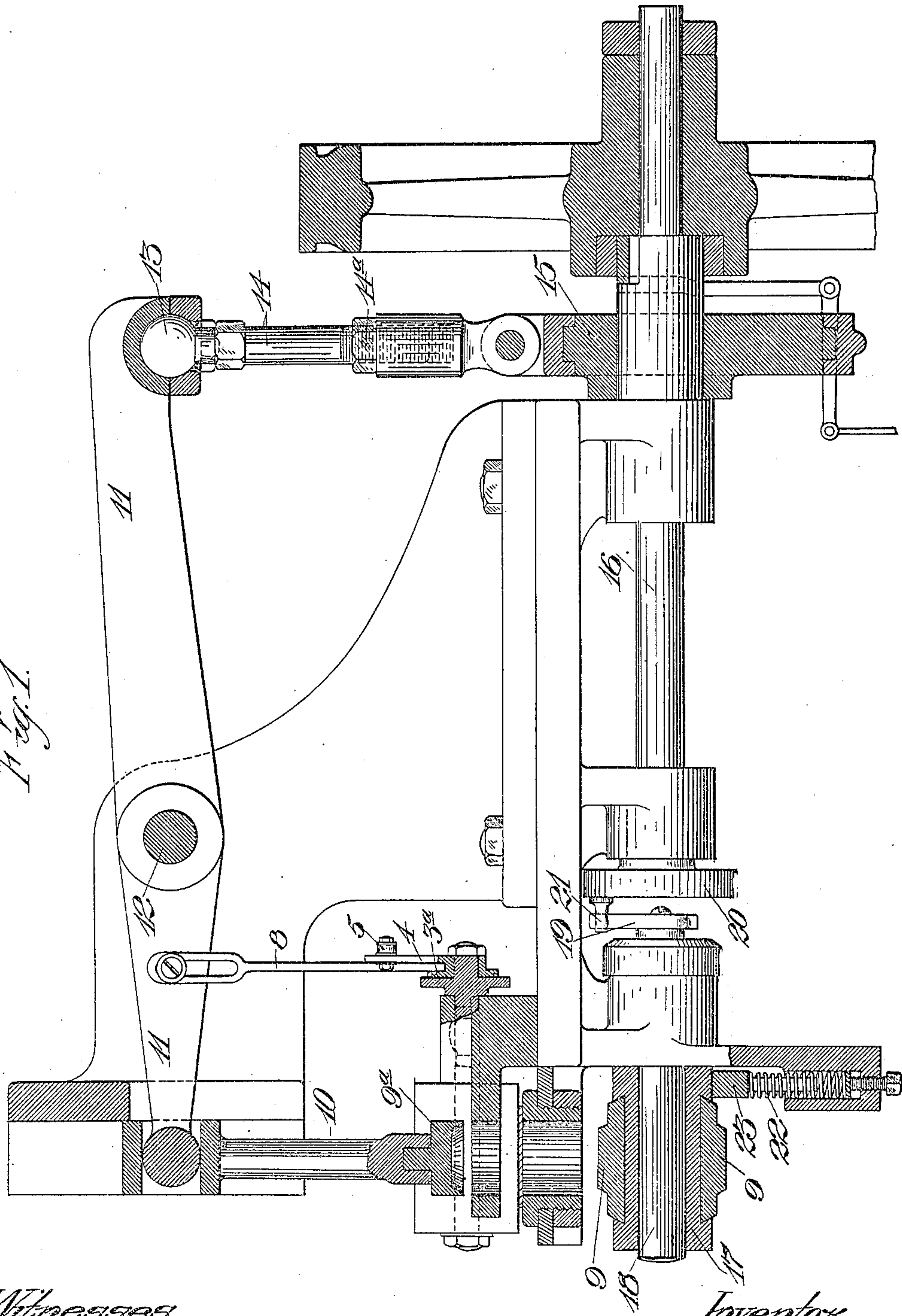


No. 831,763.

PATENTED SEPT. 25, 1906.

