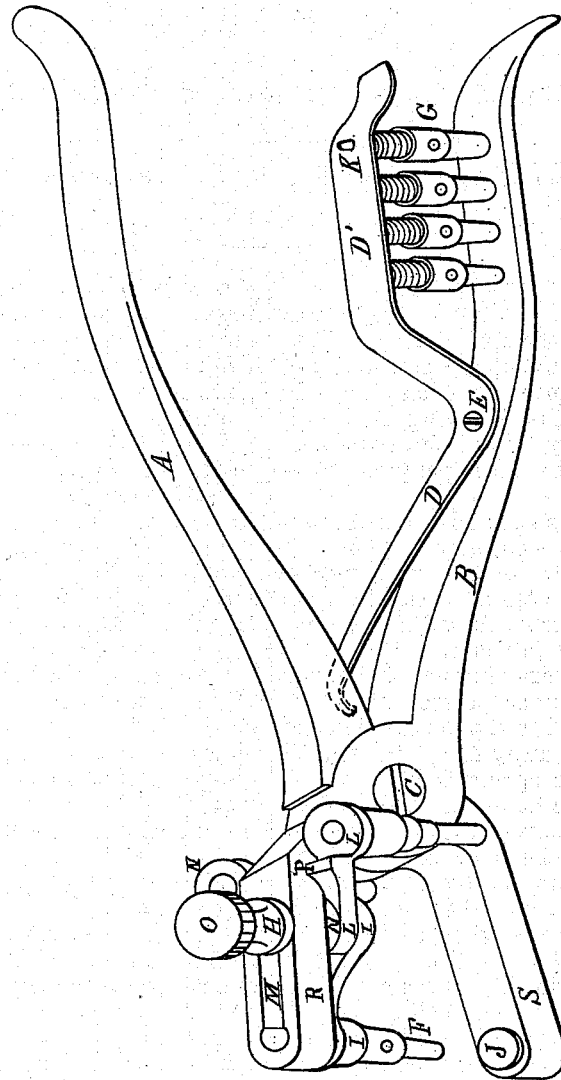


O. B. CRANE.

SPRING-PUNCHES FOR PUNCHING LEATHER, &c.

No. 182,306.

Patented Sept. 19, 1876.



Witnesses.

Wm. R. Sands
J. W. Little

Inventor

Oscar B. Crane per
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attys.

UNITED STATES PATENT OFFICE.

OSCAR B. CRANE, OF NEWARK, NEW JERSEY, ASSIGNOR TO H. F. OSBORNE,
OF SAME PLACE.

IMPROVEMENT IN SPRING-PUNCHES FOR PUNCHING LEATHER, &c.

Specification forming part of Letters Patent No. **182,306**, dated September 19, 1876; application filed
May 29, 1876.

To all whom it may concern:

Be it known that I, OSCAR B. CRANE, of the city of Newark, county of Essex, State of New Jersey, have invented a new and useful Improvement in Spring-Punches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing.

My design is to furnish a hand-punch for perforating leather, pasteboard, or similar materials, which shall be provided with means for punching holes of various sizes, and with a convenient arrangement for adjusting and carrying the necessary punches.

At A and B in the drawing are shown the two halves of the punch jointed at C. A spring, D, pivoted at E to the handle B keeps the punch F pressed away from the seat J. A continuation of the spring D is extended along the inside of the handle B, and bent so as to accommodate, between its surface and the handle, spare punches marked G. These punches G are kept in place by wires or pins secured in the handle, and the continuation D' of the spring is perforated over one of the wires, which enters the hole thus made, and serves to keep the spring D in its place.

When removing the punches G for use the spring is lifted off the wire K and turned on the pivot E, thus exposing the punches for removal. When brought to the pin K and secured on the same the spring D is in position to keep the handles A and B properly separated.

At I, L, and N are shown three links, pivoted to a screw, H, which passes through a slot, M, in the jaw R. Each link is provided with a projection, P, to fit slot M, and is so constructed that it can be brought over the seat J, when desired, by loosening the nut O upon

the screw H, and turning the required link toward the slot M, the other two being pushed out of the way for that purpose. One or more of the links is provided with a tapped hole at its extremity, into which any of the punches G can be screwed, when desired.

The slot M serves the double purpose of receiving the projections P to keep the desired punch over the seat J, and affording the screw O a movement out from the joint C that certain of the links may be turned around between the jaws of the punch on the side of screw H toward C. This is desirable, that the length of the jaws R and S may not be increased unnecessarily to let the links turn.

I am aware that a wheel carrying a series of punches has been attached to the jaw of a hand-punch; but in such an arrangement the punch in use has no direct bearing against the jaw, but strains the pivot of the wheel severely. I do not, therefore, claim rotating the punches in succession over the seat J; but

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

1. The combination, in a hand spring-punch, of two or more adjustable links carrying punches, with the jaw R of the spring-punch, and the clamping device H, substantially as and for the purpose described.

2. In combination the jaws R, provided with the slot M, the set-screw H, and links J and N, all arranged and operating substantially as shown and described.

3. In combination the handles A B, spring D D', and punches G, all substantially as described, and for the purpose set forth.

OSCAR B. CRANE.

Witnesses:

THOS. S. CRANE,
HENRY F. OSBORNE.