H. R. HINKLEY.

Rolling Mills.

No. 139,246. Patented May 27, 1873.

Fig. 1.

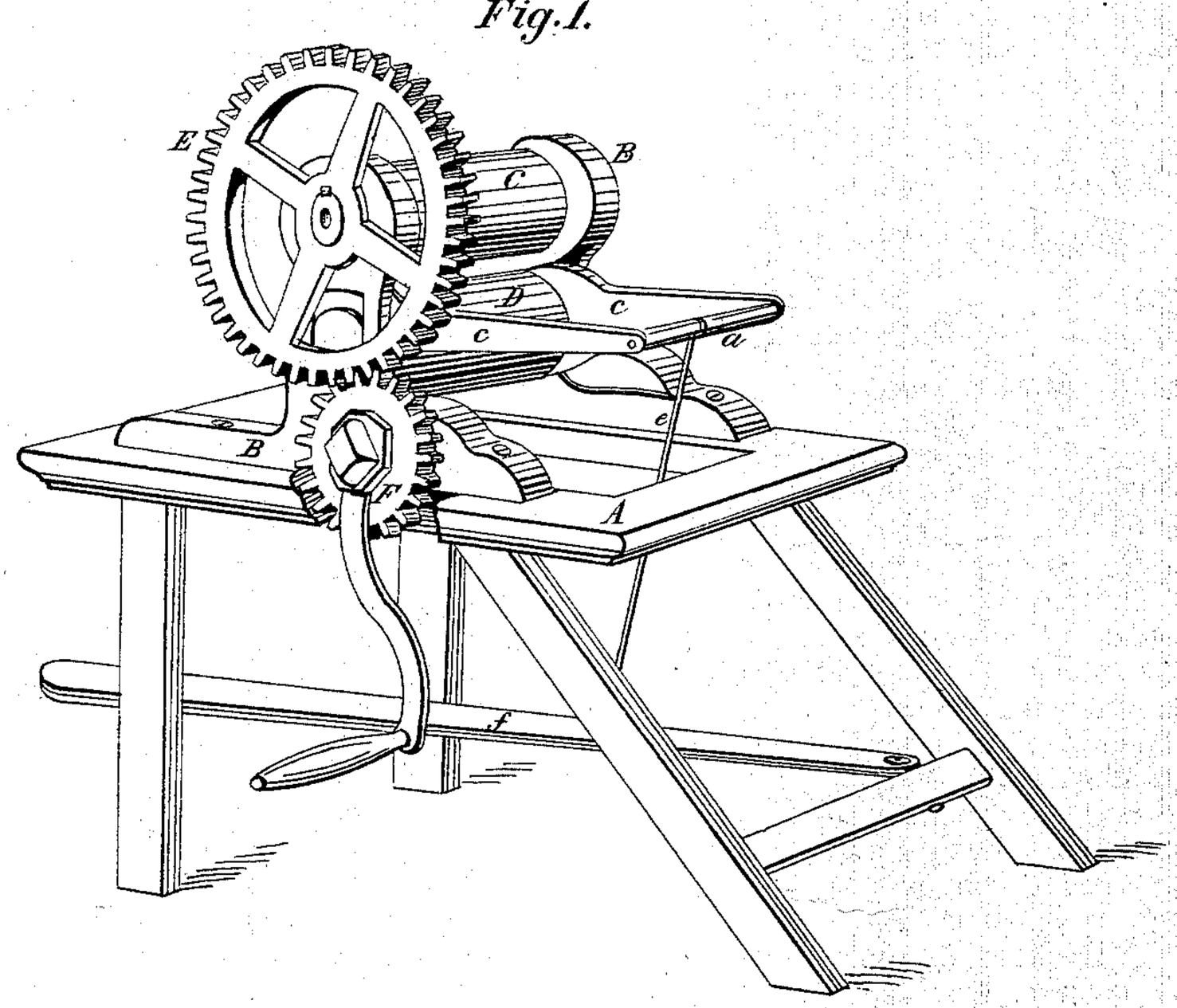


Fig. 3.

