

(No Model.)

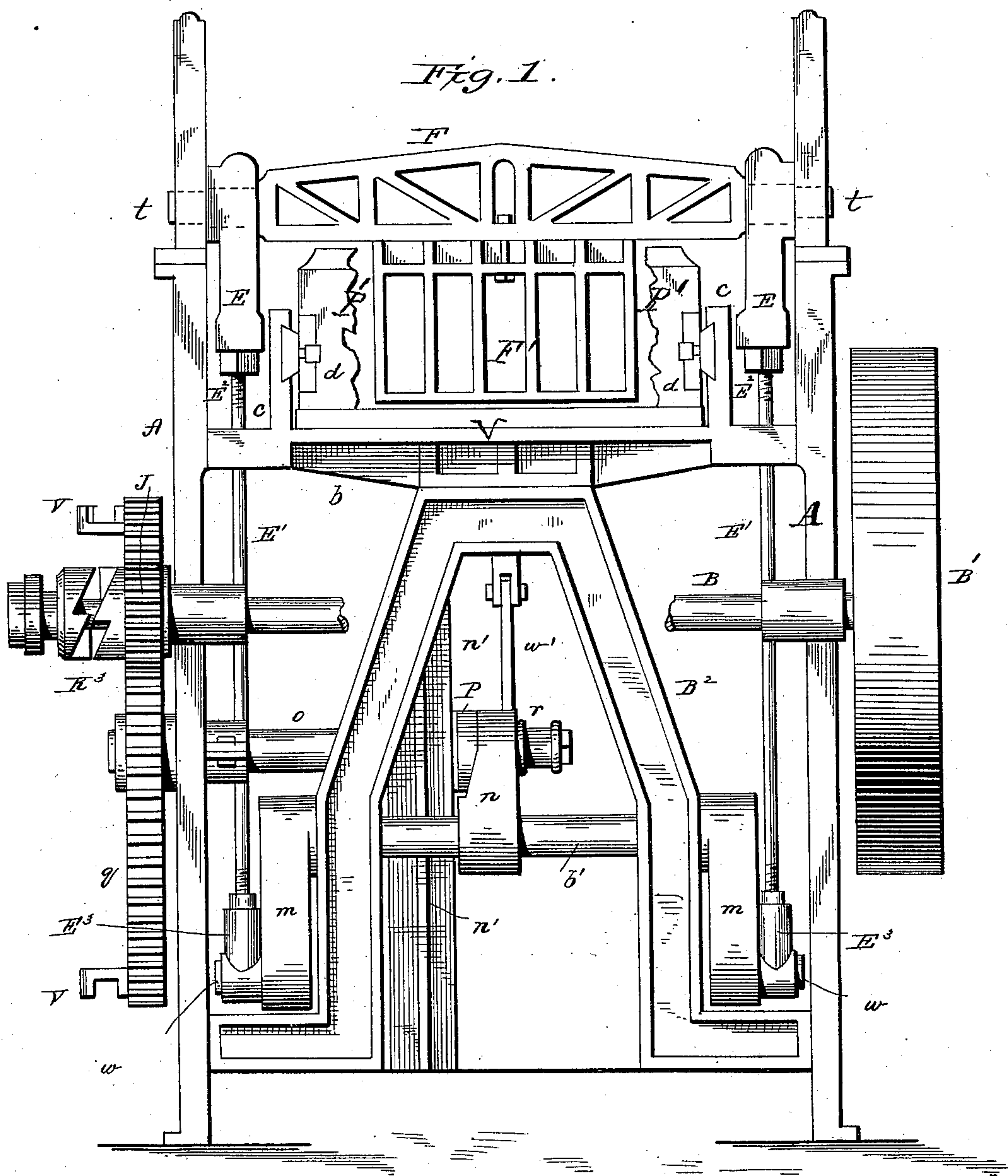
2 Sheets—Sheet 1.

J. N. WRIGHT.

PRESS.

No. 294,747.

Patented Mar. 4, 1884.



Witnesses.
Edwin L. Yewell.
J. J. McCarthy.

Inventor.
James N. Wright.
By *W. A. Alexander*
Attorney.

