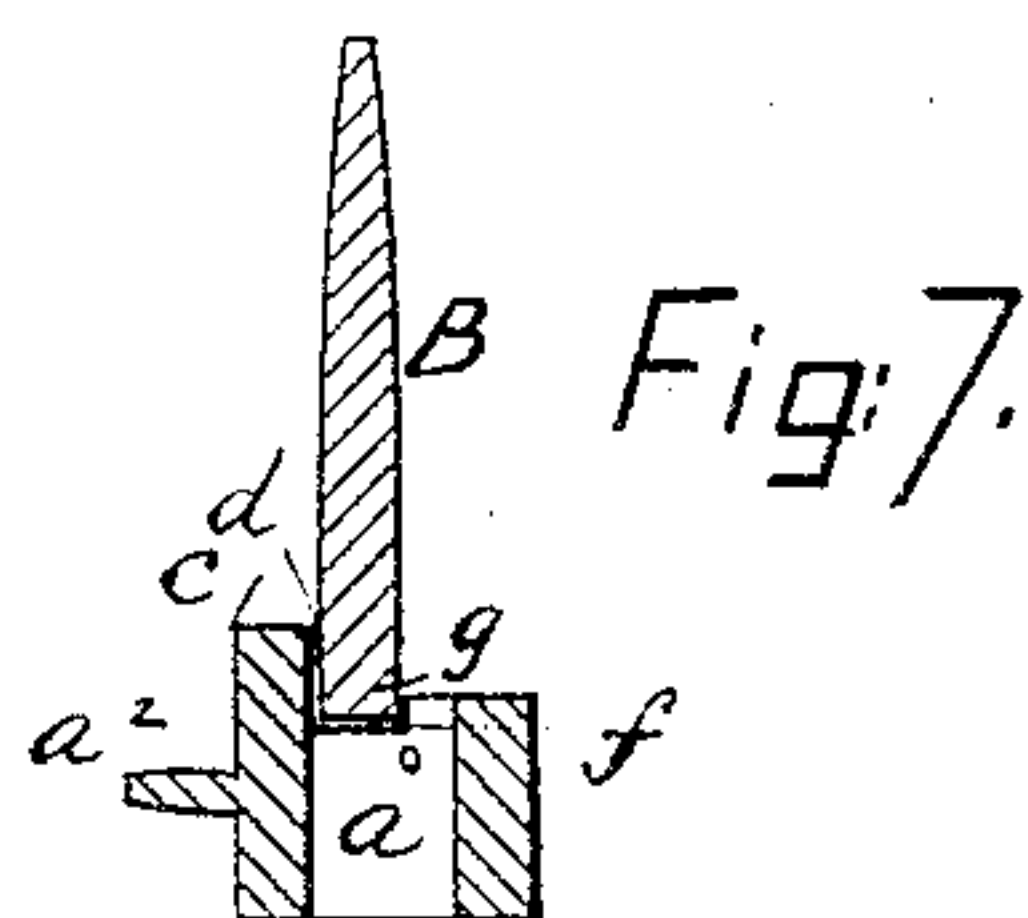
