

No. 698,570.

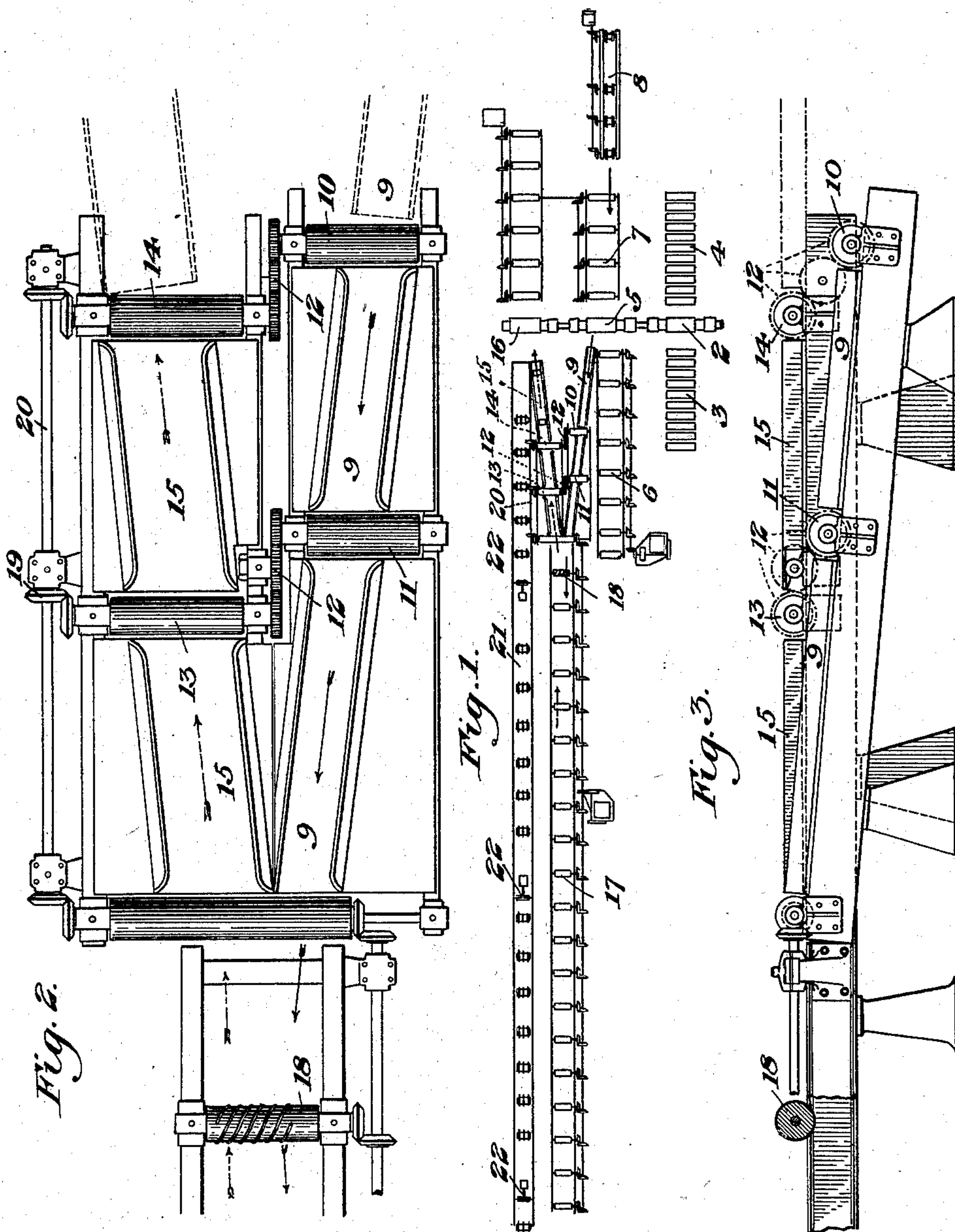
Patented Apr. 29, 1902.

E. E. SLICK.

ROLLING MILL FEED TABLE.

(Application filed Dec. 2, 1901.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWIN E. SLICK, OF BRADDOCK, PENNSYLVANIA.

ROLLING-MILL FEED-TABLE.

