

S. V. HUBER.
STRAIGHTENING TABLE.
APPLICATION FILED AUG. 23, 1905.

2 SHEETS—SHEET 1.

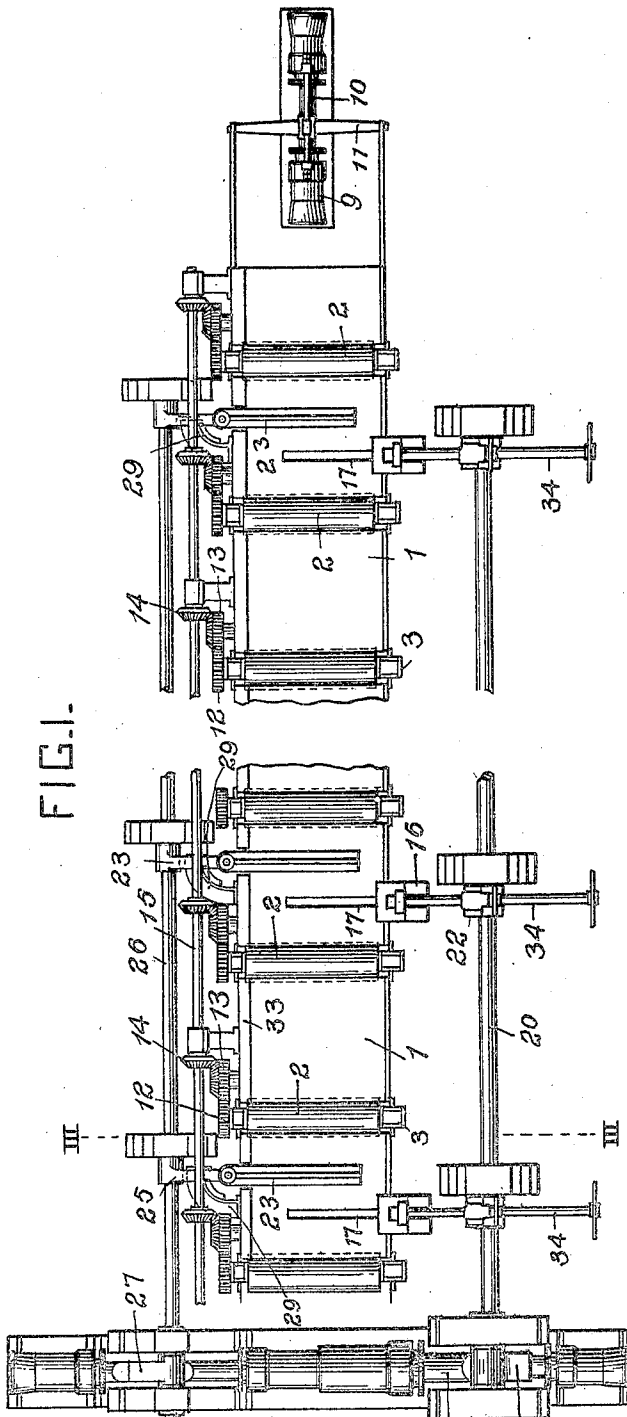


FIG. 1.

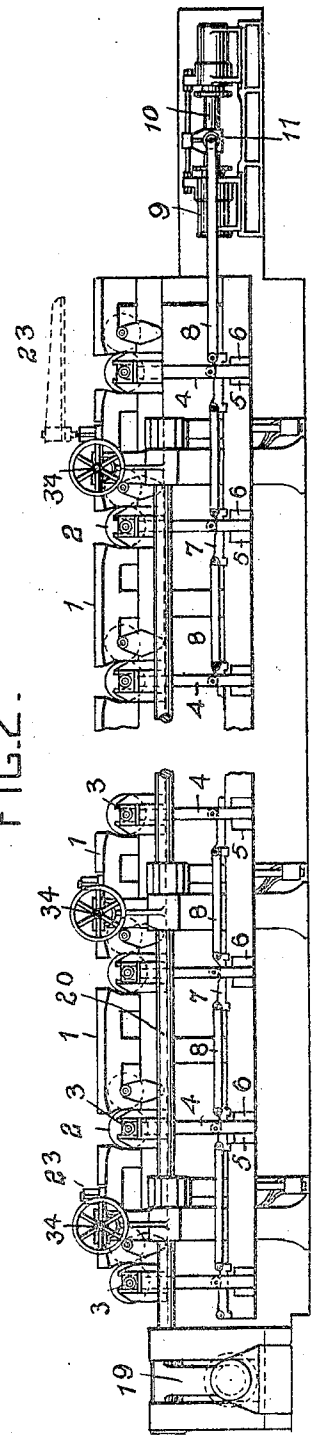


FIG. 2.

