3 Sheets—Sheet 1.

P. H. MAYO.

Device for Pressing Tobacco.

No. 211,633. Patented Jan. 28, 1879.

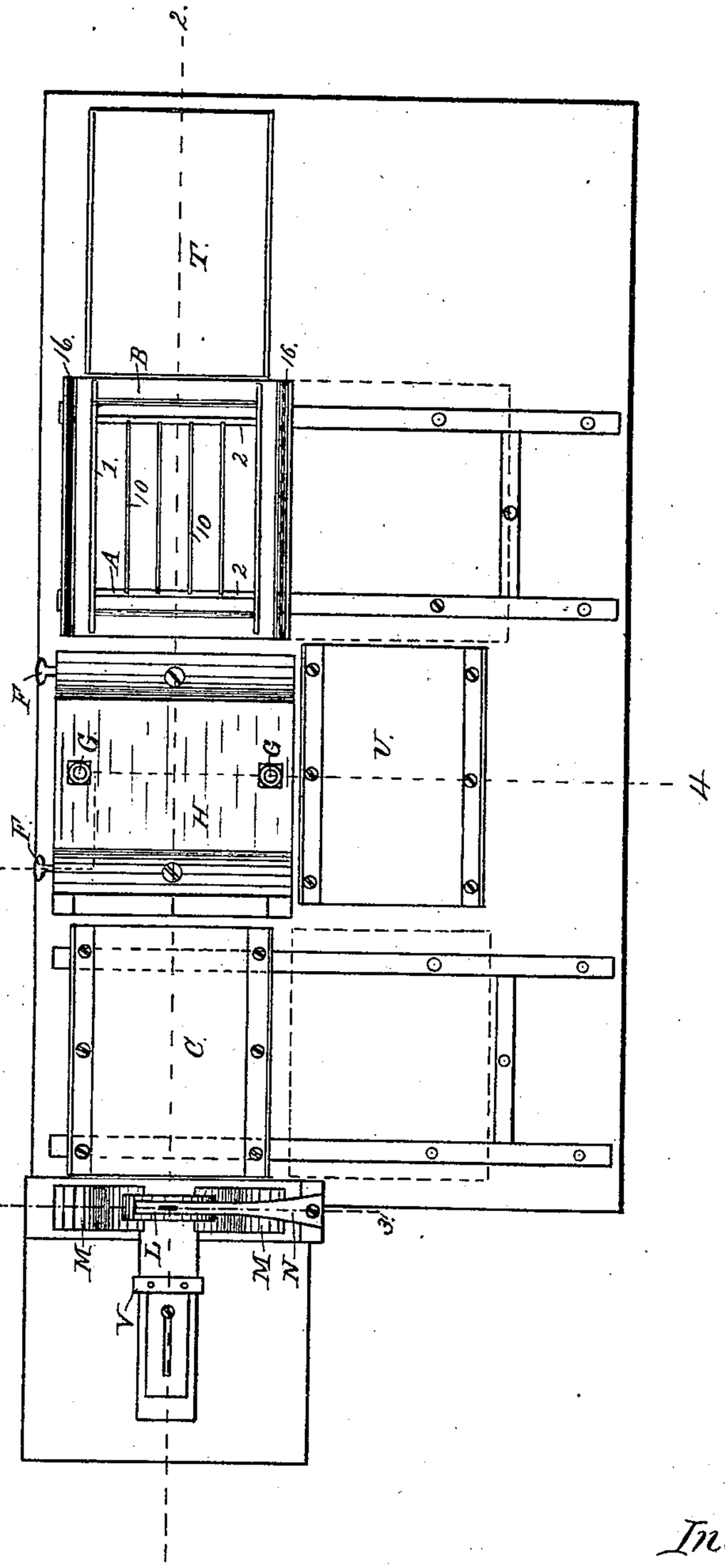

Fig. 1

Attest:

Geo. T. Smallwood Jr.

Walter Allen

Inventor:

Peter H. Mayo.

By Knight Bros

Attys.

