

H. KNICKMANN.
 Tool for Removing Pintles from Hinge-Joints.
 No. 203,466. Patented May 7, 1878.

Fig. 1.

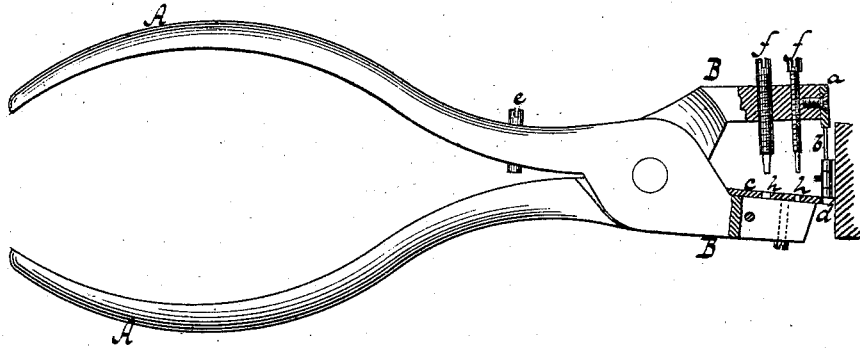


Fig. 2.

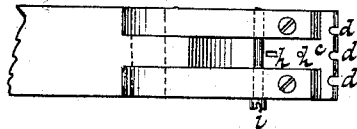
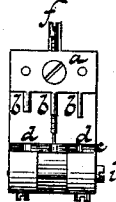


Fig. 3.



Witnesses.

Otto Stufeland
Hugo Brueggemann

Inventor:

Henry Knickmann
 by
Van Santvoord & Hauff

his attorneys

UNITED STATES PATENT OFFICE.

HENRY KNICKMANN, OF EAST NEW YORK, N. Y.

IMPROVEMENT IN TOOLS FOR REMOVING PINTLES FROM HINGE-JOINTS.

Specification forming part of Letters Patent No. **203,466**, dated May 7, 1878; application filed March 28, 1878.

To all whom it may concern:

Be it known that I, HENRY KNICKMANN, of East New York, in the county of Kings, State of New York, have invented a new and useful Improvement in Tools for Removing Pintles from Hinge-Joints, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a side view, partly in section, of a tool containing my invention. Fig. 2 is an inverted plan view of the jaws of the instrument. Fig. 3 is a front view of the jaws of the instrument.

Similar letters indicate corresponding parts.

This invention consists in the combination, in a tool for removing pintles from hinge-joints, of a plate provided with one or more fingers or projections, which plate is attached to the front of one of the jaws of the tool, and a plate attached to the other jaw, said latter plate having notches or perforations corresponding to the fingers of the other plate, so that by placing one of the fingers against a pintle, and compressing the jaws of the tool, the pintle is forced out of the hinge through the perforation in the opposite plate.

In the drawing, the letters A A designate the handles of the tool. The jaws are represented at B B. To the front of one of these jaws is screwed or otherwise attached a plate, *a*, of metal or any desired material. This plate is provided with one or more fingers or projections, *b b b*, Fig. 3. My object in having several fingers is that I can make them of different diameters, so as to fit into hinges of different sizes. To the other jaw of the tool is fastened a plate, *c*. This plate has notches or perforations *d d d*, corresponding in number and position to the fingers *b b b*.

The object of this tool is to remove the pintles, chiefly, in jewelry, watches, and other objects of a similar nature, whose delicate construction has heretofore caused great difficulty in removing the pintles of their hinges; but of course I do not limit myself to the use of

the instrument in this sort of work, but may use it in removing the pintles of any hinge-joint.

The screw *e* in one of the handles A forms an adjustable stop, which prevents the jaws from being compressed too far.

The instrument can also be used to punch holes, for which purpose I provide the following device: One of the jaws of the instrument is provided with screws *f f*, whose ends have round, square, and other forms, according to the hole to be punched. These ends pass into perforations *h h* of corresponding form in the plate *c*. The jaw to which the plate *c* is attached is forked, as seen in Fig. 2, so as to allow the pieces of metal which have been punched out to fall through the holes *h h*. The screw *i* is merely to strengthen the forked ends of the jaw.

The chief object of my tool is to provide a ready means for removing the pintles from hinges, and the mode of accomplishing this is seen in Fig. 1. The plate *c* is placed against the hinge so that the pintle rests over one of the notches or perforations *d*. A corresponding finger, *b*, is placed against the pintle, and on compressing the jaws B B the pintle is forced out through the notch or perforation *d*.

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

The combination, in a tool for removing pintles from hinge-joints, of a plate, *a*, provided with one or more fingers, which plate is attached to the front of one of the jaws of the tool, and a plate, *c*, attached to the other jaw, said latter plate having perforations corresponding to the fingers of the other plate *a*, all combined and operating substantially in the manner set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 21st day of March, 1878.

HENRY KNICKMANN. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.