

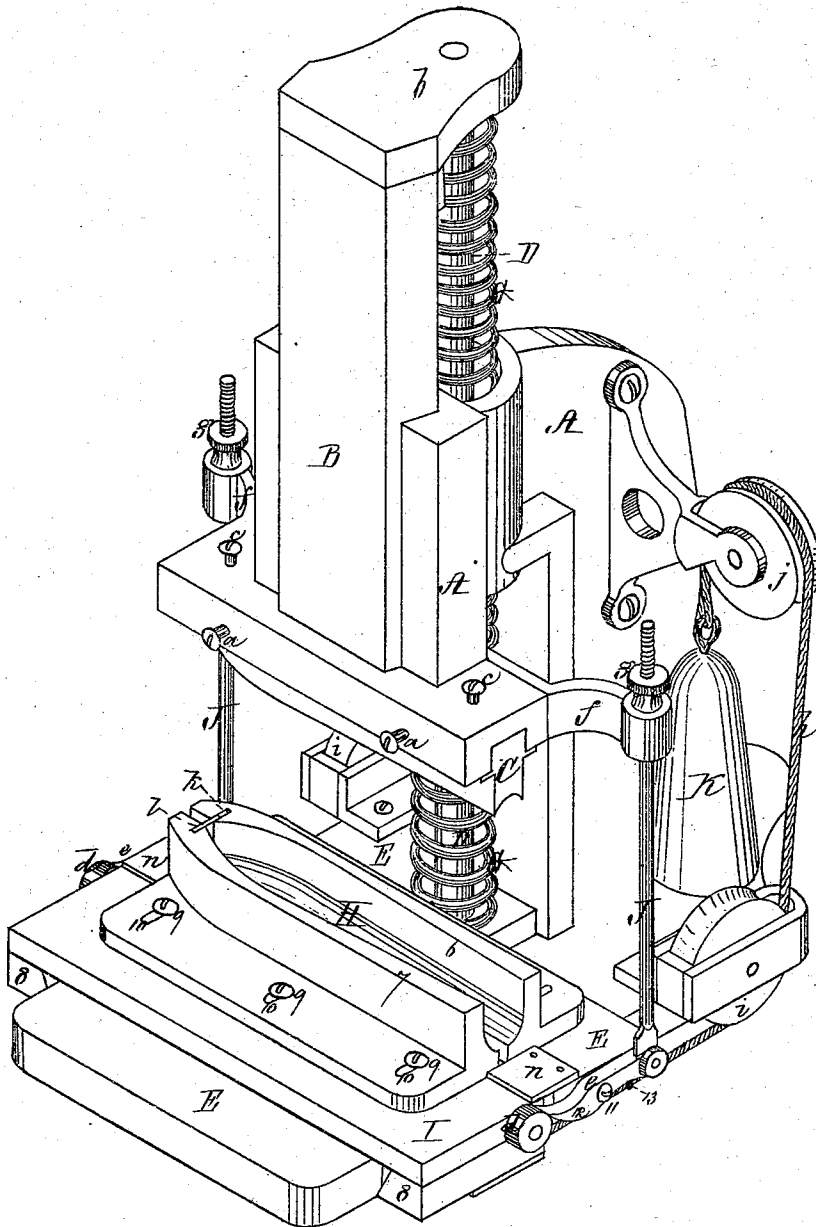
11. D. Brewer's Machine for Pressing and Moulding Cigar Bunches:

3 Sheets Sheet 1.

PATENTED JUL 25 1871

117377

Fig. 1.



