

(No Model.)

2 Sheets—Sheet 1.

H. FELLOWS.
SEAM PRESSING MACHINE.

No. 375,417.

Patented Dec. 27, 1887.

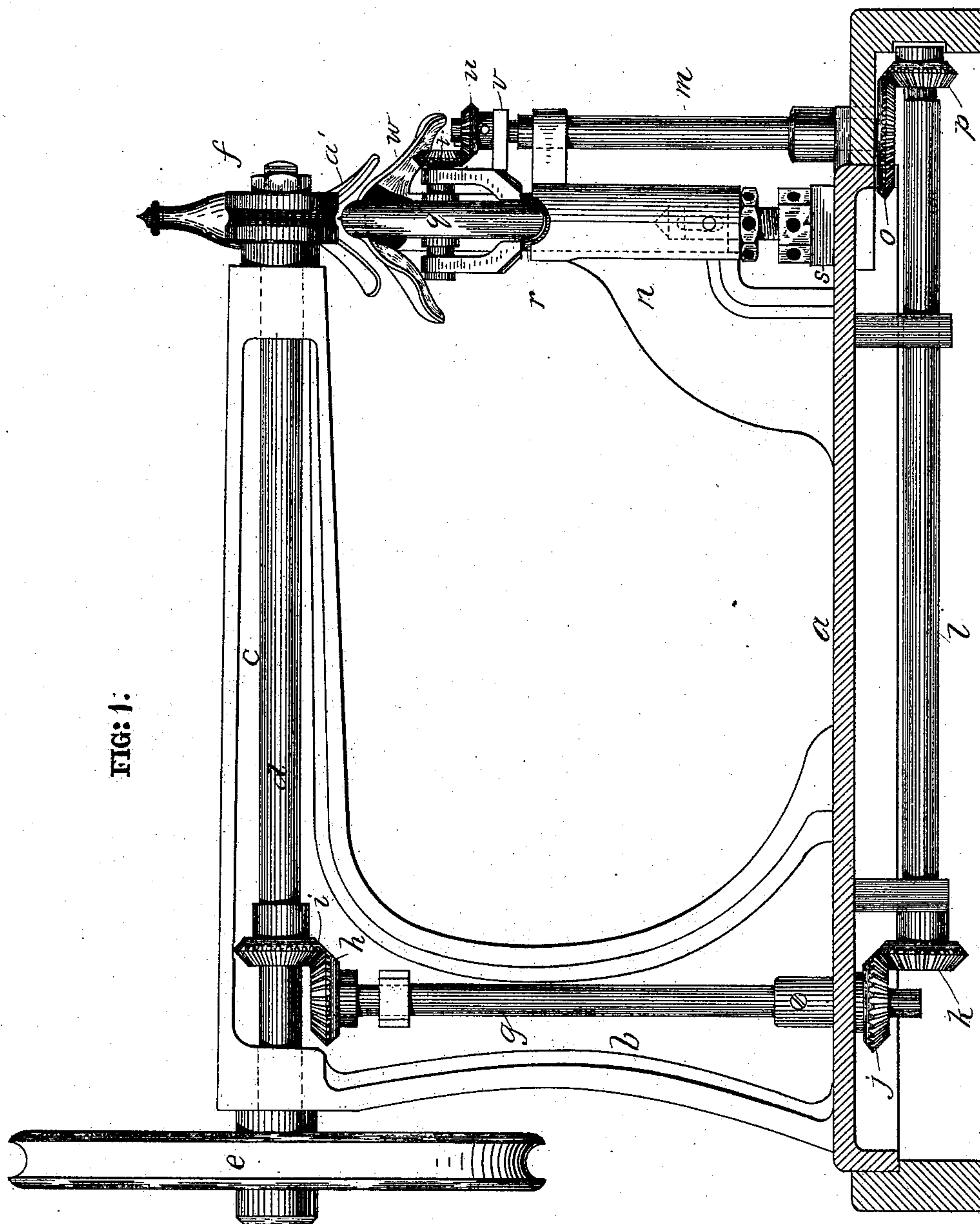


FIG. 1.

