W. H. Boyden,

Dresser Copher.

No. 84,793. Patented Dec. 8. 1868.

Fig. 1.

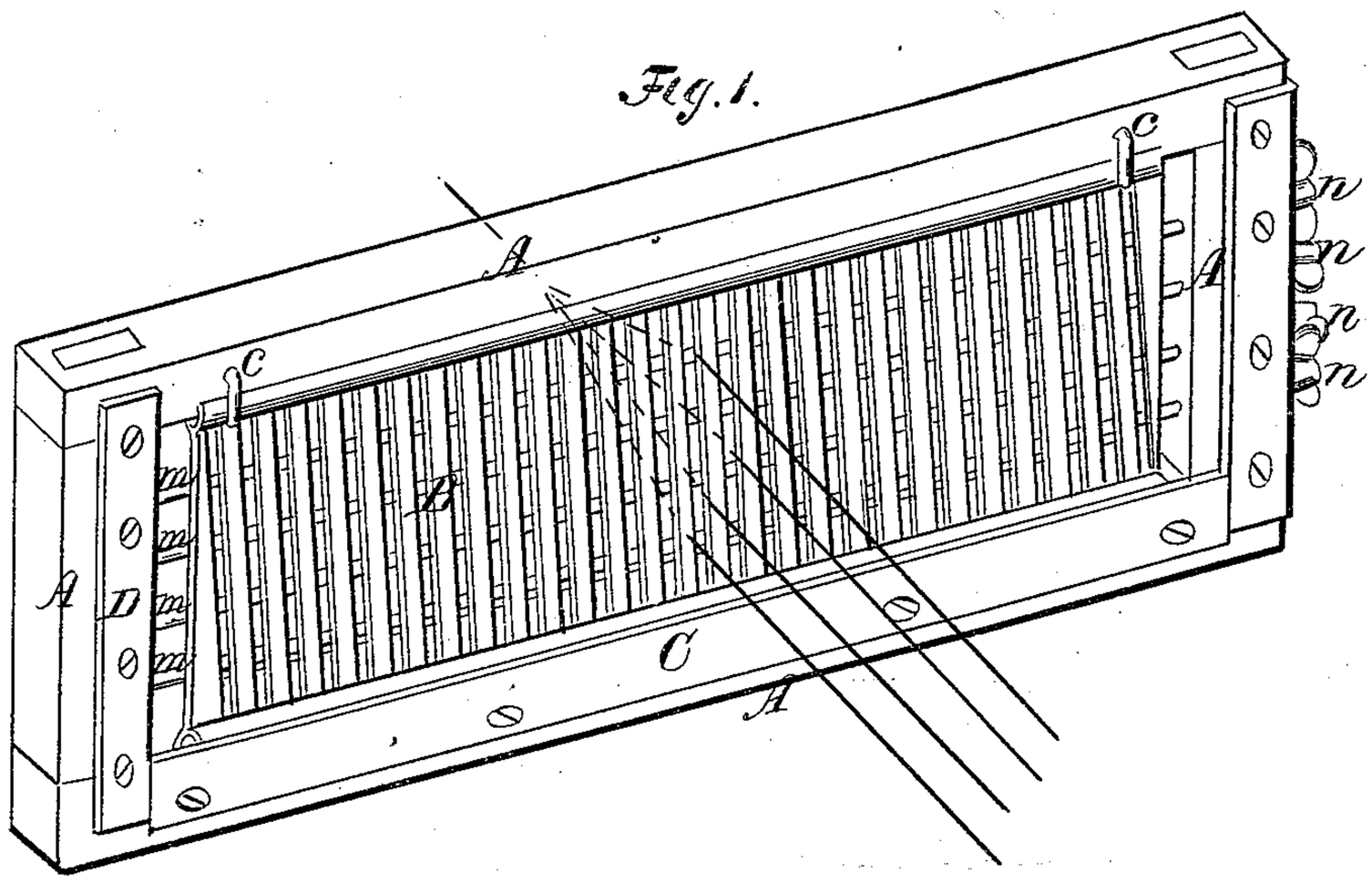


Fig. 2

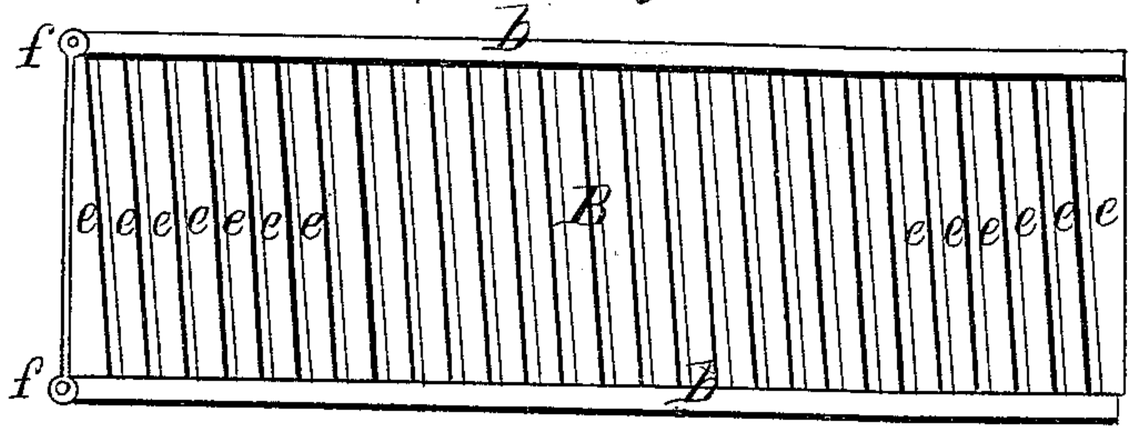
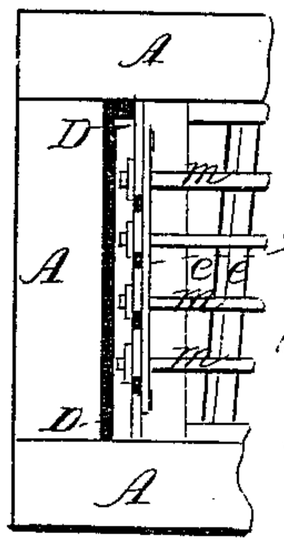


Fig 3



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W. H. BOYDEN, OF ROCKLAND, RHODE ISLAND.

Letters Patent No. 84,793, *dated December* 8, 1868.

IMPROVEMENT IN "DRESSER-COPPER" FOR WARP-DRESSING MACHINES.

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

To all whom it may concern:

Be it known that I, W. H. BOYDEN, of Rockland, in the county of Providence, and State of Rhode Island, have invented a new and improved Dresser-Copper; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view.

Figure 2, a front elevation of the rack detached.

Figure 3 is a rear elevation of the clamp T.

The object of this invention is to construct a dresser-copper for dressing cotton-warp, in such a manner that the edges of the copper, with which the threads come in contact, can be finished smoother than heretofore, and when in use will wear away more slowly, and so that when the parts of the metal in contact with the threads become worn to any extent, so as to endanger the threads, they can, without cutting out the threads and reaming out the copper, be adjusted in a few minutes, so as to bring a new surface of metal into contact with the threads, thereby saving a great deal of time and labor, and rendering the instrument much more convenient to operate than heretofore.

Most of the coppers hitherto employed in dressing cotton-warp, are made from three to four inches wide, and from two and a half to four and a half feet long, having a series of small holes punched through them to receive the threads. The threads working in the holes are apt to wear into the copper, after which any little bunch or inequality in them causes them to break. All the threads must then be cut out, and the copper reamed, which takes from two to three days, during which the dresser is lying idle and the work is suspended. When the holes have been reamed out, they are apt to be left with sharp edges, which cut the yarn, and produce a great deal of trouble to the operators.

This invention is designed to do away with all these difficulties, and to combine in an easy and simple manner all the advantages hereinabove referred to.

