

(No Model.)

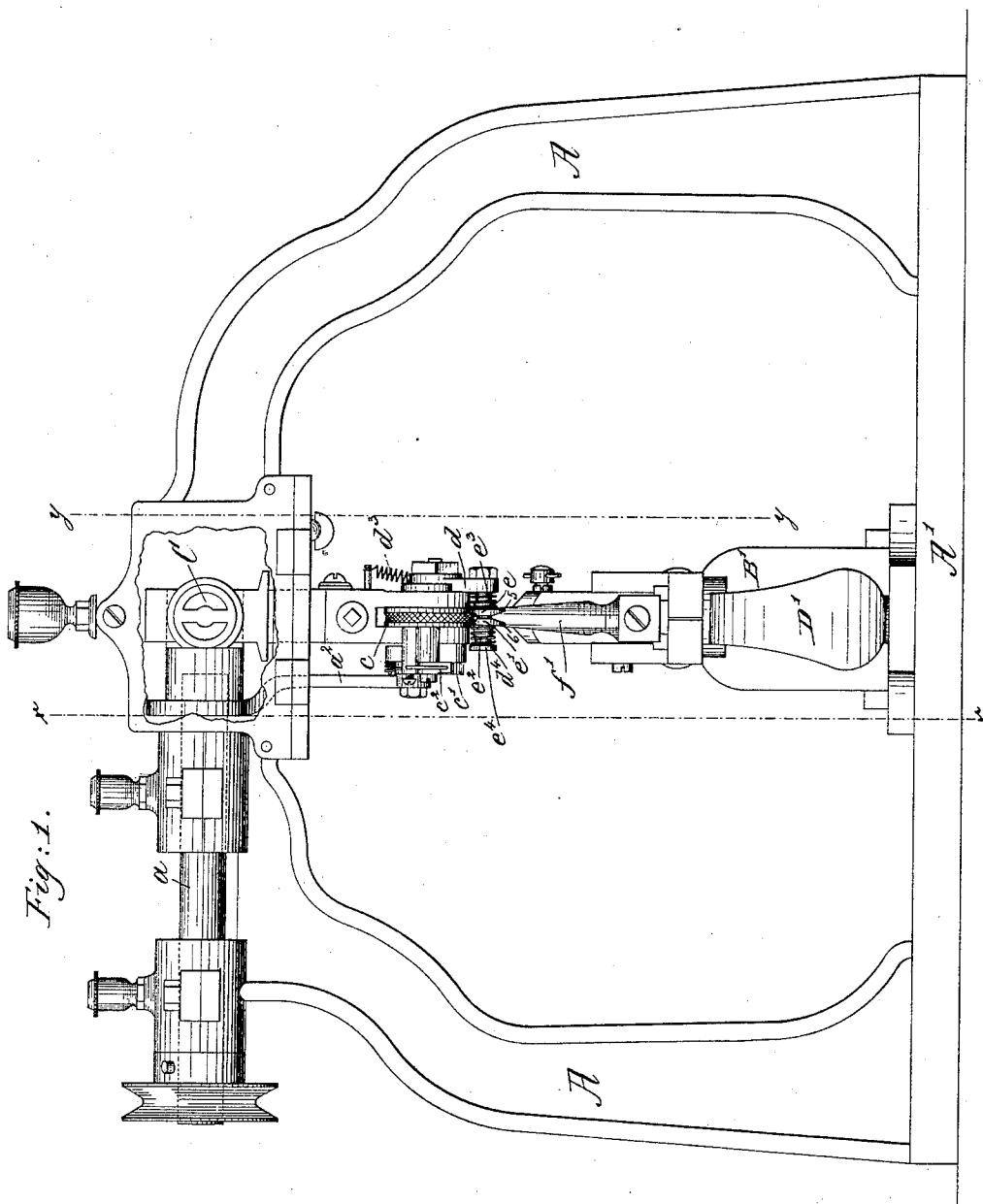
2 Sheets—Sheet 1.

C. W. COLLYER.

SEAM RUBBING OR PRESSING MACHINE.

No. 341,407.

Patented May 4, 1886.



Witnesses.

Arthur Zippert.

John F. C. Pringle.

Inventor.

Charles W. Collyer.

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Fig: 2.

