

(No Model.)

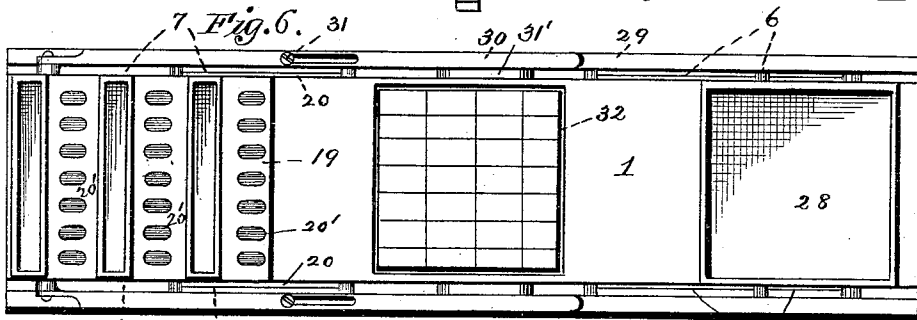
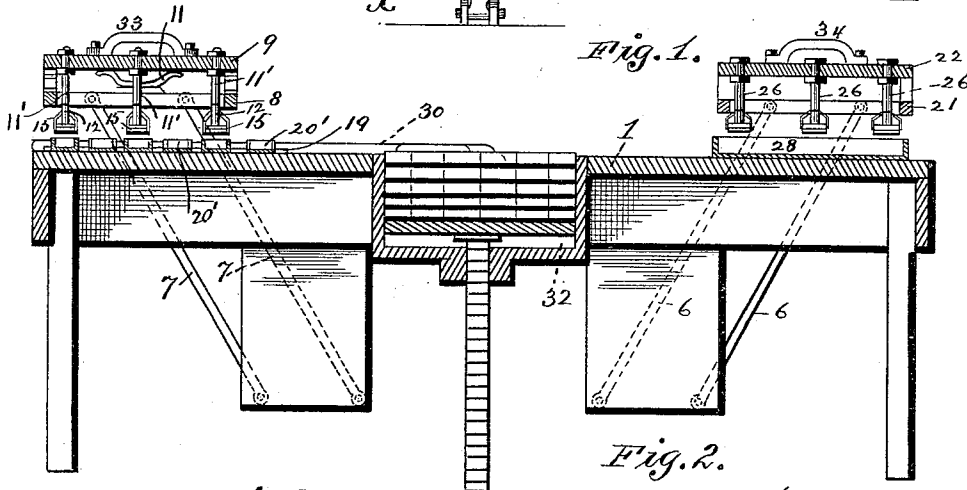
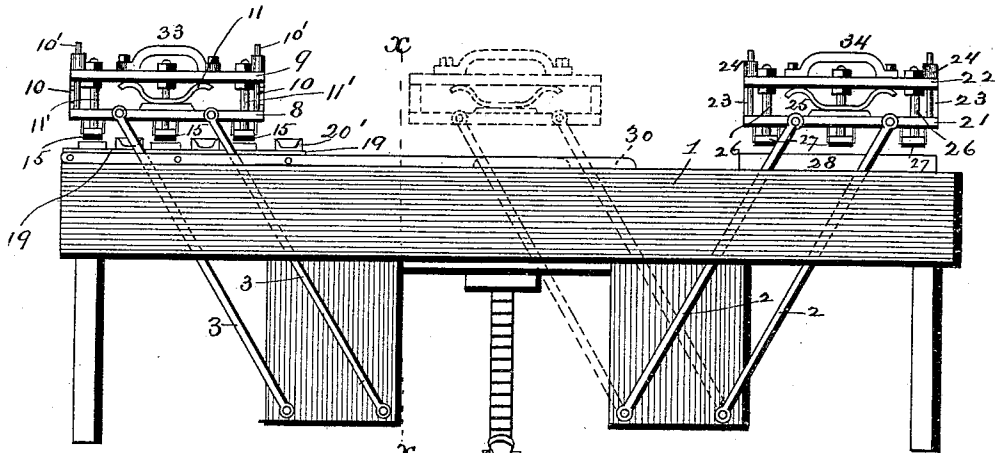
2 Sheets—Sheet 1.

