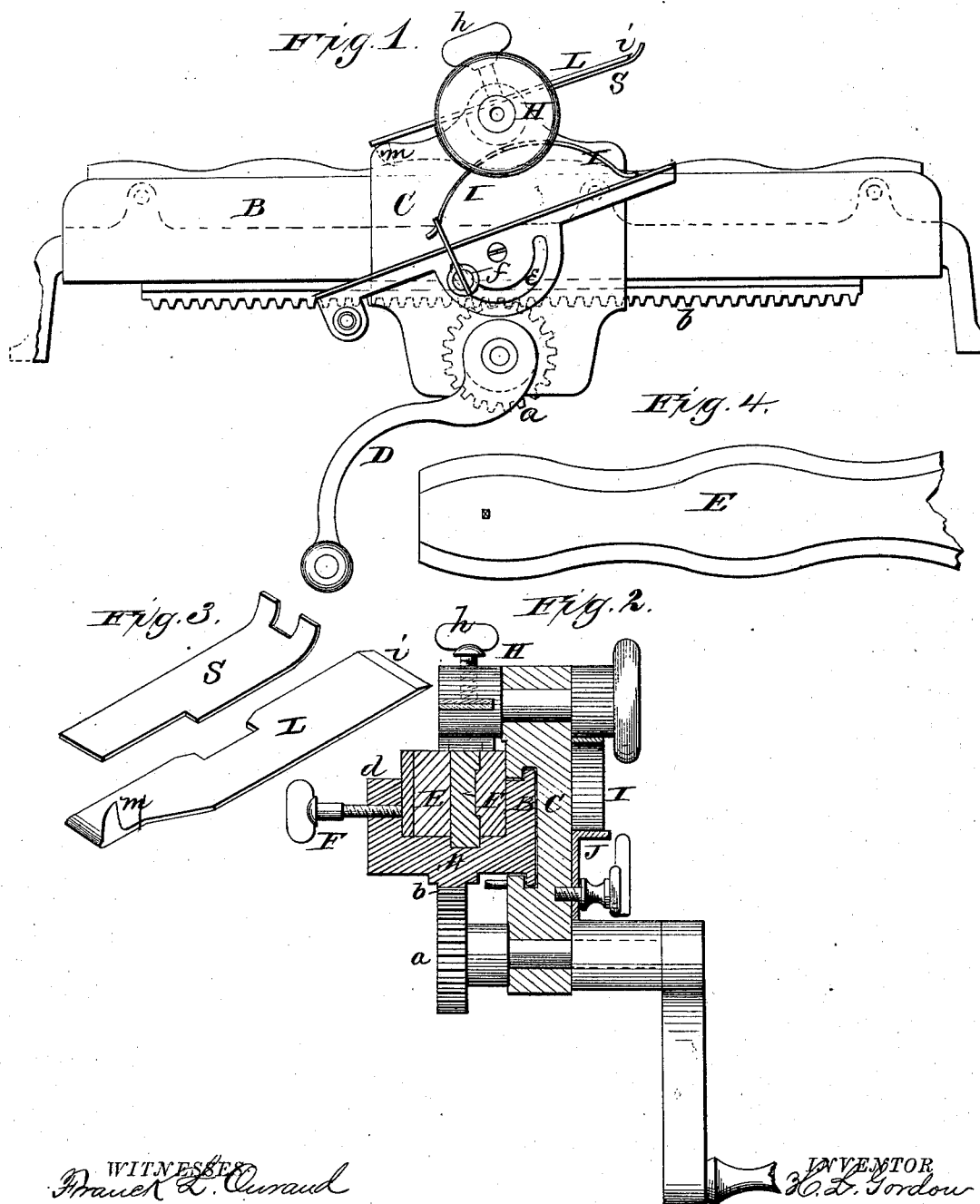


H. L. GORDON.
 Harness Strap Cutting Machine.

No. 216,174.

Patented June 3, 1879.



