

(No Model.)

W. H. McFADDEN.
FEED TABLE.

2 Sheets—Sheet 1.

No. 591,563

Patented Oct. 12, 1897.

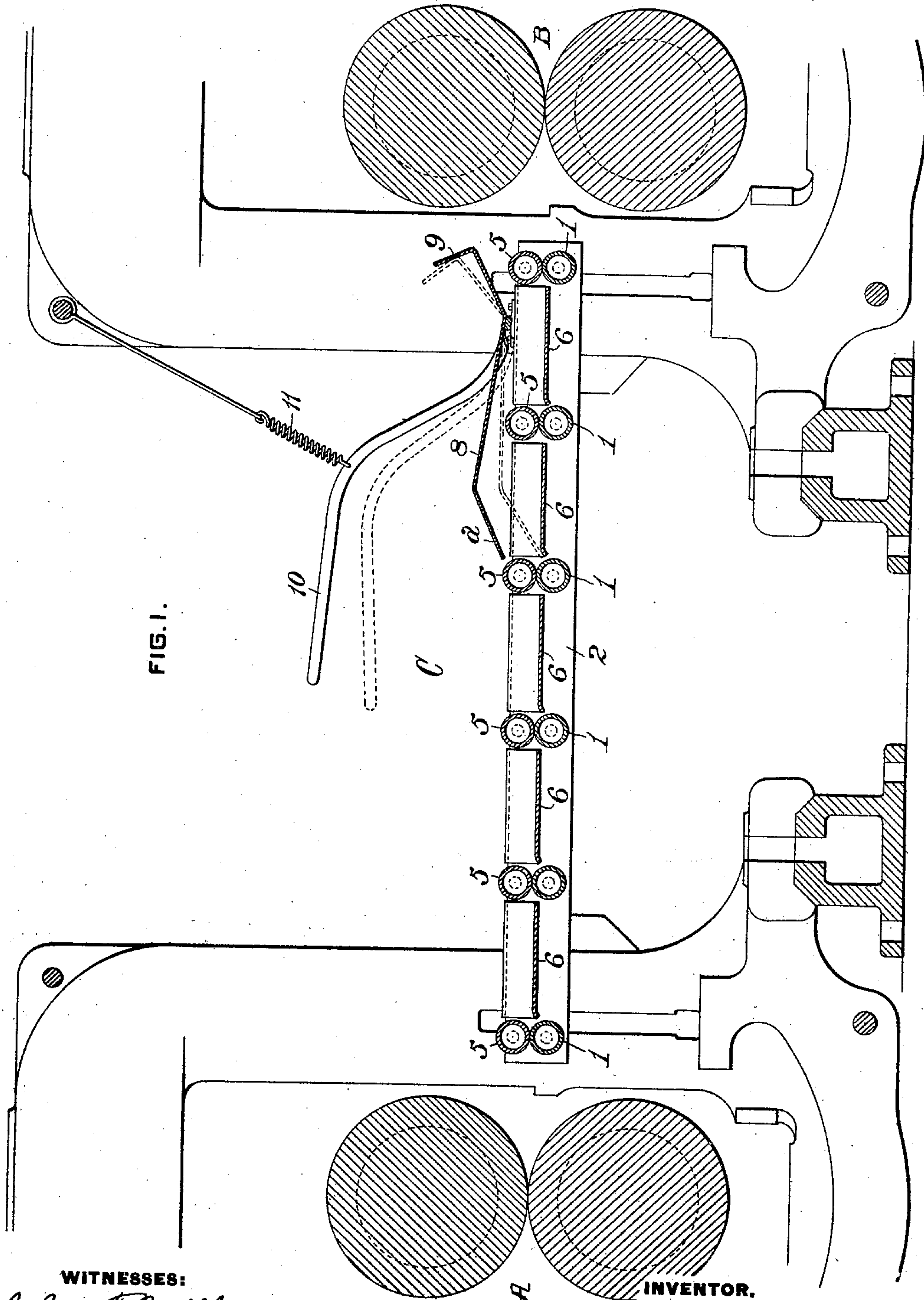


FIG. 1.

WITNESSES:

Chas. F. Miller.
J. E. Gaitner.

INVENTOR.

William H. McFadden
by Daniel S. Wolcott
Att'y.

(No Model.)

