(No Model.)

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PLUG TOBACCO FORM.

No. 489,900. Patented Jan. 10, 1893.

Fig. 1.

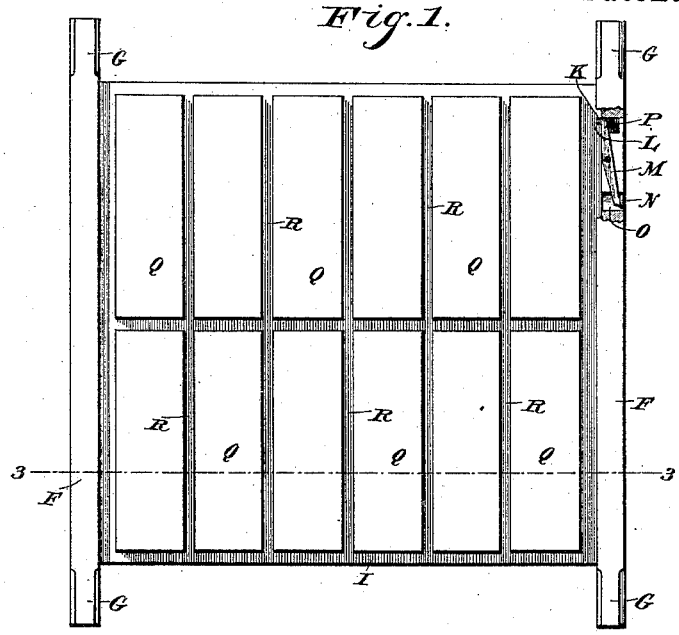


Fig. 4.

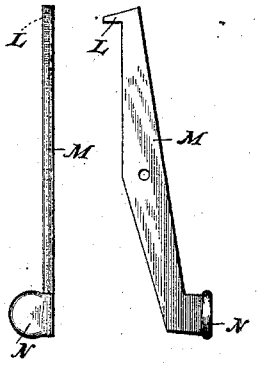


Fig. 2.

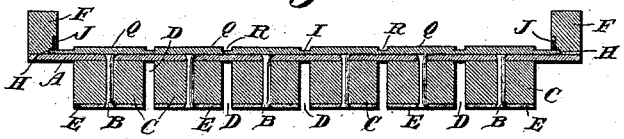
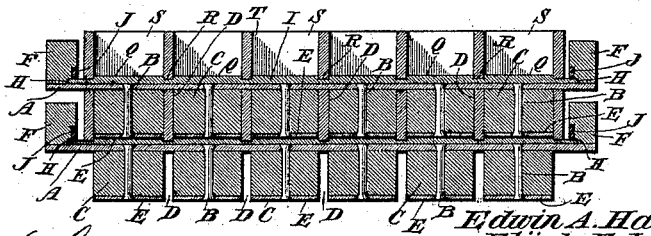


Fig. 3.

Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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PLUG-TOBACCO FORM.

SPECIFICATION forming part of Letters Patent No. 489,900, dated January 10, 1893.

Application filed September 21, 1892. Serial No. 446,434. (No model.)

To all whom it may concern:

Be it known that we, EDWIN A. HANCOCK, ELIJAH E. LOVELACE, and THOMAS F. LAWLESS, citizens of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Plug-Tobacco Form, of which the following is a specification.

This invention relates to tobacco mills; and it has for its object to provide an improved plug tobacco frame or form adapted to be used in series to "make up" the mill.

To this end, the invention primarily contemplates improvements in the base or plunger frame used in connection with the cell or die-frames, so that the improvement can be readily attached to and detached from the old style plunger base, while at the same time, providing a construction in which the strain of the powerful pressure exerted upon the mill, is evenly distributed over the entire plunger base, which is entirely without weak joints between the raised faces or cell bottoms.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings:—Figure 1 is a plan view of a plug tobacco form or frame, constructed in accordance with this invention, set up for use. Fig. 2 is a vertical transverse sectional view on the line 3.—3. of Fig. 1. Fig. 3 is a detail sectional view of the removable face plate illustrating a modified construction thereof. Fig. 4 is a detail edge view and elevation of the spring actuated locking catch. Fig. 5 is a transverse sectional view showing several of the forms arranged one upon the other.

Referring to the accompanying drawings:—A represents the flat rectangular metallic bed plate of the base or plunger frame, to the under side of which is securely riveted by the rivets B, the die or plunger blocks C. The said die or plunger blocks C, are rectangular in cross-section and are arranged in parallel rows, and at equal distances apart, to leave intervening spaces D, which receive the partition walls of the cell or die-frames hereinafter described, and the bottom faces of said blocks C, are provided with metallic facing plates E, riveted in position by the rivets B, and adapted to come in contact with the tobacco in the cells, in which the plunger blocks move. This construction is quite familiar to those skilled in the art, and to complete the ordinary base just described, side rails, F, are secured to the top and on opposite edges of bed plate A, and are extended at their ends as at G, to form the usual handles, by means of which, the frame is readily placed in proper position.

