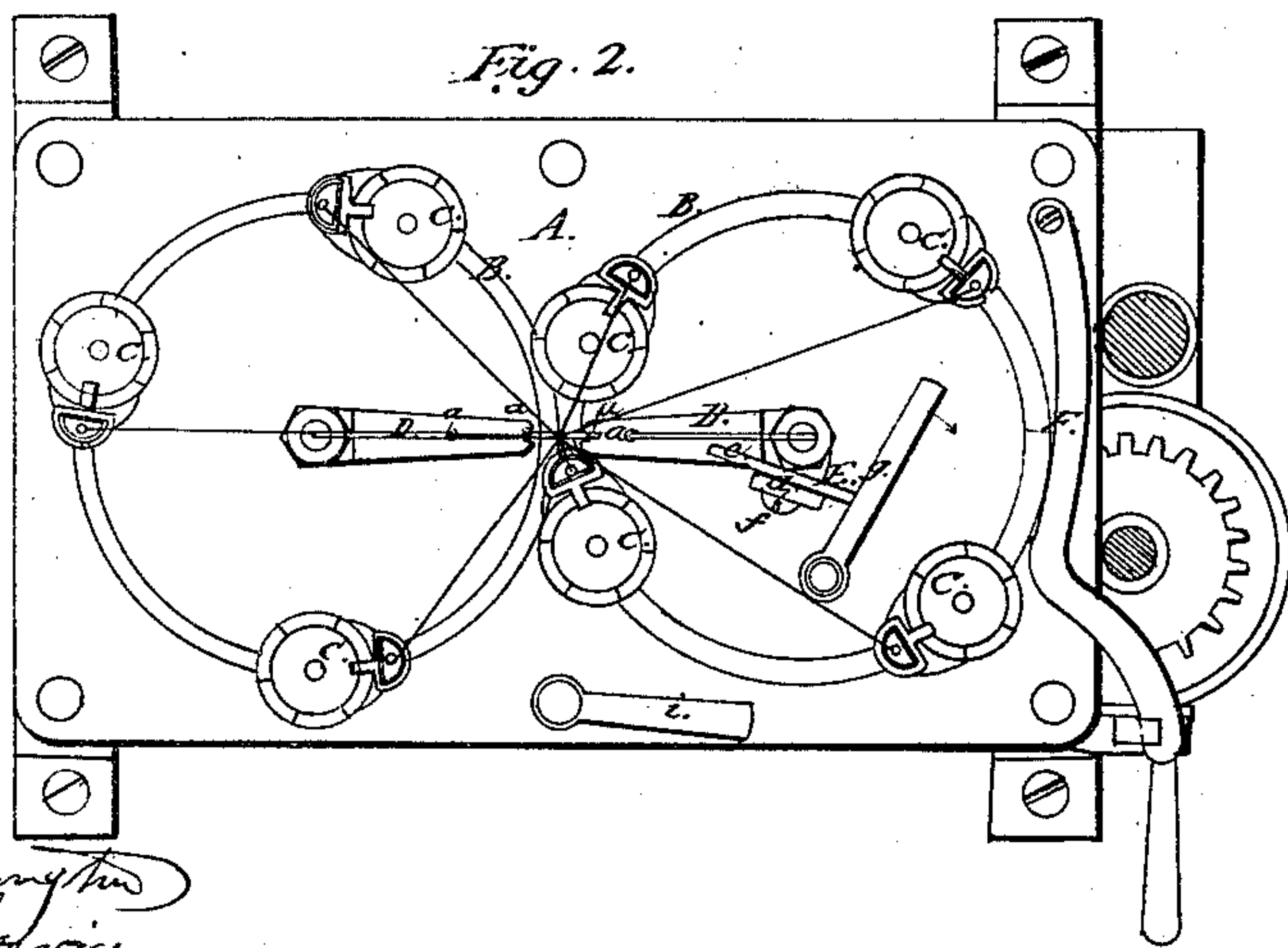
