(No Model.)

M. D. GOULD, Sr.

TIRE SHRINKER.

No. 553,192. Patented Jan. 14, 1896.

Fig. 1.

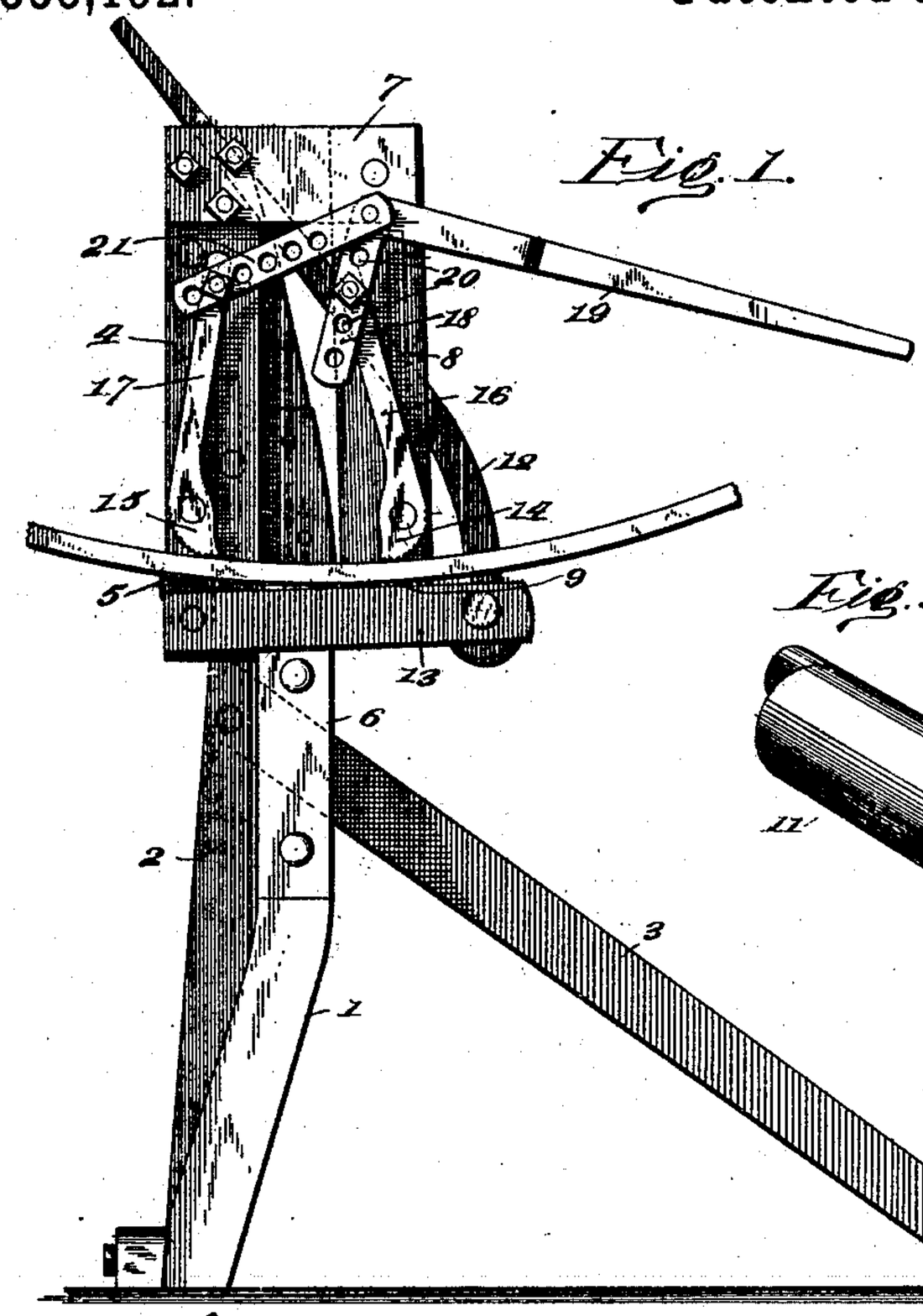


Fig. 3.