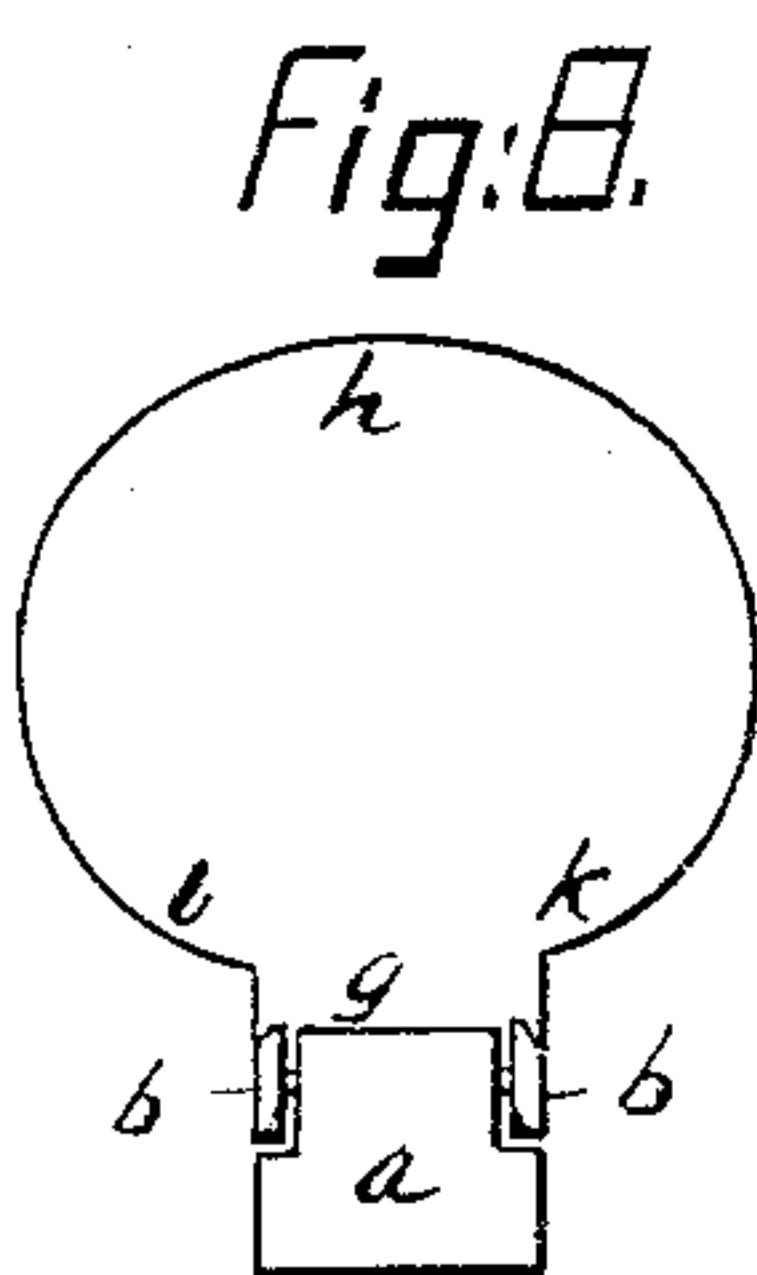
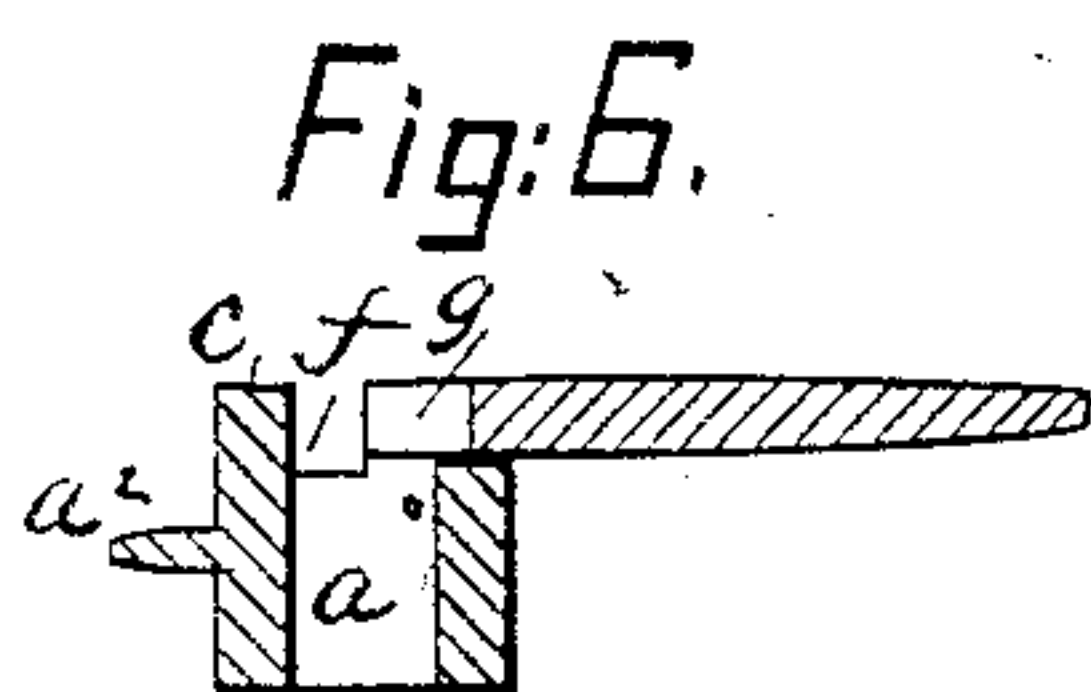