Witnesses,
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W. J. Cambridge

Inventor,

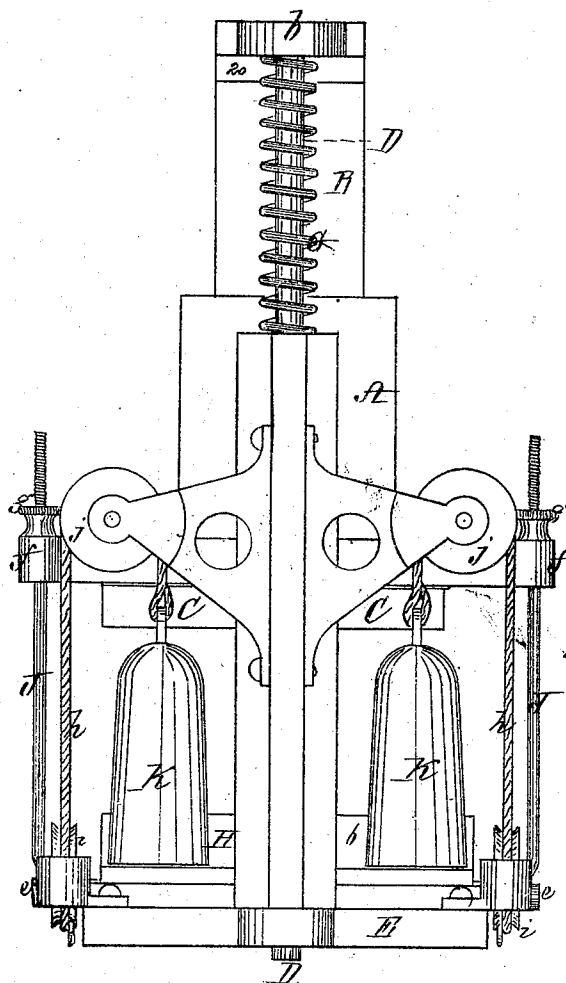
William D Brewer

W. D. Brewer's Machine for Pressing and Moulding Cigar Bunches:

117377

3 Sheets Sheet 2

Fig. 2.



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W. D. Brewer's Machine for Pressing and Moulding Cigar Bunches:

117377

3 Sheets Sheet 3

Fig. 3.

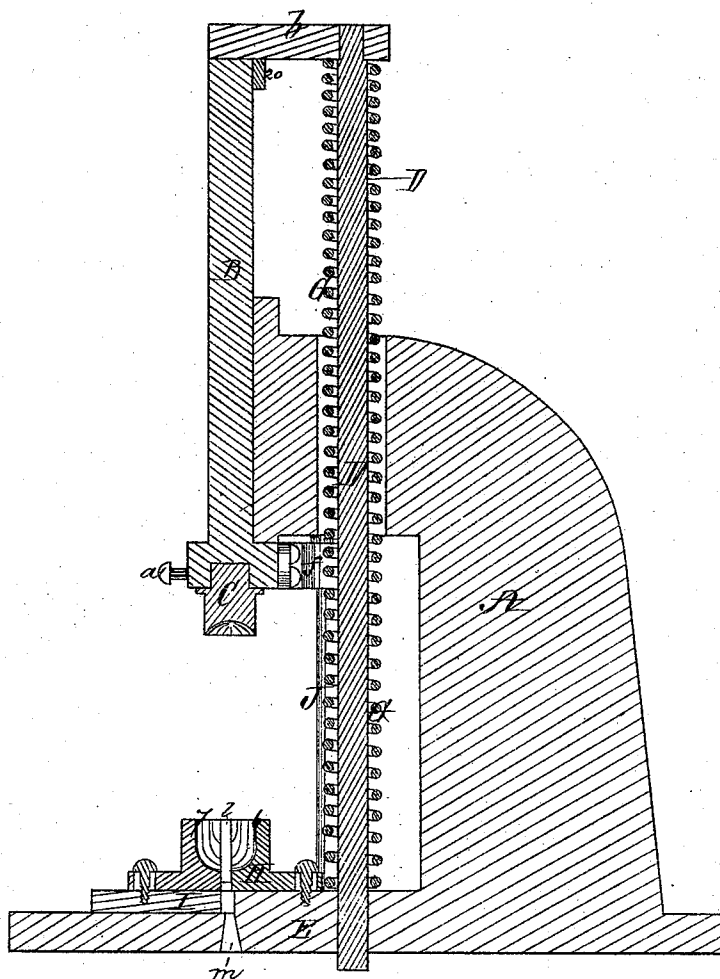


Fig. 4.

