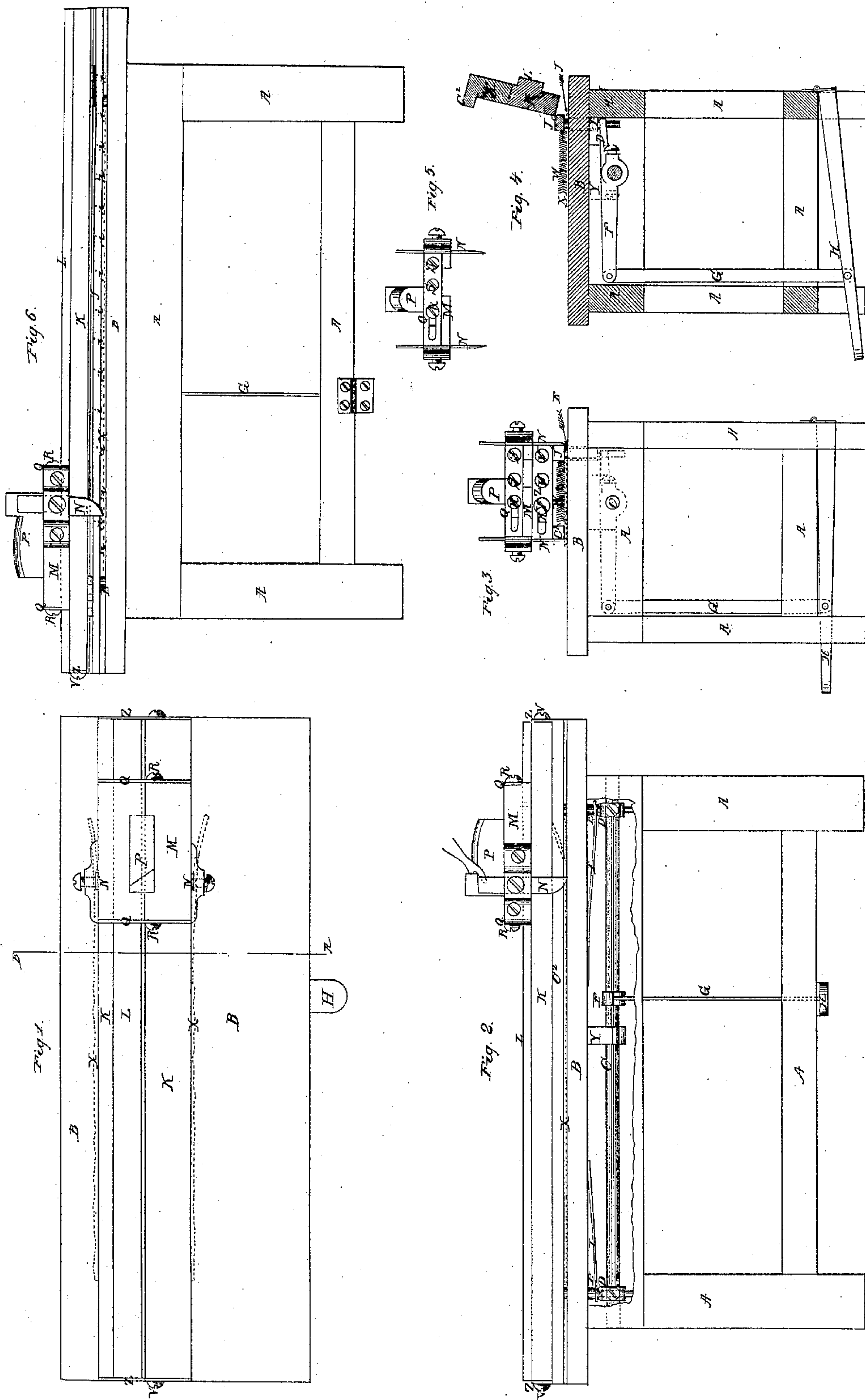


E. B. Horre,

Card-Setting Machine.

N^o 16,275.

Patented Dec. 23, 1856.



UNITED STATES PATENT OFFICE.

E. B. HOWE, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN TRIMMING CARD-CLOTHING.

Specification forming part of Letters Patent No. 16,275, dated December 23, 1856.

To all whom it may concern:

Be it known that I, EDWARD B. HOWE, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Gaging, Straightening, and Cutting or Trimming Sheets of Card-Clothing; and I hereby declare that the following specification, in connection with the accompanying drawings and references thereon, constitute a lucid, clear, and exact description of the construction and use of the same.

In referring to said drawings, Figure 1 denotes a plan or top view; Fig. 2, a front elevation of the same; Fig. 3, an end elevation of it. Fig. 4 denotes a transverse and vertical section on line A B, Fig. 1, with the top elevated to receive the piece or sheet of card-clothing to be trimmed. Fig. 5 is an end view of the cutter or trimmer stock disconnected from the machine; Fig. 6, a back side elevation of it.