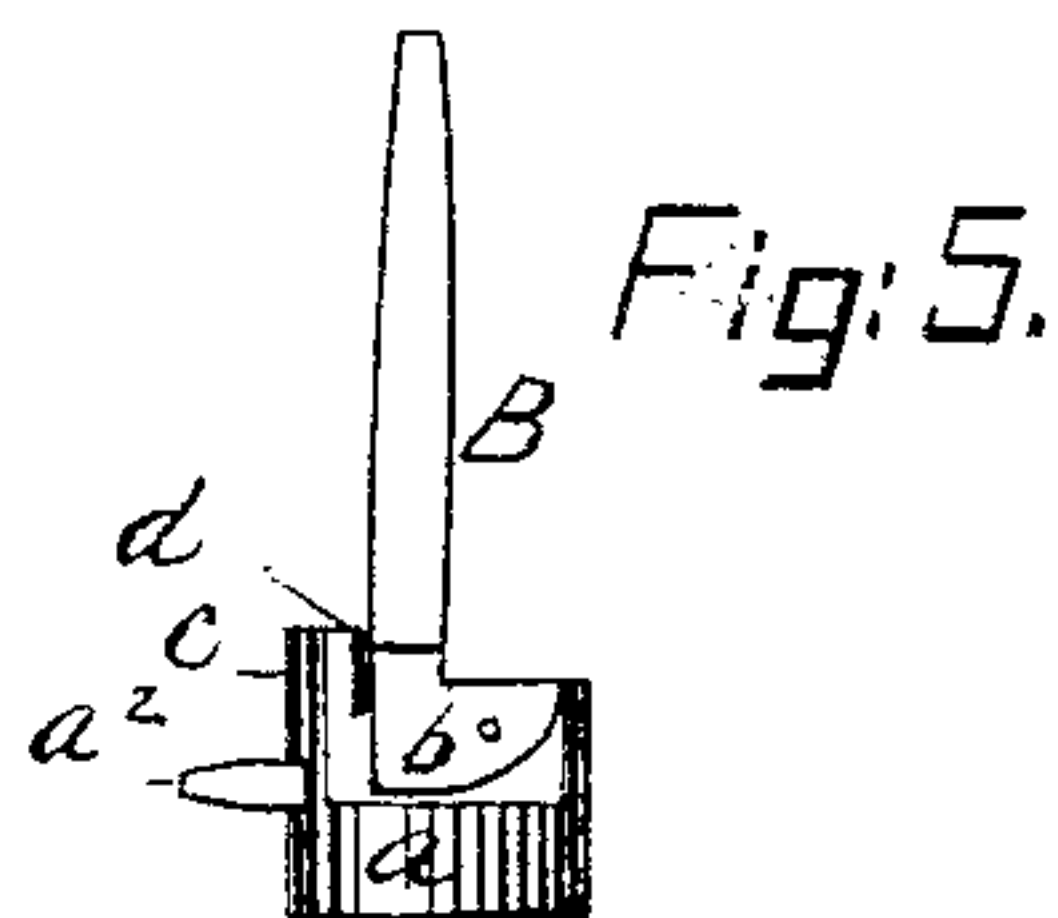
