

(No Model.)

P. MEDART.
BENDING METAL PLATES.

No. 257,963.

Patented May 16, 1882.

FIG. 1.

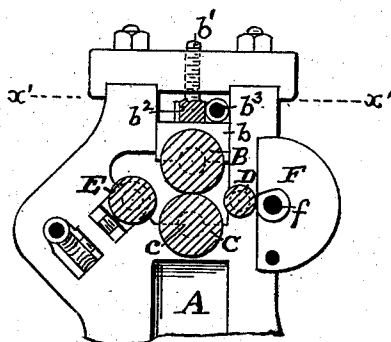
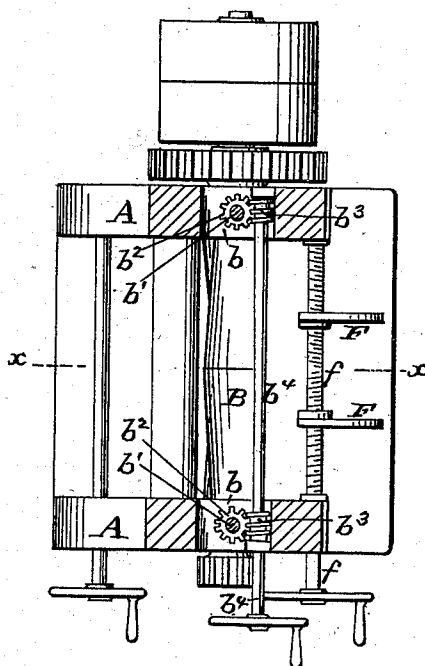


FIG. 2.



ATTEST:

Robt. Burns
Wm. Medart

INVENTOR:

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UNITED STATES PATENT OFFICE.

PHILIP MEDART, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
WILLIAM MEDART, OF SAME PLACE.

BENDING METAL PLATES.

SPECIFICATION forming part of Letters Patent No. 257,963, dated May 16, 1882.

Application filed August 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MEDART, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Machines for Bending and Crowning Pulley-Rims, of which the following is a specification.

In bending metal plates into shape for the rims of wrought-metal-rimmed pulleys as manufactured by me under my various patents I have found it both practical and convenient to form the "crown" or "dish" in the pulley-rim at one and the same operation of bending the rim into the required circular shape. An organization and construction of mechanism for this purpose requires, first, that the main rolls should have their surfaces so formed that they will impart the proper "crowning" to the rim-plate as it passes through them in being bent into proper circular shape, and, second, that the plate which forms the rim of the pulley should be guided so that its middle will be directly at the center or apex of the crowning of the rolls.

In order to attain these objects, I form the two main rolls of a bending-machine with correspondingly "crowned" and "dished" surfaces, so that in the passage of the rim-plate through them they will impart the desired crown to the same; and I combine with these rolls a pair of guide heads or plates, which are made simultaneously adjustable to and from the center or crown of the rolls, so as to accurately guide the center of any required width of rim to the apex of the upper roll. I also employ a horizontal guide-roller in front and a bending-roller in rear of the main rolls.

In the drawings, Figure 1 is a vertical section at line $x x$, Fig. 2. Fig. 2 is a horizontal section at line $x' x'$, Fig. 1.

Similar letters of reference indicate like parts in both views.

Referring to the drawings, A represents the side standards or housings, in which are journaled the various rolls composing the bending-machine.

The bearings $b b$ of the upper main roll, B, are made adjustable, so that the vertical move-

ment of the upper roll, B, away from the roll C can be readily limited to suit different thicknesses of plates operated upon, the journal-box c of the lower roll, C, being stationary.

In order to adjust the boxes $b b$ equally and simultaneously, I provide the adjusting-screws $b' b'$ with worm-wheels $b^2 b^2$, which are simultaneously turned by worms $b^3 b^3$ upon a hand-shaft, b^4 , as clearly indicated in Fig. 2.

D is a guide-roll, and it may be made vertically adjustable, if desired, in a manner similar to that above described in connection with the main roll B; but I have not illustrated it as adjustable. This roll should have its upper surface about on a level with the upper surface of the lower roll, C. In practice it operates as a guide to keep the bar level, so that it will be properly bent by the bending-roller. It should roll freely under the bar, so as to operate also as an anti-friction support or roller.

E is the adjustable bending-roll, its adjustment being effected by screws, worm-wheels, and worm-shaft in a manner similar to that in connection with the main roll B. The adjustment of the roll E regulates the diameter of the circle to which the plate is bent.

In order to form a crown in the plate operated upon, I form the upper roll, B, crowning and the lower roll, C, dished, as shown, so that the plate in passing between them will have the proper crown imparted to it.

In order to accurately guide the rim-plate so that its middle will be in a direct line with the apex of the crowning in the rolls B C, I have provided two sliding guide-plates, F F, made simultaneously and equally adjustable to and from each other, and from and to the apex of the crown in the rolls by means of a right-and-left-handed screw-shaft, f , journaled in the standards A.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, in a machine for bending and crowning pulley-rims, of the rolls B C, crowned and dished as described, the adjustable bending-roll E, and the guide-plates

F F, equally and simultaneously adjustable to and from the apex of the crown of the roll B, substantially as and for the purpose set forth.

2. The combination, in a machine for bending and crowning pulley-rims, of the rolls B C, crowned and dished, as described, the adjustable bending-roll E, the guide-plates F F, 5 equally and simultaneously adjustable to and from the apex of the crown of the roll B, and

the anti-friction guide-roll D, substantially as and for the purpose set forth.

In testimony whereof witness my hand, at St. Louis, Missouri, this 22d day of August, 1881.

PHILIP MEDART.

In presence of—

WM. MEDART,
ROBT. BURNS.