

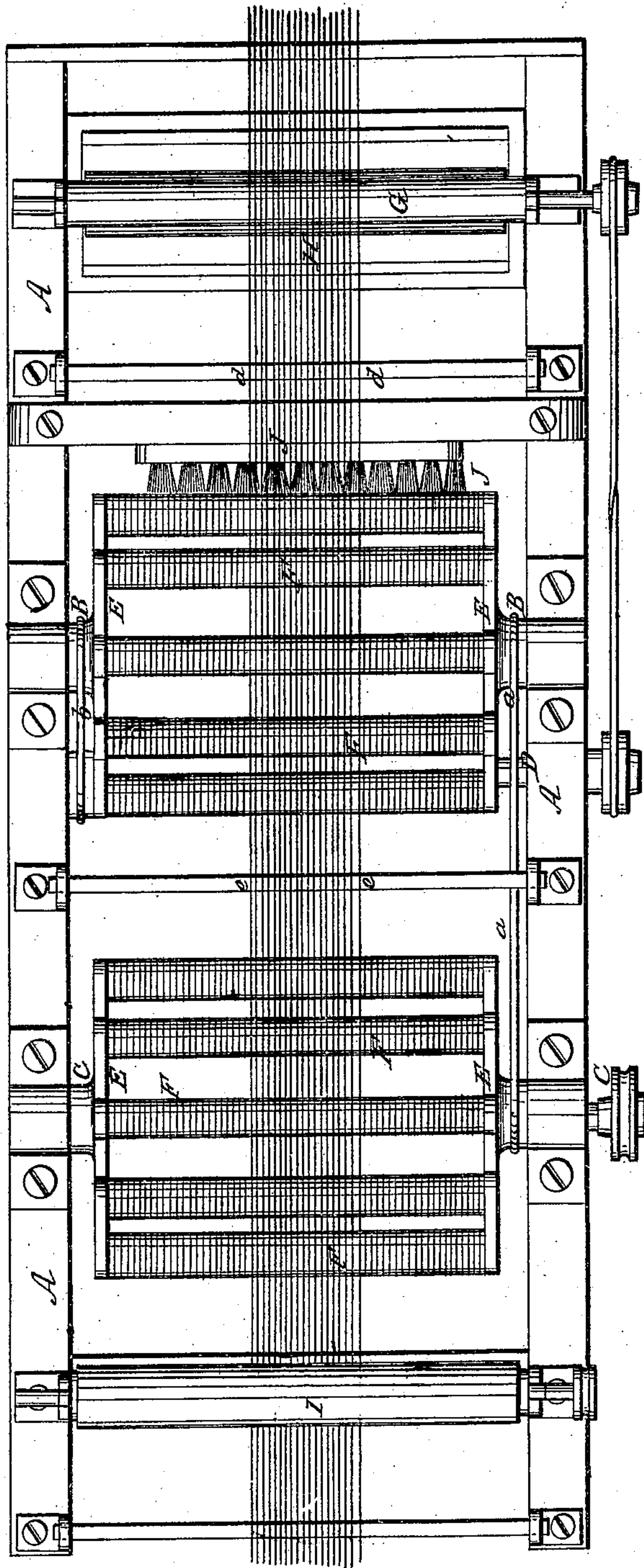
S. Semple, Jr. & R. A. Semple

Thread Dressing Mach.

No. 87,005.

Patented Feb. 16, 1869.

Fig. 1.



WITNESSES  
E. Wolff.  
Wm. A. Morgan.

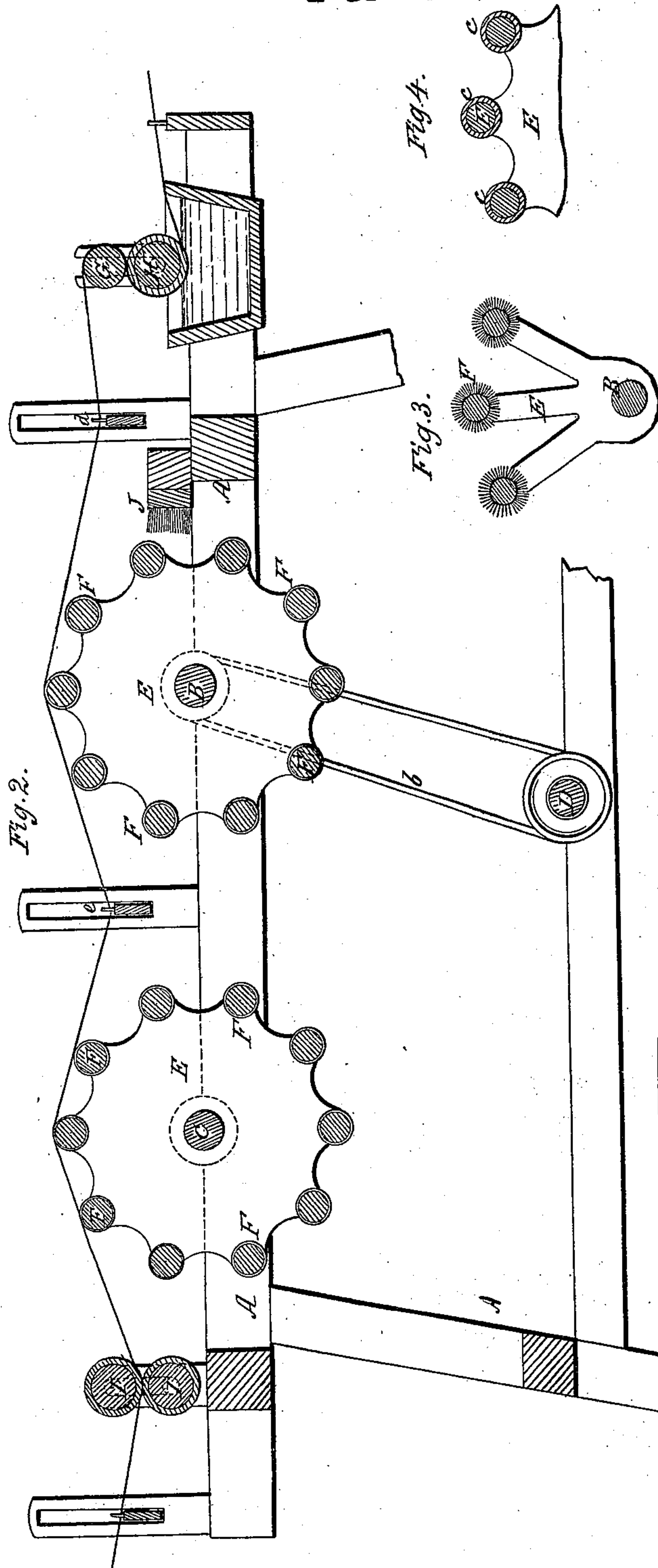
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N<sup>o</sup> 87,005.