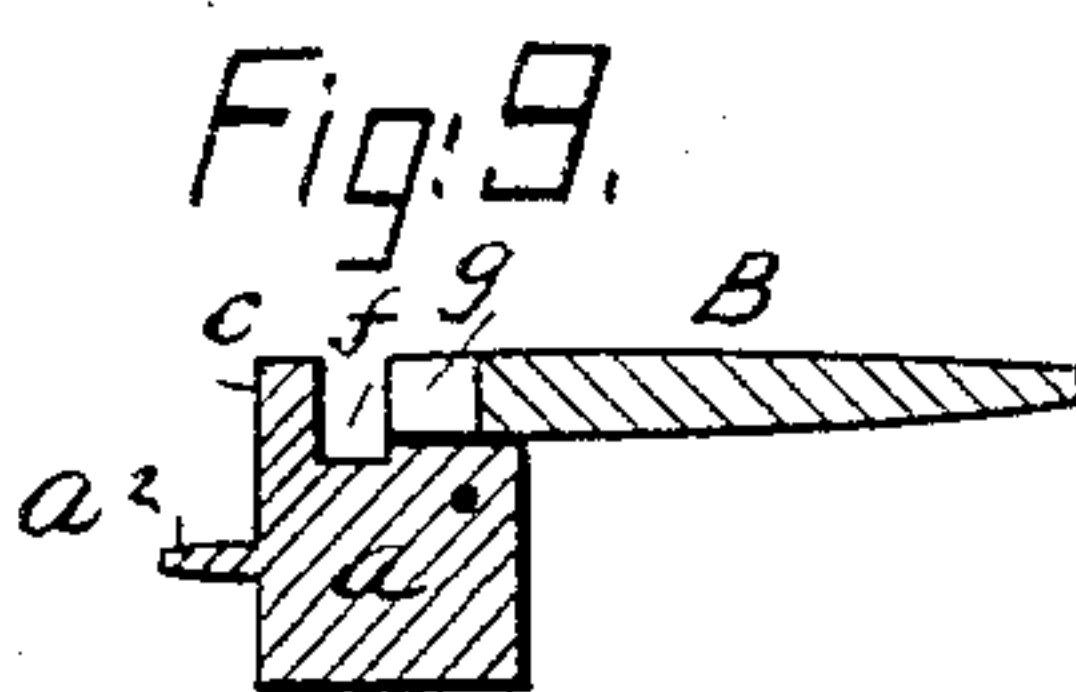
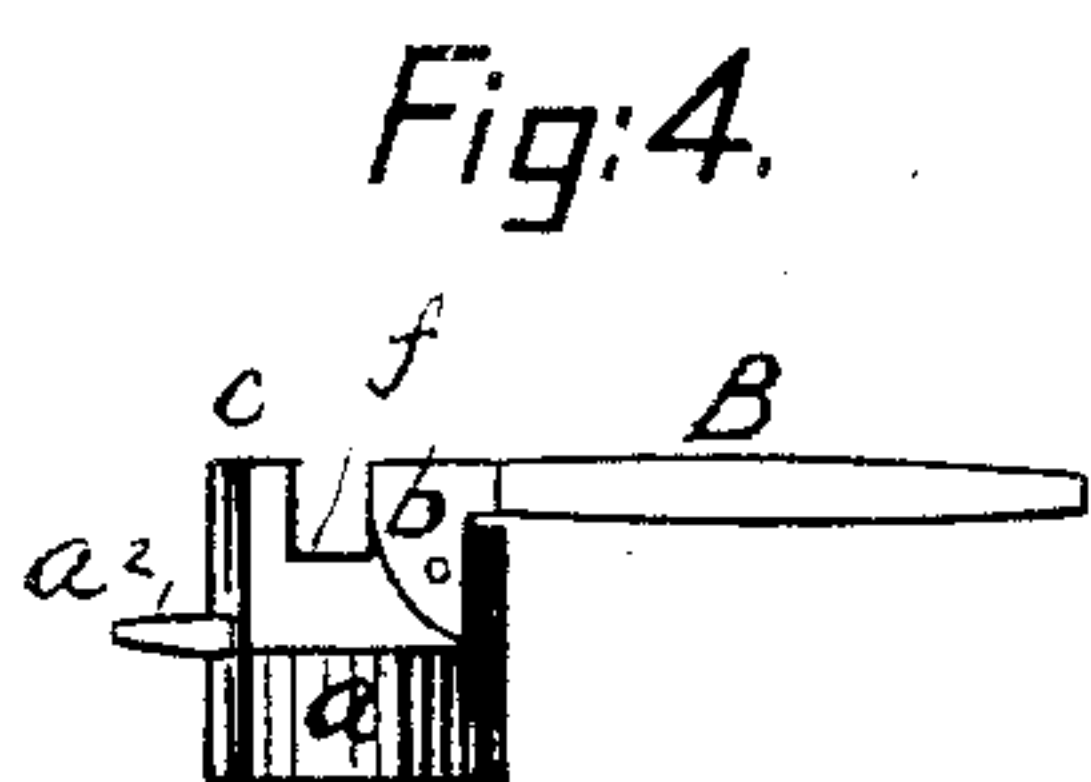