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P. H. MAYO

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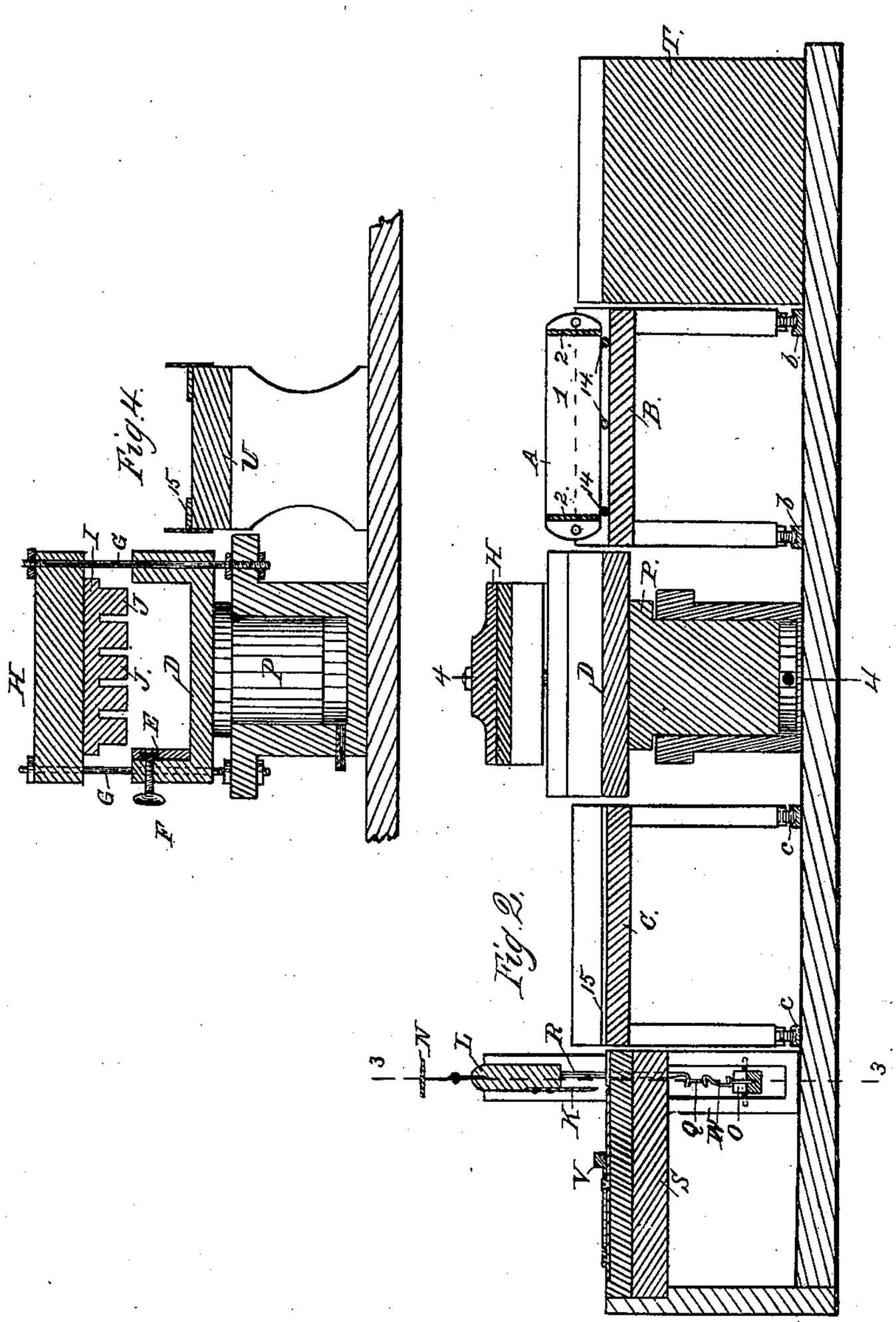

Attest:
Geo. T. Smallwood Jr.
Walter Allen

Inventor
Peter H. Mayo.
Knight Bros
Attys.

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P. H. MAYO.

Device for Pressing Tobacco.

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Fig 3.

