B. K. TAYLOR.

Machine for Upsetting Tires.

No. 212,332. Patented Feb. 18, 1879.

Fig. 1.

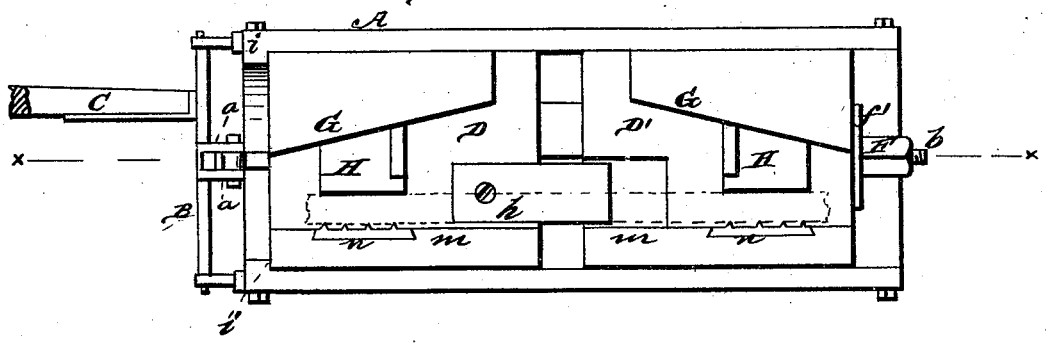


Fig. 2.

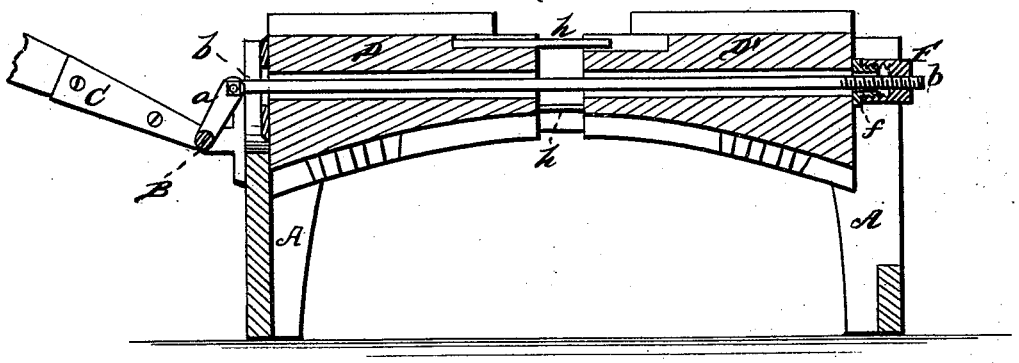
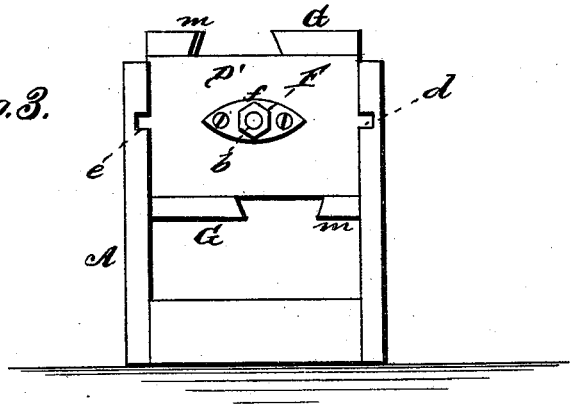


Fig. 3.



WITNESSES

Robert Everett

James J. Sheehy.

INVENTOR.

Benjamin K. Taylor.

Gillmore & Smith & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

BENJAMIN K. TAYLOR, OF ALEXANDRIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR UPSETTING TIRES.

Specification forming part of Letters Patent No. **212,332**, dated February 18, 1879; application filed May 25, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN K. TAYLOR, of Alexandria, in the county of Huntingdon and State of Pennsylvania, have invented a new and valuable Improvement in Tire-Shrinking Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my shrinking-machine. Fig. 2 is a longitudinal vertical central section on line *x x* of Fig. 1. Fig. 3 is an end view.

The nature of my invention consists in the construction and arrangement of a machine for shrinking or upsetting tires, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the frame of the machine, at one end of which, in suitable bearings, is placed a rock-shaft, B, provided with a lever, C, for operating the same. From the rock-shaft B projects a forked arm, *a*, in which is pivoted one end of a rod, *b*.

Each side piece of the frame A has on its inner side a longitudinal groove, *e*, in which fit ribs or flanges *d d* on the sides of two dies, D D′. These dies are reversible, so as to be turned either side up, one side being horizontal and the other concave, so that the same dies may be used for shrinking or upsetting either a straight or a curved bar.

The rod *b* passes longitudinally through both dies, and is adjustably connected to the outer end of the die D′ by means of an elongated double nut, F, which is screwed upon the end of the rod, and also upon a collar, *f*, secured upon the end of the die D′. The collar *f* is formed with exterior screw-threads, and has a flange or plate, *f′*, which is fastened by screws to the die.

The double nut F has in its outer end interior threads to fit the thread on the end of the rod *b*, while in the inner end of the nut are threads to correspond with those on the collar *f*.

It will readily be understood that by these means the die D′ can be adjusted out and in, as required, and then connected to the rod, so as to thereby regulate the distance said die D′ will separate from the die D, in accordance with the extent of shrinkage required.

The die D is moved up in the grooves *e* against shoulders *i* in the frame, and remains there, while the die D′ is moved out and in by means of the lever C, rock-shaft B, with arm *a*, and the rod *b*. The die D is provided with guide-plates *h*, fastened to it, and moving in corresponding grooves or recesses on the die D′.

Each die has on each face a straight rib, *m*, along one side, and on the other side is an inclined shoulder, G, so that a wedge, H, may be inserted for holding the tire or other iron against the rib *m*.

The rib *m* has a toothed bar, *n*, formed or inserted in it for holding the iron firmly in its place. The inner side of the rib *m*, with its toothed bar *n*, is made somewhat inclined in the shape of a dovetail, and the edge of the key or wedge H is made to correspond—that is to say, the place where the iron is held is wider at the bottom than at the top, and hence, when the iron is being upset, it will be held down on the dies, and must come together without bending or doubling together.

The dies being reversible—with one side straight and the other concave—both straight and curved iron can be operated upon by the same machine.

The frame is adapted to receive a tire-bending machine.

When this machine is to be inserted the nut F is unscrewed and the upsetting-dies removed. The rod *b* is then passed through said machine and the same nut F replaced.

The tire-bending machine is made the subject of a separate application.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the frame A, hav-

ing longitudinal grooves *e e*, of the dies D D′, provided with side ribs, *d d*, the rock-shaft B, with lever C and arm *a*, the rod *b*, collar *f*, and double nut F, substantially as and for the purposes set forth.

2. The double nut F *f*, combined with the die D′ and rod *b*, with its operating-lever, to allow the adjustment of the die and operating mechanism, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

BENJAMIN K. TAYLOR.

Witnesses:
C. GRAFUIS,
J. M. PIPER.