The nature of my invention consists of gaging, straightening, and cutting both edges of card-clothing sheets at one operation, which may be effected with great rapidity and accuracy with my machine, which is hereinafter described.

To enable persons skilled in the art to which my invention appertains to construct and carry out the same, I will describe it as follows:

I construct a frame of wood. (Seen at A, Figs. 2, 3, 4, and 6.) On the top of it I place and fasten a plate. (Seen at B, Figs. 1, 2, 3, 4, and 6.) I construct a square bar, (seen at J, Figs. 2, 4, and 6,) fastened to the rods E, which pass down through holes formed in the top or plate B, and are connected to the arms D, which arms are secured to the turning shaft C, Figs. 2, 3, and 4, it being so fitted to the frame A as to turn freely therein. I then construct two steel springs, I, Figs. 2 and 4, one end of which I secure to the under side of the plate B, while each of their opposite ends presses down upon the ends of the arms D and rods E, and of course the bar J, to which they are connected. The object of this downward pressure is to force the points *i*, Figs. 4 and 6, into the leather to hold it, and also hold down the leather with sufficient force upon the plate B so that it may be cut or trimmed. A stand (seen at Y, Figs. 2 and 4) is fastened to the under side of the plate B,

Figs. 1, 2, 3, 4, and 6, to sustain the central part of the shaft C, Figs. 2, 3, and 4. I form an arm, (seen at F, Figs. 2 and 4,) and secure one of its ends to the shaft C, Figs. 2, 3, and 4, and the other end to a rod (seen at G, Figs. 2, 3, 4, and 6) which reaches down and is connected to a treadle, (seen at H, Figs. 1, 3, and 4,) so that by placing the foot upon this treadle and pressing it down it will raise the bar J, as seen at Figs. 3, 4, and 6, for the purpose of placing the piece of the card-clothing (seen at X, Figs. 1, 2, 3, 4, and 6) under it to be trimmed, the card-teeth (seen at W, Figs. 3 and 4) being placed against the bar J for holding it so that it may be trimmed parallel with the teeth to straighten them when they are laid into the machine to be held and trimmed.

It will be understood that my machine is designed to trim sheet card-clothing, as seen in end view at W and X, Figs. 3 and 4, and it is necessary to straighten both edges of the leather parallel with the rows of card-teeth set therein, and of exact and uniform width their whole length, so that in placing the card-sheets in my machine care should be taken to press one of the rows of card-teeth against the bar J, Figs. 3 and 4, which constitutes its guide, as well as to press down the leather. Various widths of card-sheets are necessary, and my machine is so constructed as to be adjustable to any desired width.

I construct an adjustable swinging top of two parts, (seen at K, Figs. 1, 2, 3, 4, and 6,) so that it may be made wider or narrower by means of the slotted plates Z, Figs. 1, 2, 3, and 6, and screws V and U, which screws hold these plates and are for adjusting the top K to any required width. The front part of the top K has a bar fastened to its under side (seen at C², Figs. 1, 3, and 4) for holding the front edge of the leather while being trimmed by the downward pressure of the hand upon and movement of the cutting-tools N, as will be seen in Figs. 1, 2, 3, 5, and 6. I then construct the tool-stock (seen at M, Figs. 1, 2, 3, 5, and 6) of two parts of like adjustability as the swinging top K, Figs. 1, 2, 3, 4, and 6, by means of the plates Q, Figs. 1, 2, 3, 5, and 6, and screws R and S, Figs. 1, 2, 3, 5, and 6. This tool-stock is fitted nicely, so as to slide on the track or guide L on the upper side of the swinging top K. This track or way L imparts an exact guide to the movement of the cutters

N, Figs. 1, 2, 3, 5, and 6, and consequently trims the card-clothing to a uniform width and exactly parallel with the rows of teeth when this tool-stock is slid along over the top K by hand or power, meaning that the cutters N will straighten, gage, cut, and remove at a single operation the surplus leather contained in the card-sheets.

At P, Figs. 1, 2, 3, 5, and 6, can be seen the handle which is secured to the tool-stock for pushing it forward and back by hand or power to perform the cutting or trimming operation. The points or lower edges of the spur-cutters N pass down through the leather and slightly into the wood or top B, so as to be sure to cut and separate the leather for trimming, as will readily be understood.

What I claim as my invention is—

The arrangement of the adjustable guide and clamp K, with its adjustable tool-holder M, operated thereon, and the guide-bar J, for guiding the card-clothing by the card-teeth set therein, and the points *i* in this bar J to hold the card-clothing while it is being trimmed on both edges at the same time, and parallel with the card-teeth therein, these parts being arranged and operated essentially in the manner and for the purposes set forth.

EDWARD B. HOWE.

Witnesses:

BENJ. ROBINSON,
E. W. SCOTT.