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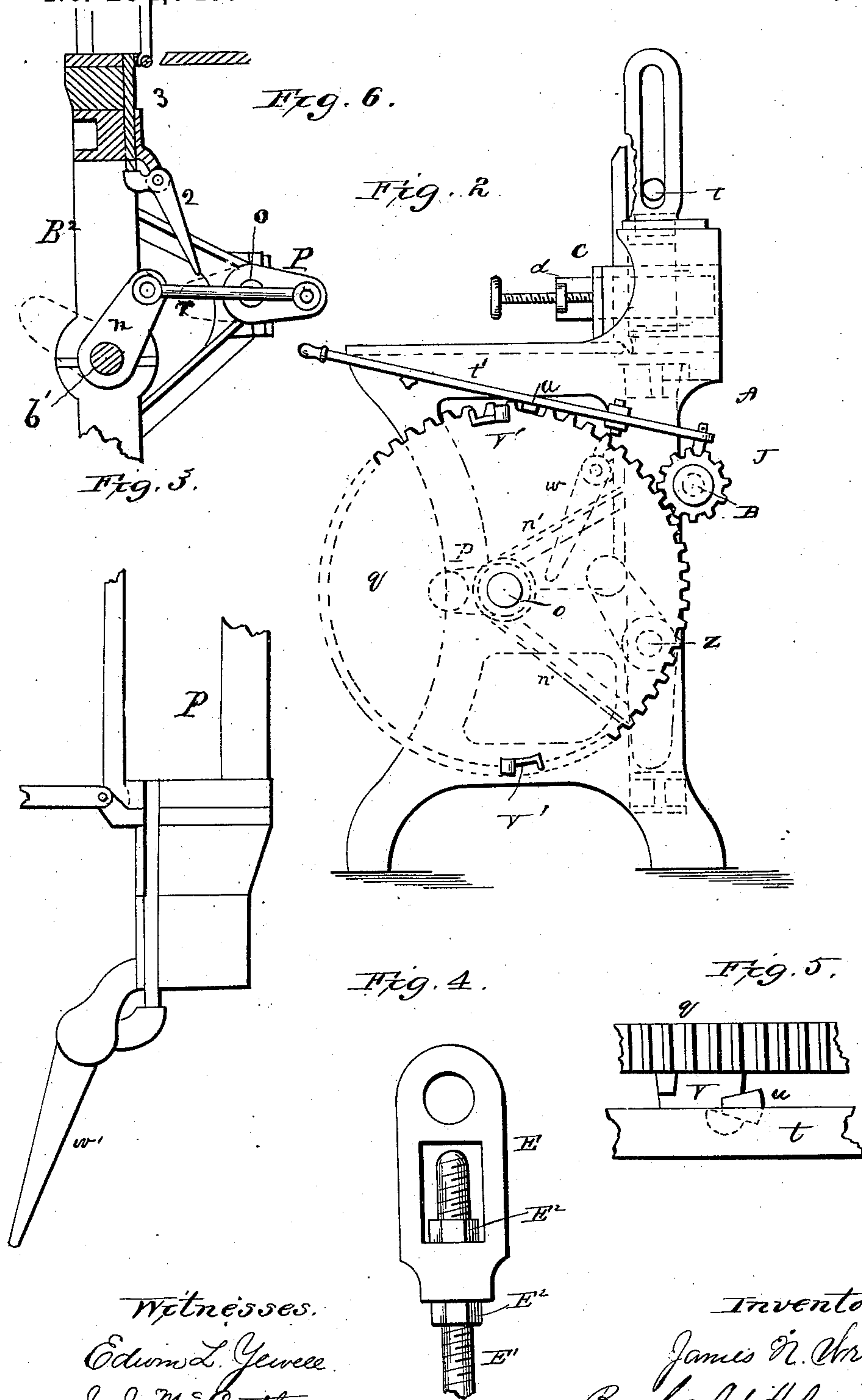
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Attorney.

UNITED STATES PATENT OFFICE.

JAMES N. WRIGHT, OF QUINCY, ILLINOIS.

PRESS.

SPECIFICATION forming part of Letters Patent No. 294,747, dated March 4, 1884.

Application filed June 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES N. WRIGHT, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Presses, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is an elevation of my improved press, parts of which are broken away for the purpose of exposing to view certain other parts behind them. Fig. 2 is an elevation of one side of the machine. Figs. 3, 4, 5 are details of parts of the machine, which I will hereinafter describe. Fig. 6 is a section in detail, showing connection of shaft *o* with shaft *b'*, and also the ejecting devices.

My invention relates to improvements on presses which are especially applicable to the press for which Letters Patent were granted J. H. Brinkop on the 31st day of May, 1881, numbered 242,258; but the devices which I shall describe may be applied to other presses without changing the nature of my invention, which consists, essentially, in the devices which I shall point out and claim, and which will be fully understood from the following description, when taken in connection with the annexed drawings.

My object is to press tobacco (or other material) into plugs or lumps, and to secure a uniformity of the pressed material; and also to construct a mold with an adjustable back plate, a stationary bottom, movable ends, and a hinged apron forming the front of the press-box, in combination with a vertically-movable plugger.