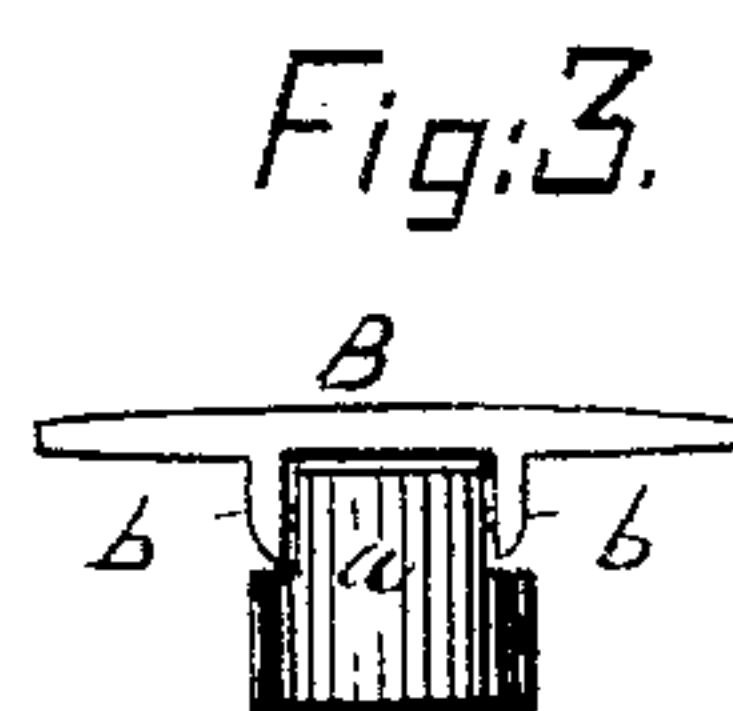