SPECIFICATION forming part of Letters Patent No. 698,570, dated April 29, 1902.

Application filed December 2, 1901. Serial No. 84,304. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. SLICK, of Braddock, Allegheny county, Pennsylvania, have invented a new and useful Rolling-Mill Feed-Table, 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 diagrammatic plan view showing a rail-mill having a feed-table constructed in accordance with my invention. Fig. 2 is an enlarged plan view showing the Y portion of the table, and Fig. 3 is a side elevation of the table of Fig. 2.

My invention relates to the feed-tables employed in connection with a rolling-mill and is designed to provide improved mechanism for transferring the metal laterally from one stand of rolls to an adjacent stand without the use of a traveling-table system.

In the drawings, in which I show my invention as applied to a rail-mill, 2 represents a stand of roughing-rolls having the usual tables 3 and 4.

5 is the intermediate stand of rolls, having upon one side the table 6, with positively-driven rollers, and upon the other side a positively-driven roller-table 7, which is shown as having an extension system 8 in the rear thereof. As the metal passes from the table

7 through the last pass of the intermediate rolls 5 it enters a trough 9, which extends at an angle to the direct line of feed and is preferably provided with one or more feed-rollers

10 and 11. These rollers 10 and 11 are preferably connected by intermediate gearing 12 with similar rollers 13 and 14, interposed in another inclined trough or feed-conduit 15, leading to the finishing-rolls 16. The two

trough or channel portions 9 and 15 form the two legs of a Y, which constitutes the main feature of my invention, the metal passing from one set of rolls through one leg of the Y and upon a table having rollers 17 and then being fed forward through the other leg of the Y to the adjacent stands of rolls.

After the metal has been fed through the angle-trough 9 and upon the positively-driven feed-rollers 17 these rollers are reversed, as are also the rollers 10, 11, 13, and 14, and as the section starts forward its front end is deflected by means of a roller 18, having a spiral

ring portion, as shown in Fig. 2. The end of the section enters between the thread portions, and as the roller rotates the head is deflected toward the left, and thereby caused to enter the other leg of the Y-shaped switch. I have shown the rollers 13 and 14 as driven by bevel-gear connections 19 from a shaft 20. The rolls 5 may deliver into the trough 9 at the same time that metal is being fed forward through the other branch into the rolls 16. In such case the rollers of trough 9 will slip on the piece in the arrangement of gearing shown. After the metal passes through the last pass of the finishing-rolls it is fed upon a table 21 and sheared into sections by suitable shears mounted thereon.

In the mill to which the invention has been applied the one leg of the Y-shaped switch leads upwardly to the general level of the rollers 17, as shown in Fig. 3; but the stands of rolls may be located at the same or different levels without departing from my invention.

The advantages of the invention result from doing away with the necessity for feed-table mechanism which is mounted upon a traveling carriage. By employing a stationary feed-table the output of the mill is greatly increased because of the fact that the rolling operation is not retarded by the piece passing through the rolls or the shifting of the table and pieces can follow in quick succession and without interfering with each other. The expense both of the table itself and of its operation are largely reduced.

Many changes may be made in the form and arrangement of the parts without departing from my invention, which is applicable to rolling many sections other than rails.

I claim—

1. In rolling-mill feed-tables, a Y-shaped switch, and mechanism for feeding the metal forwardly through one leg of the switch and back through the other leg; substantially as described.

2. A rolling-mill feed-table having a Y-shaped switch, and a deflector arranged to shift the end of the section and cause it to enter the other leg of the Y on its return movement; substantially as described.

3. In rolling-mill feed-tables, a Y-shaped switch, positively-driven feed-rollers in each

leg of the switch, and a deflecting device arranged to shift the end of the section; substantially as described.

4. In rolling-mill feed-tables, a table having positively-driven feed mechanism, a Y-shaped switch between it and two sets of rolls, and a deflector in the rear of the Y-shaped switch; substantially as described.

5. In rolling-mill feed-tables a Y-shaped switch, one leg of which lies in a different

plane from that of the other leg; and mechanism for feeding the metal forwardly to one leg of the switch and back through the other leg; substantially as described.

In testimony whereof I have hereunto set my hand.

EDWIN E. SLICK.

Witnesses:

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