WITNESSES:

H. Brown.
W. Ramsay.

INVENTOR:

Henry Fellows.
by Wm. Brown & Crossley
Attorneys.

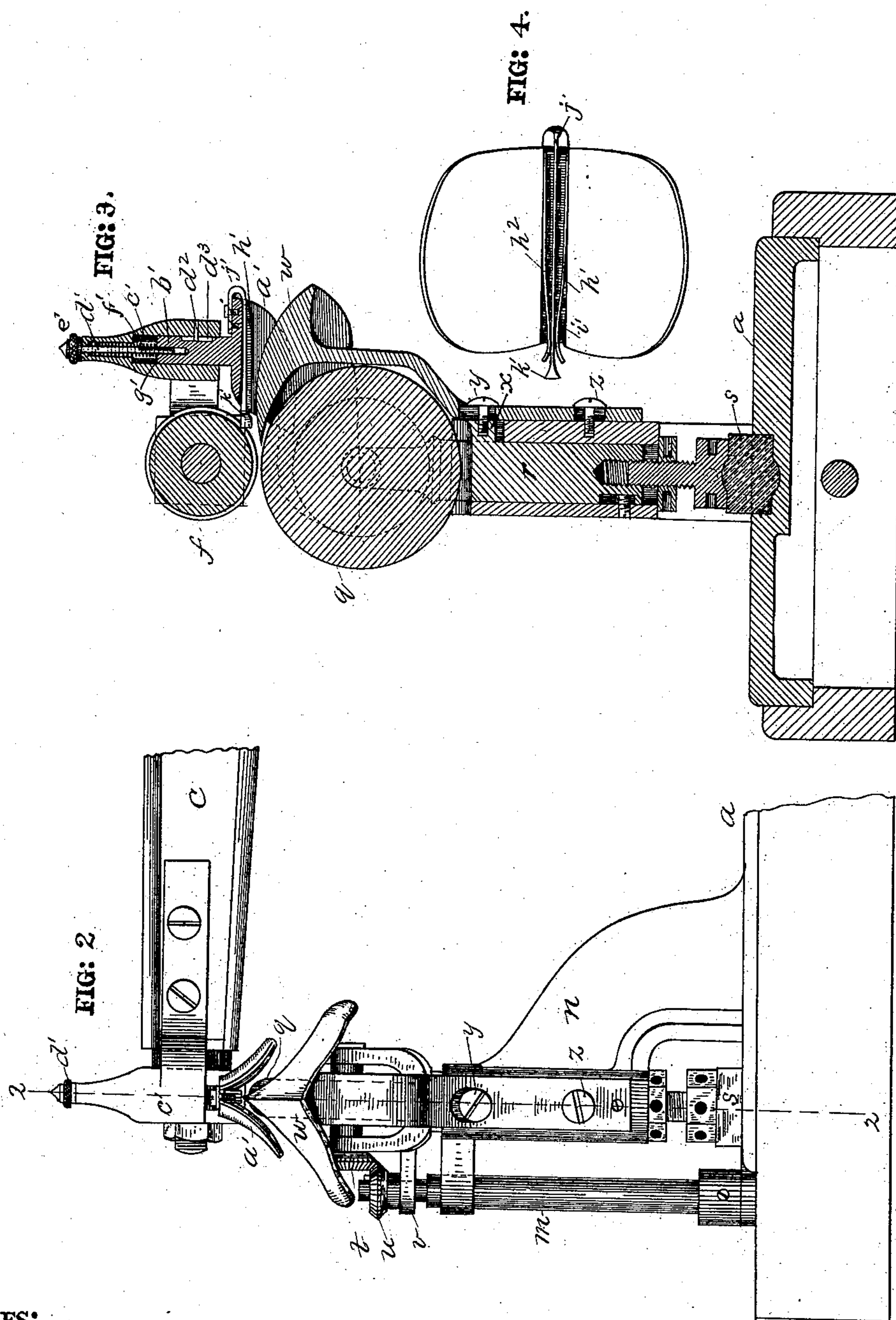
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WITNESSES:
H. Brown.
W. Ramsey.

