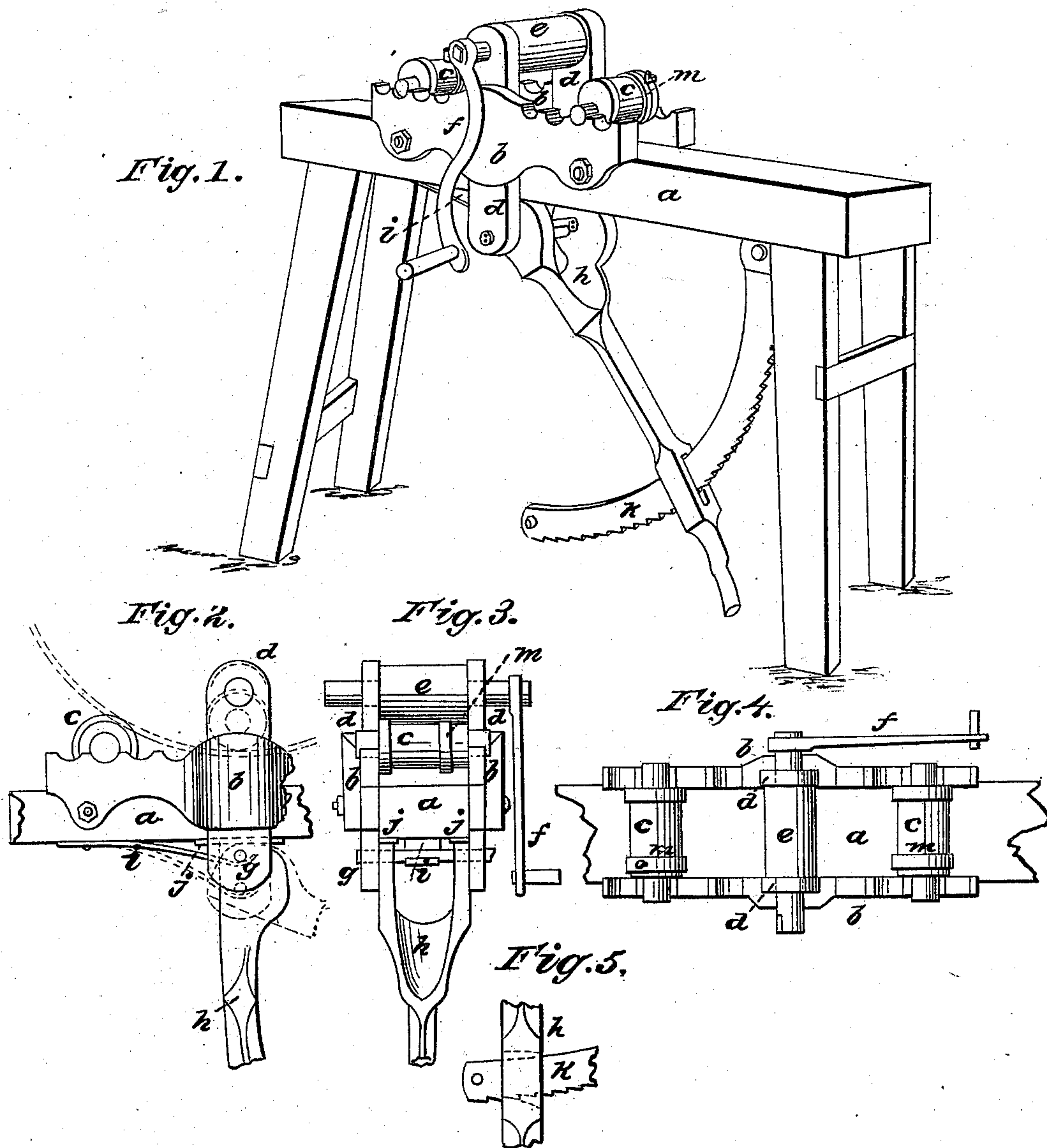


T. M. & A. F. STANSBURY.

Bending Tires.

