

J. Metzgar.

Tire Bending Mach.

N^o 91,252.

Patented Jun. 15, 1869.

Fig. 1.

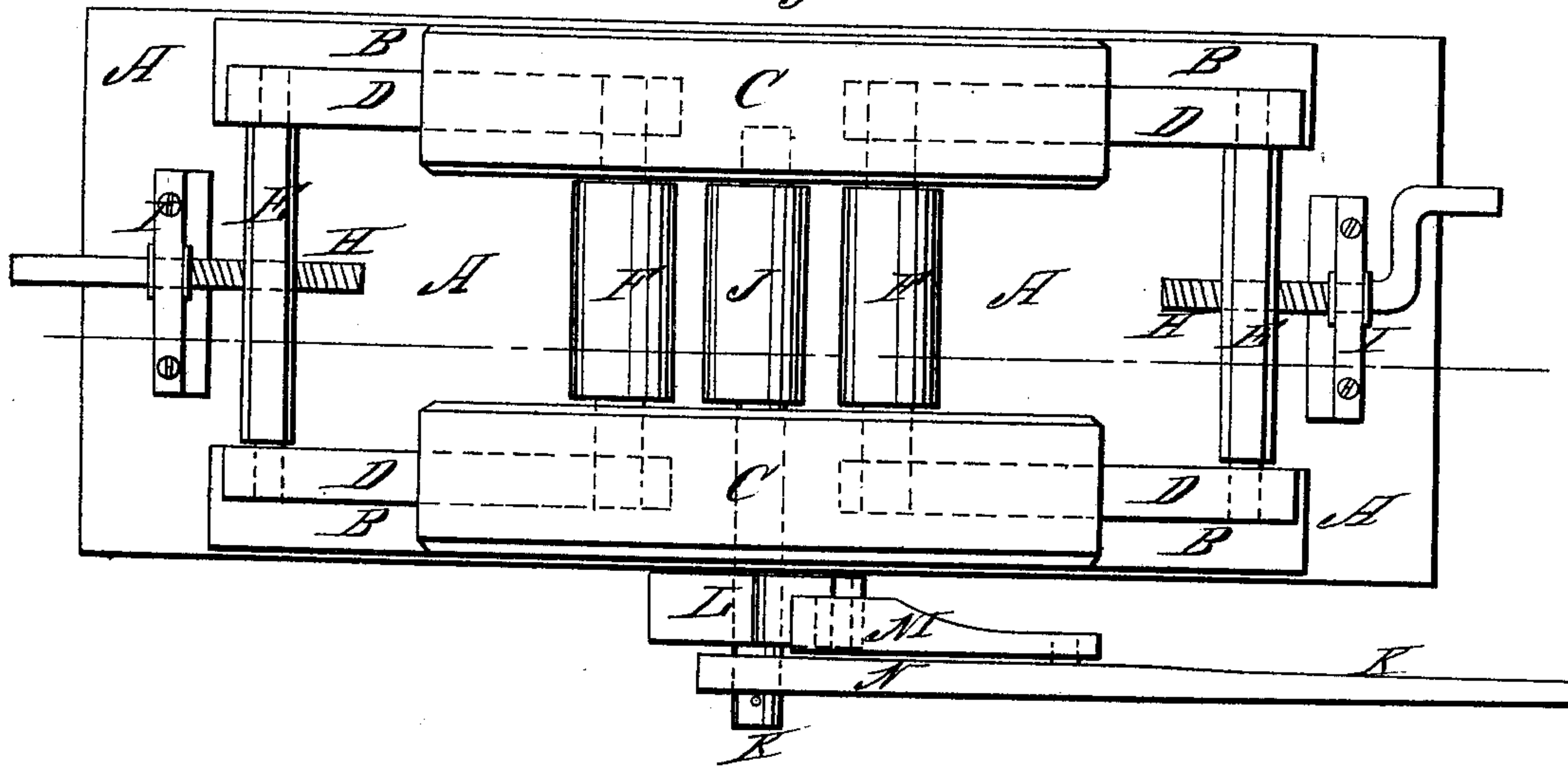
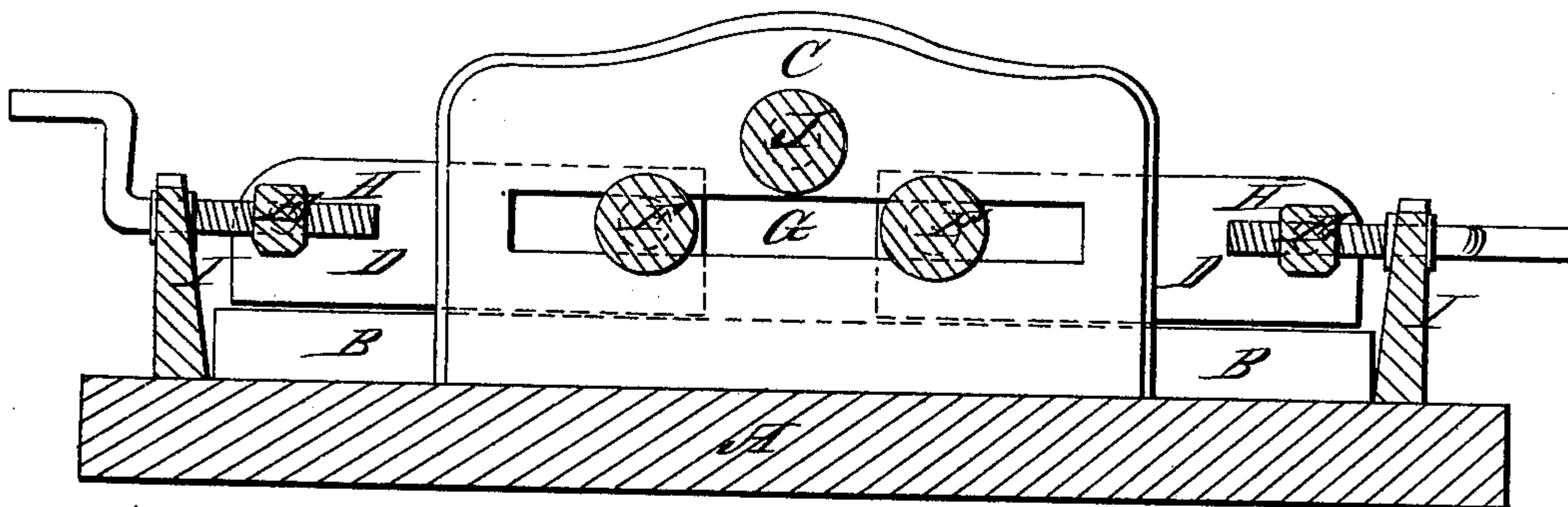


