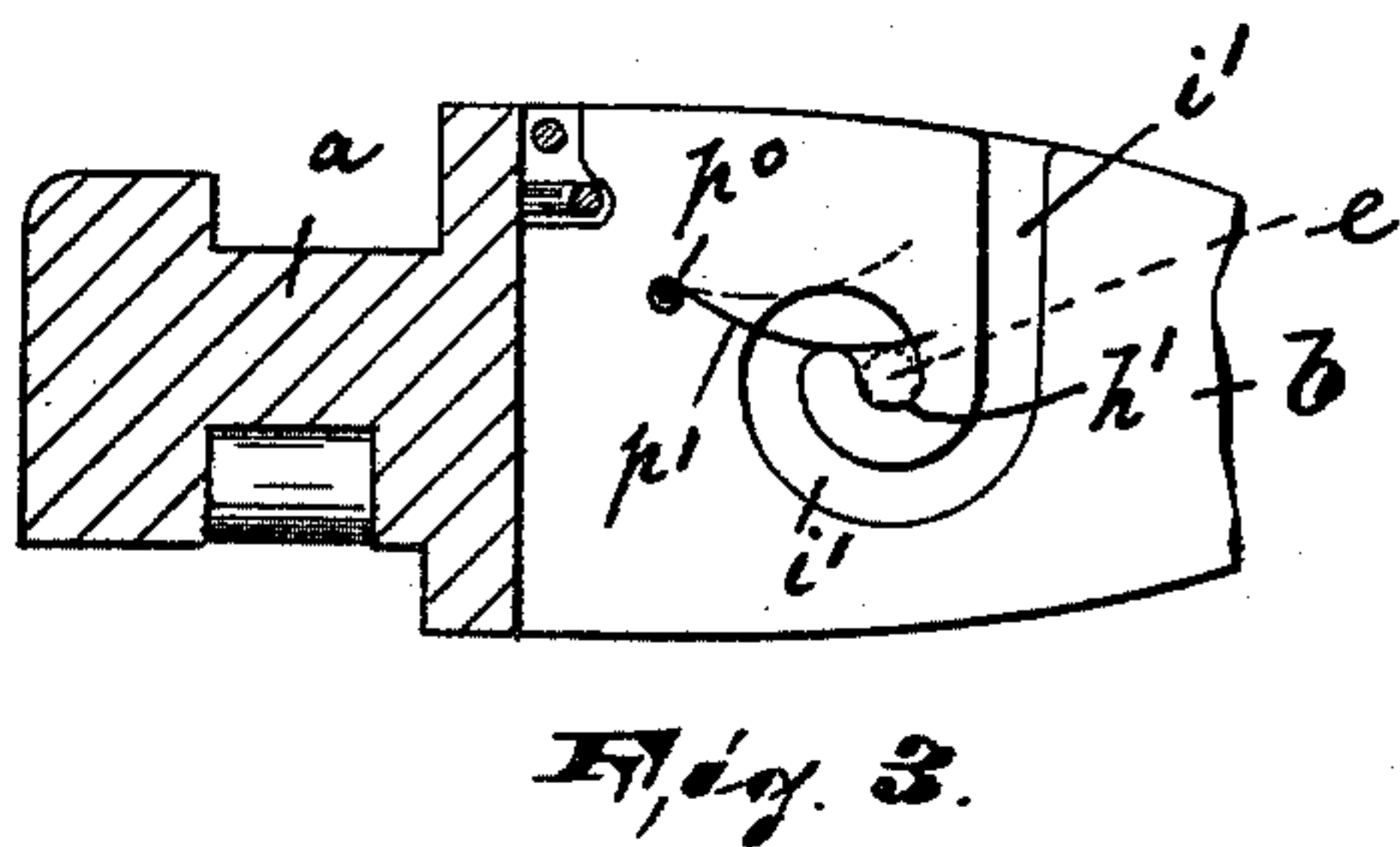
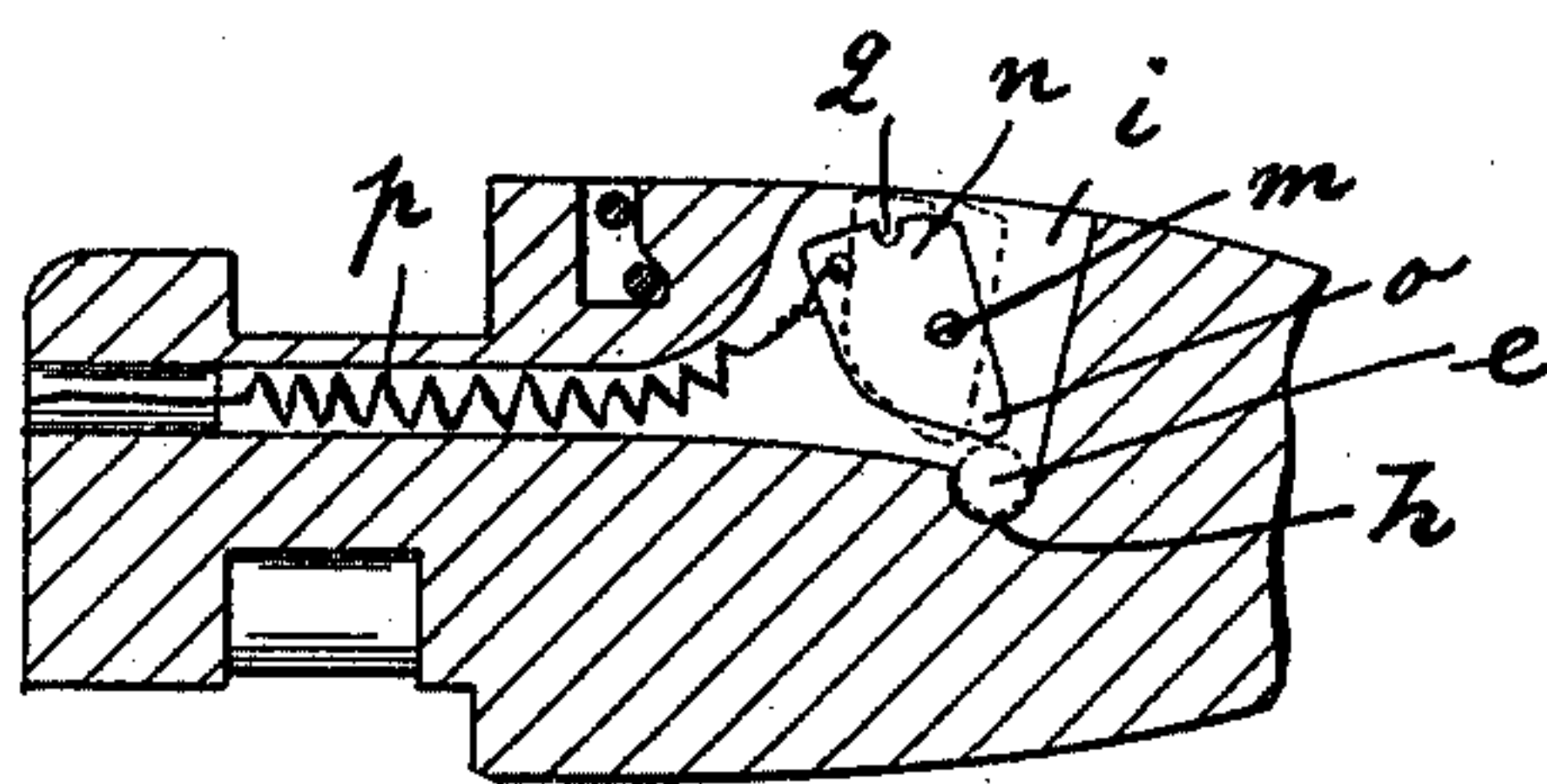
