

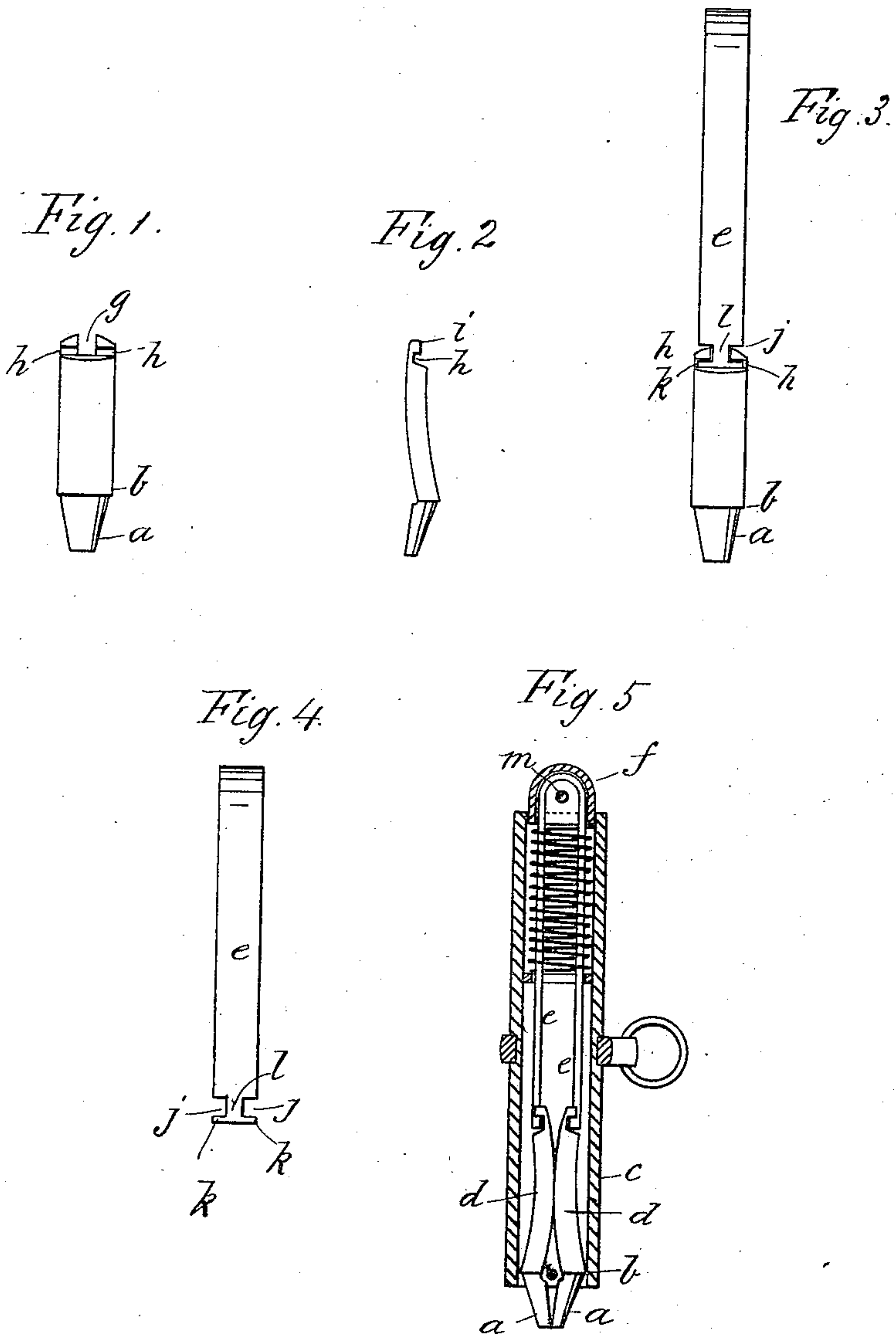
(No Model.)

J. S. BIRCH.

WATCH KEY AND HOLDING TOOL.

No. 282,605.

Patented Aug. 7, 1883.



