JOSEPH AYERS.

Machines for Making Piping.

No. 126,864. Patented May 21, 1872.

Fig. 1

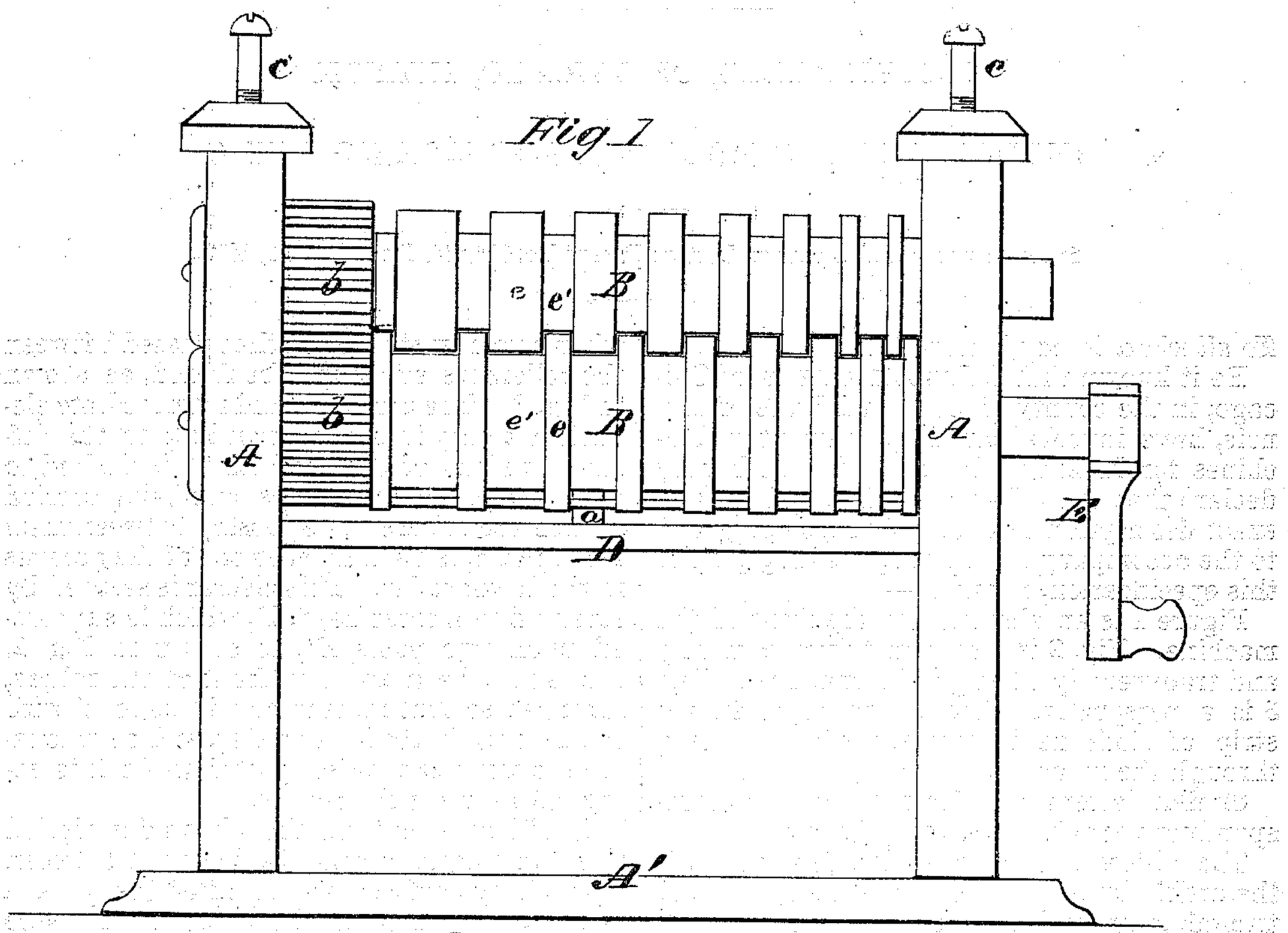


Fig. 2

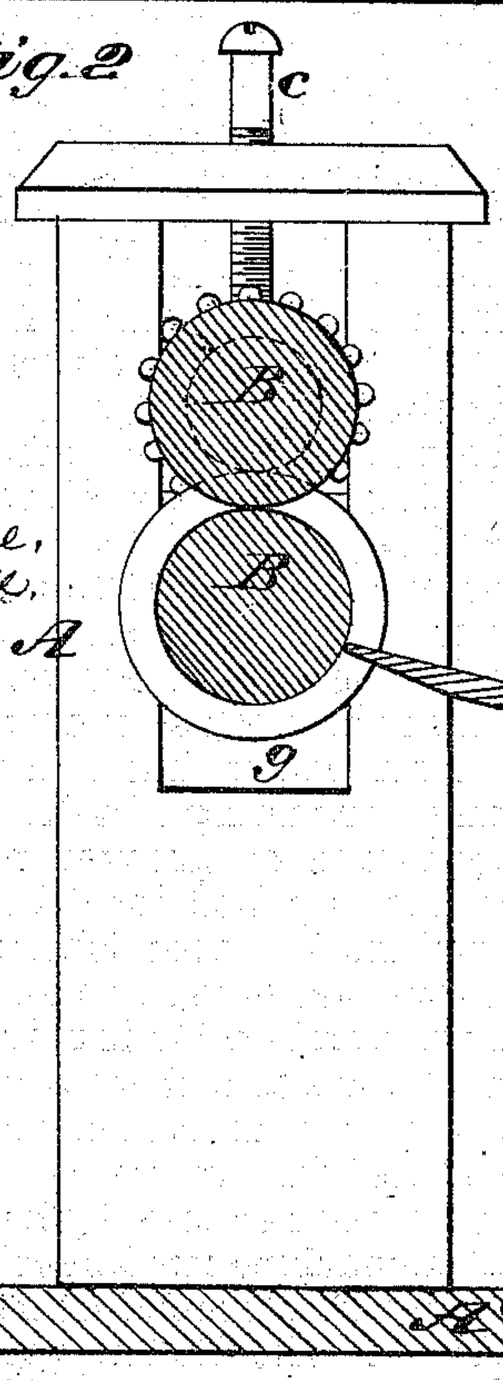
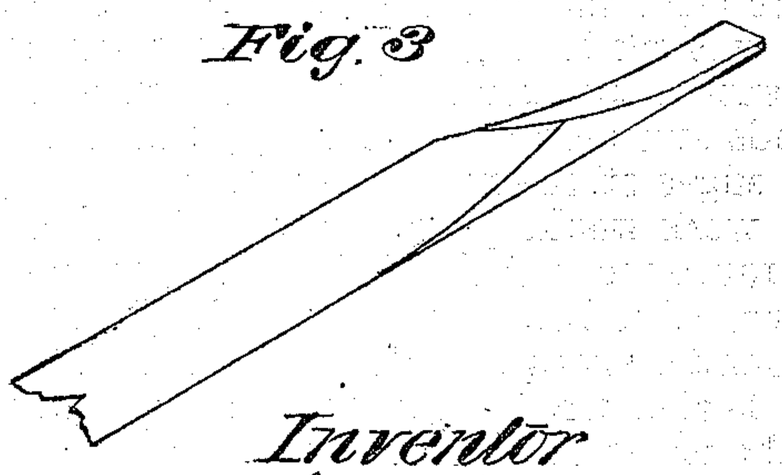


Fig. 3



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH AYERS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MACHINES FOR MAKING PIPING.

Specification forming part of Letters Patent No. 126,864, dated May 21, 1872.

To all whom it may concern:

Be it known that I, JOSEPH AYERS, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Machines for Making Piping; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is an elevation of the front of the machine. Fig. 2 is a section taken vertically and transversely through the machine. Fig. 3 is a perspective view, which represents a strip of cloth as it appears while passing through the machine.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to produce the article known in the market as biased-fold trimming or piping in a better cheaper and more rapid manner than hitherto. This article was made only by hand-labor before my invention, and required the most experienced hands and very delicate manipulation to fold the edges of the narrow biased strips so that the work would present a merchantable appearance when the folded edges were pressed down. The best work of this kind produced by hand is always more or less uneven in width, and is also irregular in other respects, owing to the material being cut biased.

The following description of my invention will enable others skilled in the art to understand it.

In the annexed drawing, B B represent two rollers or rotating shafts, which have their bearings, respectively, in movable journal-boxes that are guided in standards A A rising from and firmly secured to a base, A′. The journal-boxes of the upper roller B are acted upon and held down by adjusting-screws *c c*, and the journal-boxes of the lower roller B are supported upon springs *g*, which press this roller against the upper roller with more or less force that can be regulated by the set-screws *c*. The two rollers B B are geared together by the spur-wheels *b b*, and driven by power applied to a crank, E. Both rollers are grooved and fitted together in such manner that the grooves *e′* of one roller receive the annular elevations *e* of the other roller, as shown in Fig. 1; thus when a narrow strip of cloth is passed between the rollers its edges will be folded, as shown in Fig. 3. The grooves *e′* and intermediate elevations *e* vary in width according to the different widths of strips which it is desired to fold. To prevent the