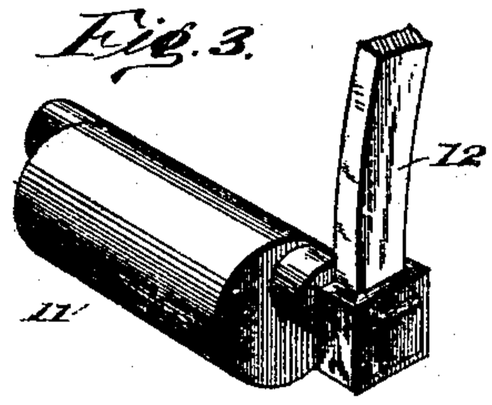
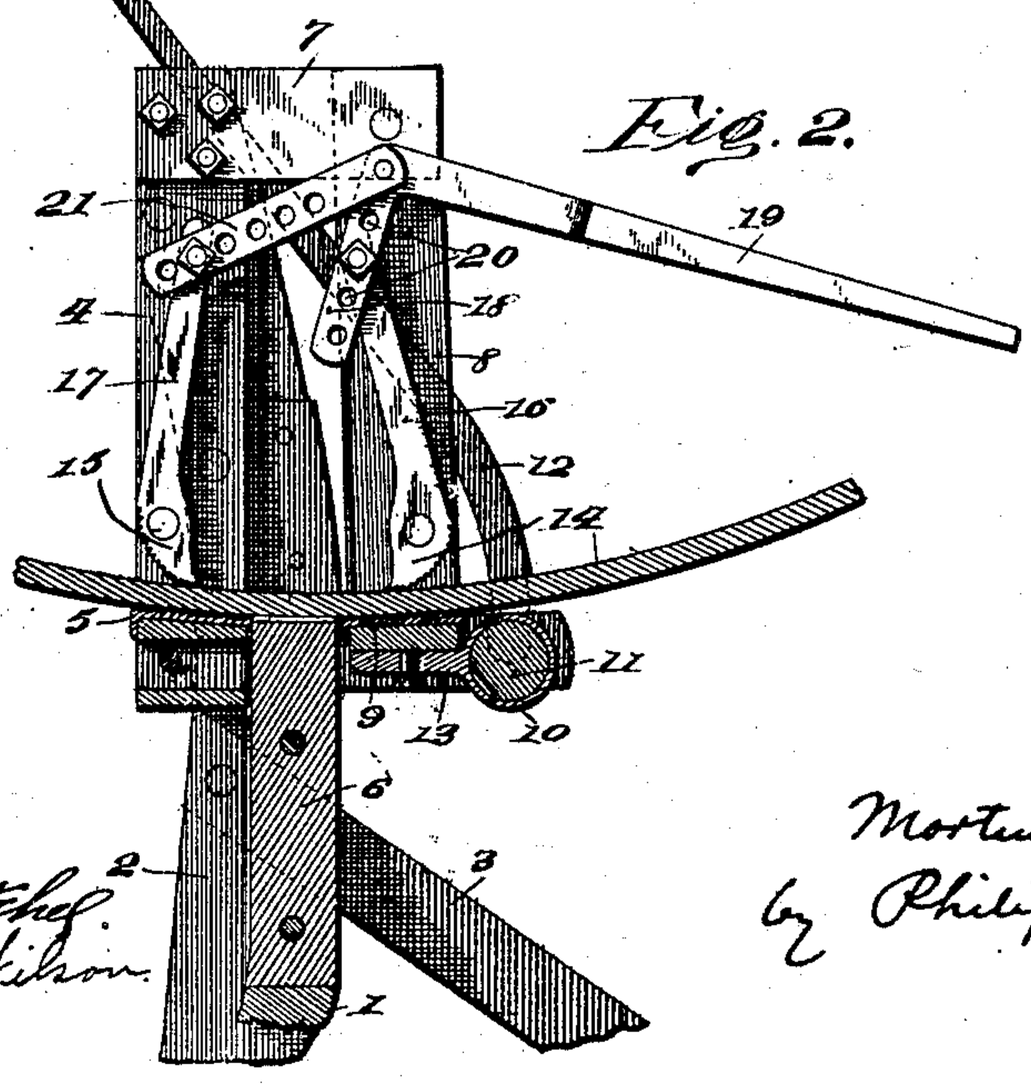


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MORTIMER D. GOULD, SR., OF SALIDA, COLORADO.

TIRE-SHRINKER.

SPECIFICATION forming part of Design No. 553,192, dated January 14, 1896.

Application filed May 22, 1895. Serial No. 550,261. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER D. GOULD, Sr., a citizen of the United States, residing at Salida, in the county of Chaffee and State of Colorado, have invented certain new and useful Improvements in Tire-Shrinkers; 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 improvements in apparatus for shrinking tires, the object of the same being to provide a device of this character, which is simply and cheaply made, and is adapted to shrink tires of malleable iron, steel, or other suitable metal, by means actuated from the outside of said tire.

