

W. Nash,
 Hand Punch,
 N^o 45,738. Patented Jan. 3, 1865.

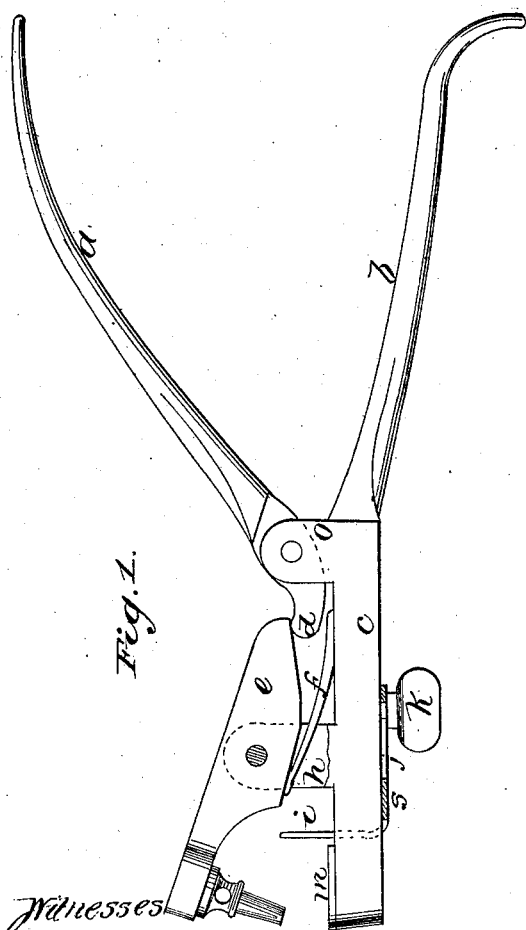
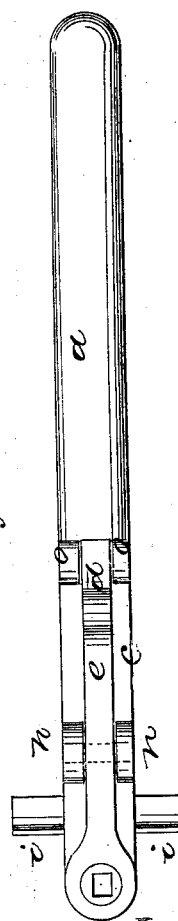


Fig. 1.

Witnesses
 Henry Harris
 C. L. Topliff

Fig. 2.



Inventor:
 Wm Nash
 Mm Co
 attys

UNITED STATES PATENT OFFICE.

WILLIAM NASH, OF WATERTOWN, NEW YORK.

IMPROVEMENT IN HAND-PUNCHES.

Specification forming part of Letters Patent No. 45,738, dated January 3, 1865.

To all whom it may concern:

Be it known that I, WILLIAM NASH, of Watertown, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Hand-Punches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a hand-punch constructed after my invention. Fig. 2 is a plan of the same.

Similar letters of reference indicate like parts.

This invention consists in applying a movable gage to the lower limb of the punch so as to be able to punch holes in a line with each other, and with the edge of the material operated upon, and also in operating the cutting-arm of the punch by means of a free lever, instead of making it part of one of the handles according to the usual construction.

b is the lower, or, as it may be called, the "stationary," limb of the punch, having two standards, *o*, in which is supported the movable or upper arm, *a*, of the punch. The extension *c* of the lower arm forms the bed-plate of the punch. A second pair of standards (designated by the letter *h*) rises from the bed-plate *c*, to furnish bearings for the journals *g* of the punch-lever *e*. The bed plate *c* also supports a gage composed of a plate, *s*, slotted at *j*, to receive a clamping-screw, *k*, by which the plate is secured to the under side of the bed-plate, and of a pair of gage-plates, *i*, which spring up from the lower plate, *s*, upon each side of the bed-plate, rising above its surface far enough to answer the office of a gage. A flat spring, *f*, secured to the upper face of the

bed-plate near the standards *o*, reaches forward and upward against the under surface of the punch-lever *e* at a point forward of its journals *g*, so as constantly to raise the punch *n* off from the bed *m* of the bed-plate, and bring the opposite end of the punch-lever down upon the toe *d* of the upper arm, *a*.

The different parts of the punch may be made of any suitable materials, wrought-iron being a suitable material for the punch-lever *e*, while the bed *m* should be of copper or brass. The example of my invention here shown illustrates its application for cutting or punching leather, card, and other paper, thin sheet metal, and other substances, which can be penetrated by a punch of the general description shown; but I apply it also to cutting and punching metallic plates and other substances of considerable thickness by using a solid steel punch and die, the arrangement of the parts by my invention being such as to increase the power exerted by the operator over that exerted through a hand-punch whose punch is rigidly fixed to one of the arms.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A hand-punch for cutting leather, paper, metals, and other materials, wherein the punch-lever is independent of the movable arm of the handle of the punch, but is operated by the toe thereof, as by a free lever not connected with the punch-lever by any joint or hinge, substantially as above described.

2. The combination, with a hand-punch, of an adjustable gage, *i*, substantially as and for the purpose above set forth.

WILLIAM NASH.

Witnesses:

LOUIS S. MOULTON,
EDWIN H. DOLAN.