WITNESSES:

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JOHN S. BIRCH, OF NEW YORK, ASSIGNOR OF ONE-THIRD TO CHARLES C. CUMMINGS, OF BROOKLYN, N. Y.

WATCH-KEY AND HOLDING-TOOL.

SPECIFICATION forming part of Letters Patent No. 282,605, dated August 7, 1883.

Application filed February 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. BIRCH, a citizen of the United States, and residing at New York city, in the county and State of New York, have invented new and useful Improvements in Watch-Keys and Holding-Tools, of which the following is a specification.

My invention consists of an improvement in the construction of adjustable watch-keys and holding-tools, consisting of gripping-jaws that slide out and in the end of a case to open and close for engaging and releasing the watch-post or other object, a spring or other device being used to press the jaws in the case for gripping the object, and a push device being employed to thrust them out. The said improved construction consists of a simple means for connecting the inner ends of the jaws to the device, by which the aforesaid spring and push-piece are made to act on them, and by which the jaws are opened, as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation of one of the jaws of a watch-key in back view. Fig. 2 is a side elevation of the jaw. Fig. 3 is an elevation of the jaw in back view, together with a side elevation of the aforesaid connecting device, showing the improved means I now propose for connecting the jaws to said device. Fig. 4 is a side elevation of the said connecting device without the jaw; and Fig. 5 is a sectional elevation of the key complete, in which the jaws are connected by my improved means.

The jaws *a*, which are to grip the post of a watch or other object to be held between them, have a diameter at *b* about as large, when they touch at the points, as the bore of the case *c*, and above said point they diminish or taper to about the middle of the length of the shanks *d*, which are suitably convex along the inner sides to touch at or about the middle for a fulcrum, by which they rock on each other as they slide out and in, the upper ends being connected to the spring-bars *e*, employed to connect them to the push-cap *f*, and also to press them toward each other for opening the lower ends when they are thrust out.

Heretofore the spring-bars *e* have had a lip turned inward at the lower end that engaged with a notch in the back of the upper end of the jaw for connecting with the jaw; but this is objectionable, because it makes the jaws extend apart too much for the required diameter of the rest of the key, which it is desirable to make smaller than such arrangement will allow, and at the same time provide the necessary space to prevent the bars from bending against the sides of the case when the jaws are closed, as represented in Fig. 5. I therefore now make the jaws with a slot or notch, *g*, as shown, in the upper end, and with the transverse nicks or creases *h* in the back at the sides of the slot, forming backwardly-projecting hooks or lugs *i* above said creases and at the sides of the slot; and I form the nicks *j* in the edges of the spring-bars *e*, having projecting studs *k* at the lower end adapted to rest in the creases *h*, while the neck *l* occupies the slot *g*, making a connection, by which it will be seen, in Fig. 2, that the connecting-bars *e* occupy no more of the space in the case transversely than the jaws do—that is to say, the diameter through the bars *e* is no greater than through the jaws—so that the case, which heretofore required to be larger than was needed for the jaws on account of the greater thickness of the bars, may now be reduced to the size only required by the jaws. As the spring-bars *e* have a set by which they press the jaws toward each other, it will be seen that this form of connection will not detach when the parts are placed in position in the case *c*, and that it is of simple contrivance, both the jaws and the bars being so designed that they can each one be shaped by a blow of a drop or other die. The cap *f* is fastened to the spring-bars by little stud-points *m*, made to project in between the bars of the spring at the bow by indenting the outside of the cap with a center-punch.

The spring *n*, resting on the seat *o* and bearing against the cap, draws up and closes the jaws on the object to be held, and a push down on the cap *f* by the finger thrusts the jaws down, so that the spring-bars *e* open them to receive the post or other object to be gripped.

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

5 The jaws of a watch-key or holding device constructed substantially as herein described, having a slot or notch, *g*, and the cross-nicks *h* at the upper end, in combination with the spring-bars *e*, having notches *j* in the edges and studs *k* at the end, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN S. BIRCH.

Witnesses:

EUGENE N. ELIOT,
W. J. MORGAN.