C. W. COLLYER.

Seam Pressing Mechanism.

No. 201,994. Patented April 2, 1878.

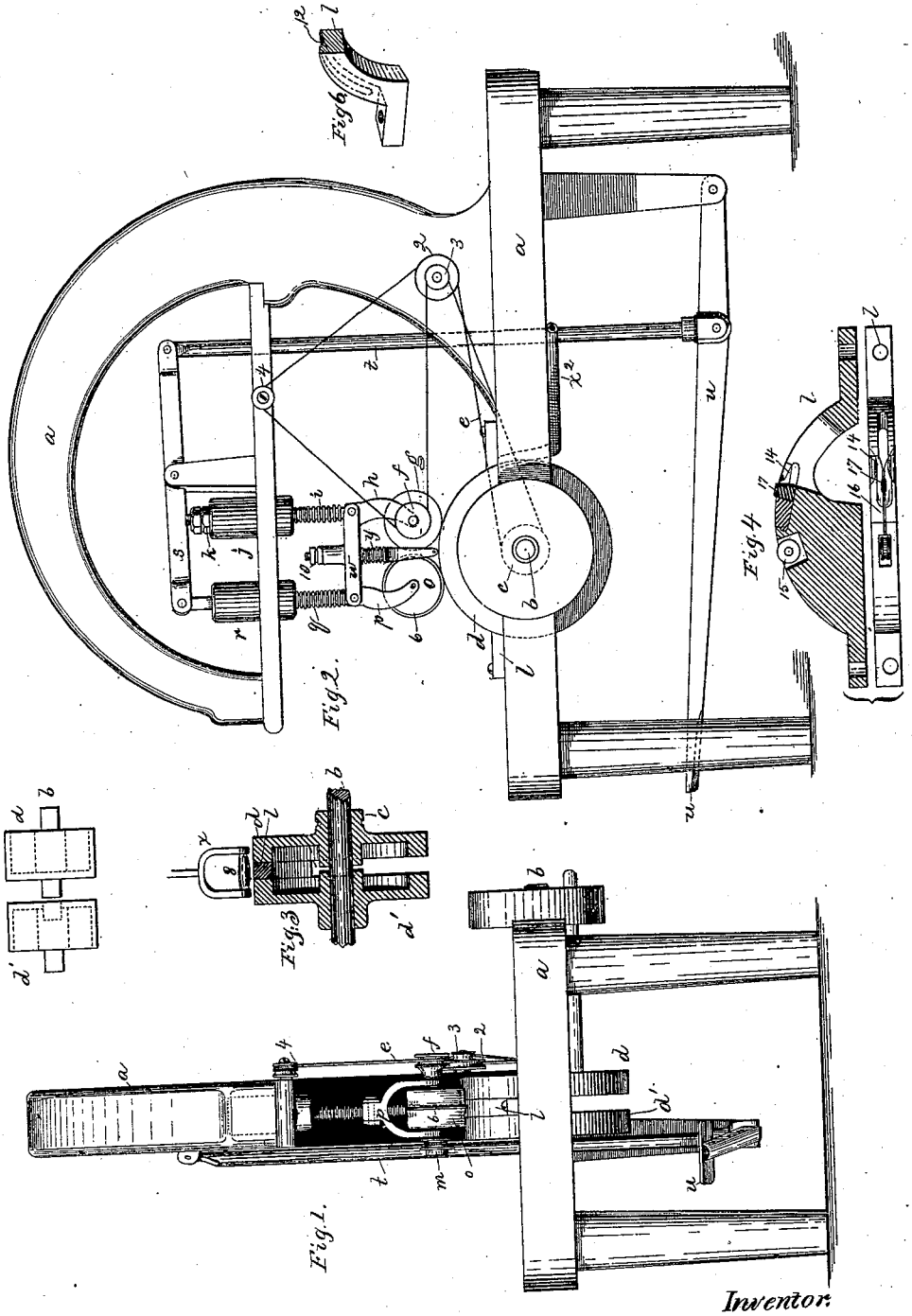

Fig. 6.

Fig. 2.

Fig. 4.

Fig. 5.

Fig. 3.

Fig. 1.

Witnesses.
W. J. Pratt.
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Inventor.
Charles W. Collyer
per Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

CHARLES W. COLLYER, OF LYNN, MASS., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO LYMAN A. MAY AND A. EDWIN WITHEY, OF SAME PLACE.

IMPROVEMENT IN SEAM-PRESSING MECHANISMS.

Specification forming part of Letters Patent No. **201,994**, dated April 2, 1878; application filed February 18, 1878.

To all whom it may concern:

Be it known that I, CHARLES W. COLLYER, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Seam-Pressing Mechanisms, of which the following is a specification:

This invention relates to improvements in seam-pressing mechanism, specially applicable to pressing seams in leather and cloth used in the manufacture of boots and shoes, or other purposes.

In this invention the material containing the seam to be pressed or smoothed, and opened, is placed on a support, over which it is moved, so that the seam is first opened by a rotating seam-opener, after which the seam is pressed or ironed by a rotary ironer. Wheels at each side this support hold up the material being acted upon, and assist in feeding the material forward. The drawing also shows the interposition of a presser between the opener and ironer.

The support may be either substantially flat for plain seams, or grooved for welt or corded seams, so as not to flatten the cord-welt, or may have a knife, and, if desired, an inking apparatus, to trim a welt and black it, as hereinafter described.