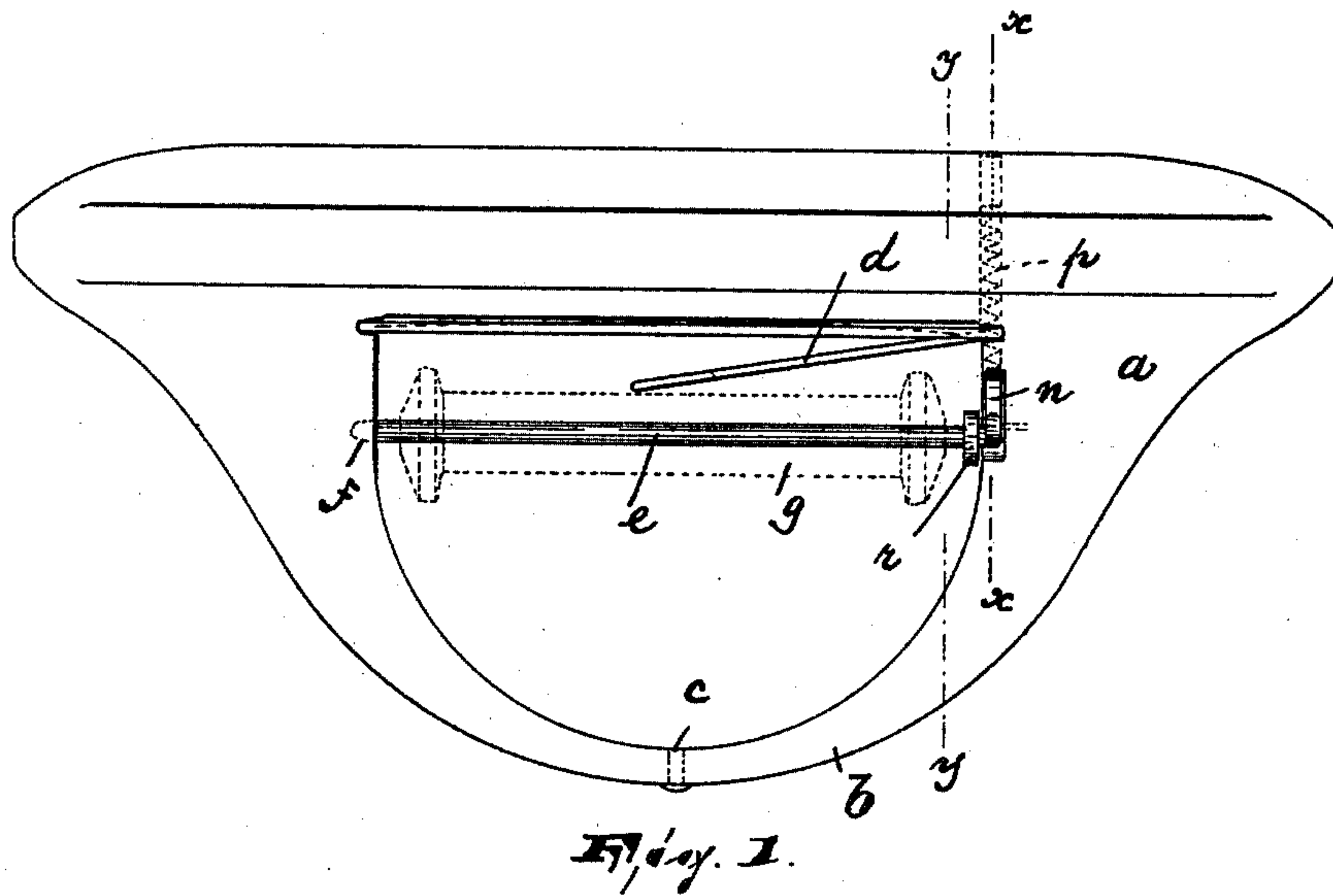
No. 619,170.