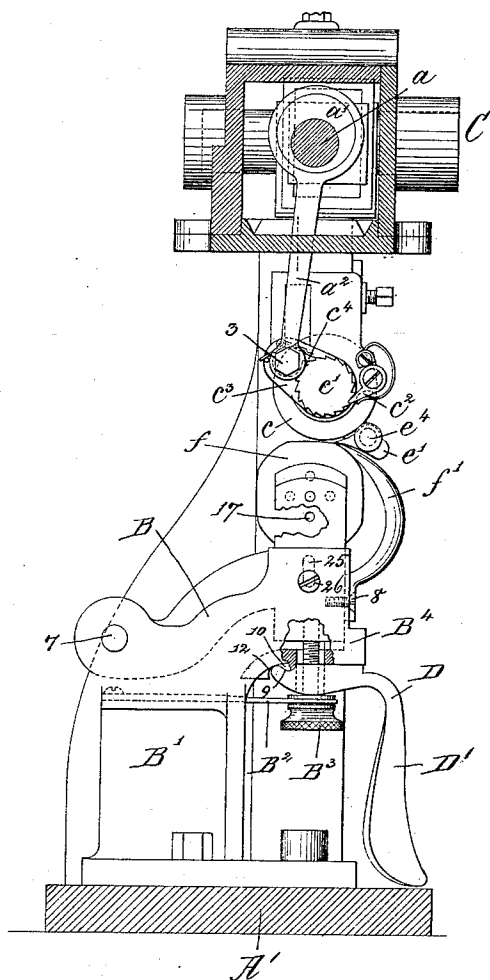


Fig: 3.

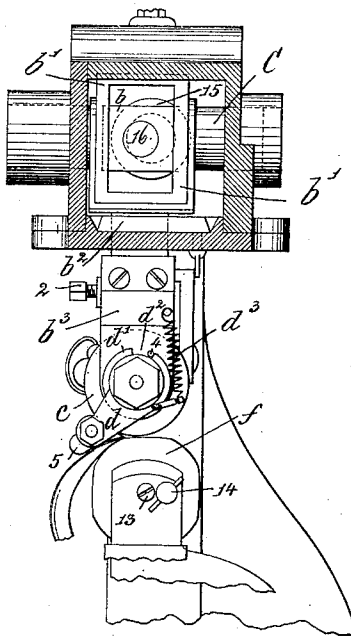
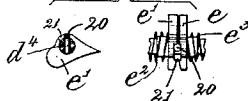


Fig: 4.



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UNITED STATES PATENT OFFICE.

CHARLES W. COLLYER, OF LYNN, MASSACHUSETTS, ASSIGNOR TO JOHN R. BALDWIN, TRUSTEE, OF SAME PLACE.

SEAM RUBBING OR PRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 341,407, dated May 4, 1886.

Application filed February 17, 1886. Serial No. 192,173. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. COLLYER, of Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in Seam Rubbing or Pressing Machines, of which the following description, in connection with the accompanying drawings, is a specification--like letters on the drawings representing like parts.

This invention is an improvement upon United States Patent No. 324,085, granted to me August 11, 1885, to which reference may be had, the object of the invention being to simplify the construction of the machine therein described as to details, thereby rendering the same capable of doing better work.

In accordance with this invention the reciprocating cross-head carrying the tool which bears upon the material slides in fixed bearings, while the work-support is yielding to compensate for leather of various thicknesses. The tool-carrying cross-head is reciprocated by a crank and crank-pin carried by the main rotating shaft, and the pawl-carrier mounted upon the shaft carrying the rotating wheel which bears directly upon the seam to be pressed is moved by an eccentric-rod connected with an eccentric upon the main rotating shaft, the pawl carried by the said pawl-carrier rotating the ratchet fixed to the shaft carrying the seam-pressing wheel or roller step by step, such movement imparting to the seam-pressing wheel or roller an intermittent rotary movement, as in the patent referred to.

The mechanism employed to direct the seam beneath the roller consists of a spring-controlled arm mounted loosely upon the shaft carrying the seam-pressing wheel or roller, the forward end of the said arm being provided with a short arm extended at right angles thereto and transversely across the work-support, on which is mounted adjacent to each other two spring-controlled clamps or presser-feet, the latter being cut away or beveled outward at their forward ends to permit the seam to enter between them, the presser-feet spreading according to the width of the seam.

The work-support consists of a pivoted spring-controlled supporting-lever carrying a stationary work-support, and co-operating therewith is a curved horn, the free tapered

end of which passes upward beneath the clamps or presser-feet and terminates between the work-support and the seam-pressing wheel or roller, the material being fed over the said curved horn, and the presser-feet bearing against each side of the seam.

