

*S. S. Gray,
Collar Machine.*

No. 87,841.

Patented March 1869.

Fig. 1.

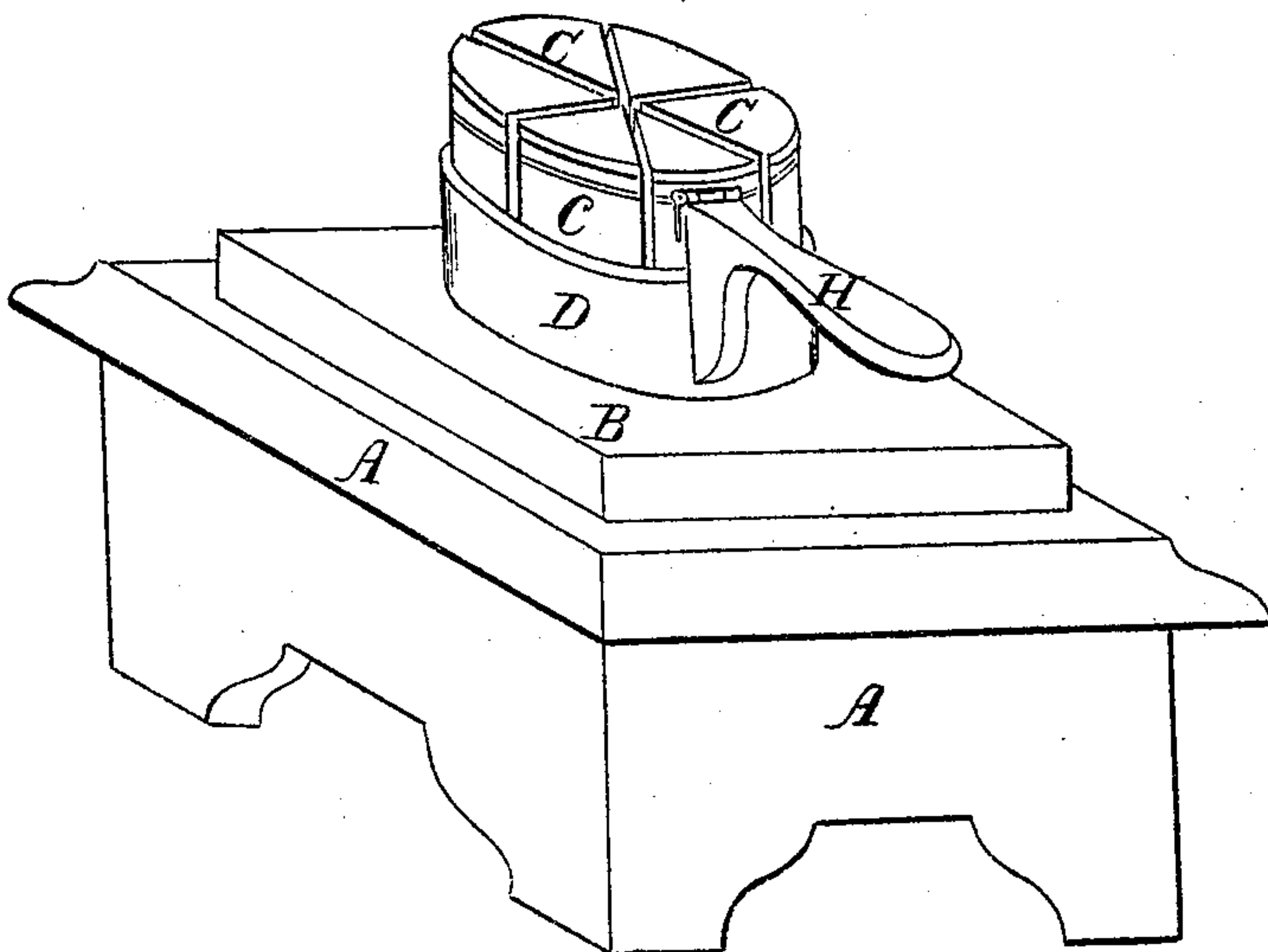
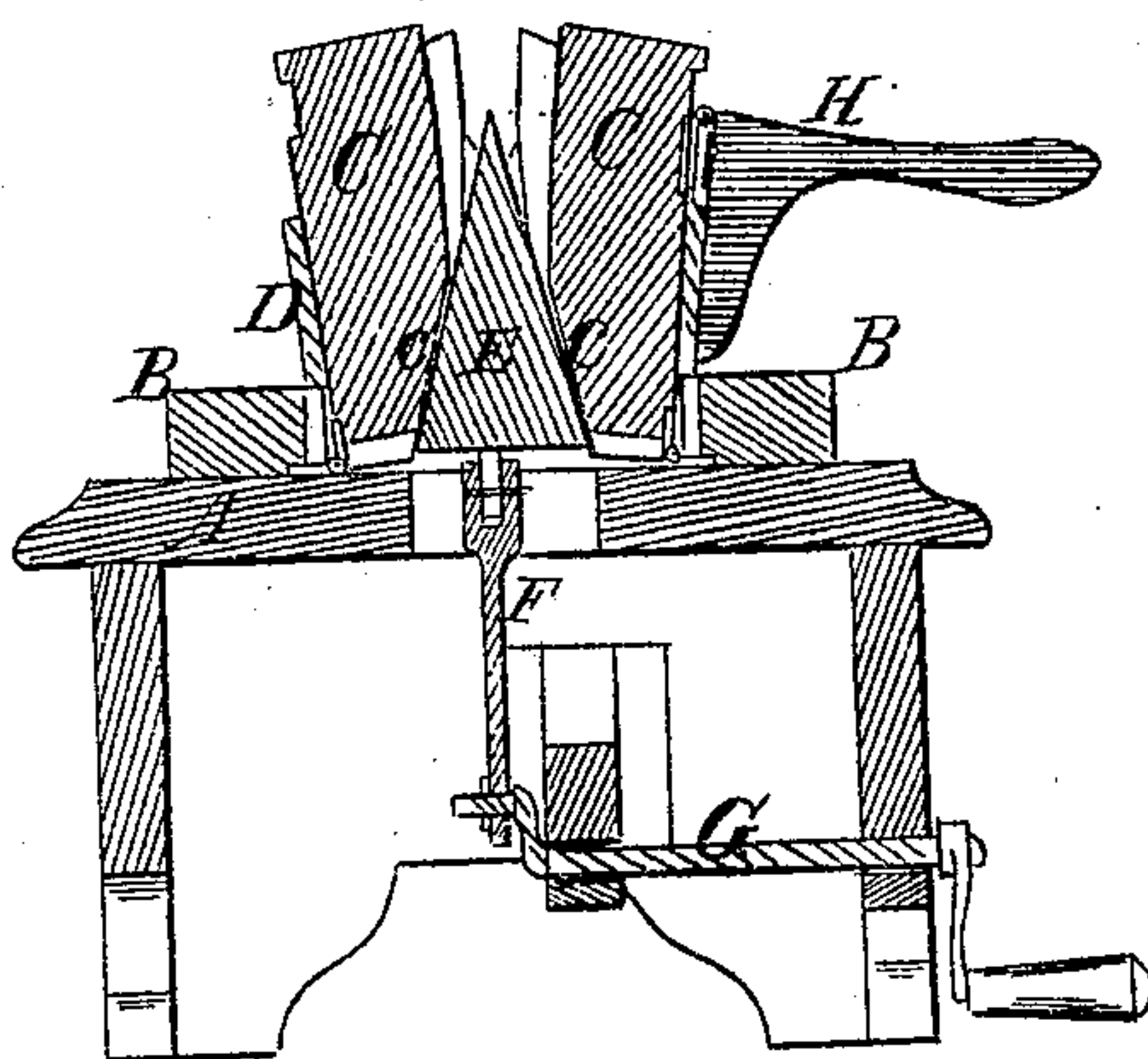