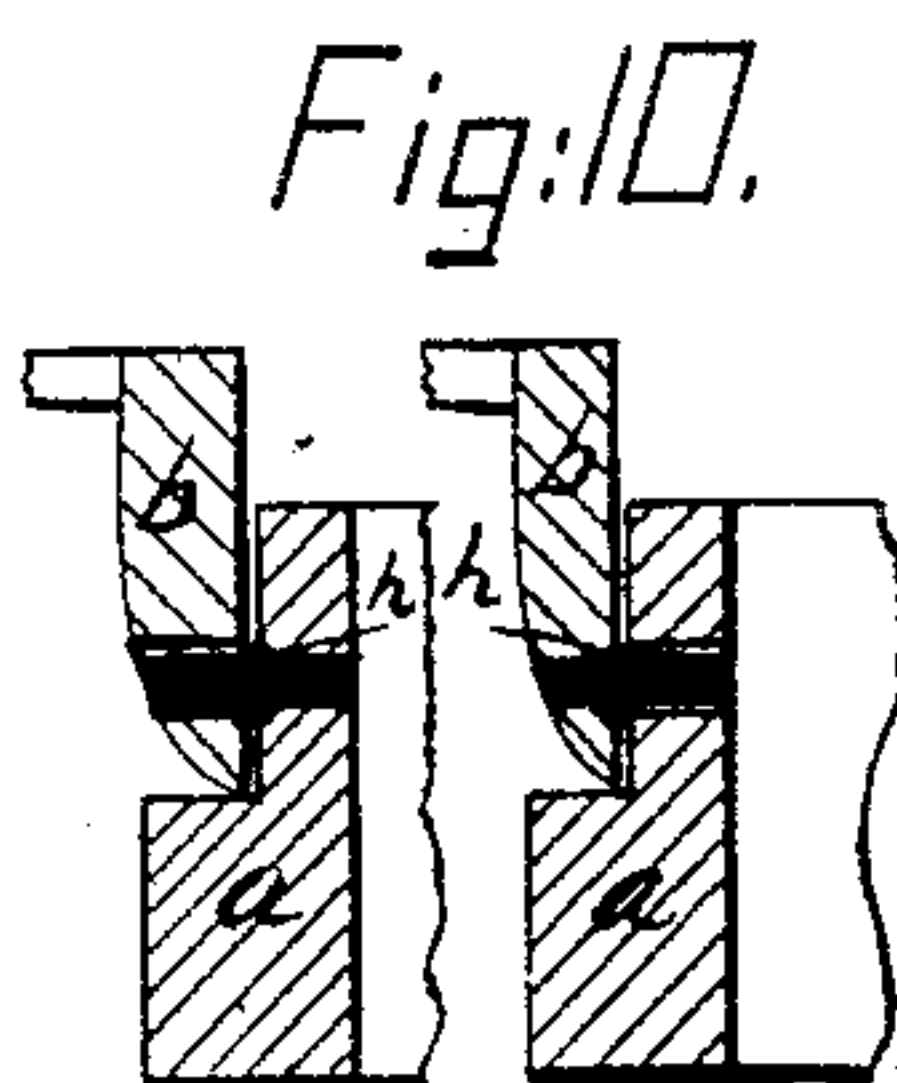
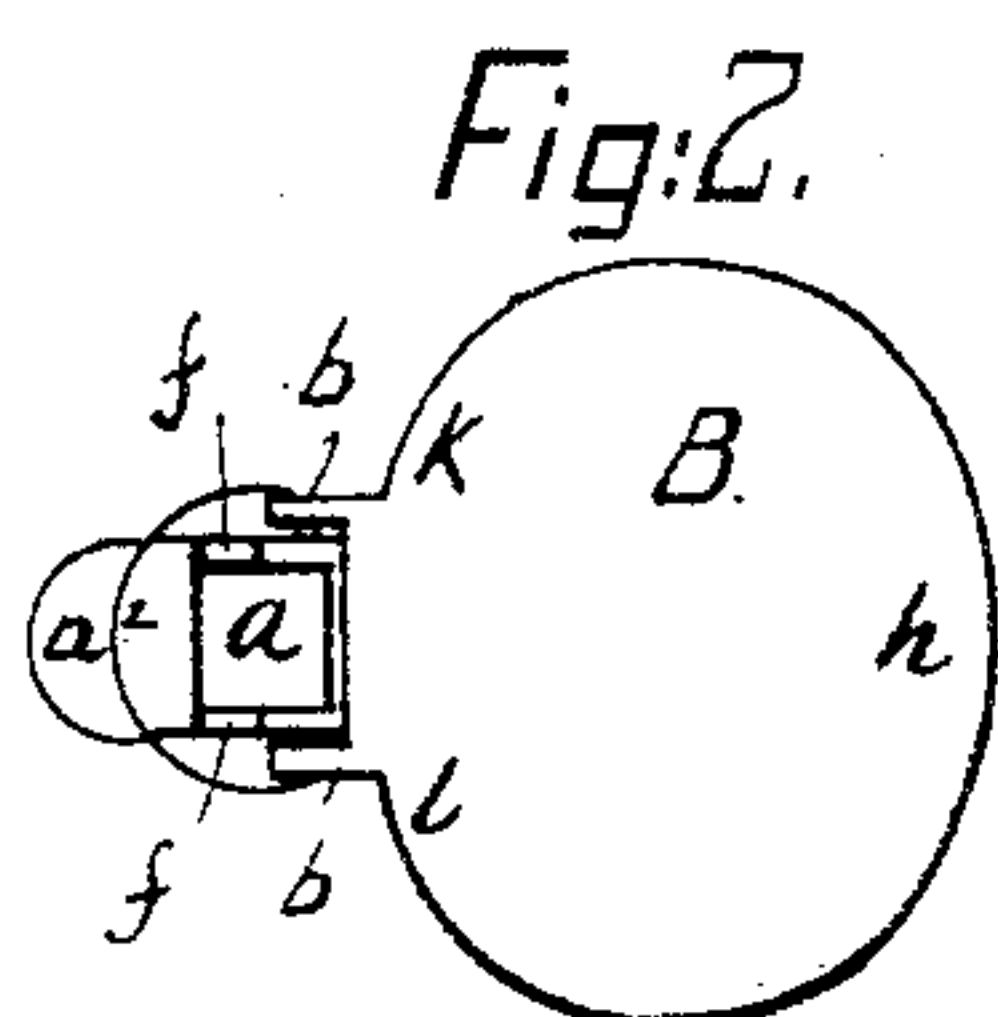