In the present invention, the opposite side rails F, are provided at their lower inner edges with the opposite inner side grooves H, which receive the removable metallic sliding face plate I. The said metallic face plate, I, rests flat upon the bed plate A, and has the edges thereof engaging the opposite side grooves H, so that the same cannot only be readily slid in and out of position, but also, so that any tendency of the said face plate to "lift" or "rise" with the cell or die-frame is checked, and the said plate held firmly in position while the several parts of the mill are being separated after pressing. The side rails F, are further provided at their lower inner edges with the wear plates J, which plates form a portion of the top sides of the opposite grooves H, and therefore prevent the face plate, I, from wearing the wooden side rails so that the same would fit loose in its proper position. The removable face plate I, is provided in one edge thereof with a locking notch K, which after the face plate has reached its proper position upon the bed plate A, is adapted to receive the locking tongue L, at one end of the spring actuated catch lever M. The other end of the catch lever M, terminates in a finger flange N, working in the opening O, in one of the side rails and providing means for releasing the catch from the plate when it is desired to remove the latter. The spring P, seated in one of the side rails, normally presses the catch into locking engagement with the

face plate. The said removable face plate I, is further provided upon the upper face thereof with a series of rectangular raised portions or cell bottoms, Q. The said rectangular raised portions or cell bottoms Q, are preferably cut out integrally with the face plate I, by regularly indenting or grooving the same to leave intervening spaces R, which correspond in width and disposition to the intervening spaces D, between the die or plunger blocks C, beneath the bed plate A, but it will of course be understood, as illustrated in Fig. 3, that the said raised portions or cell bottoms Q, may be separately riveted to the face plate I, with the intervening spaces R, therebetween. Now, as the plunger blocks C, snugly register with and fit into the top of the cells S, of the cell frames T, the rectangular raised portions or bottoms Q, which are directly in line with and above the said blocks, snugly register with and tightly fit into the bottom of the cells of said frames to form closed bottoms therefor, to prevent the tobacco from forcing its way out of the bottom edges of the cells while undergoing pressure from the plunger blocks entering the top of the same.

It will of course be understood, that the cell or die frames T, are constructed in the usual manner so as to have a multiplicity of partitioned rectangular cells corresponding to the plunger blocks on the base or plunger frame.

Although the face plate I, is removably placed in position upon the bed plate A, specifically as described, nevertheless, it will of course be readily understood that the same can be otherwise removably fixed in position by analogous means, without departing from the spirit of the invention.

To those skilled in the art, the operation of employing the herein described form, is well understood.

The first base or plunger frame is mounted upon a suitable base, and the partitioned cell frame mounted thereon between the side rails thereof, so that the bottom edges of the cells take into the spaces R, and the cell bottoms of the plunger frame snugly fit into the bottom of the cells. Each compartment or cell, receives its proper quantity of tobacco, designed to be pressed into plugs, after which the second plunger or base frame, is mounted over the cell frame, so that the plunger blocks upon the under sides thereof fit into the top of the filled cell frames. Several forms, the number varying according to the size of the mill, are similarly placed in position, one upon the other, until the series is completed, which "makes up" the mill, and after which the pressure is applied to any desired degree, without fear of the plugs being formed, with spread edges from the spewing of the tobacco.

It is thought that the construction and operation and many advantages of the herein described frame or form are apparent without further description.

Having thus described our invention, what we desire to secure by Letters Patent is:—

1. In a plug-tobacco form, the combination with the bed plate and the series of plunger blocks or dies secured to the under side of the said plate; of a face plate removably seated on the said bed plate and having a corresponding series of raised portions or cell bottoms, substantially as set forth.

2. The combination of the bed plate having a bottom series of plunger blocks or dies; of a face plate removably seated on said bed plate and having a corresponding series of raised portions or cell bottoms, means for locking said face plate in position, and the partition cell or die frame, substantially as set forth.

3. In a plug form for tobacco mills, the combination with the bed plate, and the transverse rows of plunger blocks or dies secured to the under side of said bed plate; of the opposite side rails secured to top opposite edges of said bed plate and having inner side grooves, a removable face plate adapted to rest flat upon said bed plate and slide within said grooves, said face plate being provided with a series of raised portions or cell bottoms corresponding to said plunger blocks, and a locking notch at one edge, a spring actuated catch adapted to engage said locking notch, and the cell frames registering with said blocks and raised portions or bottoms respectively, substantially as set forth.

4. In a plug form for tobacco mills, the combination with the bed-plate having a bottom series of plunger blocks or dies; of a separate face plate adapted to rest flat upon said bed-plate and having a corresponding series of raised portions or cell bottoms, substantially as set forth.

5. In a plug form for tobacco mills, the combination with the bed plate and the transverse rows of plunger blocks or dies secured to the under side of said bed plate; of the opposite side rails secured to opposite top edges of the bed plate and having inner side grooves, wear plates arranged at the inner bottom edges of said rails at the top of the grooves, a removable face plate adapted to slide within said grooves and upon the bed plate and provided with a series of raised portions or cell-bottoms corresponding with said plunger blocks, and a locking notch in one edge thereof, a spring actuated catch having a locking tongue adapted to engage said locking notch and a finger flange, and the partitioned cell frames registering with the said plunger blocks and the raised portions or cell bottoms, respectively, substantially as set forth.

6. In a tobacco form, the combination with the bed plate, of a face plate sliding in ways or guides provided on said bed plate, and a

catch or lock for detachably securing the face plate in position, as set forth.

7. In a tobacco form, the combination with the bed plate, of the face plate sliding in ways or guides provided on said bed plate, and having a series of cell bottoms or raised portions formed in its upper face, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

EDWIN A. HANCOCK.
ELIJAH E. LOVELACE.
T. F. LAWLESS.

Witnesses:
M. P. DAVIS,
RICHARD HANCOCK.