Fig. 2



*Witnesses,
J. H. Adams
James A. Woodbury*

Solomon S. Gray



SOLOMON S. GRAY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
AMERICAN MOULDED-COLLAR COMPANY.

Letters Patent No. 87,841, dated March 16, 1869.

MACHINE FOR MOULDING PAPER-COLLARS.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, SOLOMON S. GRAY, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Machines for Moulding Collars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a machine embodying my improvement, and

Figure 2 is a vertical section of the same.

The object of my invention is to mould a collar, by means of an outward pressure, produced by the expansion of an elastic substance, while the collar is held at all points firmly together upon the same; and

The invention consists in the employment of a band of India rubber, surrounding a former composed of a series of sectional blocks, which form a cylinder when closed, and which are made to expand or open outward at their upper ends, by means of a conical block forced up from below, the inner lower edges of the former blocks being bevelled, so that, as the conical block is forced upward, the upper ends of the sectional blocks will be thrown outward, and thus expand the rubber band which surrounds them.

In combination with the above is a handle or lever, hinged to one of the blocks, and provided with a jaw or holder, which serves to hold the ends of the collar together upon the rubber band during the process of moulding the collar.

Referring to the drawings—

A represents a frame, of any suitable form and dimensions, upon the top of which is secured the platform B, having a central circular opening.

Within this opening is arranged a series of sectional blocks, C C, forming, when closed, a solid cylinder.

Surrounding these blocks, at their lower portion, is a band of India rubber, D.

The sectional blocks C C are hinged at their lower outer edges to the main frame A, and at their lower inner edges are bevelled off, so as, when closed, to fit over the upper end of a conical block, E.

The block E is connected, by means of a pivoted rod

or bar, F, to a crank-shaft, G, as shown in fig. 2, so that as the shaft G is turned, the conical block E will be moved up and down.

As the block E is moved upward, it presses upon the bevelled edges of the sectional blocks C, causing their upper ends to be thrown open or to expand outward, as shown in fig. 2.

To one of the sectional blocks C is hinged a handle, or holder, H, as shown, the lower portion of which forms a jaw and fits close to the rubber band D, so as to firmly hold the ends of a collar, which is placed around the band D.

The operation is as follows:

The sectional blocks C C being in a closed position, as shown in fig. 1, the collar to be moulded is placed around the rubber band D, the ends of the collar being placed under the jaw of the handle H, where they are firmly held. The shaft G being then rotated, the conical block E is forced upward, and spreads out or expands the upper portions of the sectional blocks or former C, thus distending the rubber-band D and moulding the collar to the proper form.

Having thus described my invention,

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

1. In a machine for moulding collars, the sectional blocks C, when constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the expanding-blocks C, the elastic band D, as and for the purpose specified.

3. The clamp H, attached to one of the sectional blocks C, for the purpose described.

4. Also, the combination of an expanding-block, E, or its equivalent, with the sectional blocks C, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

SOLOMON S. GRAY.

Witnesses:

JAMES A. WOODBURY,
J. H. ADAMS.