

No. 786,245.

PATENTED MAR. 28, 1905.

C. W. BRAY.  
MATCHING DEVICE.

APPLICATION FILED JAN. 3, 1903.

2 SHEETS—SHEET 1.

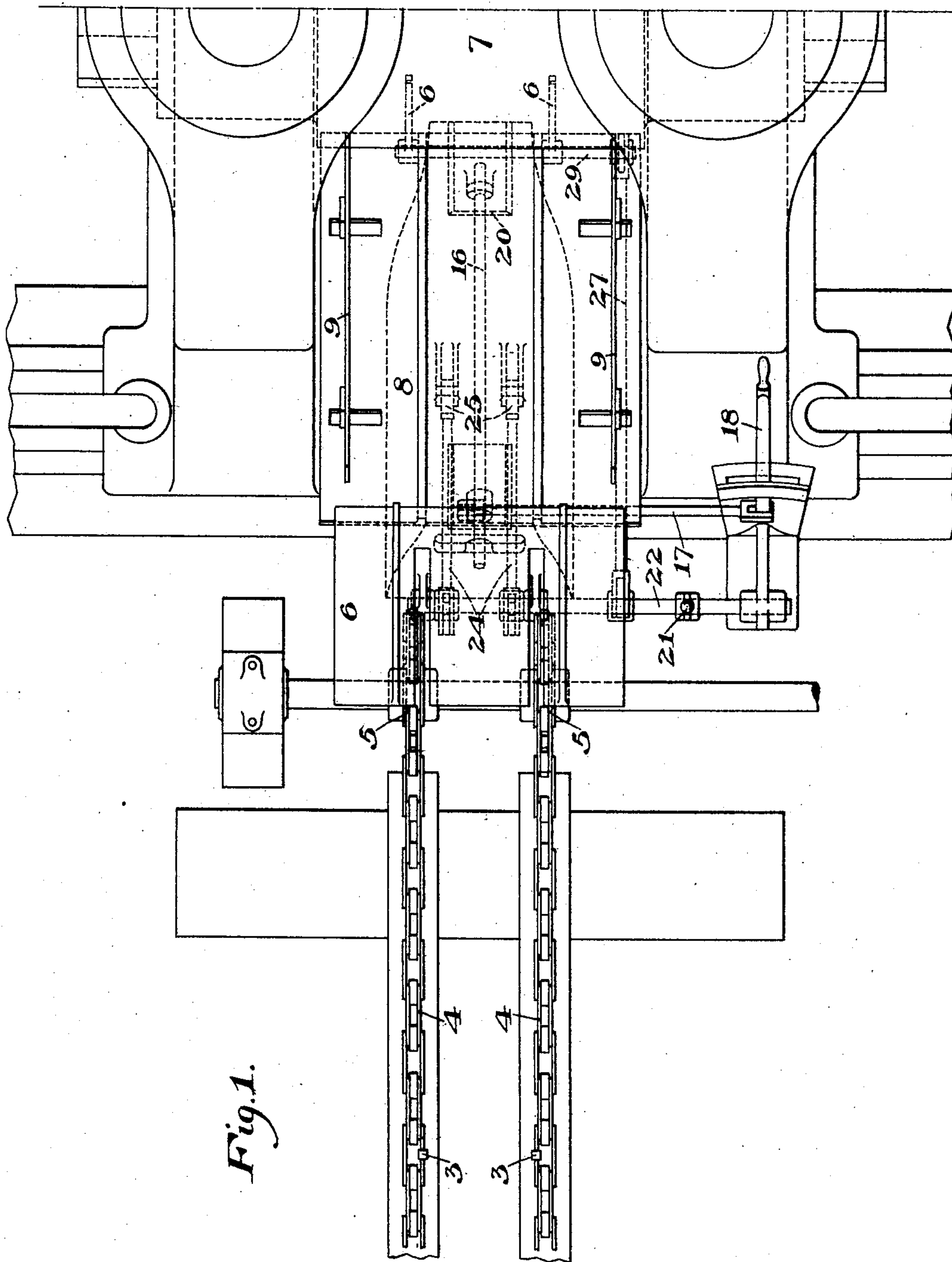


Fig. 1.

