(No Model.)

A. A. DAYTON.

PEN EXTRACTOR.

No. 560,611. Patented May 19, 1896.

Fig. 1,

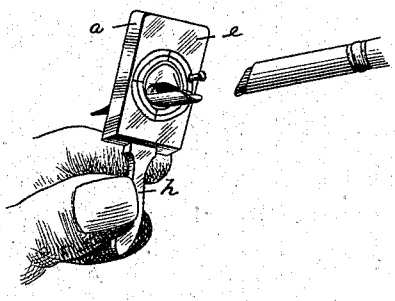


Fig. 2,

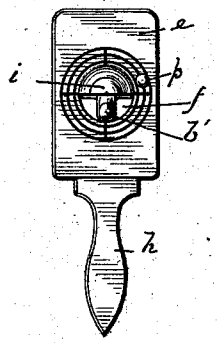


Fig. 3,

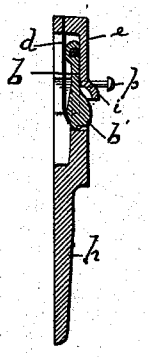


Fig. 4,

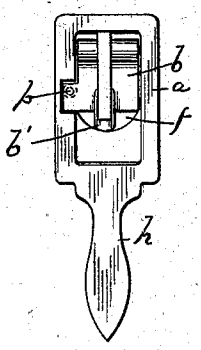


Fig. 5,

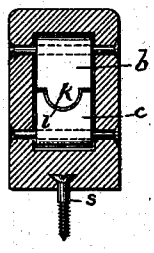


Fig. 7,

Fig. 6,

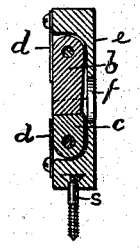
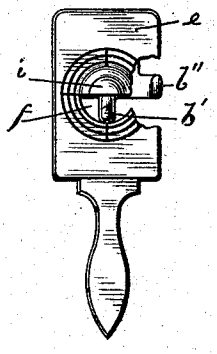


Fig. 8,



Witnesses:-

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UNITED STATES PATENT OFFICE.

ALTON A. DAYTON, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOHN R. PHELPS, OF SAME PLACE.

PEN-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 560,611, dated May 19, 1896.

Application filed June 6, 1894. Serial No. 513,646. (No model.)

To all whom it may concern:

Be it known that I, ALTON A. DAYTON, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Pen-Extractors, of which the following is a specification.

My improvement consists of a device for removing or extracting a pen from the holder without soiling the hands.

In the accompanying drawings, illustrating my improvement, Figure 1 is a perspective view of the extractor in the form I prefer to construct it, showing the pen being removed from the holder. Fig. 2 is a front view of the extractor shown in Fig. 1. Fig. 3 is a sectional side view, and Fig. 4 a back view, of Fig. 2; Fig. 5, a front view of a modified form of the extractor; Fig. 6, a sectional side view of Fig. 5; Fig. 7, a detail of the same, and Fig. 8 a modification.

The extractor, in the forms shown in Figs. 1 to 4, consists of a frame *a*, which may have a handle *h*, by which it is held in the hand. One side of the frame is open, and in the opposite side *e* is an aperture or opening *f*. Within the frame and hung from the top of the latter is a link *b*, arranged to swing backward or toward the open side and in a direction lateral to the plane of the aperture *f*. The length of the link is such that its free end touches the solid part of the frame *a* at the bottom of the aperture in its normal position. The lower part of the aperture *f* is preferably semicircular, and the bottom of the link, or in the construction shown of the projection *b'* on the link, is preferably rounded to fit the curve of the aperture. The projection *b'*, or lower end of the link, is further preferably rounded on the front and back, as shown, to more effectually guide the pen between the link and lower side of the aperture *f* and to furnish a bearing for the spring *d*. This spring *d* is attached to the top of the frame at its open side and, extending along back of the link, presses against the latter and holds its lower end against the frame at the bottom of the aperture. At the end of the link projects a slight offset *t*, and in the front of this offset, substantially in the middle line of the link, is a slight notch or indentation *t'*, adapted to receive the point of the pen as it is thrust beneath the front projection *b'*. Secured to the link at one side is a pin *p*, which extends out through a hole in the frame beyond the front surface *e* of the latter. As this pin is pushed in, or toward the frame, it throws back the link, and thus moves the bottom of the latter away from its contact with the surface of the opening *f*. In the modification shown in Fig. 8, in place of a pin, a portion *b''* of the link is brought beyond the side of the frame, and preferably so as to project forward of the front *e* of the latter in position to be pushed to throw the link back.