WITNESSES:

Charles Bernold,
Dwight Benton.

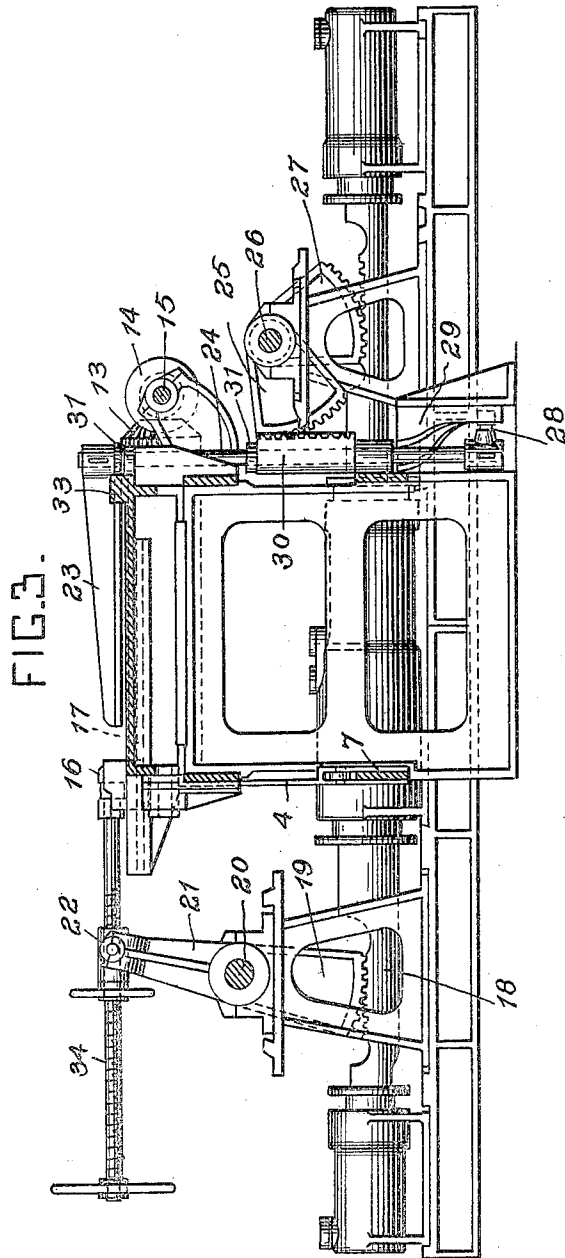
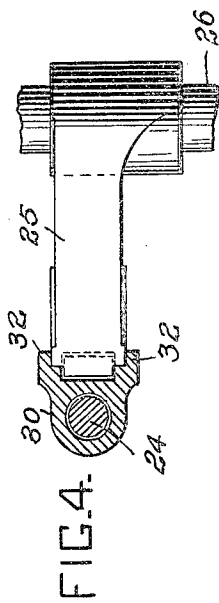
18 19 *Signed S. V. Huber*
by Christy and Christy,
INVENTOR
ATTY'S.

No. 808,751.

PATENTED JAN. 2, 1906.

S. V. HUBER.
STRAIGHTENING TABLE.
APPLICATION FILED AUG. 23, 1905.

2 SHEETS—SHEET 2.



WITNESSES:
Charles Burnett
Dwight Benton

Sigmund V. Huber INVENTOR
by Christy and Christy
Atty's.

UNITED STATES PATENT OFFICE.

SIGMUND V. HUBER, OF PITTSBURG, PENNSYLVANIA.

STRAIGHTENING-TABLE.

No. 808,751.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed August 23, 1905. Serial No. 275,486.

To all whom it may concern:

Be it known that I, SIGMUND V. HUBER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Straightening-Tables, of which improvement the following is a specification.

The invention described herein relates to certain improvements in mechanism for the edge-straightening of sheets. While sheets coming from the rolls may have equal or approximately equal width at all points, the edges will be curved in and out. In order to straighten the edges, transverse pressure must be applied, and at the same time means must be employed to prevent a buckling or longitudinal bending of the sheet by the transverse pressure.