D. J. BURR.

MACHINE FOR APPLYING LABELS TO PLUG TOBACCO.

No. 493,476.

Patented Mar. 14, 1893.



Witnesses
K. B. Harris

Wm. H. Brereton

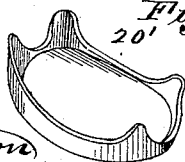


Fig. 5.

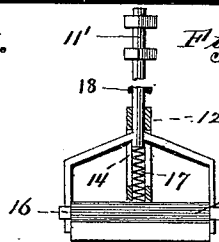


Fig. 7.

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(No Model.)

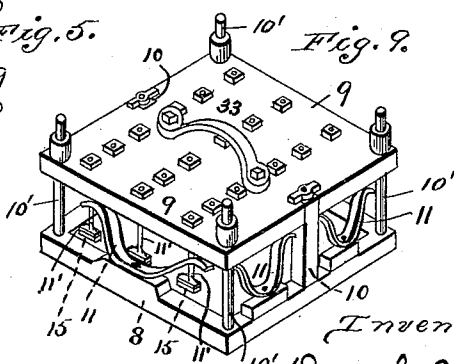
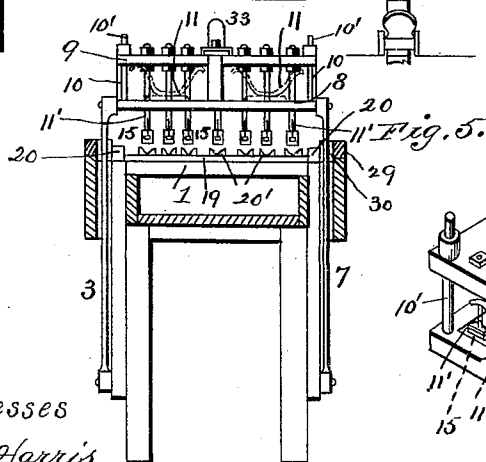
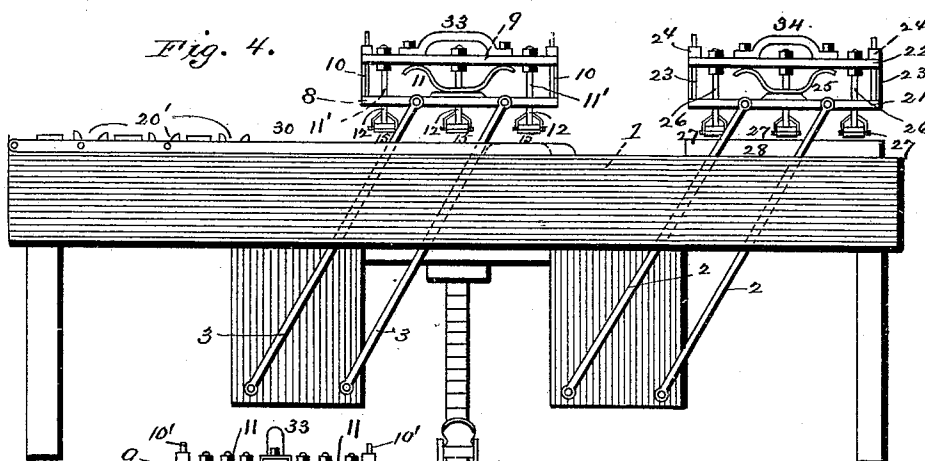
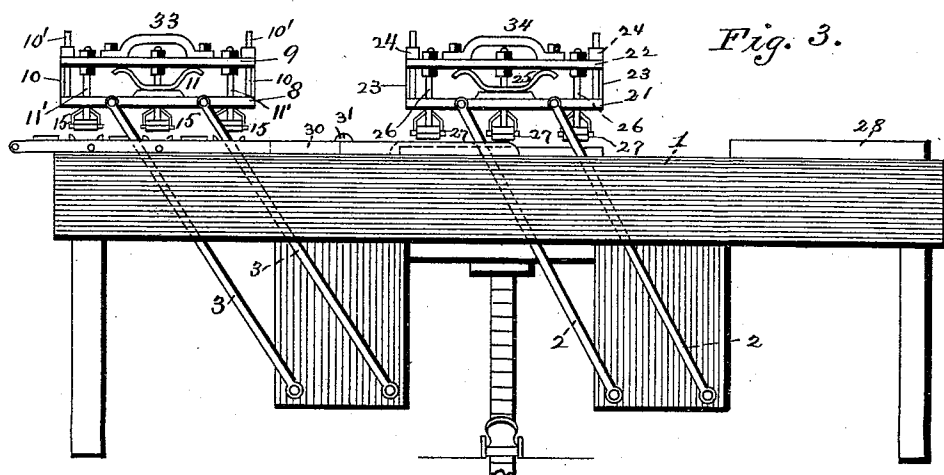
2 Sheets—Sheet 2.