In the construction shown in Figs. 1, 2, 3, 4, and 8 the aperture *f* in the front *e* of the frame is semicircular, and above it the surface *i* of the frame projects outward in a rounded shape to assist in locating the final position of the pen under the link.

In the modified constructions shown in Figs. 5, 6, and 7 there are two links *b* and *c* hung from the top and bottom of the frame, so as to swing toward each other. The lengths of the links are such that their free or inner edges touch, and in the edge of the upper link is a semicircular projection *k*, which fits into a similar cavity *l* in the edge of the lower link *c*. These edges *k* and *l* preferably incline downward from the front *e* of the frame toward the back. In this construction there are two springs *d d* attached to the frame, which press against the links and hold their edges in contact. Figs. 5 and 6 show the extractor provided with a screw *s*, by which it may be attached to the desk or table.

The operation of the extractor is as follows: The pen is introduced into the device through the opening or aperture *f* in the front of the frame and under the projection *b'* of the link *b*, or, in the constructions shown in Figs. 5 and 6, between the edges *k* and *l* of the links *b* and *c*. As the pen is pushed against the link it swings back against the spring *d* and allows the pen-point to pass between the bottom of the link and the surface of the aperture *f*. When the pen is first inserted, the point will enter the notch *t'*; but as it is pushed farther in and the link forced backward the

point of the pen will pass beyond the notch t' and the pen will extend through the opening f in about the position shown in Fig. 1. The projection i in the face of the frame stops the insertion by coming in contact with the end of the penholder at a point where the prongs on the end of the penholder are not caught by the link. The arrangement and form of the link and surface of the aperture are such that as the holder with the pen is drawn back the bottom of the link presses the pen firmly against the surface of the aperture and holds it, thus extracting the pen from the holder. In the construction with the two links, as will be readily understood, the insertion of the pen swings back both links, and as the holder with the pen is drawn back the edges of both the links grasp and hold the point of the pen between them, thus extracting the pen. The greater the force used in pulling back the pen the firmer the grip of the link or links on the latter.

After the pen has been extracted the pin p or projection, b', is pushed inward and the link swung back, thus releasing the pen and allowing it to fall from the extractor without being touched by the fingers.

I claim—

1. A pen-extractor consisting of the frame a having the front plate e provided with the opening f and the forward projection i adjacent to said opening, in combination with a pivoted clamping-link b pivoted to the frame underneath said front plate e and extending underneath the projection i and across the opening f, substantially as described.

2. A pen-extractor consisting of the frame a having a front plate e and an opening f, in combination with a pivoted clamping-link b and a clamping-surface opposed thereto; said link b being pivoted to the frame underneath the plate e and being provided near its free end with a projection b' extending forward into the opening f, substantially as shown and described.

3. A pen-extractor consisting of the frame a provided with a front plate e having an opening f, in combination with the clamping-link b and a clamping-surface opposed thereto; said clamping-link b being provided at its free end with a projection b' and a notched offset t whereby the point of the pen is guided in position for insertion in the clamp.

Signed at San Francisco, in the county of San Francisco and State of California, this 21st day of May, A. D. 1894.

ALTON A. DAYTON.

Witnesses:
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