The invention consists of a framework made up of suitable upright supports, an anvil at the top of one of said uprights, a pair of corrugated plates upon which the tire is adapted to rest, one on each side of said anvil, a cross-beam secured to the upper end of a plate secured to one of said uprights, a downwardly-extending plate pivoted to the outer end of said cross-beam secured at its lower end to one of said corrugated plates, a sleeve or collar secured to one side of said corrugated plate, lateral bars pivoted to one side of the framework, an eccentric fitting said sleeve pivoted to the outer end of said bars, an operating-lever connected to said eccentric by means of which it can be turned, gripping-dogs having serrated lower faces pivoted to said depending plate and to a stationary part of the framework, respectively, adjustable rods pivoted to the upper free ends of said dogs and an operating-lever secured to one of said arms, whereby the tire to be shrunk may be securely clamped between the serrated plates referred to when in their outer position, and whereby said serrated plates may be caused to approach one another for the purpose of shrinking.

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings, Figure 1 represents a side elevation of my device. Fig. 2 is a vertical section through the anvil and movable plates and the parts connected thereto. Fig. 3 is a detail perspective view of the eccentric and its operating-handle.

Like reference-numerals indicate like parts in the three views.

The framework of my device is made up of uprights 1 and 2, respectively, and an inclined supporting-beam 3. The upright 2 extends some distance above the upright 1 and has secured to its outer face a plate 4, upon a forwardly-extending flange of which is secured a serrated plate 5. The upper end of the upright 1 has secured to it a plate 6 which extends downwardly along the side of said upright and forms an anvil for working the tire. This anvil is situated adjacent to the serrated plate 5, as clearly shown. To the upper end of the plate 4 is secured, by bolts or otherwise, one end of a cross-beam or plate 7, having pivoted to its other end the downwardly-depending plate 8, upon a forwardly-extending portion of which is secured a serrated plate 9, which acts in conjunction with the serrated plate 5 for shrinking the tire. To the serrated plate 9 or to the lower end of the plate 8 is secured a sleeve 10 in which moves an eccentric 11 having a lever 12 secured to one end thereof and pivoted in the outer ends of plates 13 13, which are themselves pivoted to the plate 4. This construction, it will be seen, will enable the serrated plates located one on each side of the anvil 6 to be moved to and from each other by lowering or raising the lever 12.

Pivoted at a point near their lower ends to the plates 4 and 8 are a pair of dogs 14 15, having cam-faces at their lower ends which are also serrated. These dogs have upwardly-extending arms 16 17, respectively, the arm 16 having connected thereto the right-angled portion 18 of an operating-lever 19. A series of perforations 20 is provided in said lever for the purpose of adjusting said dogs and lever. The upper end of the arm 17 is connected through a link 21 to the angular portion of the lever 19. By this construction it will be seen that by forcing the outer arm of the lever 19 downwardly the serrated cam-faces of the dogs 14 and 15 will be forced downwardly into contact with the inner sur-

face of the tire to be shrunk, forcing and clamping the same against the serrated plates 5 and 9, respectively.

In operation my device works as follows: The lever 19 is raised, which throws the lower ends of the dogs 14 and 15 open, and the tire to be shrunk is inserted between said dogs and the plates 5 and 9, the latter being thrown apart by raising the lever 12. The lever 19 is now forced downward, which clamps the tire against the serrated plate. The downward movement of the lever 12 therefore will, through the eccentric 11 and sleeve 10 connected to the plate 9, force the movable plate 9 inward, thereby decreasing the diameter of said tire. A reverse movement of these parts will release the tire so that it may be removed from the machine.

I have described herein the plates 5 and 9 and the dogs 14 and 15 as having serrated or corrugated faces. This is the preferred form of my invention, but it is obvious that I may, if I choose, make these plates and dogs with smooth faces, and either form of construction is intended to be covered by the claim hereto appended.

Having thus described the invention, what is claimed as new is—

In a tire shrinker, the combination with a suitable framework made up of a pair of uprights and supporting beams, one of said uprights being longer than the other, the lower upright having an anvil formed upon its upper end, a plate rigidly secured to the longer upright having a serrated plate secured to the forward extension of the same, a cross-beam secured to the upper end of said plate, a downwardly depending plate pivoted to the outer end of said cross-beam, a serrated plate secured to the lower end of said downwardly depending plate, a sleeve secured to said downwardly depending plate, an eccentric having an operating lever upon its outer end fitting said sleeve, a pair of laterally extending arms pivoted to a stationary part of the framework in which said eccentric is pivotally mounted, a pair of dogs having serrated cam lower faces, pivoted, respectively, in a stationary part of the framework and in said downwardly depending plate, upwardly extending arms on said dogs, a lever having a right angle extension adjustably secured to the upper end of one of said arms and a link pivoted to the angular portion of said lever and adjustably secured to the upper end of the other arm, substantially as and for the purpose described.

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

MORTIMER D. GOULD, SR.

Witnesses:
GEORGE T. GRANGER,
AMOS SLATER.