D. J. BURR.

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UNITED STATES PATENT OFFICE.

DAVID J. BURR, OF RICHMOND, VIRGINIA.

MACHINE FOR APPLYING LABELS TO PLUG-TOBACCO.

SPECIFICATION forming part of Letters Patent No. 493,476, dated March 14, 1893.

Application filed April 9, 1891. Renewed July 28, 1892. Serial No. 441,541. (No model.)

To all whom it may concern:

Be it known that I, DAVID J. BURR, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Machines for Applying Labels to Plug-Tobacco; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved machine for applying labels to plug tobacco. Heretofore, such labels have been applied to the plugs, separately, by hand, which is necessarily, a slow and expensive method, and it is the object of my invention to provide a machine by means of which the labels may be applied to a series of any convenient number of plugs simultaneously, as more fully hereinafter specified. The above mentioned objects I attain by the means illustrated in the accompanying drawings forming a part hereof, in which

Figure 1 represents a front elevation of the machine, with the parts in position to commence work. Fig. 2 represents a longitudinal, vertical, sectional view showing the parts in position for the first operation of the machine. Fig. 3 represents a similar view to Fig. 1, showing the parts in position for the second operation. Fig. 4 represents a view with the parts in position for the third operation of the machine, and Fig. 5 a transverse, vertical sectional view taken on the line $x-x$ of Fig. 1. Fig. 6 represents a plan view, the label applying and gumming heads being removed. Fig. 7 is a detail view in perspective of one of the label holding cups, and Fig. 8 a detail view in partial section of one of the spring reacted heads. Fig. 9 represents a view in perspective of the label applying head, removed.

Referring to the drawings, the reference numeral 1 indicates a table or bench, of convenient height for the operator. This may be constructed of wood or other suitable material, and supported upon legs, or otherwise.

To the front of the frame which supports the top of the table, and near the lower edge

thereof are pivoted the lower ends of two sets of parallel bars, 2 and 3. To the rear of the table are pivoted similar parallel bars 6, 7. The upper ends of the sets of parallel bars 3 and 7 have their upper edges pivoted to the edges of a rectangular frame 8, which occupies a position between them.

Above the frame 8 is located a vertically movable head 9, which slides upon vertical standards 10 secured to the frame 8 at its ends, and by corner posts 10'; the said head 9 being held upward and returned to normal position, after being depressed, by means of leaf-springs 11, the head being limited in its upward movement by means of screw-nuts on the upper ends of the standards 10 before mentioned. The lower side of the said head 9 is provided with a series of dependent bars 11', which are firmly affixed to said head so that they will retain their positions during the operation of the machine. The bars at their lower ends terminate short of the frame 8, and upon each is fitted a loose sleeve 12, which is slotted on opposite sides as indicated by the numeral 14. Through the slots and the lower portion of each sleeve extends a wire which is bent downward at each side, to form guides for a series of heads 15, at the lower ends of the respective sleeves, the bent portions extending through guide ways 16 on opposite ends of the heads. The wires hold the sleeves in place on the bar, while at the same time they permit the sleeves to move freely on said bars for the purpose hereinafter explained. The sleeves may be forced downward by means of spiral springs 17 or they may be arranged to drop by their own weight. The upward movement of the sleeves or downward movement of the bars is limited by means of shoulders 18 on said bars. Below the said frame 8 is located a tray 19, which is arranged to slide between ways 20, longitudinally on the top of the table, and on its upper face is provided with a series of cups or label receptacles 20', which correspond in number and position to the bars 11' carrying the sleeves 12, and heads 15. Between each series of cups extending transversely across the tray are formed troughs or spaces, of about the same width as each transverse row of cups

or receptacles which contain pads of absorbent material, such as felt or the like for the purpose hereinafter explained.