No. 81,550.

Patented Aug. 25, 1868.



Witnesses:

W. H. Haskell
A. J. Dorrance.

Inventors:

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UNITED STATES PATENT OFFICE.

THOMAS M. STANSBURY, AND ALEXANDER F. STANSBURY, OF CANTON ILLINOIS.

IMPROVEMENT IN TIRE-BENDERS.

Specification forming part of Letters Patent No. **81,550**, dated August 25, 1868.

To all whom it may concern:

Be it known that we, THOMAS M. STANSBURY and ALEXANDER F. STANSBURY, of the city of Canton, Fulton county, and State of Illinois, have invented a new and useful Machine for Bending the Tires of Wheels; and we do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a side sectional view. Fig. 3 is an end view. Fig. 4 is a vertical longitudinal view; and Fig. 5 is a side view of one section.

The nature of our invention consists in securing a journal-plate on either side of a suitable bench, on which plates, at any desired distance from each other, friction-rollers are placed, having bands to set to any width of tire, to prevent its warping. Between the bench and either plate is a vertical-sliding post, each pierced at the upper end, to receive journal of a drive-roller, which is turned by a crank. Connecting the lower ends of these posts is a bolt, on which turns an eccentric or cam-lever, whose face works on small plates secured to under side of bench, and is mortised near lower end, to receive a self-adjusting toothed segment-bar, the upper end working in staple fastened to lower side of bench. The handle of lever being down, and shortest axis of eccentric between bolt and bearing-plate, a spring holds the drive-roller to its highest point. The machine being so set, the iron bar is passed under the drive-roller, and rests on the friction-rollers. The drive-roller is then drawn down on the iron bar, as desired, by the lever, when the crank is turned and the bar run through until proper circle is obtained.

To enable others skilled in the construction and use of such machines to make and use our invention, we will describe it more fully.

To any suitable bench, *a*, are secured, on either side, the journal-plates *b b*. On these plates rest the friction-rollers *c c*, each having an end of greater circumference than face of roller, and a movable collar or band, which is fixed to any width of tire by a set-screw. Be-

tween these plates and the bench, in again on the inner side of plates, are the sliding posts *d d*. In the upper ends of these posts turn the journals of the drive-roller *e*, each journal being made to receive mortise of a crank, *f*. The bolt *g* connects lower ends of posts, and passes through each head of the eccentric-lever *h*, securing it to sliding posts. *i* is a steel spring, fastened to lower side of bench, and its lower end so bears up against the under side of bolt *g* as to hold it to its highest point whenever the lever *h* hangs down with its shortest axis to bearing-plates, Fig. 3. The segment-bar *k* hangs in the staple *l*, in which it readily swings, and it passes through mortise in lever *h*, resting its horizontal weight upon lower end of mortise, Fig. 5. The parts of wood and iron are shown by their respective colors.

To operate our machine, place the iron bar on the rollers *c c*, *e* being at its greatest elevation. Next, move the bands *m m* close to the tire and secure them by the screws. Then bring up the lever *h* to the desired position on the segment-bar *k*, when it will be held by the teeth on *k*. This movement of lever brings down the draft-roller *e*, so that the iron bar is bent, and it is then drawn through the machine by turning the crank. If circle of tire is too large, move the lever up one or more teeth, and run the tire through by reverse motion of crank. The diameter of tire, when bent, will depend somewhat on the position of rollers *c c*. For a large wheel, place them in outer bearings; vice versa. If the bands *m m* are properly set, the tire will not be in wind when bent.

Having thus explained our machine, what we claim as our invention, and desire to secure by Letters Patent, is—

The arrangement herein described and shown of the devices—viz., the posts *d d*, rollers *c* and *c*, lever *h*, spring *i*, segment-ratchet bar *k*, and frame *a*, for the uses and purposes herein set forth.

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