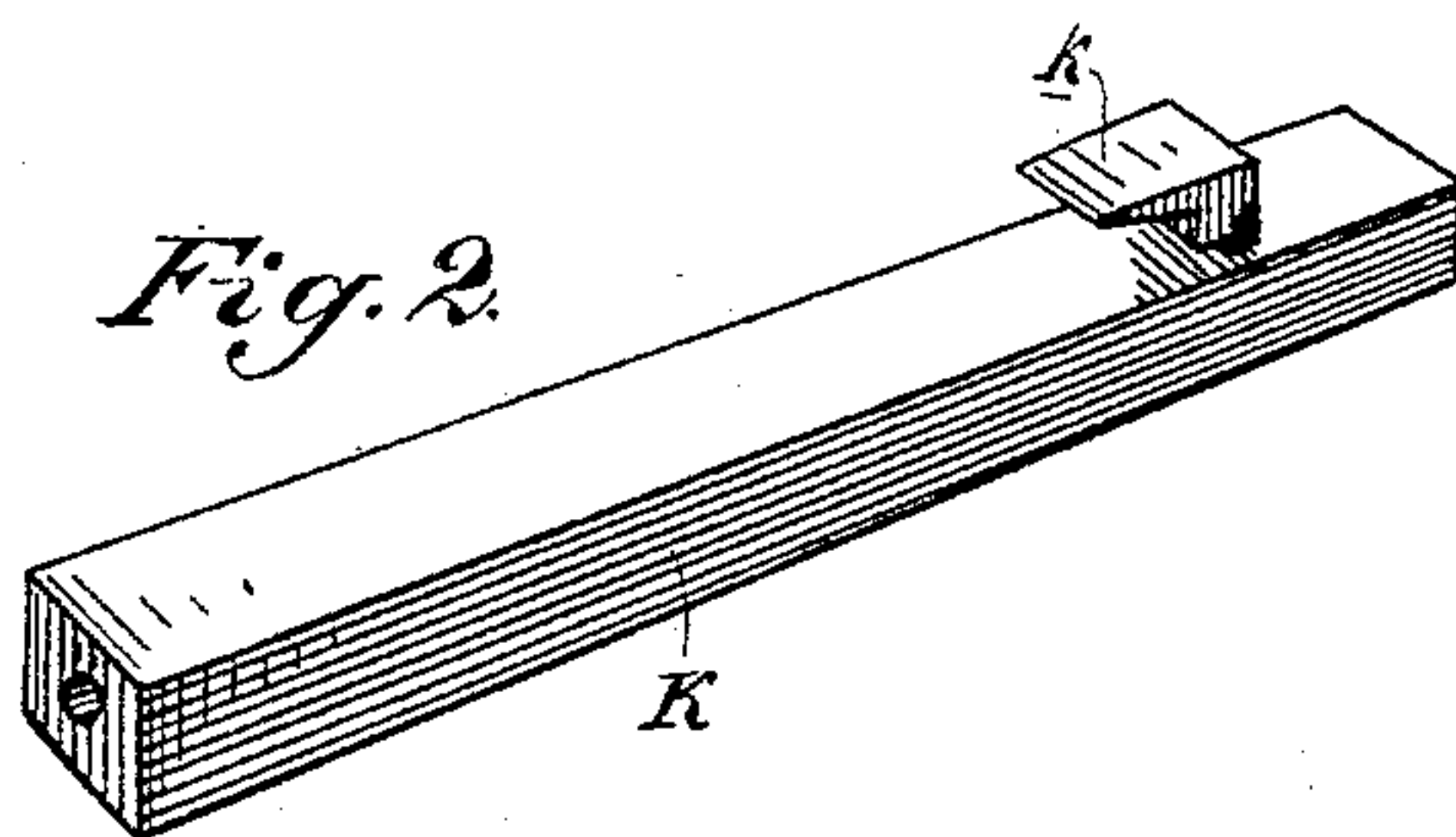
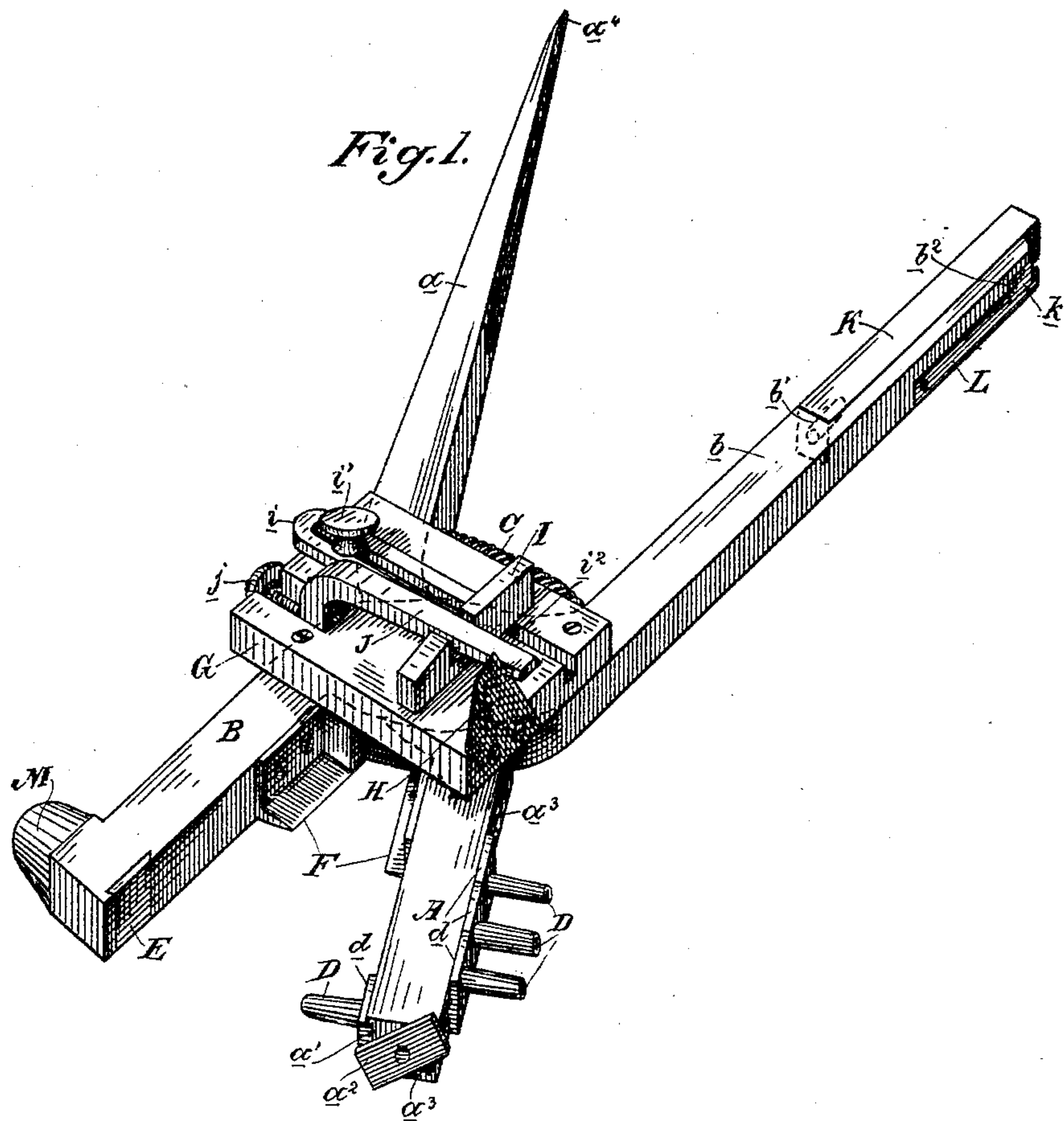


