J. Olmstead.

Upsetting Tires.

No. 41,262. Patented Jan. 12, 1864.

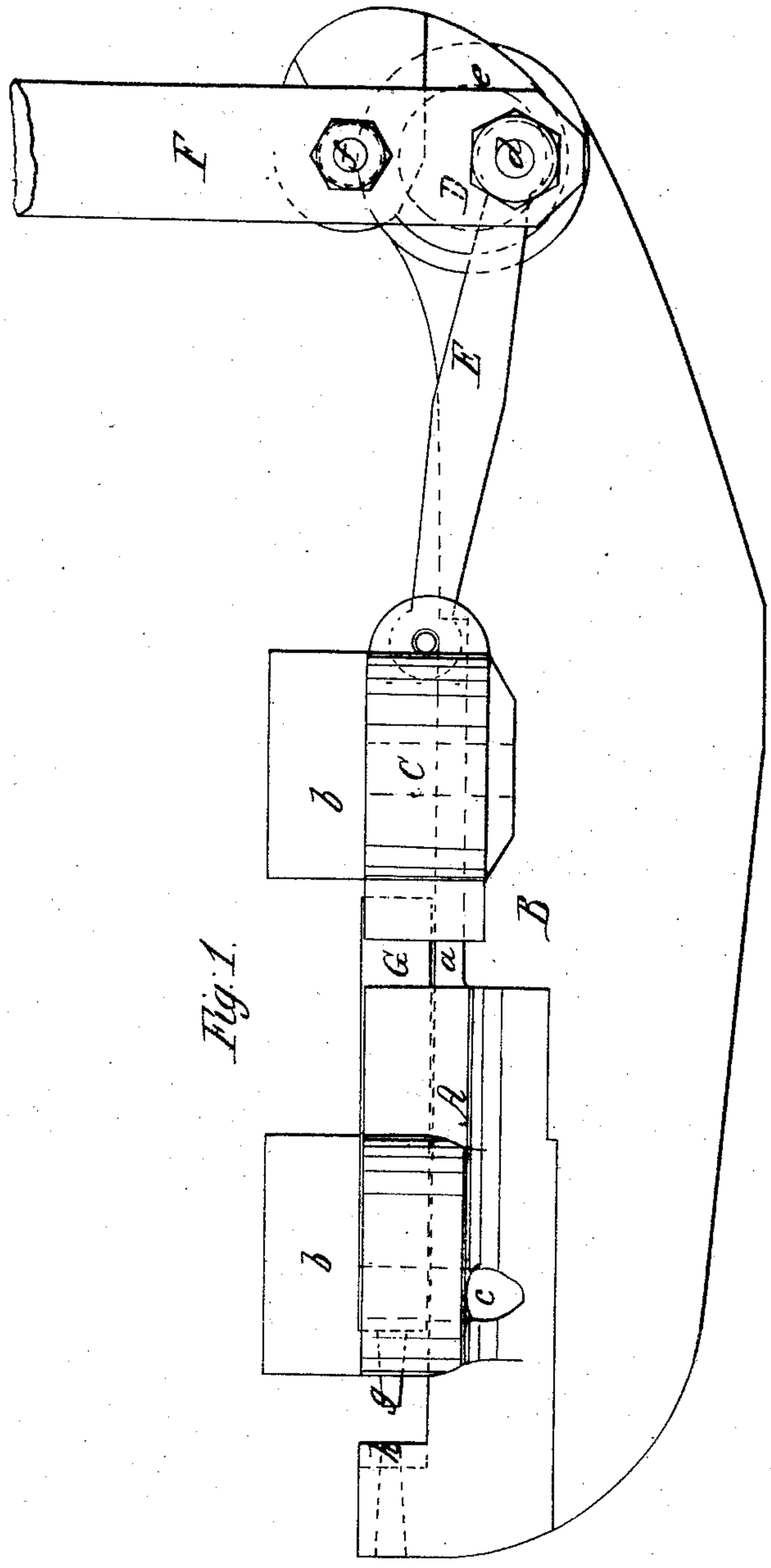

Fig. 1.