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# United States Patent Office.

SAMUEL SEMPLE, JR., AND ROBERT A. SEMPLE, OF MOUNT HOLLY, NEW JERSEY,  
ASSIGNORS TO SAMUEL SEMPLE AND SONS, OF THE SAME PLACE.

*Letters Patent, No. 87,005, dated February 16, 1869.*

## IMPROVEMENT IN MACHINE FOR POLISHING AND DRESSING THREAD.

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

*To all whom it may concern:*

Be it known that we, SAMUEL SEMPLE, JR., and ROBERT A. SEMPLE, of Mount Holly, in the county of Burlington, and State of New Jersey, have invented a new and improved Machine for Polishing Thread; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those 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 plan, or top view of our improved thread-polishing machine.

Figure 2 is a vertical longitudinal section of the same.

Figures 3 and 4 are detail sectional views of modifications of the friction-rollers.

Similar letters of reference indicate corresponding parts.

This invention has for its object the construction of a machine for polishing sewing-thread; and consists in the arrangement of devices, hereinafter described, to the action of which the thread is subjected while being fed from the bobbin-creel to the spindles on which it is to be wound.

A, in the drawing, represents a frame, of suitable size and form, made of metal, or other suitable material.

In it are the bearings of two horizontal transverse shafts, B and C, which are rotated in the same direction, by suitable means.

In the drawing is represented a belt *a*, which connects the two shafts, and another belt, *b*, which connects one of them with a driving-shaft, D.

On each shaft, B and C, are mounted, near the ends, two disks, E E, which are connected by nine, or more or less, horizontal bars or rollers, F F, which are all equidistant from and parallel with the axes of their respective rollers, B C, as shown.

The bars, or rollers F F, may be fastened to arms, projecting from the shafts B C, in place of the disks E, as indicated in figs. 3 and 4.

The bars F are, by preference, made of cylindrical form, but may be of other suitable shape, if fastened rigidly to the disks, or arms E.

If they are arranged so that they can rotate, they must be cylindrical.

The bars F are either made of wood, or other suitable material. They are either grooved, as in figs. 1 and 2, or are provided with branches, as in fig. 3, or covered with layers, *c*, of felt, as indicated in fig. 4, or smooth rods, or rollers, may be used, this construction having been found, by actual experiment, to be equally as good as the grooved, felted, or brush-rollers.

The thread to be polished is, from a reel of suitable kind, brought between the sizing-rollers G H, through guides *d d*, over the first roller B, through guides *e*, then over the second roller C, and is then passed between felt-covered rollers I I, whence it passes to the spindles around which it is to be wound, all as indicated in fig. 2.

The lower size-roller H works in a trough, J, filled with sizing, as shown.

The guides *d e*, and the felt-covered rollers I, being lower than the upper bars F of the rollers B C, the thread is held tensely above said bars, and, as the shafts B C are rapidly revolved, the bars, or rollers F, will strike, and beat the threads, and rub them at the same time. The effect is, that after having passed the first set of rollers, or bars F, the thread will be quite dry, and partly polished, and the second set of rollers, or bars, will entirely finish the polishing-process.

A stationary brush, J, is fastened to the frame A, to clean the bars, or rollers F, of the first shaft B, from all sizing that may have adhered to them.

It will, at first sight, appear doubtful that the rollers F, working only from underneath, should be able to polish the thread on all sides; but we have found that, by the aforesaid beating-motion, the thread is somewhat twisted, so that it will turn to expose its whole surface to the action of the beaters.

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

The series of rotating disks E E, carrying the grooved bars F, in combination with the sizing-rollers G H, brush J, guides *d e*, and felt-covered rollers I I, all arranged and operating as described, for the purpose specified.

SAMUEL SEMPLE, JR.  
ROBERT A. SEMPLE.

Witnesses:

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RICHARD P. HOLEMAN.