Suitable means are supplied for depressing the pivoted supporting-lever when it is desired to remove the material from between the work-support and seam-pressing wheel or roller.

Other features of invention will be herein after more fully described.

Figure 1 shows in front elevation a seam rubbing or finishing machine constructed in accordance with this invention; Fig. 2, a vertical section of Fig. 1, taken on the dotted line *xx*, looking toward the right; Fig. 3, a partial vertical section of Fig. 1, taken on the dotted line *yy*, looking toward the left, and Fig. 4 details of the clamps or presser-feet.

The frame-work, consisting of the arched portions *A A*, rising from the base-plate *A'*, the central portion of the said arched frame being cut out to provide a space for the reciprocating cross-head *C*, is similar to the frame-work of the machine in the patent referred to. The main rotating shaft *a*, having its bearings in the arched frame *A*, carries a disk, 15, having a crank-pin, 16, which latter is provided with a slide-block, *b*, which it moves vertically in the guide-frame *b'*, forming a portion of the cross-head *C*, rotation of the said shaft *a* thereby reciprocating the cross-head. A frame, *b''*, depending from the reciprocating guide-frame *b'*, carries the tool, which bears upon the edges of the leather formed by the seam to press the same. The tool herein shown is substantially the same as described in the said patent, it consisting, essentially, of a pressing wheel or roller, *c*, mounted upon a rotating shaft, which latter has its bearings in the lower end of the frame *b''*, adjustably secured by set-screw 2 to the frame *b''*. The shaft carrying the seam-pressing wheel or roller *c* also carries a ratchet-wheel, *c'*, having a spring-controlled pawl, *c''*, to prevent backward rotation. A pawl-carrier, *c'''*, is also mounted loosely upon the said shaft. Its pawl *c''* engages the teeth of the ratchet-wheel *c'*, and the said pawl-carrier is partially rotated by the eccentric *a'* upon the main ro-

tating shaft, the eccentric-rod a^2 of which is connected with the pawl-carrier by the screw 3. To the opposite end of the shaft carrying the seam - pressing wheel or roller c a short arm, d , is loosely connected, the flange d' of which is cut away, as at d^2 , in which the pin or stud 4 follows, to thereby limit the rising and falling movement of the said arm on the shaft, the spring d^3 normally retaining the said arm in depressed condition. To the extreme end of the said arm d a short arm, d^4 , is attached, extending therefrom at right angles and directly across in front of the seam - pressing wheel or roller c adjacent to the work-support. Two clamps or presser-feet, e e' , (see Figs. 1 and 4,) are mounted upon the arm d^4 , the contiguous sides of the said presser-feet being cut away, as at 21, in which the stud 20, fixed to the arm d^4 , follows, thereby limiting the rotation of the presser - feet upon the shaft and preventing their direct contact. Two springs, e^2 e^3 , surrounding the said arm d^4 , bear against the outer sides of the presser-feet, the opposite ends of the said springs bearing one against the arm d and the other against the flange e' , thereby normally serving to keep the said presser-feet in proximity to each other. The forward ends of the said clamps or presser-feet e e' are cut away or flared outward to permit the seam of the leather to pass between them, to thereby present the seam properly beneath the wheel c , the said feet yielding laterally to the width of the seam to be pressed and vertically to the thickness of the material.

The work-supporting mechanism consists of the supporting-lever B, pivoted at 7 to the frame B', mounted upon the base-plate A' of the machine, the said lever B carrying the work-support f , which is provided with a suitable grooved surface in which the material may enter, as in the patent referred to. The curved tapering horn f' , secured to the lever B by the screw 8, extends upward and passes beneath the yielding presser-feet and between the work-support f and the seam-pressing wheel c . The lever B is held in elevated position in a yielding manner by a stiff spring, B², secured to the frame B', said spring, by means of an adjusting-screw, B³, bearing with more or less force against the under side of the forward end of the said lever B, or beneath the work-support. The lever B is slotted at 25, in which a pin, 26, follows, to thereby limit the movement of the said lever on its pivot and prevent the work-support from coming in direct contact with the seam-pressing wheel or roller c . A hand-lever, D, strides the shank of the adjusting-screw B², and bears against the under side of the overhanging portion B⁴ of the frame B', the said lever D being notched at its forward end, as at 9, to permit the projection 10 of the said overhanging frame B⁴ to enter, while the extreme rounded end of the said lever D enters a recess, 12, of the said frame, serving as a pivot upon which the hand-lever is turned when depressed by the operator bear-

ing upon the extended portion D'. By this hand-lever it will be seen that the pivoted supporting-lever may be depressed at any time, to permit any material between the wheel or roller c and the work-support to be withdrawn.

