

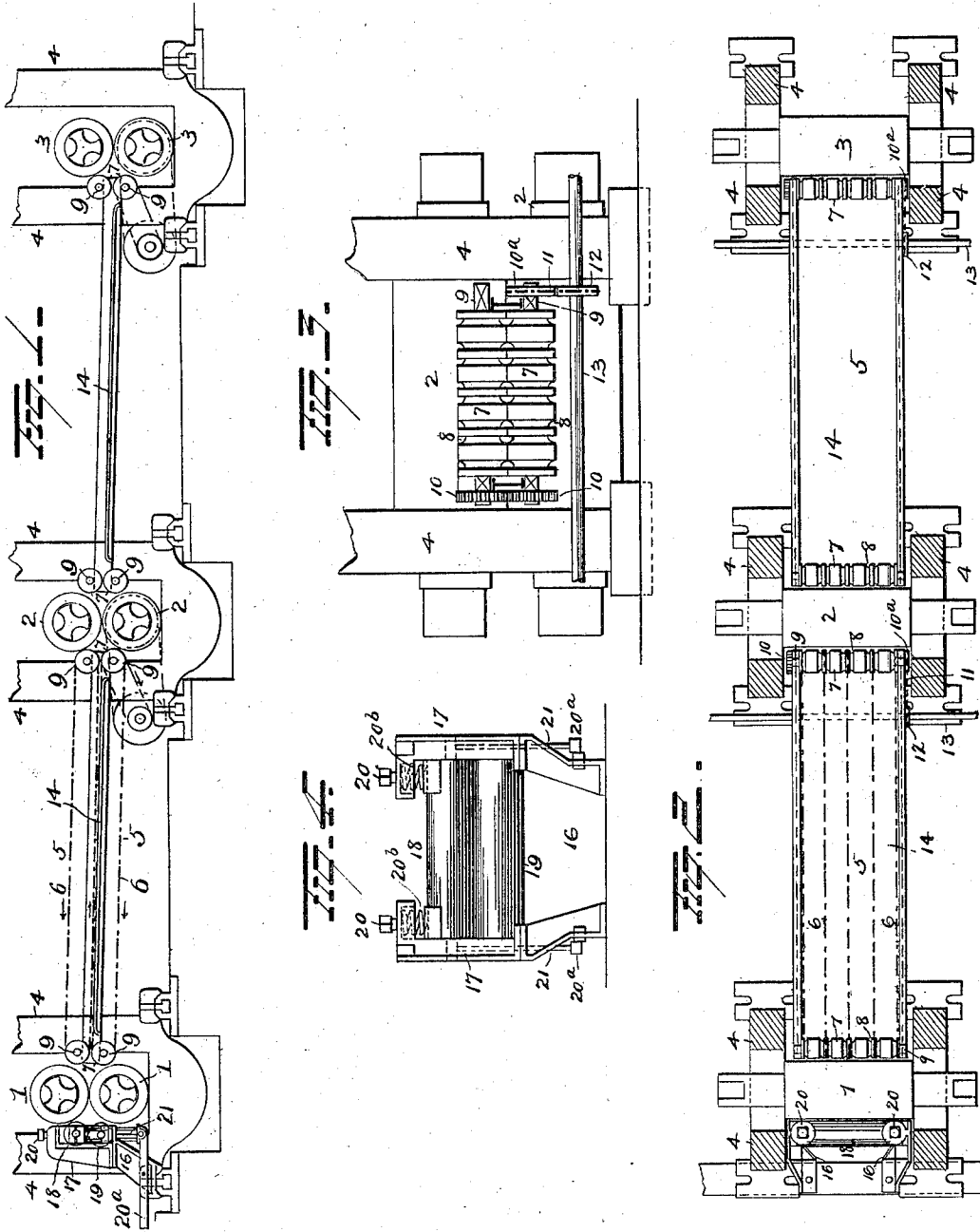
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Patented Mar. 11, 1902.

J. D. SWINDELL.
CONVEYER FOR ROLLING MILLS.

(Application filed Apr. 13, 1901.)

(No Model.)



WITNESSES
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JAMES D. SWINDELL, OF PITTSBURG, PENNSYLVANIA.

CONVEYER FOR ROLLING-MILLS.