WITNESSES
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By

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UNITED STATES PATENT OFFICE.

HORACE L. GORDON, OF WEST GARLAND, MAINE.

IMPROVEMENT IN HARNESS-STRAP-CUTTING MACHINES.

Specification forming part of Letters Patent No. **216,174**, dated June 3, 1879; application filed February 1, 1879.

To all whom it may concern:

Be it known that I, HORACE L. GORDON, of West Garland, in the county of Penobscot, and in the State of Maine, have invented certain new and useful Improvements in Harness-Strap-Cutting Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for cutting and skiving the straps for the breeching and breast-plates of harness, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a vertical cross-section of the same. Fig. 3 represents the knife and a metal shoe used therewith. Fig. 4 shows one of the patterns.

A represents a bed-plate, of suitable form and dimensions, along one side of which is attached a vertical plate, B. On this plate slides the sliding or movable head C, which is actuated by a crank, D, and pinion *a*, said pinion engaging with a rack, *b*, on the under side of the bed-plate.

On the opposite side of the bed from the vertical plate are projections or lugs *d*, through which are passed set-screws F, for clamping and holding the work firmly while being cut or formed.

E E represent the double pattern, which may be of wood or metal, and of the desired form of the work to be cut. Between these patterns the leather is inserted, and the whole is held fast by the clamping-screws F.

H represents the adjustable or rotating knife-holder, carried in the upper part of the sliding head C. This knife-holder is provided with springs I I, either one of which is made to rest on an adjusting-lever, J, pivoted to the side of the head C. The lever J has a projection, with segmental slot *e*, for the passage of

a screw, *f*, for holding the lever at any angle desired.

L represents the knife, which is adjustable, and secured in a slot in the knife-holder by a thumb-screw, *h*. On one end of the knife is the cutting-edge *i*, which cuts or forms the leather to the pattern. On the opposite end of the knife is a lance-shaped projecting cutter, *m*, which on the return movement of the sliding head splits the edge of the strap to the depth necessary for the skiving. The roughened surface which is left on the flesh side of the leather is to be afterward removed by the ordinary hand-skiver.

When a wood pattern is used it is necessary to insert under the cutting-edge of the knife a thin metal shoe, S, to keep the knife from cutting the pattern.

The operation of the machine is as follows: After the leather has been cut to the necessary width it should first be soaked to a degree that will make it soft and pliable. It is then placed between the patterns, the work or finish side next to the sliding head, and the whole secured by the clamping-screws F. The sliding head C being at the farthest point to the left, the adjusting-lever J is raised to its highest point and fastened by the thumb-screw *f*. This depresses the edge of the knife to the pattern, and it is held to this position by the springs I. By propelling the sliding head to the right the knife cuts the leather to the form of the pattern. The adjusting-lever J is then set to its lowest point, which causes the lance *m* at the other end of the blade to pierce the edge of the leather. Then by propelling the head back to the left the edge of the strap is split to the required depth for the skiving. Next loosen the clamping-screws, raise the pattern without removing the leather, reverse end of the pattern and also edges, place it back in position and secure as before, and proceed to cut the last edge in the same manner as the first.

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

1. The combination of a sliding head, an oscillating or rocking knife-holder, and an adjustable knife with a pattern of any desired

form, as arranged for the purposes herein set forth.

2. The combination of the bed-plate A, with vertical plate B and lugs *a*, the clamping-screws F, sliding head C, crank D, pinion *a*, and rack *b*, substantially as and for the purposes herein set forth.

3. The combination of the adjustable knife-holder H, springs I I, and adjusting-lever J, substantially as and for the purposes herein set forth.

4. The blade L, provided at one end with the

cutting-edge *i*, and at the other end with the cutter *m*, and adjustable in the adjustable holder H, for the purposes herein set forth.

5. The shoe S, in combination with the blade L, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of January, 1879.

HORACE L. GORDON.

Witnesses:

JASON T. FOGG,

GEO. W. CARD.