INVENTOR:
Henry Fellows.
By *Wm. Brown & Cooley*
Attorneys.

UNITED STATES PATENT OFFICE.

HENRY FELLOWS, OF HAVERHILL, MASSACHUSETTS.

SEAM-PRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 375,417, dated December 27, 1887.

Application filed January 24, 1887. Serial No. 225,400. (No model.)

To all whom it may concern:

Be it known that I, HENRY FELLOWS, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Seam-Pressing Machines, of which the following is a specification.

My invention relates to seam-pressing machines of the class employing two rollers or wheels so arranged that their peripheries will roll in contact with or close proximity to each other, and in which the pressing of a seam is effected by interposing or feeding the article containing the seam with the latter in proper position between such rollers or wheels.

My invention consists in the improvements hereinafter described, and subsequently pointed out in the claims.

I will now proceed to describe my invention, so that others skilled in the art to which it pertains may make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming a part of this specification, in which drawings—

Figure 1 represents a rear elevation, partially in section, of a seam-pressing machine embodying my invention. Fig. 2 represents a front elevation of the front portion of the machine. Fig. 3 represents a sectional view on the line 2 2, Fig. 2. Fig. 4 represents a bottom plan view of the upper seam-guide.

The same letters of reference indicate the same parts wherever they occur.

a indicates the bed of the machine; *b*, the rear standard, and *c* the overhanging arm, in which is journaled the main shaft *d*, provided on its rear end with the driving-pulley *e* and on its front end with the upper seam-pressing roller, *f*.

Suitably journaled in the rear standard, *b*, is a vertical shaft, *g*, provided on its upper end with a bevel-gear, *h*, engaging a similar gear, *i*, on main shaft *d*, and having a bevel-gear, *j*, on its lower end, engaging a like bevel-gear, *k*, on a horizontal shaft, *l*, adapted to turn in bearings under the bed of the machine.

m indicates a vertical shaft suitably supported and journaled in bearings in front of front standard, *n*, said shaft being provided on its lower end with a bevel-gear, *o*, intermeshing with another gear, *p*, on horizontal shaft *l*.

q indicates the lower seam-pressing roller, having bearings in the adjustable bar or rod *r*, stepped on a yielding cushion, *s*, to compensate for varying thicknesses of goods being operated upon, as also other emergencies.

It will be seen that lower seam-pressing roller, *q*, has a diameter substantially twice that of the upper roller, this construction being for the purpose of securing a longer pressing-surface between the two rollers and prevent the crimping or curling of the work which would be likely to occur if the rollers were small and of the same size. In order to obtain the same surface speed of the two rollers, the lower one is driven at a slower rate than the upper, this variation in speed being secured by making bevel-gear *o* substantially twice the size of bevel-gear *p*.

Affixed to the forward end of the journal-shaft of lower roller, *q*, is a bevel gear-wheel, *t*, intermeshing with a like gear-wheel, *u*, splined on shaft *m*, so that it can move longitudinally thereon, as well as be rotated thereby. A small bracket, *v*, extends outward from the upper forked end of supporting-rod *r* and surrounds vertical shaft *m*, affording a support for bevel-gear *n*, so as to always keep it in engagement with gear *t*.