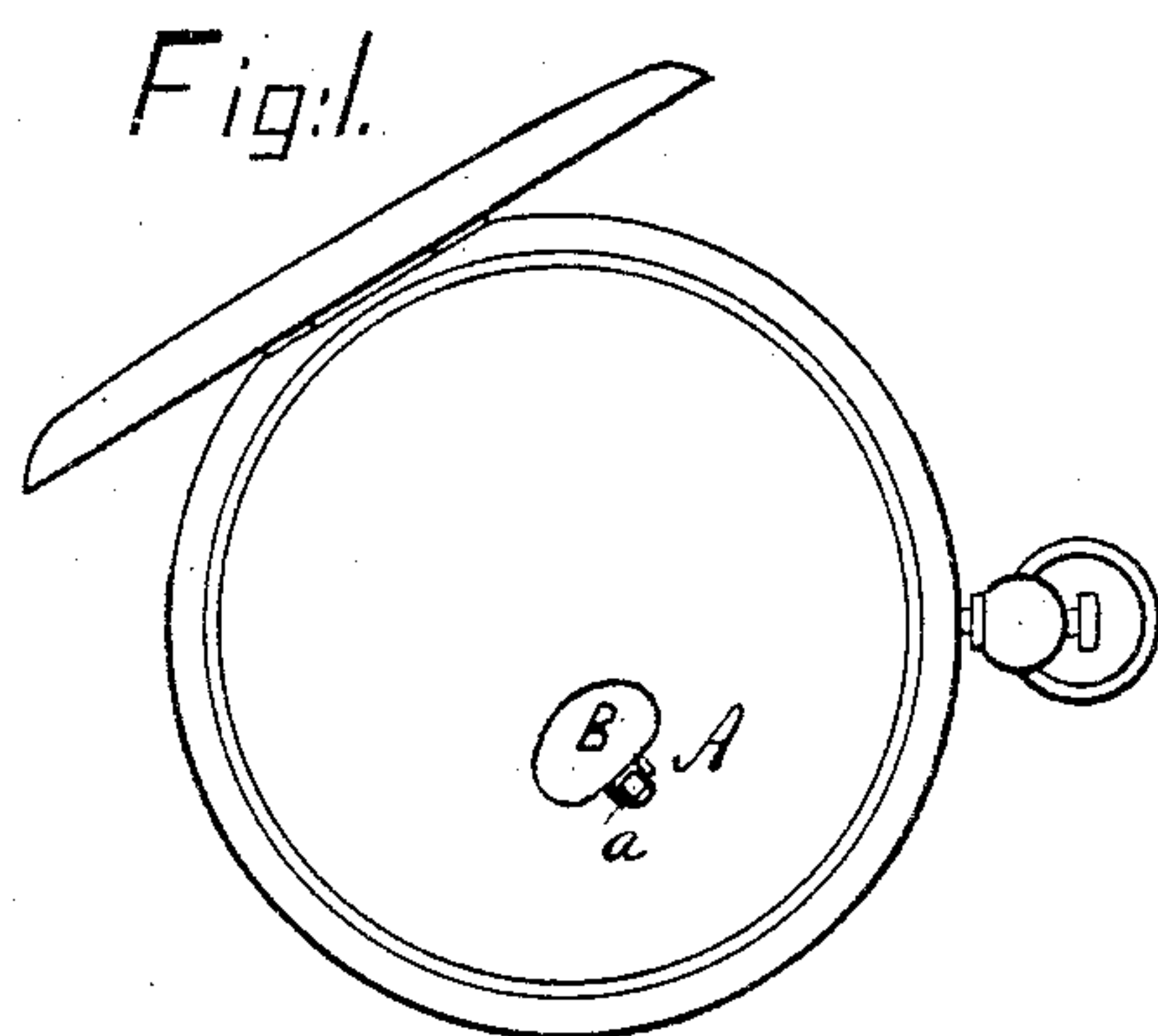