WITNESSES

Warren W. Swartz  
J. M. Corwin

INVENTOR

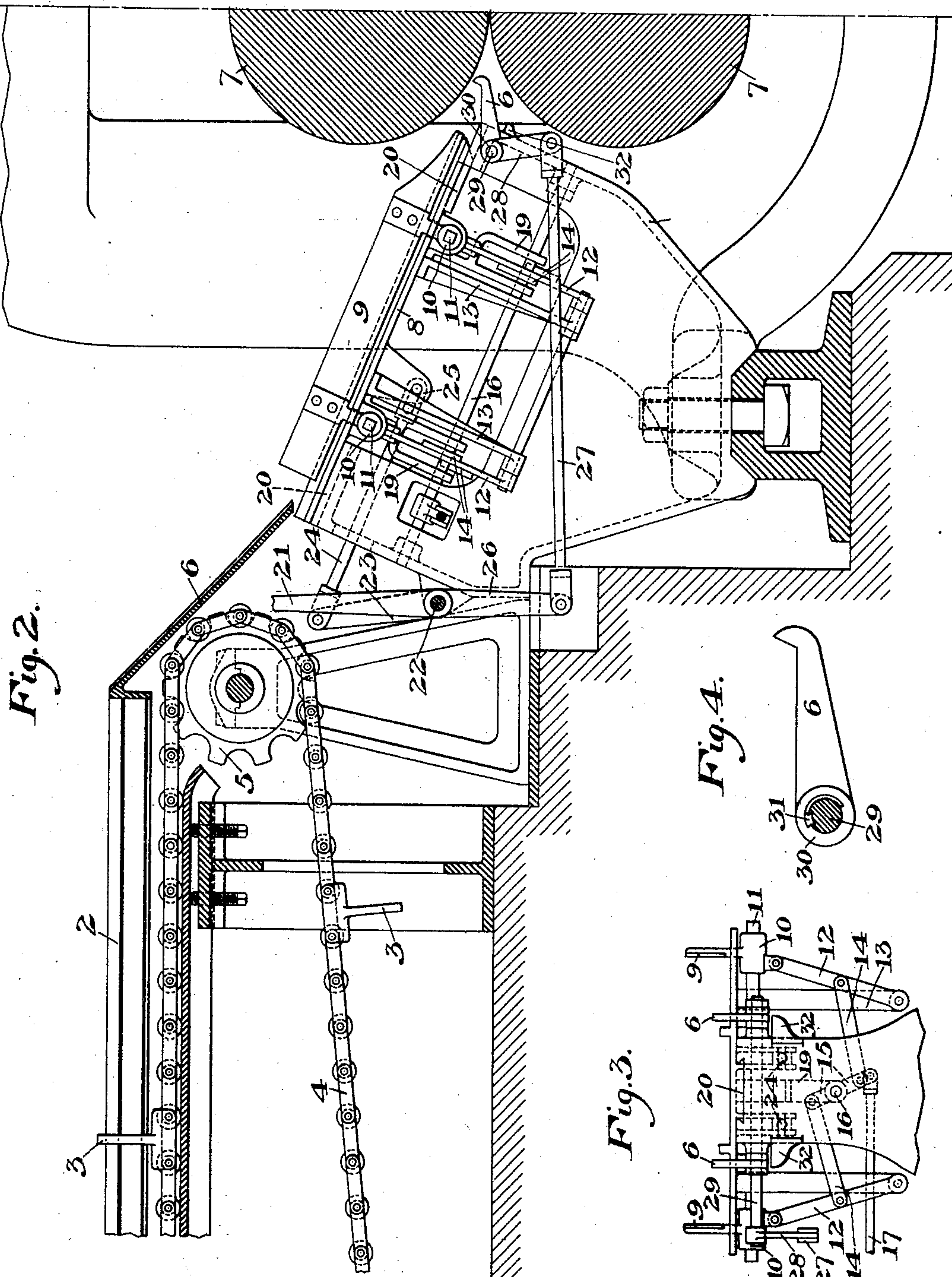
C. W. Bray  
by Ballinger & Byrnes  
his attys

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WITNESSES

Warren W. Swartz  
H. M. Corwin

Fig. 3.

Fig. 4.

INVENTOR

C. W. Bray  
by *Boatman & Rogers*  
his attys



# UNITED STATES PATENT OFFICE.

CHARLES W. BRAY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO AMERICAN TIN PLATE COMPANY, OF ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## MATCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 786,245, dated March 28, 1905.

Application filed January 3, 1903. Serial No. 137,714.

*To all whom it may concern:*

Be it known that I, CHARLES W. BRAY, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Matching Device, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved matching device. Fig. 2 is a sectional side elevation. Fig. 3 is a partial front elevation, and Fig. 4 is a detail view of the stop.