By the means described I am enabled to operate both seam-pressing rollers in unison and in a positive manner.

w represents the lower guide, which is adapted to support and assist in guiding the work being fed between the seam-pressing rollers. Said guide is securely attached to a projection, *x*, on the supporting-rod *r* by means of a screw, *y*, or in any other suitable manner. Another screw or stud, *z*, passes through a slot in the lower end of the shank of said guide and into the frame of the machine, to merely hold said shank from moving laterally out of place at this point. By this construction it will be seen that guide *w* is made to always maintain the same relative position with respect to lower roller, *q*,—that is, as said roller is moved vertically by varying thicknesses of work that pass between the rollers, guide *w* moves in unison with it.

a' represents the upper guide, provided with a slot, *b'*, extending vertically upward into a chamber formed in the end of a bracket, *c'*, secured to the side of the overhanging arm *c*,

as shown in Fig. 3. An adjusting-stud, d' , is screwed into the upper end of stud b' , and is arranged to have its head e' rest upon the upper end of the chambered end of bracket c' . A spiral spring, f' , surrounding stud b' and arranged to bear at its lower end, g' , of said stem, and at its upper end against the bracket c' , serves to keep said guide a' pressed downwardly in its normal position, and yet allows it to yield vertically, in case of emergency, for the passage of any unusually bulky part of a seam or other unevenness therein. Adjusting-stud d' enables the operator to adjust guide a' vertically in a position best adapted to the grade of work being operated upon, the yielding connection of said guide, with its support, being, as has been intimated, to provide for such unevenness as may occur in the seams. A guide or steady pin extends through bracket c' into a slot, d^3 , formed in stud b' , in order to maintain guide a' in position—that is, from turning on stud b' as a pivot.

In Fig. 4 I have shown a bottom plan view of guide a' , wherein h' h^2 represent two springs, secured by solder or in any other suitable manner at one end, one to each side of the guide-groove i' , the other or free ends of said springs extending rearwardly to a point preferably slightly beyond the guide, where they approach and bear against each other, so that the projecting edges of the seam passing through guide-groove i' , whether said seam be formed on thick or thin stock, it will be held in proper position by the springs h' h^2 as it passes from the guide to the rollers.

j' indicates a wire or small strip of metal, secured at its forward end on the upper surface of guide a' , and bent around and secured in guide-groove i' between springs h' h^2 , in which position it extends back to a point slightly beyond the rearward ends of said springs, where it is provided with a plow-shaped enlargement, k' , adapted to enter between the projecting edges of the seam, and so spread them slightly, as to insure their proper presentation to and pressing or rubbing by said rollers.

Though I have been particular to describe the form and arrangement of the various parts, it is obvious that these may be varied within the limits of mechanical ingenuity without de-

parting from the nature or spirit of the invention.

Having thus described my invention, what I claim is—

1. In a seam-pressing machine, the positively-operated roller f , roller q , a yielding support, r , therefor, the horizontal journal-shaft of said roller q , a gear fixed thereon, a vertical shaft, a gear splined thereon to turn therewith and move longitudinally thereon and intermeshing with the first-mentioned gear, and gearing for rotating said second shaft, constructed, combined, and arranged substantially as and for the purposes hereinbefore set forth.

2. In a seam-pressing machine, roller f and its support, roller q , and an adjustable and yielding support, r , for the same, in combination with guide w , secured to the yielding support for the latter, constructed, arranged, and operating substantially as set forth.

3. An upper roller, f , a lower roller, q , and its yielding support r , and means for operating said rollers, in combination with a lower guide secured to the yielding support r of the lower roller, the upper guide, and its support, said upper guide being adjustably and yieldingly connected with its support, all constructed, arranged, and operating substantially as set forth.

4. The guide a' , provided with a guide-groove, in combination with the springs h' h^2 , all arranged, constructed, and operating substantially as and for the purposes set forth.

5. The guide a' , provided with a guide-groove, in combination with the springs h' h^2 and the wire or strip of metal j' , provided with the plow-shaped enlargement k' , all constructed, arranged, and operating substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 17th day of January, A. D. 1887.

HENRY FELLOWS.

Witnesses:

ARTHUR W. CROSSLEY,
HORACE BROWN.