The improvement has for its object the provision of suitable means for clamping the plate on a surface such as the feed-table of a rolling-mill and while so clamped pressing one edge against a suitable abutment by means of a series of presser-blocks operating against the other edge.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan of a portion of the feed-table of a rolling-mill having my improvements applied thereto. Fig. 2 is a side elevation of the same; and Fig. 3 is a transverse section on an enlarged scale, the plane of section being indicated by the line III III, Fig. 1. Fig. 4 is a sectional detail view, on an enlarged scale, of the arm-operating mechanism.

In the practice of my invention the frame of the table is suitably constructed to form a firm support for the bed-sections or aprons 1, which are preferably cast integral with portions of the frame of the table, as shown in Fig. 3. Sufficient space is provided between adjacent bed-sections to permit the peripheries of the rollers 2 to project slightly above the upper surfaces of the aprons when the rollers are raised to operative positions. The rollers 2 have the journals mounted in bearings 3, carried by posts 4, mounted in suitable guides 5 and 6. The lower ends of the posts are bifurcated, and between the legs thus formed are arranged cam-plates 7, which are connected by links 8, so they can be shifted simultaneously to impart a like vertical

movement to the rollers. The two lines of cam-plates can be shifted by any suitable means—as, for example, by the fluid-pressure cylinders 9, having their common piston or ram 10 connected by a cross-head 11 to said lines of cam-plates. By this or other suitable means the rollers can be raised, so that they will have sufficient frictional engagement with a sheet to move it along the table or lowered so that the sheet may rest entirely on the bed-sections or aprons. In order that these rollers may be raised and lowered without disengagement from their driving mechanism, pinions 12 are keyed on the journals of the rollers and intermesh with pinions 13, having toothed beveled portions intermeshing with beveled pinions 14 on the shaft 15.

In order to straighten the sheets, the bed-sections or aprons are provided along one edge with upwardly-projecting ribs 33, against which one edge of the sheet will bear, while presser-blocks 16 are forced against the opposite edge. The blocks are provided with dovetail portions fitting in similarly-shaped grooves 17, formed transversely in the aprons 1. These blocks may be shifted by any suitable means, but preferably by fluid-pressure cylinders and pistons, as shown. The piston 18 is provided with teeth engaging a toothed segment 19, secured to a shaft 20, having secured thereto arms 21, which are connected to the presser-blocks. Desirable connections between the arms and blocks consist of threaded stems 34, having swivel connections to the blocks and passing through threaded sleeves 22, pivotally mounted on the arms, as shown in Fig. 3. The sheets or plates are clamped or pressed down onto the bed-sections before or simultaneously with the inward movement of the presser-blocks by means of arms 23, which can be moved toward and from the bed-sections by any suitable means. A convenient structure to this end consists of a series of vertically-movable stems 24, having the arms 23 secured thereto. These stems are arranged in suitable guides secured to the frame of the table and have teeth attached thereto adapted to engage toothed segments 25, secured to the shaft 26. This shaft is oscillated to raise and lower the stems and arms by means of fluid-pressure cylinders and piston, the latter being provided with teeth for engagement with a toothed seg-

ment 27, secured to the shaft 26. As it is preferred that the arms should be swung from over the table when raised, lugs 28 are secured to the stems in such manner as to engage grooves in blocks 29. The lower portions of the grooves are made straight, so that there will not be any swinging of the arms as they move into and out of contact with the sheets. In order to permit of this rotation of the stems without disengagement from the segments 25, sleeves 30, provided with teeth, are loosely mounted on the stems between collars 31. As shown in Fig. 4, flanges 32 on each side of the toothed portions of the collars overlap the sides of the segments 25, and thereby prevent any disengagement of the collars and segments.

I claim herein as my invention—

1. A straightening-table having in combination a sectional bed provided with a longitudinal abutment, a series of positively-driven rollers, means for raising and lowering the rollers, presser-blocks movable toward and from the abutment, and clamping-arms

extending transverse of the bed and movable toward and from the same. 25

2. A straightening-table having in combination a bed provided with a longitudinal abutment, presser-blocks movable transverse of the bed, arms extending transverse of the bed and movable toward and from the same, and means for moving the arms laterally. 30

3. A straightening-table having in combination a sectional bed provided with a longitudinal abutment, a series of positively-driven rollers, means for raising and lowering the rollers, presser-blocks movable toward and from the abutment, arms extending transverse of the bed and movable toward and from the same, and means for swinging the arms laterally. 35 40

In testimony whereof I have hereunto set my hand.

SIGMUND V. HUBER.

Witnesses:

ALICE A. TRILL,

BAYARD H. CHRISTY.