G. H. BARTLETT.
PUNCH AND DIE PRESS.
APPLICATION FILED MAY 19, 1906.

2 SHEETS—SHEET 1.



Witnesses:
J. H. Hagerberg
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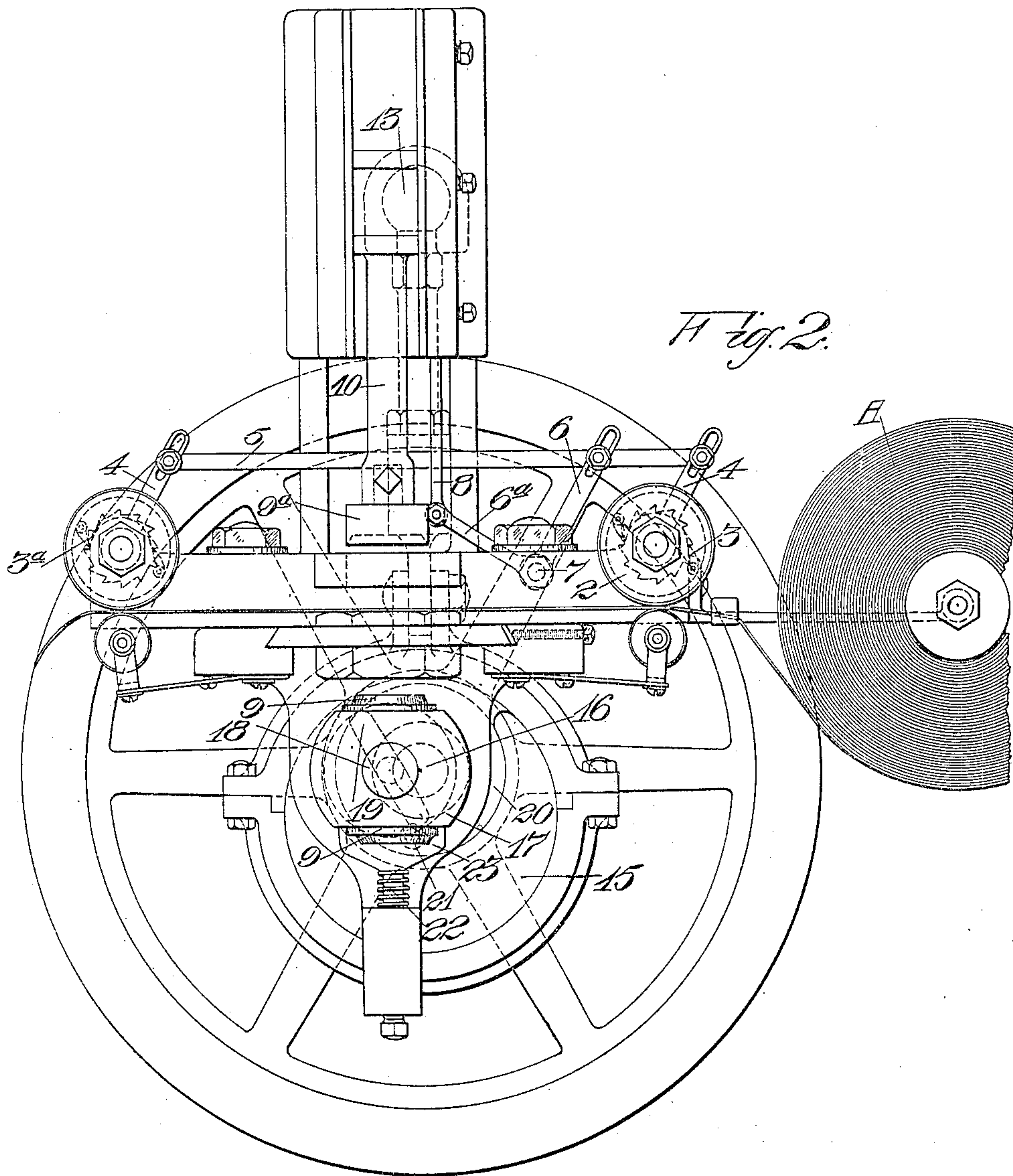
Inventor:
George H. Bartlett;
By
Geo H Strong
Atty.

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2 SHEETS—SHEET 2.



Witnesses.
T. Eastberg
J. H. House

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UNITED STATES PATENT OFFICE.

GEORGE H. BARTLETT, OF SAN FRANCISCO, CALIFORNIA.

PUNCH AND DIE PRESS.

No. 831,763.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed May 19, 1906. Serial No. 317,718.

To all whom it may concern:

Be it known that I, GEORGE H. BARTLETT, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Punch and Die Presses, of which the following is a specification.

My invention relates to a punch and die press.

It consists in the combination of parts and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation, partially in section. Fig. 2 is an end view.

The apparatus may be carried upon any suitable base or framework, upon one end of which is carried a roll of paper or equivalent flexible fabric A, from which the plates or disks are to be formed. This strip passes between rollers, as shown at 2, and one of these rollers has a pawl-and-ratchet mechanism 3, by which the roll is intermittently moved and the material thus advanced between the rollers. At the opposite end of the framework is a similar pawl-and-ratchet mechanism 3^a, and the lever-arms 4, by which the mechanism is actuated, are connected by a rod 5, so that both are moved in unison. This rod is also connected at some portion of its length with a bell-crank, as at 6, this lever being fulcrumed at its angle at 7 and having the other arm 6^a connected by a rod 8 with the reciprocating arm or lever which actuates the stamping mechanism, so that the material will be advanced intermittently and in unison with the stamping operation which takes place between the feed-rollers 3 3^a.