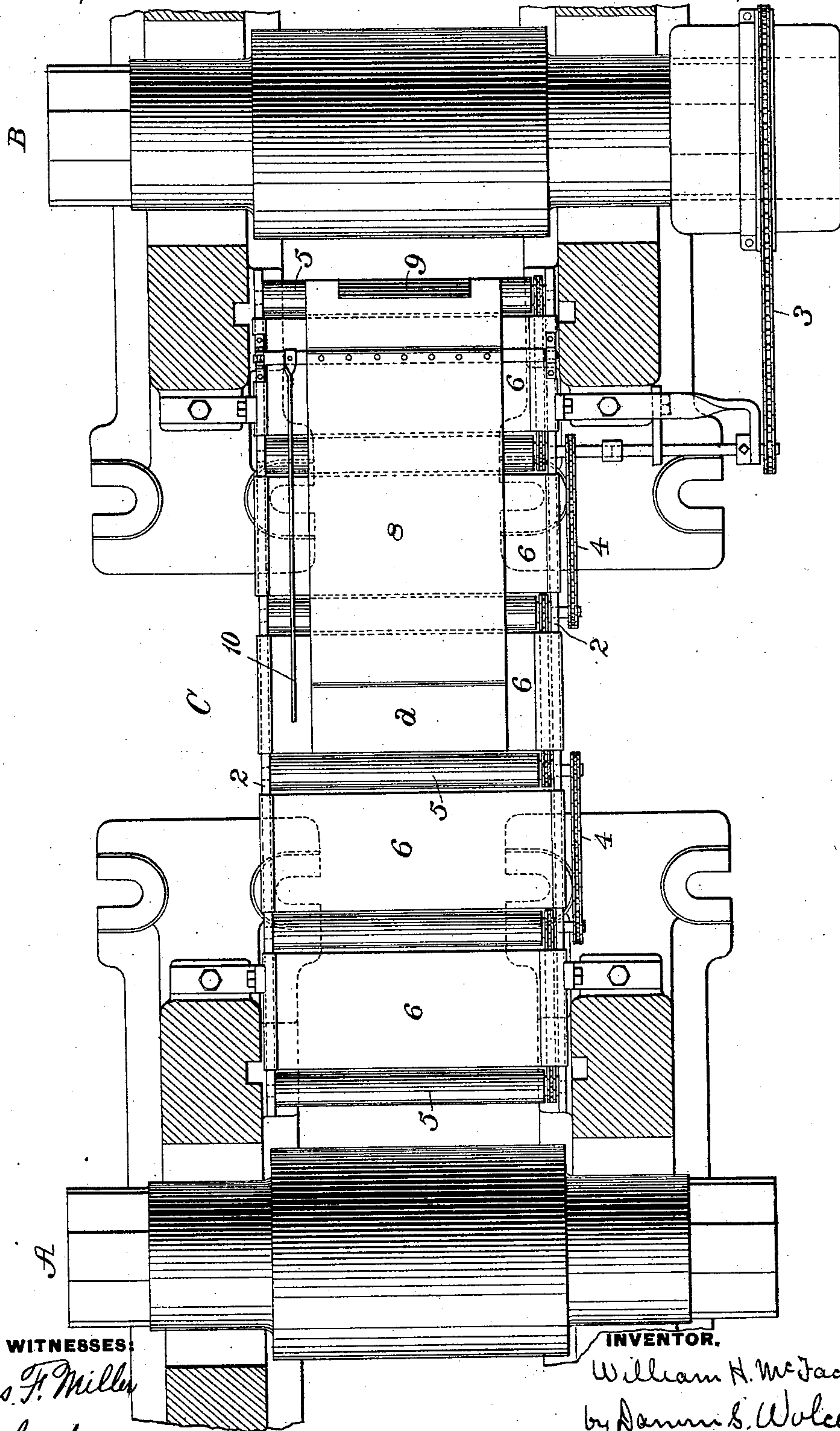
2 Sheets—Sheet 2.

W. H. McFADDEN.
FEED TABLE.

No. 591,563.

Patented Oct. 12, 1897.

FIG. 2.



WITNESSES:

Chas. F. Miller
J. E. Gaither.

INVENTOR.

William H. McFadden
by Saml. S. Wolcott

Att'y

UNITED STATES PATENT OFFICE.

WILLIAM H. McFADDEN, OF ALLEGHENY, PENNSYLVANIA.

FEED-TABLE.

SPECIFICATION forming part of Letters Patent No. 591,563, dated October 12, 1897.

Application filed June 16, 1897. Serial No. 640,976. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. McFADDEN, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Feed-Tables, of which improvements the following is a specification.

The invention described herein relates to certain improvements in feed-tables for rolling-mills, and has for its object a construction of apparatus whereby an operator may remove an article while passing along the feed-table from one reducing or shaping mechanism to another without interfering with the progressive and orderly movements of other articles.