SPECIFICATION forming part of Letters Patent No. 695,181, dated March 11, 1902.

Application filed April 13, 1901. Serial No. 55,736. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. SWINDELL, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Conveyers for Rolling-Mills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved conveyer for rolling-mills, the object of the invention being to provide an improved device of this character which will convey sheets from one pair of rolls to another and insure the sheets remaining flat and smooth from beginning to end of the rolling operation.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation illustrating my improvements. Figure 2 is a top plan view. Fig. 3 is an end view, and Fig. 4 is a view illustrating the tension-rolls.

1, 2, and 3 represent pairs of presser-rolls spaced apart and supported in suitable framework 4, as shown. Between the rolls 1 and 2 and 2 and 3 endless conveyers 5 are located, and as they are precisely alike a description of one will apply alike to both. These conveyers comprise two series of endless chains or belts 6, one series located above the other and both mounted on rollers 7 in proximity to the respective pairs of presser-rolls. The rollers 7 are made with peripheral grooves 8 to receive the chains or belts 6 and are secured on shafts 9, on which intermeshing gears 10 are secured, and on one of said shafts 9 a sprocket-wheel 10^a is mounted and connected by a sprocket-chain 11 with a sprocket-wheel 12 on a suitable drive-shaft 13.

Platforms 14 are located between the pairs of rollers 7 and in position to receive the upper half of the lower series of chains or belts and the lower half of the upper series of belts thereon, and thereby support the weight of the metal plates while they are being transferred from one pair of presser-rolls to another.

In front of the first pair of rolls 1 my improved tension device 16 is located and consists of a frame 17, having parallel uprights forming guides for bearings in which rollers 18 and 19 are mounted and located one above the other, and springs 20^b are disposed between the upper ends of frame 17 and upper rollers 18, and set-screws 20 are provided to regulate the tension of the springs to force the upper roll down toward the lower roll or raise it therefrom to regulate the tension on the plates fed to the rolls 1. A foot-lever 20^a is pivoted between its ends, as shown, and connected by links 21 with the bearings for the upper roller 18, so as to raise the roll 18 from the roll 19 to permit the insertion of the plate between them far enough to be grasped by the presser-rolls 1, when pressure on the foot-lever 20^a is released and the rollers 18 and 19 will tightly engage the plate and hold it taut while it is being drawn in between the rolls 1.

The rollers 7 and endless conveyers 5, carried thereby, are moved at a slower rate of speed than the presser-rolls, so as to exert a pull on the plates fed to the presser-rolls, and thereby maintain them straight and smooth.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. A conveyer for metal-rolling mills comprising two series of endless chains or belts located one above the other, the chains or belts of the upper series being disposed over the chains or belts of the lower series, bearings for the respective series of chains, the bearings for the upper series of chains being disposed immediately over the bearing of the lower series at both ends of the conveyer.

2. A conveyer for metal-rolling mills, comprising two series of endless chains or belts located one above the other, and a stationary

platform over which the lower half of the upper series of chains or belts and the upper half of the lower series of chains or belts, move and bearings for the two series of chains, 5 the bearings for the upper chains located immediately over the bearings of the lower chains at both ends of the conveyer.

3. In a metal-rolling mill, the combination with two pairs of presser-rolls, of two endless 10 chains or belts located between the pairs of rolls, rollers on which the chains or belts are mounted and said rollers grooved to receive the endless chains or belts, and a tension device in front of the first pair of rolls, the roll- 15 ers for the upper chains disposed immediately over the rollers for the lower chains at both ends of the conveyer.

4. The combination of two pairs of rollers, a conveyer for transferring plates from one 20 pair of rolls to another, comprising two pairs of rollers each having a series of peripheral

grooves therein, a series of endless chains or belts mounted to run in said grooves, the rollers for the upper chains located immediately 25 over the rollers for the lower chains at both ends of the conveyer, and means for moving said endless chains or belts simultaneously at a slower rate of speed than the presser-rolls.

5. In a rolling-mill, the combination with 30 presser-rolls, of a frame in front of said presser-rolls, tension-rollers mounted in said frame, set-screws for adjusting the tension of said rollers and a foot-lever for separating said rollers to permit the insertion of an article 35 between them.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES D. SWINDELL.

Witnesses:

F. O. HENZI,

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