The upper ends of the parallel bars 2 and 6 are pivoted to the edges of a rectangular frame 21, similar to the frame 8 before mentioned, said frame 21 being located between opposite sets of said bars. Above said frame 21 is located a head 22 which is similar to the head 9 before mentioned. The said head 22 is mounted loosely upon vertical standards 23 so as to be capable of a vertical movement thereon, and conjoined to said standards by means of screw nuts 24 at the upper ends of the standard 23 before mentioned. The said head 22 is held upward and returned to normal position after depression by means of leaf springs 25. From the said head 22 depend a series of bars 26, which are firmly affixed to the said head. These bars correspond in number to the bars 11', before mentioned and are arranged at similar intervals therewith, which will be determined by the number and size of the plugs to be labeled.

The lower ends of the bars 26 are provided with heads 27 by means of which gum or glue may be applied to the plugs as more fully hereinafter explained.

Upon the top of the table 1, is located a receptacle 28 for glue, mucilage, gum or other adhesive material to be applied to the plugs to secure the labels thereto.

Upon the upper edge of the rear rail 29 of the table frame, is located a longitudinally sliding bar 30, by means of headed bolts 31 passing through longitudinal slots in said bar. This bar is connected to the movable tray 19 before mentioned, and is provided with a projection or block 31', which is beveled at its ends, and lies in the pathway of the bars 6 and 7, before mentioned so that the bar 30 will be moved thereby to shift the tray for the purpose herein described.

The number 32 indicates a receptacle for the tobacco plugs, which come from the tobacco presses or "gums" as they are called, in rectangular sheets or layers containing a desirable number of plugs. This receptacle may consist of a shallow frame or tray located between the movable label tray and the glue receptacle, on the top of the table, and capable of holding but a few plug sheets; or it may consist of a deep rectangular box or frame, capable of holding quite a number of sheets, with a follower, upon which they are placed, and a ratchet bar and treadle whereby the operator with his foot may successively bring the sheets into position to be labeled, as shown in Figs. 1 and 2, the sheets as they are labeled being removed by hand.

The label receptacles are, preferably of oval shape, as shown in Fig. 7, or they may be of such other shape as to come in contact with the corners of the labels, slightly or at as few points as possible, so as to not bind against said edges to any appreciable extent and permit them to be removed with certainty.

One of the objects of my invention is to dispense with the use of previously gummed labels, as they are expensive as compared with the cost of the ungummed labels; but where it is desired to employ such gummed labels water may be substituted for the gum in the gumming tray and the gumming heads then serving to moisten the tobacco for the reception of the labels.

Each of the respective movable heads before mentioned is provided with a handle 33—34, by means of which such heads are operated.

The operation of the machine is as follows: The parts being in the position shown in Fig. 1, and the operator standing in front of the machine, depresses the movable head at the left, forcing the label applying heads into the troughs between the label receptacles upon the pads, which are saturated with glycerine. He then depresses the movable head carrying the gumming devices, to charge the gumming heads and afterward moves said head with its supporting frame in the direction of the tobacco receptacle, as shown in Fig. 3, the head and frame describing the arc of a circle, of such radius, as to bring said head and its frame when they reach their limit in proper position directly over the plug sheets, to apply the gum properly thereto, which is done by depressing the head. The movement of the bars at the right, moves the sliding bar 30 connected with the movable tray carrying the label cups, moving said tray back so as to bring the label receptacles under the label applying heads, as in Fig. 3. He then depresses the head at the left, causing the label applying heads to bear upon the upper labels in the respective cups. The glycerine on the faces of the heads will cause a label to adhere to each, temporarily. The head with its frame at the left is then carried toward the tobacco receptacle stopping in proper position exactly over the same, when the head is depressed placing the labels, accurately on the gummed portions of the plugs, as in Fig. 4. The movement of the parallel bars supporting the head through the sliding bar 30 before mentioned, moves the label carrying tray back into position to repeat the operations just above mentioned.