Fig. 2.



Witnesses:

Jesse Goff
Chas. C. Wilson

Inventor:

John Metzgar.
by Orville W. Dyer

United States Patent Office.

JOHN METZGAR, OF RANCHO GAP, PENNSYLVANIA.

Letters Patent No. 91,252, dated June 15, 1869.

IMPROVED APPARATUS FOR BENDING TIRE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN METZGAR, of Rancho Gap, in the county of Clinton, and in the State of Pennsylvania, have invented certain new and useful Improvements in Tire-Bending Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a plan or top view of my tire-bending machine, and

Figure 2 is a vertical, longitudinal section of the same, on the line *x x* of fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

This invention consists in the adjustable frames carrying the lower rollers, and in the general construction, arrangement, and combination of parts, as hereinafter more fully described.

In this machine, the lower rollers are journaled in bearings in sliding frames, which are moved longitudinally, by means of screws, to adjust said rollers to and from a central upper roller, which is operated through the medium of a lever, pawl, and ratchet-wheel.

In the annexed drawing—

A represents the bed of the machine, on which are placed ways B B, for the sliding frame.

Over the ways B B, are constructed housings C C, adapted to receive and partially enclose the side-pieces D D of the adjustable frames.

These side-pieces D D, rest on the ways B B, and are connected together near their outer ends by transverse bars E E.

The lower rollers F F, pass through slots G G, in the inner faces of the housings C C, and rest in suitable bearings in the side-pieces D D of the adjustable frames, as shown by the dotted lines.

As means for adjusting the frames which carry the lower rollers, I employ screws H H, swivelled in standards I I, rising from the bed A, and working through the transverse bars E E, which connect the sides D D of the adjustable frames. These screws are preferably made or provided with crank-handles, as shown.

The upper roller J, is mounted in fixed bearings, in the centre of the housings C C. One of the journals,

K, of said roller, extends through the housing, and has secured thereto, by means of a key, a ratchet-wheel L, the teeth of which are engaged by a pawl, M, pivoted to a hand-lever, N, which is in turn pivoted upon the outer end of the journal K. The roller J, it may be stated, can be made with its surface plain or corrugated, as may be found most desirable.

The operation of this device is as follows:

The lower rollers are adjusted in the manner described, either toward or from the central roller, according to the diameter which it is desired the tire shall be when finished, and the tire-blank passed between said rollers, resting on the lower ones. The tire-blank may be inserted either before or after the adjustment of the rollers, but in either instance, the bar being in place between said rollers, the hand-lever is operated up and down, causing the upper roller to be partially rotated at each downward movement, and the tire-blank correspondingly passed between said upper and the lower rollers, by which means said blank is bent to any circle desired.

This machine is both simple and practical, as will be obvious. It is effectively and easily operated, can be used for forming tires of all sizes in ordinary use, and is comparatively inexpensive, as well as strong and durable, being constructed, preferably, entirely of cast-iron, with the exception of the bed.

Having thus fully set forth the nature and merits of my invention,

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

The arrangement of the adjustable frames D D and E E, rollers F F, and screws H H, substantially as and for the purpose shown and described.

Also, the combination of the lower rollers F F, movable frames D D and E E, adjusting-screws H H, upper rollers J, ratchet-wheel L, pivoted pawl M, and lever N, the slotted housings C C, and ways B B, all operating substantially as herein shown, and arranged upon a bed, A, for the purpose set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 29th day of March, 1869.

JOHN METZGAR.

Witnesses:

JOHN SALLADOR,
A. C. CHATHAM.