Patented Feb. 7, 1899.

G. H. HAMALIAN.
SHUTTLE.

(Application filed June 20, 1898.)

(No Model.)



WITNESSES:

Wm. Drell.
Louise Snyder

INVENTOR :

George H. Hamalian

BY *Partner & Co*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE H. HAMALIAN, OF PATERSON, NEW JERSEY, ASSIGNOR TO SCHAUM
& UHLINGER, OF PHILADELPHIA, PENNSYLVANIA.

SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 619,170, dated February 7, 1899.

Application filed June 20, 1898. Serial No. 683,949. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HAMALIAN, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Shuttles; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention relates to improvements in loom-shuttles, (especially for weaving narrow weaves;) and its object is to provide such a shuttle with simple bearings into which the spool or bobbin supporting spindle can be readily and quickly inserted or lifted therefrom and while in operative or normal position is prevented from movement or accidental disengagement from said bearings, thus avoiding breakage or undue tension on the spool or bobbin (weft) thread.

The invention consists in the improved shuttle, its spindle-bearings, and the means for retaining said spindle in said bearings and in the combination and arrangement of the various parts, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 represents in a top plan view a ribbon-shuttle provided with my improvements; Fig. 2, a sectional view on the line $x x$ of Fig. 1; and Figs. 3 and 4, sectional views on the line $y y$ of Fig. 1, illustrating modified forms of the spindle-bearings and the spindle-retaining means.