The apparatus comprises a male die 9, which is fixed in the frame, and a female member 9^a, which is reciprocated, so as to cut out and shape the desired form from the strip of material which is carried between the two by the feed mechanism above described. The movable member 9^a is carried by a guided reciprocating rod 10, the upper end of which is connected by ball or suitable joint with a lever 11, fulcrumed to the frame, as at 12, and the opposite end of the lever having a similar ball or suitable joint, as at 13, is connected by a rod 14 with an eccentric, as at 15, whereby a reciprocating motion is communicated to the moving parts. The length of the connecting-rod may be adjusted by screw or equivalent coupling 14^a. The eccentric is mounted upon a journaled shaft 16, and

power may be transmitted to move it by any suitable or desired means. There are two of the die members 9, fixed to the opposite sides of a carrier 17, which is secured upon a shaft 18. This shaft is journaled out of line with the shaft 16 and has a lever-arm 19 fixed to its inner end. Upon the end of the shaft 16 which is contiguous to the lever 19 is a wheel 20, and projecting from its face is a pin 21. The operation of this portion would be as follows: The revolution of the shaft 16 causes the crank-pin 21 to travel around its circle, and at each revolution it engages with the arm 19. This engagement takes place during a portion of the revolution of the shaft 16 and while the pin is traversing that part which is nearest to the line of the shaft 18. As soon as the crank-pin has passed the center it will disengage from the lever-arm, and thus allow the shaft 18 to remain stationary, and with it the dies 9. The revolutions are thus made so that at each full revolution of the shaft 16 and the stamping mechanism one of the dies will be presented for the stamping of the passing material. Then during the intermediate advance of the material and the revolution of the shaft carrying the stamping mechanism the lower die will be reversed, and the disk or plate which has been cut and stamped upon the upper die member will be carried around with it to the lower side and discharged. A spring 22 acts upon a pressure-bar 23, and this pressure-bar contacts with flat surfaces of the carrier 17, so as to steady the dies 9 in each of their positions as the carrier is turned.

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

1. A plate and disk stamping device, including a reciprocating die, a die-table having a plurality of opposing dies, said dies being arranged on the opposite sides of said table, a horizontal main power-shaft and connections therefrom to operate the reciprocating die, a second horizontal shaft carrying the table said second shaft being independent of the main shaft, and connections between the adjacent ends of said shafts for imparting to the second shaft a partial rotation during each complete revolution of the main shaft.

2. A plate and disk stamping device, comprising a reciprocable die, a die-table having a plurality of opposing dies, said dies being arranged on opposite sides of the table, a horizontal main power-shaft, connections be-

tween said shaft and the reciprocable die for operating the latter, a second shaft independent of the main shaft, connections between the adjacent ends of said shafts for imparting
 5 a partial rotation to the second shaft during each complete revolution of said main shaft, and means for intermittently advancing a strip of fabric between the dies.

3. In a plate punching and forming device,
 10 a die, means for vertically reciprocating it, a second die located in line below the movable die, feed-rollers located in the plane of the lower die, and upon opposite sides thereof, pawl-and-ratchet mechanism connected with
 15 said rollers, connected lever-arms by which the pawls are actuated in unison, a bell-crank lever having one arm connected with the link which unites the pawl-levers, and a connection between the other arm and the die-re-
 20 ciprocating devices.

4. In a plate punching and forming apparatus, a vertically-reciprocable die, a plurality of opposing dies, a table upon which said dies are carried, means for intermittently re-
 25 volving the table to successively present its dies to the action of the reciprocating die, said means consisting of an independent shaft upon which the table is carried, a main power-shaft journaled out of line with the
 30 table-shaft and carrying a crank or eccentric pin, and an arm carried by the table-shaft and engaged by the crank-pin.

5. In a plate, stamping and forming press, a vertically-reciprocable die, a main power-

shaft and means actuated thereby to recipro- 35 cate the die, a second shaft, a table fixed to one end of said second shaft said second shaft being out of line with the main shaft, a plurality of dies carried upon different sides of the table, crank and lever arms carried re- 40 spectively by the adjacent inner ends of the main and supplemental shafts, and acting to produce a semirevolution of the die-carrying shaft at each complete revolution of the power-shaft.

6. In a press for punching and forming plates, a vertically-reciprocating die, a plu- 45 rality of opposing dies, a table upon different sides of which said dies are fixed, a horizontal revoluble shaft upon which the table is 50 carried, a main horizontally-mounted shaft and connections therefrom to operate the reciprocating die, said shafts having their inner ends proximate to each other and arranged slightly out of line, and mechanism 55 carried by the inner ends of said shafts by which the table is intermittently rotated to successively present its dies to the action of the reciprocating die, and a spring-actuated stop mechanism by which the table is held in 60 position during the stamping operation.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE H. BARTLETT.

Witnesses:

S. H. NOURSE,

CHARLES H. HARVEY.