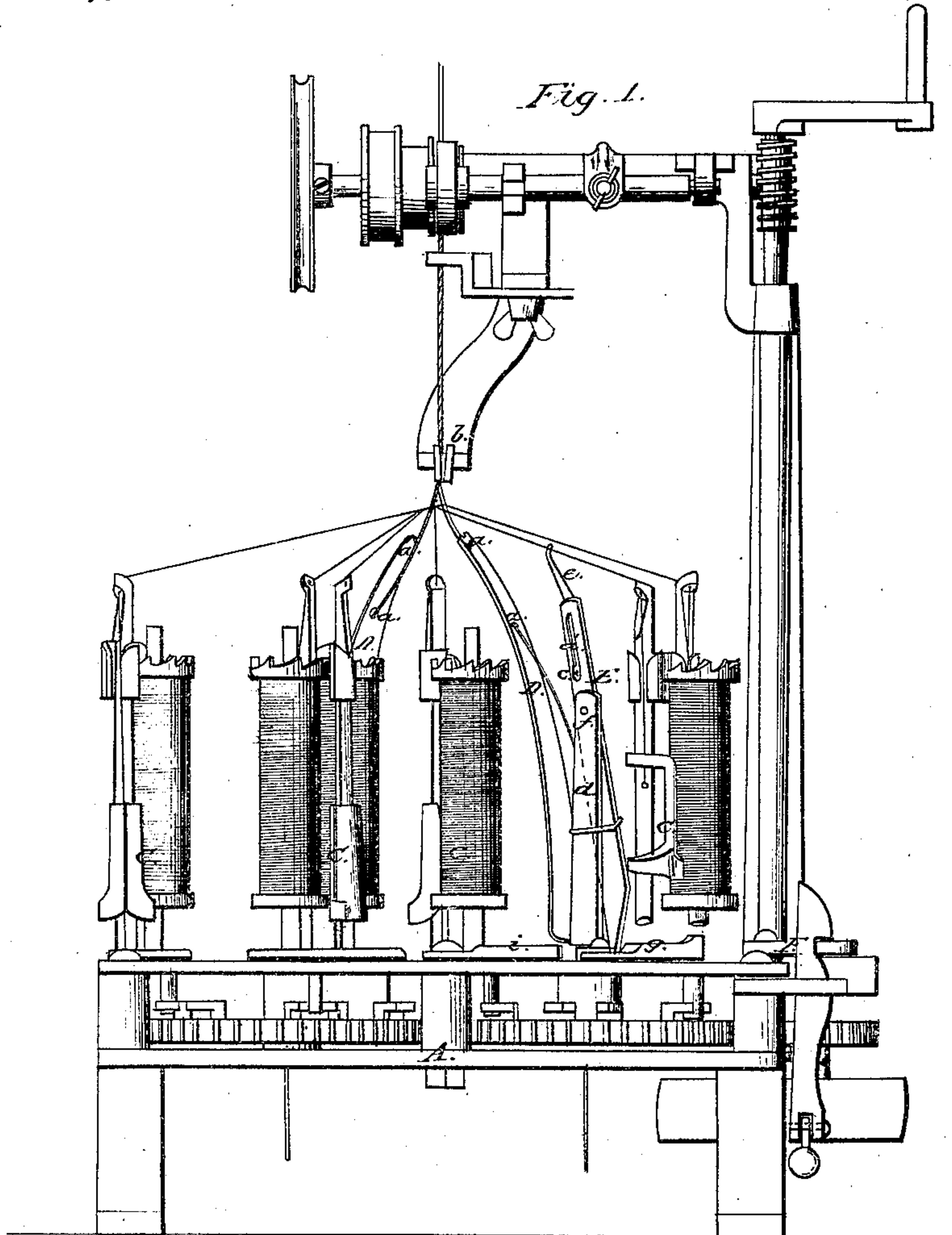