In said drawings, a represents a shuttle provided in its nose or front portion b with an eye c and having a spring-controlled brake d , adapted to bear against the spool or bobbin, all of the usual and well-known construction.

The spindle e for the spool or bobbin g (shown in dotted lines in Fig. 1) has its bearings in a socket f and in the recess h , respec-

tively, which latter communicates (see Figs. 1 and 2) with a groove i , arranged in the inner portion of the shuttle-nose b . Within the said groove is pivotally secured, as at m , a latch or block n , adapted when in normal position to engage with its lower portion o of the top surface of the spindle e to thus retain the latter within the recess h . A spiral spring p is provided for within the shuttle (in a suitable hole or socket) and is connected with the top portion of the fulcrumed block n , and is designed to hold said block in normal position.

In connection with the above it must be remarked that a collar r is preferably arranged on the spindle e and is adapted to bear against the fulcrumed block n to thus prevent undue lateral movement of the spindle. A notch q is furnished in the top portion of said block n for conveniently operating the same whenever the spindle is to be removed from its bearings, as clearly illustrated in Fig. 2 of the drawings.

In the modification illustrated in Fig. 3 the bearing for the spindle e is furnished in the recess h' at the terminal of the spiral or substantially J-shaped groove i' , which latter is arranged in the inner portion of the nose b of the shuttle a . A flat spring p' is secured with one end to a pin p^0 , projecting from the shuttle-nose, while its other end bears upon the top surface of the spindle, as clearly shown in said Fig. 3.

In the modification illustrated in Fig. 4 the spindle is retained within its recess h^2 by means of the curved end portion p^3 of a flat spring p^2 , which latter is secured with its opposite end to a pin p^4 , arranged in the groove i^2 and projecting from the shuttle-nose b .

In operation, reference being had to Figs. 1 and 2, whenever the spindle e is to be taken out of the shuttle the block n is turned on its fulcrum against the action of the spiral spring p into the position shown in dotted lines in Fig. 2, whereby the lower portion o of said block is moved out of the path of the spindle, which latter can then be readily lifted out of said bearings, as will be manifest. For reinserting the spindle into the shuttle one end of said spindle is first inserted into the socket f and its opposite end thereafter slid into the

recess *h*, the block *n* being turned to one side by the spindle against the action of the spiral spring *p*, which latter as soon as said spindle has seated itself in the recess *h* returns said block to its normal position. For removing the spindle from the shuttles, as illustrated in Figs. 3 and 4, the said spindle is simply lifted or moved out of its respective bearing, the spring *p'* or *p''* being pressed out of the path of the spindle, as will be manifest.

From the above it can be seen that in each and every construction illustrated and described the spindle is firmly held in its operative or normal position and is prevented from undue movement, and yet can be readily and quickly lifted out of its bearings when necessary or desired.

I do not intend to limit myself to the precise constructions shown and described, as various alterations can be made without changing the scope of my invention; but

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

1. In a shuttle, the combination, with its nose provided on one of its inner sides with a bearing and on its opposite inner side with a recess and connecting open groove, of a spool or bobbin carrying spindle removably arranged in said bearing and recess respectively, and a block pivotally mounted in, and controlling the passage through, said groove to the recess, substantially as described.

2. In a shuttle, the combination with its nose provided on one of its inner sides with a bearing and on its opposite inner side with a recess and connecting open groove, of the

spool or bobbin carrying spindle removably arranged in said bearing and recess respectively, and a spring-controlled block pivotally mounted in, and controlling the passage through, said groove to the recess, substantially as and for the purposes set forth.

3. In a shuttle the combination with its nose provided on one of its inner sides with a bearing and on its opposite inner side with a recess and connecting open groove, of the spool or bobbin carrying spindle removably arranged in said bearing and recess respectively, a block fulcrumed within the groove and normally engaging the spindle but capable of being moved out of the path of the latter, and a spring controlling said fulcrumed block, substantially as and for the purposes described.

4. In a shuttle, the combination, with its nose provided on one of its inner sides with a bearing and upon its opposing inner side with a recess and connecting open groove, and a spool or bobbin carrying spindle removably arranged in said bearing and recess respectively, and a pivoted transversely-arranged and spring-controlled spindle-retaining block arranged in said recess, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of June, 1898.

GEORGE H. HAMALIAN.

Witnesses:

ALFRED GARTNER,
LOUISE SNYDER.