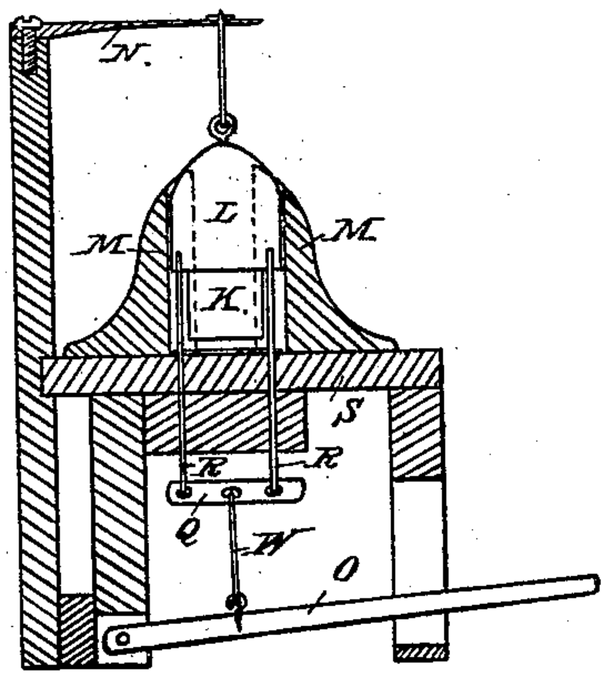


Fig. 5

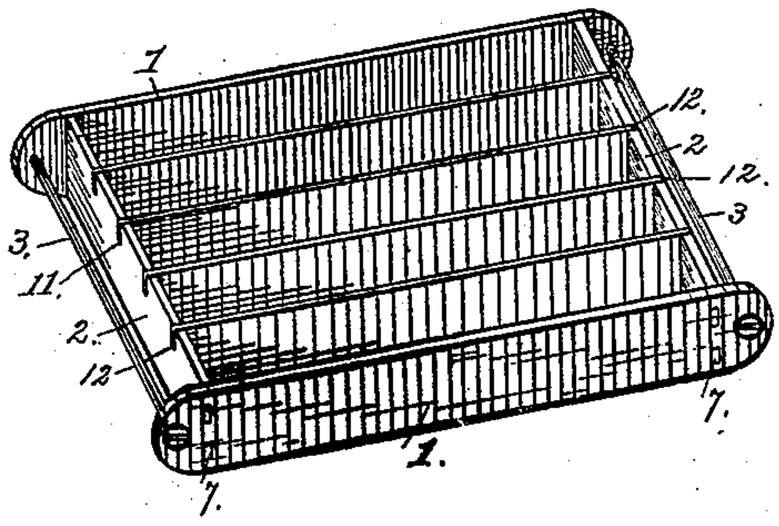


Fig. 8.

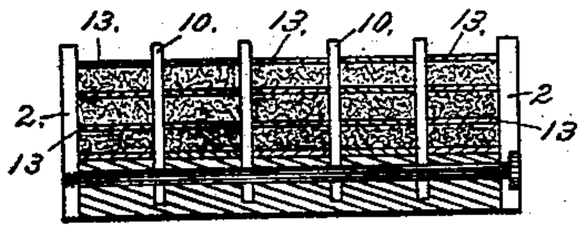


Fig. 6.

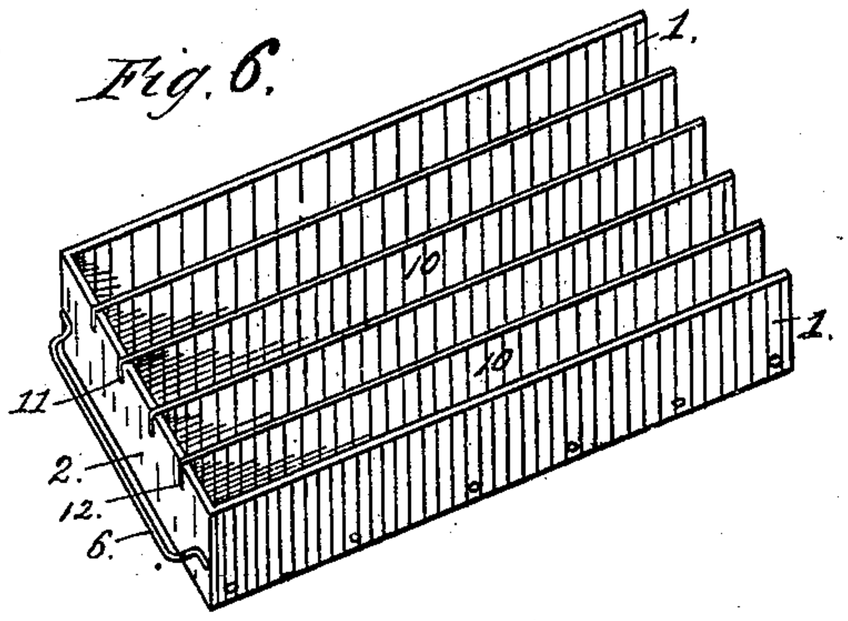
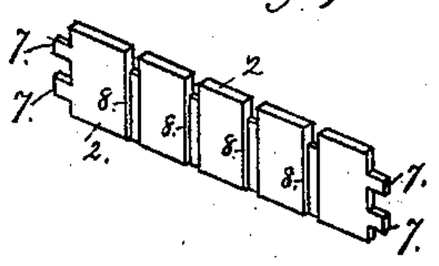