My invention relates to the class of matching devices for metal plates or sheets, and is designed to provide an improved apparatus of this character which will square up the pack and feed it forwardly out of the apparatus.

In the drawings, 2 represents a feed-table on which the plates or sheets are fed either singly and successively or in piles or packs by fingers 3 on sprocket-chains 4, passing over sprocket-wheels 5. The plates or packs slide down upon an inclined table 6 until their forward ends strike the stop-fingers 6 at the entrance to rolls 7. The table 8 of the matcher is preferably inclined and is provided with squaring-up side guides 9, mounted on arms provided beneath the table with collars 10, which slide upon transverse shafts 11. The collars are simultaneously moved toward or from each other by means of levers 12, pivoted to supports 13, depending from the table, and connected by links 14 with two-armed levers 15, mounted on shaft 16. This shaft is rocked by a pivotal rod 17, connected at its outer end to a hand-lever 18, by which the guides may be simultaneously moved in to square up the plates sidewise and also to grip the side edges of the pack and hold the plates in proper position as they are fed forward into the pair of rolls. The shaft 16 has a spline connection with the levers 15, which are moved along it by depending forked supports 19 upon the table when the table is moved endwise. The table has a central dove-tailed guide connection 20 with its support and is moved longitudinally by a hand-lever 21, which operates a rock-shaft 22, having a lever 23, with a pivoted link 24, which has a

loose slotted connection 25 with a depending bracket on the table. The hand-lever is extended at 26 and is connected by pivoted links 27 with a lever 28, secured to a rock-shaft 29, having loose connection with the stop-fingers 6. These stop-fingers are provided with collars 30, which are cut out for a portion of their circumference, as shown in Fig. 4, to contain the key 31 on the shaft, so that the shaft may rotate a part of a revolution before it acts upon the fingers. The arrangement is such that when the parts are in their normal position the operator moves in the squaring-up side guides, which may be held either by the operator or by a notched latch device. The operator then swings the lever 21 and moves the keys 31 in a clockwise direction, allowing the stops to drop or swing down. This movement may be assisted by springs, if desired, and is limited by a stop 32. The further movement of the lever 21 acts through link 24, which has thus far moved idly, to positively move forwardly the table, side guides, and pack until the forward end of the pack enters the set of rolls 7. The operator then releases the side guides and the pack feeds forwardly into the pair of rolls with the plates in their correct relative position.

The advantages of my invention result from the gripping of the pack and the feeding forward of such gripped pack, since this prevents displacing of the sheets or plates and holds them in proper relative position when they are carried out of the matcher, also from the squaring up of the plates in the matcher with the mechanism for feeding the squared-up pack forwardly.

The device may be used either where separate sheets or plates are fed in one upon the top of the other into the matcher or where a pack or packs are fed in.

The device for gripping the pack may be varied so as to engage the pack in another manner, the feeding-out mechanism may be changed, and other variations may be made without departing from my invention.

I claim—

1. A matcher having squaring-up mechanism for the sides and end of a plate-pack,



mechanism for feeding separate plates one upon the other into the matcher, and mechanism for feeding the squared-up pack out of and forwardly from the matcher; substantially as described.

2. A matcher having an inclined table, a movable stop at one end thereof, movable side guides arranged to square up the sides of a plate-pack and mechanism for feeding the pack forwardly out of the matcher; substantially as described.

3. A matcher having a movable front stop in the line of feed, mechanism for feeding plates into the matcher, means for squaring up the sides of the pack, mechanism for operating the stop, and mechanism for feeding the pack forwardly out of the matcher; substantially as described.

4. A matcher having front movable stops in the line of feed, movable side guides, and mechanism for dropping the stops and moving the pack forwardly out of the matcher; substantially as described.

5. A matcher having mechanism for gripping a pack of plates therein, and means for

feeding forward the gripped pack; substantially as described.

6. A pair of working rolls, and pack-feeding mechanism comprising means for gripping a pack of plates and means for feeding the gripped pack forwardly into the bite of the rolls; substantially as described.

7. A matcher having squaring-up mechanism, grippers arranged to engage the side edges of the pack, and mechanism for feeding the grippers and gripped pack forwardly; substantially as described.

8. A matcher having a forwardly and downwardly inclined support, mechanism for feeding the separate plates forwardly and dropping them upon each other on the support, squaring-up mechanism, and mechanism for feeding the squared-up pack out of the matcher; substantially as described.

In testimony whereof I have hereunto set my hand.

CHARLES W. BRAY.

Witnesses:

GEO. B. BLEMING,

L. M. REDMAN.