(No Model.)

H. EGBERS.
HARNESS TOOL.

No. 437,888.

Patented Oct. 7, 1890.



Witnesses,
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UNITED STATES PATENT OFFICE.

HENRY EGBERS, OF SAN FRANCISCO, CALIFORNIA.

HARNESS-TOOL.

SPECIFICATION forming part of Letters Patent No. 437,888, dated October 7, 1890.

Application filed March 27, 1890. Serial No. 345,555. (No model.)

To all whom it may concern:

Be it known that I, HENRY EGBERS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Combination-Tools for Harness, Belting, and other Leather Gear; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the general class of combination-tools, and especially to tools of this class adapted for use in connection with the handling of leather and articles and apparatus made therefrom, such as repairing harnesses, belting, riveting, and lace-cutting.

My invention consists in the implement or tool the construction and operation of which will be hereinafter fully described, and its features of novelty pointed out in the claims.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my combination-tool. Fig. 2 is a view of the anvil-bar removed.

The implement or tool is of the general type of shears, leather-punches, and similar tools having opposing sides pivoted together.

One side of the tool consists of a jaw A and a handle *a*, while the other side consists of a jaw B and a handle *b*, the two parts being pivoted together and halved into one another, so as to work upon each other, a spring C between the two handles serving to normally hold the handles and jaws apart, as in pruning-shears.