Fig. 7.



Attest:
Geo. T. Smallwood Jr.
Walter Allen

Inventor:
Peter H. Mayo
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

PETER H. MAYO, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN DEVICES FOR PRESSING TOBACCO.

Specification forming part of Letters Patent No. **211,633,** dated January 28, 1879; application filed April 27, 1878.

To all whom it may concern:

Be it known that I, PETER H. MAYO, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Tobacco-Lump Machines, of which the following is a specification:

My machine or apparatus is constructed with a central press, into which the tobacco is introduced in racks made with cells corresponding in area with the bars or lumps to be produced, plates of metal, wood, or other material being placed in the cells to separate the lumps.

The press has a removable follower, with projections or sinkers corresponding to the cells of the rack, and has a movable side, adjustable by set-screws, so as to support the sides of the rack while under pressure. Laterally-sliding tables are employed to facilitate the manipulation of the racks, their introduction to and removal from the press, and the return of the empty racks for refilling, a stationary central table being provided at the side of the press between the tables, which slides across the receiving and delivering ends of the press. A vertically-sliding knife, operated by a treadle, is employed to cut the lumps into requisite lengths, said knife consisting of a blade attached to a head, which is heavy enough to impart the required momentum, and is elevated by a spring, and connected to the treadle by rods, serving also as guides.

In the accompanying drawings, Figure 1 is a plan view of the machine. Fig. 2 is a vertical longitudinal section of the same on line 2 2, Fig. 1. Fig. 3 is a transverse section on the line 3 3, Figs. 1 and 2. Fig. 4 is a transverse section on the line 4 4, Figs. 1 and 2. Fig. 5 is a perspective view of a rack or former. Fig. 6 is a perspective of a rack or former of modified construction. Fig. 7 is a perspective view of one of the end plates of the rack. Fig. 8 is a transverse section of one of the racks filled with tobacco.

The racks A, to receive and form the tobacco, are constructed with vertical sides 1, and one or more ends, 2, connected together by transverse bolts 3, which, when applied through the projecting ends of the sides, as illustrated in Fig. 5, serve the purposes of handles in manipulating the racks. When this is not done, one or more separate handles are provided, as illustrated at 6 in Fig. 6.

The preferred construction of the rack ends is shown in Fig. 7. 7 7 represent tenons projecting from their ends, so as to occupy mortises prepared for them in the sides 1 1. 8 8 are grooves to receive the ends of any desirable number of parallel longitudinal partitions, 10 10, which separate the interior space of the rack into cells of the proper size and shape to form the tobacco lumps or bars.

The upper edge of the end plate is notched, as shown at 11 11, to receive corresponding lugs 12 12, projecting from the ends of the partitions at top.

The racks may be made with or without bottoms, as preferred. When made with a bottom it is preferable to have one end open, as shown in Fig. 6. When they are made with two ends, as shown in Fig. 5, they are preferably made without any bottom, to facilitate the removal of the pressed lumps, as hereinafter described.

13 13 represent plates of metal or wood, formed to fit within the cells of the racks to form removable bottoms therefor, or to separate the lumps of tobacco therein.