The work-support f consists in this instance of a four-sided plate fixed to a shaft, 13, rigidly connected with the work-supporting lever. A thumb-screw, 14, passes through the said supporting-lever near the bearing for the shaft 13, which enters one or another hole, 17, bored in the side of the said plate f , so that when one or another side of the said plate or work-support is desired to be used—that depending upon the quality and thickness of the material—one or another of the holes 17 is brought to register with the thumb-screw, which upon being turned locks the plate or work-support in fixed position, in order that a stationary work-support may be formed over which the material travels.

The plate or work-support f is herein shown as having four different surfaces, consequently four holes; but it is obvious that any other number may be employed if desired; also, that the means herein shown for locking the same in any position may be modified without departing from this invention.

I claim—

1. In a machine for rolling down or finishing seams, a yielding work-support combined with a reciprocating head carrying a wheel or roller to bear upon the seam, and means, substantially as described, to rotate the said roller as the head moves in one direction, and to restrain its rotation as the head moves in the opposite direction, all as set forth.

2. In a machine for rolling down and finishing seams, the work-support, the tool provided with a wheel or roller, and means, substantially as described, to rotate the said roller intermittently, and the cross-head to carry the said tool, combined with a rotating shaft, a crank and crank-pin to reciprocate the said cross-head, and the eccentric to operate the means for intermittently rotating the wheel or roller, all substantially as described.

3. In a machine for rolling down and finishing seams, the work-support and tool provided with a wheel or roller to bear upon the seam, combined with yielding mechanism, substantially as described, to bear upon the material, and containing the clamps or presser-feet e e' , to bear upon each side of the seam to properly present the same to the seam-rubbing devices, substantially as described.

4. In a machine for rolling down and finishing seams, the work-support and tool provided with a wheel or roller to bear upon the seam, combined with the clamps or presser-feet e e' , whereby the seam is presented properly to the seam-pressing wheel or roller, substantially as described.

5. In a machine for rolling down and finishing seams, the work-support and tool provided with a wheel or roller to bear upon the seam,

combined with the cut-away clamps or presser-feet $e e'$, and the pin 20, all substantially as described.

5 6. In a machine for rolling down or finishing seams, the work-support and tool containing a wheel or roller to bear upon the seam, combined with the arm d , and means, substantially as described, to limit its movement, the
10 short arm d' , connected at right angles with the arm d , and the spring-controlled flaring clamps or presser-feet $e e'$, mounted upon the said arm d' , all substantially as described.

15 7. In a machine for rolling down or finishing seams, the work-support consisting of the plate f , having one or more working-surfaces, combined with means, substantially as described, for locking the said plate f in any of its different positions, substantially as described.

20 8. In a machine for rolling down and finishing seams, the work-support consisting of a stationary plate over which the material travels, combined with a spring-controlled pivoted supporting-lever to which the said rigidly-
25 attached plate is fixed, substantially as described.

30 9. In a machine for rolling down and finishing seams, the work-support consisting of the plate over which the material travels, the spring-controlled pivoted supporting-lever to which the said plate is fixed, and the curved tapering horn f' , also attached to the supporting lever, and over which the material is passed to be properly presented to the seam-pressing
35 devices, substantially as described.

10. In a machine for rolling down and finishing seams, the work-support consisting of the plate upon which the material bears, the pivoted supporting-lever B, spring B^2 , adjusting-screw B^3 , and means, substantially as described, 40 under the control of the operator, to control the movement of the supporting-lever B, substantially as described.

11. In a machine for rolling down and finishing seams, the work-support consisting of the 45 plate upon which the material bears, the pivoted supporting-lever B, slotted at 25, and pin 26, spring B^2 , adjusting-screw B^3 , and the pivoted hand-lever D, to control the movement of the supporting-lever, all substantially as described. 50

12. In a machine for rolling down and finishing seams, a vertically-yielding non-rotating work-support having a curved bearing-surface and grooved longitudinally, as described, combined with a reciprocating head carrying a 55 wheel or roller to bear upon the seam, and means, substantially as described, to rotate the said roller as the head moves in one direction, and to restrain its rotation as the head moves 60 in the opposite direction, all as set forth.

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

CHARLES W. COLLYER.

Witnesses:

BERN. J. NOYES,
GEO. W. GREGORY.