No. 725,157. PATENTED APR. 14, 1903.

H. E. SHELDON.

ADJUSTABLE BENCH FOR ROLLS.

APPLICATION FILED FEB. 10, 1902.

NO MODEL.

Fig. I.

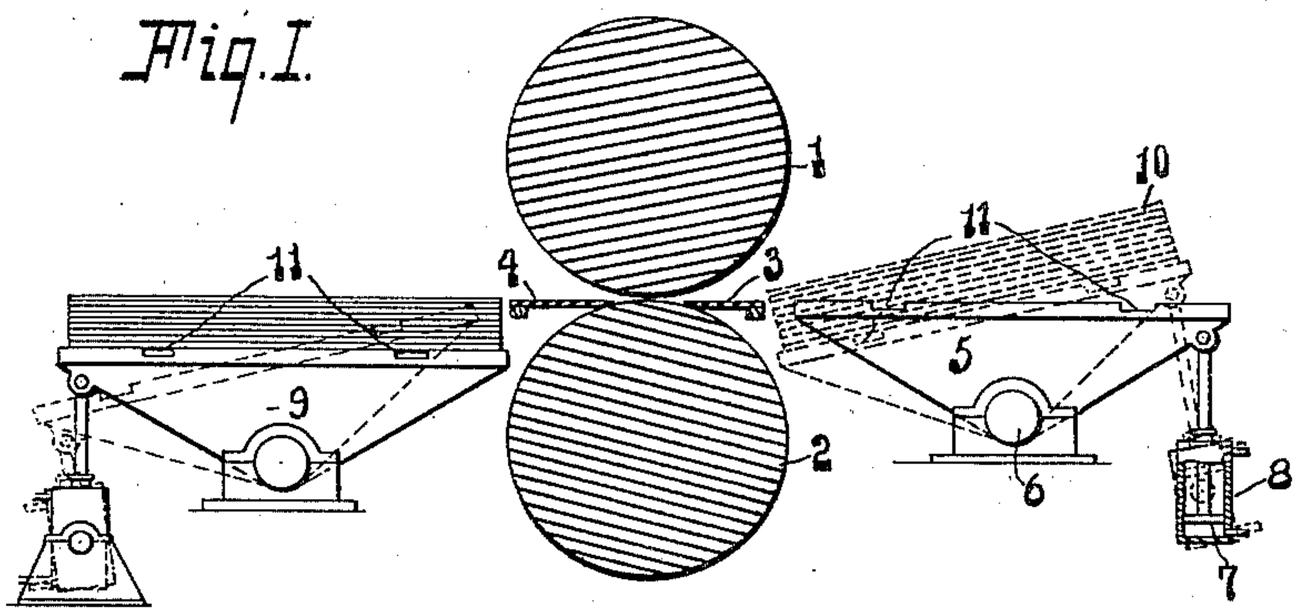
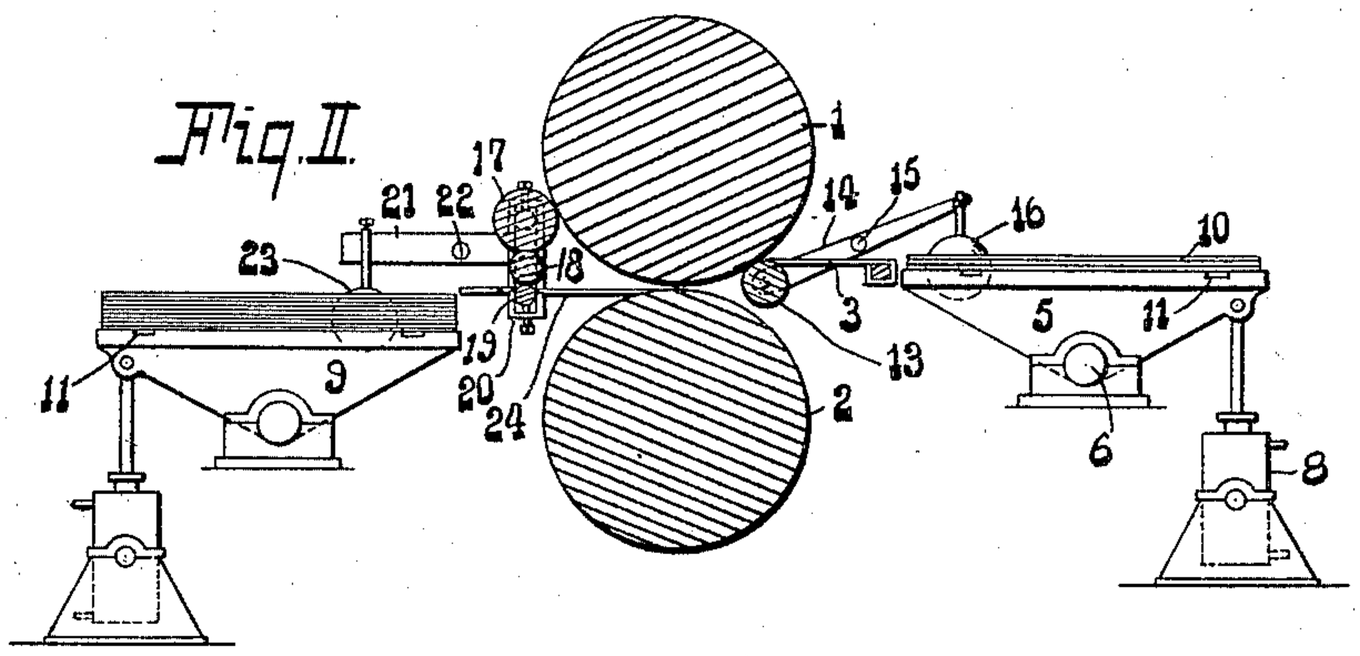


Fig. II.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRY E. SHELDON, OF ASPINWALL, PENNSYLVANIA.