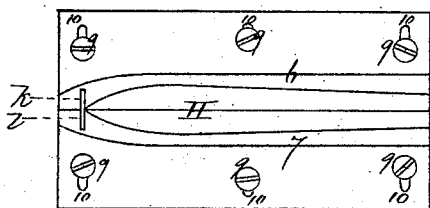
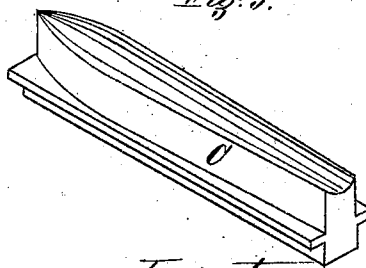


Fig. 5.



Inventor,

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UNITED STATES PATENT OFFICE.

WILLIAM D. BREWER, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PRESSING AND MOLDING CIGAR-BUNCHES.

Specification forming part of Letters Patent No. 117,377, dated July 25, 1871.

To all whom it may concern:

Be it known that I, WILLIAM D. BREWER, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Machines for Pressing and Molding Cigar-Bunches—that is, the bunches of tobacco-leaves held together by “binders” previous to the application of the outside wrappers—of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved machine for pressing and molding cigar-bunches. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section through the center of the same. Fig. 4 is a plan of the female portion of the die or mold. Fig. 5 is a perspective view of the male portion of the die inverted.

Machines for pressing and molding cigar-bunches—that is, the bunches of tobacco-leaves held together by binders previous to the application of the outside wrappers—as heretofore constructed have been provided with dies or molds made as usual in two pieces, (male and female,) the female portion being made slightly flaring toward the top to facilitate the withdrawal therefrom of the cigar-bunch after being pressed. These molds were, however, objectionable for the reason that a seam was made on each side of the cigar-bunch, requiring it to be subjected to a second pressure in the die; and, furthermore, if an excess of tobacco was placed in the mold the cigar-bunch would be pressed by the descent of the male portion of the die so hard as to spoil it for smoking.

To overcome these objections is the object of my invention; which consists in dividing the female portion of the die or mold longitudinally into two parts in connection with suitable mechanism, whereby, when the plunger or male portion of the die ascends, the two parts of the female portion of the die will be separated to allow the cigar-bunch to be easily removed therefrom, these parts being again closed together as the plunger descends and before it reaches the tobacco in the female portion of the mold; by which construction I am enabled to make the sides of this portion of the mold vertical instead of flaring, as heretofore, and as the plunger or male portion of the die is made to perfectly fit the female

portion, all liability of making a seam on the side of the cigar-bunch or cutting or tearing it is avoided; and my invention also consists in the employment of a weight or weights for closing together the two parts of the female portion of the die, the weight or weights being so proportioned and connected with one part as to allow it to separate from the other part if an excess of tobacco is placed in the mold and the plunger brought down thereon, thus notifying the person in charge that the cigar-bunch contains too much stock; and my invention also consists in a plate or tongue projecting from one part of the female portion of the mold or die, in combination with a groove in the opposite part, which prevents the point of the cigar-bunch from being accidentally forced into the space between the two parts when separated.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A represents the frame-work of the machine within a groove, in which is fitted a slide, B, to the enlarged lower end of which, in a suitable groove, is secured the plunger or male portion C of a die or mold, which is held in place by screws *a a*. D is a vertical rod which passes through the frame-work and the bed-plate E, the upper end of this rod being attached to a piece, *b*, projecting from the top of the slide B, and its lower end to a treadle (not shown) placed under the table upon which the machine rests, by which means the slide, and with it the portion C of the die, can be brought down as required, a spiral spring, G, which surrounds the rod D between the piece *b* and the bed-plate E, being employed to raise the slide B when the pressure of the foot is taken off the treadle. Instead of the spring G, a spring may be placed under the table to raise the treadle and rod D. When the slide B is brought down the male portion C of the die is caused to enter the female portion H of the die and press the cigar-bunch placed therein so as to mold it into the required form. The distance of the portion C when down from the bottom of the portion H of the die may be regulated with great nicety, in order that the cigar-bunch when pressed may be exactly round in cross-section, by means of screws *e*, which pass through the enlarged end of the slide