W. H. ZINN & M. D. PORTER.  
Watch-Winding Device.

No. 218,613.

Patented Aug. 12, 1879.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. ZINN AND MAJOR D. PORTER, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN WATCH-WINDING DEVICES.

Specification forming part of Letters Patent No. **218,613**, dated August 12, 1879; application filed May 19, 1879.

*To all whom it may concern:*

Be it known that we, WILLIAM H. ZINN and MAJOR D. PORTER, both of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Watch-Winding Devices, of which the following is a full, clear, and exact description.

This invention relates to attachments to the winding-spindle of watch-movements, for the winding of the watch therewith, and it pertains more particularly to that class of such attachments shown and described in Letters Patent of the United States issued to said Zinn, dated October 28, 1878, No. 209,441.

The present invention consists in certain improved construction of the parts of said attachment, substantially as hereinafter described, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a face view of the back-plate of a watch having our winding attachment, and with the outer cap-plate swung up; Fig. 2, a plan view; Fig. 3, a view of the front edge of Fig. 2; Figs. 4, 5, 6, 7, and 9, sectional views; Fig. 8, a front view of Fig. 7; Fig. 10, a sectional view, showing the riveting of the parts of the attachment together, as will be hereinafter explained.

In the drawings, A represents our attachment for the winding-spindle of a watch-movement, consisting of an arm or thumb-piece, B, hinged, as hereinafter described, at one side, to one end of a socket, *a*, which is interiorly adapted to fit the square end of the winding-spindle of a watch, and has on one side of it a projecting lip or flange, *a*<sup>2</sup>, which lies under the inner back-plate of the watch, at one side of the hole therein for the projection of the winding-spindle, and thus secures the winding device in place and prevents its accidental detachment from the winding-spindle.

With the winding attachment thus in place on the winding-spindle, obviously with it the watch can be wound up when desired, the attachment at such times being swung on its hinges in a vertical position, so as to be the more conveniently handled, while at all other times the swinging part or thumb-piece of the attachment can be disposed closely and compactly against the inner back-plate of the

watch, and in such position that the outer back or cap plate can be closed, as usual, without hinderance, all substantially as shown and described in the Letters Patent above referred to.

Under the present invention the side of the thumb-piece B which is hinged to the socket *a* is constructed with two parallel flat ear-pieces, *b*, which are at right angles to it, and corresponding with these ear-pieces *b*. The socket *a*, on its outer side, has two parallel flat sides or surfaces, which flat sides of the socket are inside of the outer periphery of the socket, and are suitably located to receive the ear-pieces *b* of the thumb-piece, and have them pivoted and hung thereto, and, together with the said ear-pieces, are shaped so that the latter, in all positions of the thumb-piece, will lie and be within the outer periphery of the socket *a*, all as shown in the drawings, more particularly Figs. 3 and 8.

The outer end of the socket, at the portion *c*, is higher or longer than the remainder of the socket, and such extra height of the socket corresponds to the thickness of the thumb-piece B at its hinged side, and it makes an abutment for the thumb-piece when swung up into a vertical position, as shown at *d*, to wind through it the watch-movement. Inside of this abutment *c* is a slot or notch, *f*, in position for the hinged edge or side *g* of the thumb-piece, when swung up into a vertical position, to enter into and interlock with the same.

By the abutment for and interlock of the thumb-piece above described, or either of them, obviously all strain on the pivots of the thumb-piece, when the thumb-piece is used to wind the watch, is obviated.

The abutment *c* for the thumb-piece and the interlock *f* of the thumb-piece with the socket may be used together, or either one or the other, as may be desired; but it is preferable to combine the two.

The ear-pieces *b* of the thumb-piece B are hung by rivets to the socket *a*; and to interlock these rivets either with the socket or the ear-pieces, or both, the holes in the socket or the ear-pieces provided for their reception are interiorly countersunk or enlarged, as shown at *h* in the drawings, so that in hammering the rivets in driving them into said holes to upset their outer ends, the rivets inside of said



holes will be also upset and made to interlock with the enlargements of the holes, thus securing them against detachment either from the socket or from the ear-pieces, or from both.

The thumb-piece B, round its outer edge, *h*, generally corresponds in outline to the circumference of the watch; but at the parts *k* and *l* of such outer edge nearest the ear-pieces *b* its outline is at right angles, or nearly so, to the ear-pieces, which give strength to the thumb-piece at its junction with the ear-pieces.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A socket, *a*, adapted to fit the winding-spindle of a watch, and having a hinged thumb-piece, B, and a slot, *f*, substantially as and for the purpose described.

2. A socket, *a*, adapted to fit the winding-spindle of a watch, and having a hinged thumb-

piece, B, a slot, *f*, and a raised portion, *c*, all substantially as and for the purpose described.

3. A socket, *a*, adapted to fit the winding-spindle of a watch, in combination with an arm, B, hinged thereto by ear-pieces *b*, which ear-pieces are shaped to lie within the outer circumference of the socket *a*, all substantially as described and shown.

4. The socket *a*, adapted to fit the winding-spindle of a watch, and flattened on its two sides for the hanging of the ear-pieces *b* to a thumb-piece, B, substantially as described.

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