Figure 1 represents, in front elevation, an apparatus showing a practical embodiment of this invention; Fig. 2, a side elevation thereof; Fig. 3, a section through the sustaining-rollers and support, with the presser above it; Fig. 4, a section and plan of a support adapted to trim and ink a welt; Fig. 5, a modified form of sustaining-rollers, and Fig. 6 a section of a grooved support for a corded seam.

The frame-work *a* of the machine, of suitable shape to hold the working parts, has a main shaft, *b*, driven in any suitable way, to which is attached one of the sustaining-wheels *d*, it having a grooved pulley, *c*, which, by means of a band, *e*, passed about sheaves 2 3 4, is made to rotate a pulley, *f*, on the axis of the ironing-wheel *g*, held in frame *h*, a rod extended upward therefrom passing through a spring, *i*, and through a guide, *j*, where the end of the rod is provided with adjusting devices to raise or lower it with relation to the seam-support *l*, placed between the sustaining-wheels *d* and *d'*. The ironing-roller *g* has at its opposite end a pulley, which, by means of a suitable band or otherwise, is connected with pulley *m* on the shaft of the seam-opener *o*, having a rib or projecting annulus, 6, to enter the seam to be opened. This seam-opener is carried in the frame *p*, a rod from the frame extending upward through a spring, *q*, and a guide, *r*, where it is connected with a pivoted lever, *s*, connected by link *t* with a treadle, or equivalent lever, *u*, which, when depressed by the foot or otherwise, lifts the seam-opener from the support for the introduction of the material between them. The frames or yokes *h* are connected by a link, *w*, which serves as the bearing for the shank of the frame *x*, such shank carrying at its lower end a roller-presser, 8, preferably grooved longitudinally, and made of larger diameter at its center than at its ends, the grooves in the presser and its enlarged central portion acting to prevent the liability of the material being pressed from turning aside out of the proper direct line of motion over the support *l*. The shank of the frame *x* is passed through a spiral spring, *y*, and at the top of the shank is an adjusting device or nut, 10, to alter the force of the presser.

When a plain seam is to be opened and pressed, the united material in which the seam has been formed is spread out, the right face of the material is placed upon the support *l*, having substantially a flat surface, and the annular rib 6 of the seam-opener is placed between the edges of the united material, such rib and opener, under pressure of the spring *q*, co-operating with the support to open the seam fully. The material then passes to and under the ironer, the substantially flat surface of which, operating upon the turned-over portions of the edges of the united material resting upon the support below it, irons and presses the seam smooth and sets it. The presser between the opener and ironer prevents the material rising at such point, and the teeth of the presser-roller act to prevent the material from being turned aside from its course.

When a corded-welt or plain-welt seam is being opened and pressed, to prevent the welt

being too much flattened, the support is grooved longitudinally, as at 12, Fig. 6. When it is desired to trim out a welt, the support *l* is to be provided with a knife-block, 14, and if the edge of the welt is to be blacked after being cut, an inking-roller, 15, or equivalent device, situated in an ink-holding chamber, will be employed to apply the ink to the welt-edge. The groove 16 along the top of the support will receive and guide the edge of the trimmed welt.

If desired, a small piece of india-rubber may be placed on the support *l*, at the point opposite which the rib 6 bears or projects into the seam, to prevent the rib from injuring the stitches.

The sustaining-wheels *d d'*, sustaining the material, act to feed it. The surface velocity of the peripheries of the rollers *d d'*, and opener and ironer, may be varied with relation to each other, to produce more or less friction on the passing material. As the lever *s* lifts the seam-opener and presser, the link *w* acts to somewhat lift the ironer. In some cases it is desirable to iron or press a seam connecting a tubular portion with some other portion. In such case the wheel *d'* is so connected with a portion of the axle or shaft *b* of wheel *d* that it may be moved away from such wheel *d* far enough to permit the passage of the tubular article between and about the wheels, when they will be again brought together for the seamed material to rest upon them to be ironed. Fig. 5 shows the wheels *d d'* so modified.

The pipe x^2 may convey gas or steam, or other heating material, to the support *l* to heat it.

I claim—

1. The combination, with the support, of a seam-opener and a rotating ironer, to operate substantially as described.

2. The support combined with the rotary seam-opener, having a rib, 6, substantially as described.

3. The support, rotary seam-opener, and rotating surfaces *d d'* at the sides of the support, to operate substantially as described.

4. The support and rotary seam-opener, combined with the intermediate presser, to operate substantially as described.

5. The support and ironer combined with the presser-roller, made largest at or near its center, substantially as described.

6. The support and rotary seam-opener, combined with a lever to lift the seam-opener for the introduction of the material under it, substantially as described.

7. The seam opener and ironer, and their carrying-frames and depressing-springs, in combination with the link connecting the frames, substantially as described.

8. The seam-opener combined with the support grooved for the reception of a welt or corded seam, substantially as described.

9. The support provided with a welt-inking device, combined with a seam-opener, to operate substantially as described.

10. The ironing-roller, in combination with the independent rollers *d d'*, to hold up and assist in feeding the material.

11. A seam opener and ironer combined with the support and welt-trimming mechanism, to operate substantially as described.

12. The support *l*, seam opener and ironer, in combination with mechanism to heat the support, substantially as described.

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

CHARLES W. COLLYER.

Witnesses:

G. W. GREGORY,

L. A. BAXTER.