In the drawings, A is a wooden frame, supporting a rack, B, one edge of which is set in a groove in the inner edge of the frame, and secured in position by a metallic plate, C, fastened to the frame by screws, the other edge dropping into a rebate or counter-sink in the inner edge of the opposite side of the frame, and held in place by angular pins, hooks, or buttons *c c*. The rack is made as shown in fig. 2, having the side strips *b b* strengthened by stout iron rods *f f*, and having the oblique cross-bars *e e e*, arranged as shown, the whole being made of copper or any other suitable metal or material.

Behind this rack, when in its proper position in the frame, extend four or any other suitable number of smooth, hardened-steel rods, *m m m m*, arranged as shown in fig. 1. One end of these rods is clamped, hooked, or otherwise suitably fastened to the end of the frame A, or to a lip or flange of the brass plate D, as seen at T, fig. 3. The other end of each rod passes through the end-piece of the frame, and has a screw-nut with a thumb-piece, *n*, connected with it, whereby the wires may be made to receive any required tension.

The instrument is then ready for use, the threads being inserted, as shown in red lines in the drawings. The two top threads draw down, and the two bottom ones up, so that, in practical operation, the wires take up nearly all the friction of the threads or yarn, very little coming on the rack. Two threads never touch one wire at the top and bottom, but each thread draws on its own wire.

The advantages of this method of construction are, first, that it relieves the threads or yarn so that the latter is enabled to pass through the rack, and over or under the wires, without danger of being cut; secondly, when a workman is putting a thread through from the back side of the rack, he can see the end of the thread through the rack, and will know exactly where to catch it with his other hand; and thirdly, the wires can be taken out, or changed, and the edges of the bars *e e e* smoothed, without cutting out the dresser.

Should the wires in time become cut in one place, they can be partially turned, or they can be moved longitudinally, or the rack itself might be moved longitudinally, so as to bring the threads in contact with a fresh, unworn surface.

Having thus described my invention,

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

1. The combination of the rack B and wires *m m*, in a frame, A, substantially as and for the purposes specified.

2. The arrangement of the rack B, frame A, wires *m m m m*, thumb-screws *n n*, and clamp T, substantially as shown and described.

W. H. BOYDEN.

Witnesses:

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