T is a table, on which the tobacco is supplied and weighed for the filling of the racks. B is the table on which the racks are placed for filling. C is the discharging-table, on which the racks are received to be emptied. The tables B and C have laterally-sliding motion on ways *b b* and *c c*, to facilitate the return of the empty racks, as hereinafter described. Between the sliding tables B and C are a hydraulic press, P, and a stationary table, U, which latter serves as a bridge from one table to the other when they are moved away from the press.

The table B is provided with transverse rollers 14 14, to aid in sliding the racks along it. The tables C and U have guideways 15 15, for a similar purpose, said guideways being elevated above the tables to leave room for driving the pressed lumps out of the bottomless rack.

16 16 are wings projecting from the sides of the table B, to receive the plates 13 13 when the racks are empty.

The ram of the press is surmounted by a follower, D, which constitutes the press-box. The said press-box is open at its ends toward the tables B and C, and has an adjustable side, E, set up by screws F F, so that it may tightly clamp and support the sides of the rack A while the tobacco therein is under pressure. Above the press-box D, and firmly secured to the bed of the press by standards G G, by which the press-box is guided, is a stationary platen, H, provided with a removable face, I, on which are sinkers J J, formed and arranged to enter the cells of the rack A when the latter is carried up by the press-box.

By employing a removable face for the stationary platen I am enabled to use a number of such faces interchangeably with sinkers corresponding with the cells of different racks, so as to make tobacco bars or lumps of any width desired.

The knife K is attached to a head, L, of considerable weight, sliding in grooves in the standards M M, and elevated by a spring, N. To draw the knife down I employ a treadle, O, attached by a rod or link, W, to a cross-head, Q, to the ends of which are attached rods R R, extending up through the bed S to the knife-head L, and serving both as guides and connections. V is an adjustable gage, against which the end of the bar or lump rests during the operation of cutting.

The operation is as follows: One of the racks A is first placed on the filling-table B, and one of the plates 13 is placed in the bottom of each cell. The tobacco, being placed on the table T, is there weighed out in whatever quantities may be desired for the bars or lumps. These portions are then placed one in each cell of the rack A, and distributed as evenly as may be readily practicable. Another of the plates 13 is then placed above the tobacco, if more than one lump or bar is to be made in each cell. This rack is thus quickly filled by attendants, working one on each side of the table. The filled rack is then slipped into the press, the set-screws F F are turned up to tighten the side E of the press-box against the side of the rack, and the rack being thus supported the water is let into the press-cylinder, so as to force up the ram and apply the pressure. While the contents of one rack are under pressure another rack is being filled.

The tobacco being sufficiently pressed, the press-ram is let down, the set-screws F F loosened, and the rack removed from the press to the table C, the newly-filled rack being immediately placed in the press. The tables B C are then moved to the position shown in dotted lines in Fig. 1, away from the press, and with the stationary table U between them. The rack is then slid onto the central table U, and the pressed bars or lumps removed therefrom. If it be an open-ended rack, this is effected by raising the bars or lumps by means of the projecting ends of the plates 13. If it be a double-ended and bottomless rack, the pressed bars or lumps are ejected through the bottoms of the cells.

The emptied rack is slipped to the table B, the plates 13 being placed on the wings 16 16, at each side of the rack, in readiness for re-use. The tobacco bars or lumps are placed on the table C, and both tables B and C are slid back to their places in line with the press. The bars on the table C are then cut as required by means of the knife K.

The racks are of considerable weight; but it will be observed that the mode of operation avoids the necessity of lifting them or performing any other heavy manual labor. All the work is readily performed by boys, without severe exertion or injury to health.

The following is what I claim as new:

1. The weighing-table T, filling-table B, and discharging-table C, arranged in line, in combination with the press D and knife K L, as and for the purposes set forth.

2. The combination of the rack A, press P, and press-box D with adjustable side E and set-screws F.

3. The combination of the press-box D, platen H, and sinkers J with the rack A, as and for the purpose set forth.

4. The combination of the press P, central bridge-table, U, and laterally-moving tables B C, to facilitate the application of the racks to the press and their return for refilling, as explained.

P. H. MAYO.

Witnesses:
OCTAVIUS KNIGHT,
WALTER ALLEN.