strips from being carried around the rollers while passing between them a clearer, *a*, is used for each one of the grooves in the lower roller. This clearer is secured by screws *d* to a cross-head, D, which is supported upon two posts, D′, as shown in Fig. 2. There may be a table in front of the rollers, arranged so that its surface will be level with the grooves in the lower roller, and on this table the work can be supported while it is being fed between the rollers.

It will be seen from the above description that the narrow strips are received between four rolling surfaces, which, after the work is started, will continue to fold or lap one edge over the other and press down these edges, thus finishing the work at one operation.

With regard to the frame of this machine, I desire to state that I do not confine myself to its precise construction, as the rollers may be mounted in a frame of a different shape from that represented in the drawing.

The ends of the strips are folded by hand, as shown in Fig. 3, before they are introduced between the rollers, after which the work of folding the strips and pressing down the folds will be performed by the rollers, and it is only necessary to guides the strips by hand up to the work. It will be seen that the strips are received between four rolling surfaces, which finish the work at one passage between them.

I am aware that it is not new to manufacture a trimming of a different kind from mine, by means of grooved rollers and pressure-springs applied into the grooves thereof, in combination with folding guides. I am also aware that it is not new to roll iron between grooved rollers having rigid bearings; but I am not aware that there has ever been produced before my invention the article known as "biased-fold trimming" or "piping," in any other manner than by hand-labor.

The machine combines the following features, all of which are necessary to render it practicable—to wit: Rollers, presenting grooves, and elevations varying in width, one of which roll-

ers has its bearings in fixed but adjustable blocks, and the other is supported upon springs which will afford a constant yielding pressure upon the strips while being folded; also an adjustable clearer for preventing the strips from being carried around the rollers.

Having described my invention, I claim as new—

The rollers B B, grooved as described, and held together by means of springs *g* and adjusting-screws *c*, in combination with the clearer *a*, all being arranged as set forth, and adapted for the production of piping, as shown.

JOSEPH AYERS.

Witnesses:
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