Howe & Mackrell. Braiding Mach.

N^o 57,326.

Patented Aug. 21, 1866.



Witnesses:
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UNITED STATES PATENT OFFICE.

H. B. HOWE AND W. J. MACKRELL, OF NEW YORK, N. Y.

IMPROVEMENT IN STOP-MOTIONS FOR BRAIDING-MACHINES.

Specification forming part of Letters Patent No. 57,326, dated August 21, 1866.

To all whom it may concern:

Be it known that we, H. B. HOWE and W. J. MACKRELL, of the city, county, and State of New York, have invented a new and Improved Stop-Motion for Braiding-Machines; and we 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 part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention relates to a stop-motion for braiding-machines of that class which are used for covering skirt-wire or other materials with cotton, silk, or other threads, and which are provided with two or more cams to impart motion to a series of carriers, which carry the spools containing the threads used for braiding. Such machines are usually provided with a stop-motion, which is operated by weight suspended from the threads, and which causes the machine to stop whenever one of the threads breaks.

In braiding skirt-wire, however, it happens many times that the wire fails to be fed along uniformly, and in that case the braiding continues beyond the guides through which the wires pass up, and bad or faulty places are the consequence, causing much waste and loss in time and material.

Our improvement consists in the arrangement of a tappet-lever, which rises from one of the cams, in combination with a hinged latch and with the stop-lever of the machine, in such a manner that whenever the braiding from any cause continues below the desired point one of the threads catches the tappet-lever, causing the same to tilt and to throw the latch out against the stop-lever, whereby the machine is stopped automatically and all waste in material avoided.

A represents the frame of a braiding-machine, which is made of iron or any other suitable material, and which is provided with two or more cam-grooves, B, that form the guides for the carriers C. From the centers of the cams rise the curved standards D, which

are provided each with two or more holes, *a*, to conduct the strands of wire or other material to be covered up through the guide-clamp *b* to the feed-rollers, as indicated in blue outlines in the drawing.

The threads contained on the spools of the carriers C are shown in red outlines, and they extend through eyes in the top ends of the carriers to the wire or other material to be covered, as clearly shown in the drawings, the braiding being effected between the top ends of the curved standards D and the guide-clamp *b*, and close to said guide-clamp.

If from some cause the wire is not fed up quick enough, the braiding extends down closer and closer to the curved standards, and unless the machine is stopped the threads of the carriers wind round the curved standard, and a faulty spot is produced, which afterward has to be cut out, causing much loss of material and requiring much time in claspings the ends of the cut wires together. This difficulty is obviated by the arrangement of the tappet-lever E, which has its fulcrum on a pivot, *f*, secured in a standard, *d*, which rises from the center of one of the cams. To the upper end of this lever is secured a finger, *e*, which is adjustable up and down by means of a set-screw, *c*, passing through a slot, *a'*, in the lever, as clearly shown in Fig. 1 of the drawings.

The lower end of said tappet-lever bears against a latch, *g*, which is pivoted to the cam or to the frame A in such a position that the same, when turned in the direction of the arrow marked near it in Fig. 2, will strike the stop-lever F of the machine, and by releasing the same cause the machine to stop.

The finger *e* on the upper end of the tappet-lever is adjusted in such a position that it clears the threads running from the carriers to the wires to be braided; but as soon as the feed-motion of said wire stops and the covering-threads run down on the wire to be covered toward the curved standards D one of said threads will catch against the finger and cause the tappet-lever to tilt. The latch *g* is thereby thrown against the stop-lever, and the motion of the machine is stopped automatically before any damage is done, and all waste of cotton or other material is avoided.

If the stop-lever fails to act, the latch *g*

comes in contact with a stop, *i*, secured to the frame A, and the machine is stopped.

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

1. The tappet-lever E and hinged latch *g*, in combination with the stop-lever F of a braiding-machine, constructed and operating substantially as and for the purpose set forth.

2. The adjustable finger *e*, in combination with the tappet-lever E, and with the threads

of a braiding-machine, constructed and operating substantially as and for the purpose described.

The above specification of our invention signed by us this 20th day of April, 1866.

H. B. HOWE,
W. J. MACKRELL.

Witnesses:

WM. F. MCNAMARA,
W. HAUFF.