The number of bars on the movable heads will depend upon the number of plugs of tobacco in the sheet or layer to which labels are to be attached, and a number of such heads may be provided each having different numbers of bars to correspond with the number of plugs now usually made to a layer or sheet.

The label holding heads have, as before stated, a movement on their supporting bars, so that the labels in all the cups will be reached whether one pile in one or more cups be higher or lower than those in some other cup—the head being forced back on its bar if the cup is free of labels—and thus allowing the other heads to reach the bottom of the cup adjoining as the case may be.

The felt in the glycerine receptacles pre-

vents the too rapid evaporation of the glycerine or similar substance and glycerine is preferred because it now enters largely in the manufacture of plug tobacco and is slow of evaporation—but any other suitable material

may be employed for this purpose as also for affixing the labels permanently to the plugs. Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for labeling plug tobacco the combination with a horizontal table and supporting bars pivoted thereto, of a frame located between the upper ends of said bars which are pivoted thereto, a movable head mounted above said frame and held normally by suitable springs, a series of dependent bars, having heads at their lower ends, a movable tray mounted on the table at one end, and mechanism for operating it, said tray being provided with label receptacles and intervening troughs and pads, means for applying glue to the surface of the tobacco, substantially such as described and a tobacco receptacle mounted on the top of the table, the whole arranged to operate as specified.

2. In a machine for labeling tobacco plugs in combination with a table and supporting bars pivoted to the front and rear of the table near one end, the frame pivoted between the upper ends of said bars, the movable head held normally above the said frame by means of springs, the depending bars and heads and the gum tray or pad, substantially as specified.

3. The combination of the supporting bars at the ends of the table, the frame pivoted thereto, the bars carrying the gumming and label applying heads, the movable label carrying plate, the gum tray, and the tobacco receptacle, all arranged to operate substantially as specified.

4. In a machine for labeling tobacco plugs, in combination with the horizontal table and supporting bars pivoted thereto, of a frame pivoted between the upper ends of said bars and carrying a vertically movable head from which depends a series of bars carrying heads, for the purposes described.

5. In a machine for labeling tobacco plugs, in combination with the movable frame and its supporting bars, of the label carrying tray adapted to be adjusted by said bars, carrying rows of label holding cups or receptacles, intervening in position with spaces having absorbent pads, for the purposes specified.

6. The combination in a machine of the na-

ture described with a suitable supporting table having a label holding tray at one end, a gum receptacle at the other, of a movable head with series of dependent label holders arranged over the label holding tray and a second similar movable head with dependent gumming heads arranged over the gum receptacle, whereby a layer of plug tobacco containing a series of plugs may first be gummed and then the labels applied thereto.

7. The combination in a machine of the nature described with a suitable supporting table of two movable frames, each supporting a vertical moving head upheld by springs and having depending from the lower surface a series of bars carrying heads, a label holding tray and a gumming tray arranged to operate substantially as described.

8. In a machine of the nature described in combination with a suitable table, of a movable gumming head and a gum receptacle beneath the same, a label affixing head and a label holding tray beneath the same and a receptacle for the plug tobacco layers arranged between the movable heads, for the purposes specified.

9. The combination in a machine of the nature described with the movable gumming head, and movable label applying head arranged to operate substantially as described, of an adjustable supporting follower for the layers or sheets of tobacco plugs arranged between the said heads and adapted to be adjusted to bring successive layers of tobacco plugs in position to be operated upon substantially as described.

10. In a machine for labeling tobacco plugs, in combination with a horizontal table, a frame pivoted between the upper ends of bars which bars in turn are pivoted to the table, whereby said frame may be moved longitudinally of said table in the arc of a circle, a head carried by the frame and having a vertical movement therein, a series of bars depending from said head, and a receptacle beneath the frame having separate compartments into which compartments the heads of the dependent bars dip, for the purposes specified.

Signed in the presence of two witnesses, this 8th day of April, A. D. 1891.

DAVID J. BURR.

Witnesses:

PERCY MONTAGUE,
D. H. LYNCH.