A designates the rigid frame of the machine, which is constructed with journal-bearings for a main driving-shaft, B, on one end of which I key a belt-drum, B', for the purpose of driving the machine by steam or other convenient power, in lieu of using foot-power, although a treadle may be used, if desired. Inside of this press-frame, and rigidly secured to it, is an angular bracing-frame, B², which is so constructed that it affords a substantial bed for the platen or table V. This table is horizontal and immovably fixed to the main press-frame A, and it is cast with vertical guides *c*, for the purpose of holding the dovetail draws *d*.

These devices will sustain the horizontal and vertical pressure or strain independently of the main supporting-frame of the press.

In addition to the bracing and strengthening devices above described, I employ a cross-head or bridge, F, which I prefer to construct of cast-steel. To this bridge F the plunger F' is rigidly secured, which plunger is vertically movable in the press-box P'.

E E designate loops or connecting-pieces, which are female-screw-threaded and applied on the trunnions *t t* of the said cross-head or bridge F, that play vertically in slots made through the uprights of the main frame A. Into said loops E is screwed pitman-rods E', which are provided with jam-nuts E² at their upper ends. The lower ends of the pitman-rods E' are similarly connected to T-shaped couplings E³, which are applied to wrist-pins *w*, on the free ends of cranks *m*, that are keyed on the ends of a horizontal oscillating shaft, *b'*, which has its bearings in the angular bracing-frame B².

It is obvious that by loosening the jam-nuts on the pitman-rods E', they can be turned, and that the strokes of a plunger, hereinafter explained, can be lengthened or shortened, or the wear and tear of the parts compensated for.

Between the limbs of the intermediate or bracing frame, B², a crank, *n*, is applied on the shaft *b'*, and connected to the crank P by a rod, *r*. The crank P is fast on one end of the short shaft *o*, and supported in bearings formed in the brace *n'*. This shaft *o* extends out through one of the cheeks of the press-frame, and has keyed on it a large spur-wheel, *q*. The shaft *b'* oscillates about one-quarter of a revolution, which movement brings the follower down, thus producing the pressure upon the material in the press-box, the power and motion being thrown off quasi-automatically by a catch, V', on the outer face of the gear *q*, impinging with a catch, *u*, on adjusting hand-lever *t'*, which at the same time forces the clutch K³ out of gear and retains pressure on the work. The clutch K³ is then thrown into gear by the starting-lever, which revolves shaft *o*, giving to shaft *b'* one-quarter of a revolution, which movements raise the plunger. As the crank on shaft *o* revolves, it strikes the long arm of a lever, 2, and raises an ejector, 3, and discharges

the pressed plug of tobacco from the press-box. The large gear-wheel *q* is driven by the clutch-pinion *J*, which turns loosely on the shaft *B*, and, by means of a feather on the clutch and a groove in said shaft, the coupling or shifting of the parts is effected, the shaft *B* being constantly moving. The arm *w'*, supported by the angular brace *n'*, is for the purpose of lifting the compressed mass or lump after the completion of the pressing operation, which arm is actuated by the crank *P*, pushing it outward. The arm *w'* will, by its own gravity, drop into its place after the said crank releases it.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a pressing-machine, the combination of the main frame, the auxiliary angular bracing-frame, and the table of the press, all constructed and adapted to operate substantially in the manner and for the purposes described.

2. The combination, in a press, of the brace *B*², adapted to support the table *V* at the middle thereof, the guides *c c*, rigid on the table, the adjustable draws *d*, for holding and adjusting the back plate of the mold, and the cross-head or bridge, all constructed and adapted to operate substantially in the manner and for the purposes described.

3. In a press of the character described, the combination of the vertically-movable cross-head guided in the main frame, with the loops,

the adjustable pitman-rods, and the crank on the shaft *b'*, substantially as and for the purposes described.

4. In a press, the combination of the shaft *b'*, the angular bearing-brace therefor, the three cranks thereon, the shaft located at the back of the press-frame, and provided with a pulley, the clutch *K*³, the device *r*, the crank *P*, the brace fastened to the angular brace, the shaft *o*, and the gear *q*, having an automatic throw-off catch, and the catch *u*, attached to the starting-lever, all constructed and adapted to operate substantially in the manner and for the purposes described.

5. The combination, in a press, of the starting-lever, the catches *v u*, the spur-wheel *q*, and the clutch and its pinion on the belt-drum shaft *B*, substantially as described.

6. The combination, in a press of the character described, of a main supporting-frame, an intermediate angular frame, a press-table supported thereon, and a vertically-movable cross-head guided thereby, all constructed and adapted to operate substantially in the manner and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES N. WRIGHT.

Witnesses:

JOHN BOEHM,

JAMES L. MAYS.