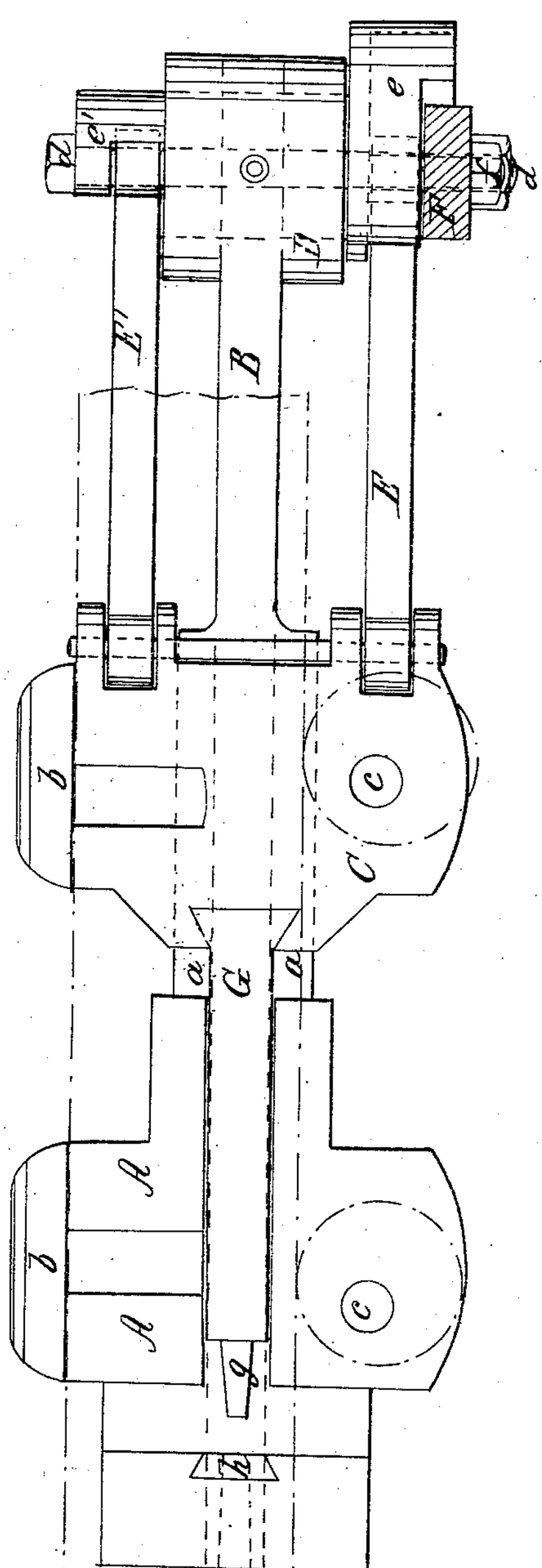

Fig. 2.

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UNITED STATES PATENT OFFICE.

JOSEPH OLMSTEAD, OF CHICAGO, ILLINOIS, ASSIGNOR TO T. P. DINSMORE, OF SAME PLACE.

IMPROVED DEVICE FOR SHRINKING TIRES.

Specification forming part of Letters Patent No. **41,262**, dated January 12, 1864.

To all whom it may concern:

Be it known that I, JOSEPH OLMSTEAD, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Device for Shrinking Tires, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side elevation of my invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention is intended as an improvement in that class of iron-shrinkers in which the bar of iron to be shrunk, after having been heated, is secured on two blocks—one stationary and the other movable—and by forcing the movable toward the stationary block the operation of shrinking is effected. The usual means employed for imparting the desired reciprocating motion to the movable block consisist of a lever and eccentric, which latter connects by two pitmen with the movable block.

My invention consists in the arrangement of two brackets, one on either end of the eccentric, in combination with the eccentric wrist-pin or wrist-pins and with the two pitmen and hand-lever, in such a manner that one of said brackets forms an extra bearing to the wrist-pin outside of one pitman, and the other bracket serves to sustain the hand-lever and enables said hand-lever to be brought in such a position that its end forms a bearing for the wrist-pin outside of the other pitman, and that it can be moved through an arc of one hundred and eighty degrees or more.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it with reference to the drawings.

The stationary block A is firmly connected to the frame B, which is provided with ways *a*, on which the movable block C slides. Each of the blocks A C is provided with a lip, *b*, and the bar of iron to be shrunk is secured on the surface of said blocks by means of eccentric dogs, or by any other suitable means that may be arranged on the blocks in holes *c*, opposite the lips *b*. In Fig. 2 of the drawings I have indicated two eccentrics, in red outlines, bearing on the bar of iron, which is also indicated in red outlines.

A reciprocating motion is imparted to the movable block C by means of an eccentric, D, which connects with said block by two pitmen, E E′, and by which motion is imparted by a hand-lever, F. The eccentric D consists of a roller that has its bearing in a suitable socket on the end of frame B, and the pitmen are connected to said roller by a pin, *d*, which passes through said roller in a longitudinal direction outside its center. A bracket, *e′*, which projects from one side of the eccentric, forms a bearing for the pin *d* outside the pitman E, and another bracket, *e*, which projects from the opposite side of the eccentric, forms a bearing for the hand-lever F, which is secured to the same by means of a screw, *f*. The edge of the hand-lever bears against a lip projecting from the surface of the bracket *e*, and its end forms an additional bearing for the wrist-pin *d* outside the pitman E. By these means the wrist-pin is firmly supported on both ends, and is not liable to bend or break by the most severe strain to which it may be exposed; whereas, when not supported on the outside of the pitmen, the wrist-pin is liable to bend and break and to become a continuous source of trouble and annoyance. Furthermore, by attaching the lever F to the bracket *e* it is free to swing through an arc of one hundred and eighty degrees or more, and consequently the full stroke of the eccentric is rendered useful; and in order to give to the movable block the same motion as with iron-shrinkers of the ordinary construction, where the hand-lever swings through an arc of a little over ninety degrees only, an eccentric of smaller diameter is required in my device than in other devices for the same purpose, and consequently a larger pressure can be exerted on the bar of iron to be shrunk with a lever of the same length than with ordinary iron-shrinkers.

The gap between the movable block C and the stationary block A is partially filled up by a slide, G, which is rigidly attached to the movable block and which extends through a

recess in the face of the stationary block. The surface of this slide is flush with the surfaces of the two blocks, and it forms a support for the bar of iron to be shrunk, such support being desirable, as it is frequently necessary to hammer that part of the bar which is held between the two blocks.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement of the brackets *e e'*, projecting from the ends of the eccentric D, in combination with the wrist-pin *d*, pitmen E E', and hand-lever F, constructed and operating as and for the purpose shown and described.

JOSEPH OLMSTEAD.

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