In the jaw A is adapted to be inserted in a manner I shall presently describe the leather-punch D, and in the opposing jaw is the die E.

To provide for different sizes of punches and their housing, I have the following construction: In the under side of the jaw A is formed a dovetailed recess *a'*, in which is fitted by sliding it in from the end the head *d*, which carries the punch. This head is held in its seat by means of a pivoted or swinging latch-plate *a²* on the end of the jaw, which when turned in one direction covers the open end of the recess, so as to confine the head *d*, and when turned in the other direction uncovers said recess, so that the head can be

slipped out endwise, said head being held in place vertically by reason of the dovetailed connection between it and the recess *a'*. In the outer surface of the jaw is formed a longitudinal groove *a³*, in which are seated by a sliding dovetailed connection a number of separate heads *d*, each carrying a punch, the punches being of different sizes. The swinging latch-plate *a²* at the end of the jaw serves also with its other end to confine the series of punches in their groove. Now when the necessity arises for using a punch of a certain size the latch-plate is turned down, so as to expose the end of the groove *a³*, whereupon the several punches may be slid out of place. One being selected, it is placed in the recess *a'* on the inner side of the jaw, and the latch-plate is then turned to cover the ends of both recess and groove, thereby holding all the parts in place.

On the sides of the jaws are secured or formed the opposing blades F, which act together to cut off between them the ends of rivets.

Secured to and carried by the body of one of the opposing parts (here shown as being secured to that part which forms the jaw B and handle *b*) is a bed-plate G. Upon one edge of this is secured vertically a sharp knife H. Upon the surface of this bed is adapted to play back and forth a gage-bar I for defining and determining the width of the leather strips to be cut. This bar extends parallel with the knife and forms between itself and said knife the space which is the width of the strip to be cut. The gage-bar is adjusted by having a slotted stem *i*, which is controlled by a set-screw *i'*, passing through it into the bed-plate. The bar may therefore be moved back and forth to vary the width of the strip to be cut, and may be set by the screw in the position desired. In its movement the bar may be guided and steadied by a downwardly-extending arm *i²*, which plays in a groove or slot in the bed-plate.

Now in order to form a top guard or guide for the leather as it is being cut there is an arm J, which is secured at one end freely, so that it may be turned about said end as a pivot, and its position is controlled by a set-

screw *j*, which engages its end. Thus the arm may be thrown back to admit the leather being placed on the bed-plate between the gage and the knife, and then turned down onto the top of the leather and there held by the set-screw.

The handle *a* of the tool is drawn out or otherwise formed into a sharp point *a*⁴, which serves as an awl. The other handle *b* is cut out to form a thin extension, at the base of which is a shoulder having a projecting pin *b*'. The end of the thin extension is notched or grooved at *b*², and against the inner side of said extension is fitted a bar *K*; the inner end of which has a hole to receive the pin *b*'. The outer end of this bar is provided with an anvil *k*, which serves as a rivet-set, and the top of said anvil, when the bar is in place alongside of the handle, fits in the notched end *b*² of said handle, and is secured therein by a spring-catch *L*, secured to the handle and dropped down over its end.

The outer side of jaw *B* is formed with a hammer *M*.

The use of the implement is as follows: When holes of a certain size have to be punched in leather—as in repairing harness or belting or such work—the proper size of punch is taken from the groove *a*³, heretofore described, and placed in the jaw *A*. To cut off rivets the opposing blades *F* are used. To cut leather into strips of any kind, I set the gage *I* to the proper width and then bring the top guard arm or guide *J* down upon the leather. The edge of the leather is then resting against the edge of the sharp knife *H*,

and while the leather is held tightly the implement is drawn against it, thereby cutting it into the required strip. For making ordinary awl-holes in leather for lacing, the sharpened end *a*⁴ of the handle *a* is used. For riveting, the bar *K* is removed from the handle *b*, and the rivets are headed down upon the anvil *k* by using the hammer *M* on the outer side of the jaw *B*.

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

1. A combination-tool comprising the opposing sides, consisting of jaws and handles pivoted together and the series of independent punches, each having a head, said heads being housed in a groove in the outer side of one of the jaws and each adapted to be seated for use in a recess in the inner side of said jaw, substantially as herein described.

2. A combination-tool comprising the jaw *A* thereof, having the recess on its inner side and the groove in its outer side, the independent punches with separate heads housed in the outer groove and adapted to be seated separately in the inner recess when needed, and the pivoted latch-plate on the end of the jaw, controlling both recess and groove, substantially as herein described.

In witness whereof I have hereunto set my hand.

HENRY EGBERS.

Witnesses:

S. H. NOURSE,
J. H. BLOOD.