ADJUSTABLE BENCH FOR ROLLS.

SPECIFICATION forming part of Letters Patent No. 725,157, dated April 14, 1903.

Application filed February 10, 1902. Serial No. 93,466. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. SHELDON, a citizen of the United States, residing at Aspinwall, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Adjustable Benches for Rolls, of which the following is a specification.

In the accompanying drawings, which make part of this specification, Figure I is a side view of my invention, portions being shown in section; and Fig. II is a similar view of a modification thereof.

My invention relates to benches from which plates are fed to rolls and to which they are fed from rolls.

By the usual method of feeding plates to rolls each plate must be seized and carried into the rolls. This involves a great deal of labor and care, to do away with a large part of which is one of the objects of my invention. As plates are delivered from the rolls they are usually carried away and piled or allowed to drop into an irregular pile.

It is another object of my invention to provide means whereby the rolled sheets may be evenly piled without handling them.

Referring to Fig. I, 1 and 2 represent a set of cold-rolls to which sheets of metal are fed over guide-table 3 and from which they are fed over guide-table 4. 5 is a bench pivoted on the shaft or axle 6 and oscillated vertically by the piston 7, working in the rocking cylinder 8. 9 is a second bench mounted and operated as the bench 5, but located at the opposite side of the rolls therefrom. The plates 10 to be rolled are piled upon the feeding-bench 5 and the latter rocked, as shown in dotted lines, so that the top plate or plates are slightly above the guide-table 3. The workman then pushes the top plates successively into the bite of the rolls, raising the inner end of the bench from time to time that the top plate may pass above the guide-table. The receiving-bench when the process commences occupies the position shown in dotted lines. The inner end of this bench is lowered from time to time, so that the plates as they come from the rolls may pass above the pile and be automatically superposed in an even pile, which may be lifted by grappling-hooks in the bench-grooves 11. The bench 5 is provided with grooves 11 to receive the hoisting-hooks when the pile of sheets is let down upon the bench.

In Fig. II the feed guide-table 3 delivers not directly to the rolls 1 and 2, but to the rolls 1 and 13, from which the plates pass between rolls 1 and 2. The roll 13 is an idler feed-roll journaled in the ends of levers 14, (only one being shown,) pivoted at 15. The roll is held against roll 1 by the weight 16. The plates are piled on the bench 5 with the top plate or plates just above the guide-table 3, and as the plates are fed the bench is raised to keep the top plate in feeding position. The sheets are supported uniformly across their entire breadth previous to their passage through the rolls 1 and 2 by the roller 13 and are carried by the rotation of roll 1 to the pass between rolls 1 and 2, with their front edges presented evenly to said rolls, so that there is no liability of the sagging of the sheets and the consequent pinching and buckling of the same. As the plates are fed upon the bench 9 the latter is lowered to permit the following plates to be deposited on those previously rolled.

The mechanism for receiving the plates from rolls 1 and 2 and discharging them upon table 9 consists of the friction-rolls 17, 18, and 19, mounted in the housing 20. Roll 17 bears against roll 1 and is rotated by its frictional contact therewith. Roll 19 receives its rotation by means of the frictional contact of roll 18 on the plate while it is passing between rolls 18 and 19.

21 represents levers (one only being shown) secured to the housings 20 and pivoted at 22, said pivotal bearings 22 being the means of supporting the housings 20. The overbalancing-weight 23 is adjustably secured to the outer end of lever 21, thereby keeping roll 17 in contact with roll 1.

In rolling, the end of a sheet after passing between the rolls 1 and 2 passes along guide-plate 24, then between rolls 18 and 19, and is discharged therefrom upon table 9.

While Fig. II represents the preferred form of my invention, it is clear by referring to Fig. I that I may omit the auxiliary rolls from either or both sides of the roll-pass.

Many other means besides those shown may be used to adjust or set the benches, and I do

not desire to be limited to the precise means shown except where specifically claimed.

Having described my invention, I claim—

1. A set of rolls, a pivoted bench for supporting a pile of sheets, mechanism for swinging said bench on its pivot so as to bring the top of each sheet into such a position relative to the pass between the rolls that the sheets may be serially fed from the pile on the bench into the pass, or from the pass to form a pile on the bench.

2. A set of rolls, an auxiliary feed-roll and a bench adapted to support a pile of sheets and adjustable pivotally to feed the sheets serially from said pile between the auxiliary and one of the main rolls.

3. A set of rolls, and a bench adapted to support a pile of sheets and adjustable pivotally to feed the sheets serially from said pile and a set of auxiliary rolls adapted to receive and deliver a sheet from the main rolls.

4. A set of rolls an auxiliary feed-roll and a bench adapted to support a pile of sheets and adjustable pivotally to feed the sheets serially from said pile between the auxiliary and one of the main rolls, and an auxiliary set of rolls adapted to receive and deliver a sheet from the main rolls.

Signed at Pittsburg this 30th day of January, 1902.

HARRY E. SHELDON.

Witnesses:

GEO. H. HARVEY,

GODFREY W. LERCH.