B and bear upon the portion C, the screws *a* being loosened to allow of this adjustment. On the rear side of the slide B is a stop, 20, which prevents the portion C of the mold from descending so far as to cause its lower edges to come into contact with the curved bottom of the portion H. The female portion H of the mold is divided longitudinally into two equal parts, one (6) of which is secured to the bed-plate, the other (7) being attached to a plate, I, which slides on the bed-plate, and is held in place by the portions 8, the inner surfaces of which are inclined and fit against the correspondingly-beveled edges of the bed-plate E. The portions 6 7 of the mold are both secured in place by screws 9 which pass through slots 10, by which means these two portions can be exactly adjusted as required and easily removed and replaced. At each end of the sliding plate I is a friction-roll, *d*, which is acted on by a lever, *e*, pivoted at 11 to the bed-plate, and having secured to it at one end a rod, J, the upper end of which passes loosely through an arm, *f*, attached to the slide B. The rods J are provided at their upper ends with adjustable screw-nuts *g*, against which the arms *f* strike as the slide ascends, which raises the rods J and vibrates the levers *e*, the inclined surfaces 12 of which, acting on the rolls *d*, withdraw the part 7 of the mold from the part 6, when the cigar-bunch may be readily removed by hand and another inserted. As soon as the slide B commences to descend the upward pressure upon the rods J is relieved, and the sliding plate I is drawn up so as to bring the part 7 into contact with the part 6 by cords *h* attached to the plate I, which pass under pulleys *i* and over pulleys *j*, and have attached to them weights K. This movement of the sliding plate I causes the rolls *d* to raise the short ends of the levers *e* and depress the rods J, which brings the nuts *g* again into a position to be struck by the arms *f* as the slide ascends. The levers *e* and rods J are prevented from dropping too far when the slide B descends by stop-pins 13 projecting from the bed-plate. To prevent the point of the cigar-bunch from being accidentally forced into the space between the two parts 6 and 7 when separated, a groove, *k*, is cut in the part 6, into which fits a tongue or projecting-plate, *l*, secured to the opposite part 7, which effectually closes this end of the female portion of the mold when the two parts are separated. The weights K are of such size that if an excess of tobacco is placed in the mold and the portion C brought down thereon the part 7 will be forced away from the part 6 against the resistance of the weights, thus notifying the operator that the cigar-bunch contains too much tobacco. If it

were not for this device the cigar-bunch, if it contained too much stock, would be pressed so hard that the cigar would be spoiled for smoking. When the cigar-bunches are dry and hard they require more pressing than when moist, and in such case the size of the weights K must be increased or more weights added, while when the cigar-bunches are soft and moist weights of less size must be used. The force with which the part 7 is held up to the part 6 can thus be exactly regulated in accordance with the condition or state of the stock. Beneath the mold and through the bed-plate E is cut a slot or opening, *m*, through which any dust or small pieces of tobacco left within the female portion of the mold may fall when the two parts are separated, this slot *m* being placed over a suitable opening cut through the table upon which the machine is placed. The dust is also prevented from getting between the ends of the sliding plate I and the bed-plate by small plates *n* which cover the spaces between the bed-plate and plate I beyond the ends of the mold. By the employment of a machine constructed as above described a cigar-bunch may be pressed and molded in a superior manner without seams, and without any liability of the tobacco being cut or torn; and by making the female portion of the die in two parts I am enabled to make its interior with vertical sides so that the portion C will fit closely therein; whereas it has heretofore been necessary to make these sides flaring to allow the cigar-bunch to be removed by the hand. After the cigar-bunch has been removed from the mold it is placed in a suitable retainer, by which it is kept in shape until it becomes set.

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

1. The within-described die or mold, the female portion of which is divided longitudinally into two parts, in combination with a mechanism for opening and closing the same, substantially as and for the purpose described.

2. The weights K, cord *h*, and plate I, connected and arranged substantially as and for the purpose set forth.

3. The plate *l*, projecting from one part, 7, of the female portion of the mold or die, in combination with the groove *k* in the opposite part 6, substantially as and for the purpose set forth.

Witness my hand this 23d day of June, A. D. 1871.

WILLIAM D. BREWER.

Witnesses:

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.