In Letters Patent No. 572,175, granted to me December 1, 1896, I have described and shown a train of rolls for cold rolling or finishing metal sheets. The stands of rolls forming this train are connected by feed-tables for the automatic movements of the sheets from one pair of rolls to the next. It sometimes happens in the rolling of the sheets that a portion thereof will become bent or crimped in passing through the first pair of rolls. It also happens that the sheets are so fed that two succeeding sheets will overlap each other, thereby forming a bent or crumpled sheet, which passing through the succeeding rolls will scratch and injure them to such an extent as to require a returning and polishing of the rolls.

In general terms my invention consists in mechanism whereby any sheet or sheets which are injured or bent in passing through the first rolls to such an extent as will have an injurious effect upon the succeeding rolls may be removed from the feed mechanism.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view showing two stands of rolls forming a train or part of a train and a connecting feed-table having my improved selector or pick-up applied thereto, and Fig. 2 is a sectional elevation of the same.

In the practice of my invention the stands of rolls A B, &c., are arranged in a train or in line with each other, and between adjacent stands of rolls is arranged a feed-table C, of any suitable form or construction adapted

for the orderly feed of the articles being rolled from one stand of rolls to the next.

For purposes of illustration I have shown my invention as embodied in a mill for rolling sheet metal, and the feed-table is constructed as described in the Letters Patent above referred to. The feed-table consists of a series of rollers 1, having their journals mounted in side bars 2, which are preferably secured to the housings of the rolls A and B. As shown in Fig. 1, the first or any desired one of the rollers of the lower series is driven by a chain or belt from one of the rolls and the other rollers are driven by chains or belts 4, passing around sprocket-wheels on the projecting journals of the rollers. Above the lower series of rollers 1 are arranged another series of rollers 5, having their journals mounted with a freedom of vertical movement in the side bars 2. These upper rollers are driven by frictional contact with the lower rollers or with the sheets being fed. Between adjacent pairs of rollers are arranged aprons 6, adapted to support the sheet or other article while passing from one pair of rolls to the next.

The sheets or other articles as they pass along the feed-table described can be readily inspected, and in order to effect the removal of an injured sheet or one which will injure the surfaces of the next pair of rolls an apron 8 is pivotally mounted upon the side bars of the feed-table or other suitable support in such manner that its free end *a*, which is preferably bent or inclined downwardly, can be dropped into the line of movement of the sheets as they are being fed along by the rollers. As the free end of this apron will drop slightly below the tops of the lower series of rollers, and therefore below the line of movement of sheets fed thereby, the latter will be forced up onto the apron which can then be raised to permit of the movement of the next sheet, if uninjured, along the table to the rolls B. As the sheets have considerable momentum, it is preferred, in order to prevent their passing over the apron onto the feed-table or into the rolls B, to provide a stop 9, which will check the onward movement of the sheets and hold them in position on the apron. This stop may be formed by turning up a portion of the metal at the rear end of the apron, as

clearly shown in Fig. 1. To facilitate the operation of the apron, a lever 10 is secured thereto in such manner that when pressed down it will move the outer end of the apron to operative position.

While the apron can be lifted by hand, if desired, it is preferred to connect the apron and the lever 10 by a spring 11 to the housing of one of the rolls or other suitable support, so that the spring will, when extended by the outward movement of the lever, return the latter when free to move.

While preferring to use the form of feed-table shown, I do not wish to limit myself to such a construction nor to limit the use of the selector to sheet-mills, as the same can be readily adapted without departure from my invention, as set forth in the claims, to other forms of rolling-mills.

I herein claim as my invention—

1. In a rolling-mill, the combination of two stands of rolls arranged in the common line of feed, a feed-table having positively-driven feeding members, arranged between the stands of rolls and mechanism for removing one or more of the articles from the feed-table without interfering with the movements of other articles along the table, substantially as set forth.

2. In a rolling-mill, the combination of two stands of rolls arranged a distance apart greater than the length of the articles being

rolled, a feed-table having positively-driven feeding members arranged between the stands of rolls and mechanism for removing one or more of the articles from the feed-table without interfering with the movements of other articles along the table, substantially as set forth.

3. In a rolling-mill, the combination of two or more stands of rolls arranged in the common line of feed, a feed-table having positively-driven feeding members arranged between the stands of rolls and mechanism movable into and out of the path of movement of articles along the table and adapted to remove one or more of such articles from the table, substantially as set forth.

4. In a rolling-mill, the combination of two stands of rolls arranged a distance apart greater than the length of the articles being rolled, a feed-table having positively-driven feeding members arranged between the stands of rolls, and an apron arranged above the table and movable into and out of the line of movement of articles along the table, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM H. McFADDEN.

Witnesses:

F. E. GAITHER,

DARWIN S. WOLCOTT.