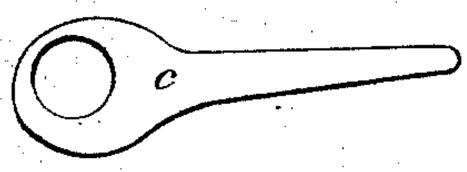


Fig. 2.

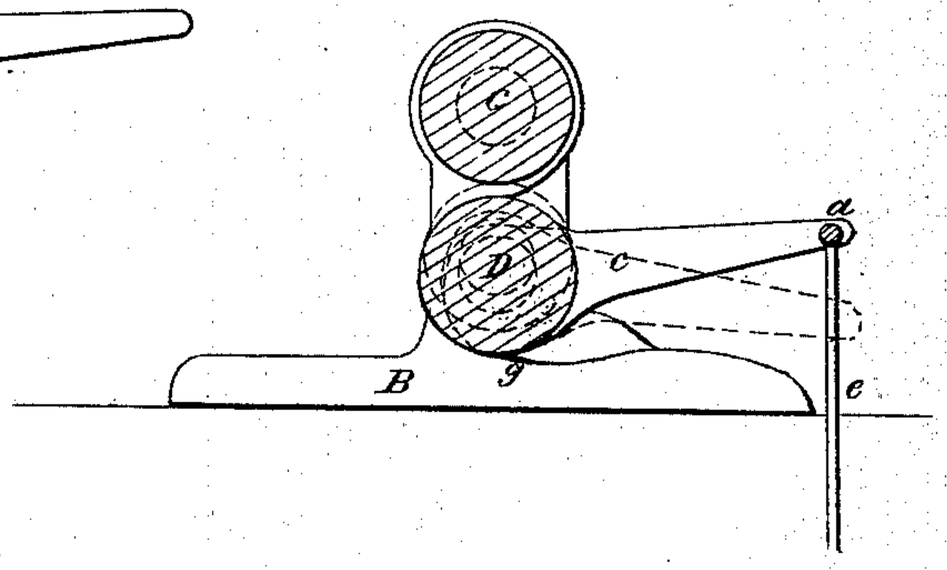
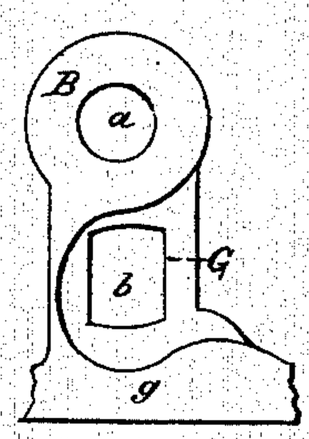


Fig. 4.



Attest:

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Inventor:

Henry R. Hinkley,

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Geo. C. Rothwell

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UNITED STATES PATENT OFFICE.

HENRY R. HINKLEY, OF MILTON JUNCTION, WISCONSIN.

IMPROVEMENT IN ROLLING-MILLS.

Specification forming part of Letters Patent No. **139,246**, dated May 27, 1873; application filed March 11, 1873.

To all whom it may concern:

Be it known that I, HENRY R. HINKLEY, of Milton Junction, in the county of Rock and State of Wisconsin, have invented an Improvement in Rolling-Mills, of which the following is a specification:

This invention relates to an improvement in rolling-mills especially designed for compressing leather, but also capable of being used for compressing metals; and said improvement consists of cam-levers working in recessed standards, and supporting in bearings in their ends the lower roll, in such manner as to allow of its necessary adjustment relative to the upper roll, for the purpose of properly compressing the leather, &c.

In the accompanying drawing, Figure 1 is a perspective view of a mill embodying my invention. Fig. 2 is a transverse vertical section through the rolls, showing the operation of the cam-levers in dotted lines. Fig. 3 is an elevation of one of the cam-levers detached; and Fig. 4 is a side elevation of a part of one of the standards, showing the conformation of the cam recess.

Similar letters of reference indicate like parts in the several figures.

The letter A represents a frame of proper construction, upon which are secured standards B B. In bearings *a b*, in these standards, the rolls C D are mounted; and upon one end of roll C a cog-wheel, E, is fixed, which meshes with a pinion, F, on one of the standards, with which is connected the motive power. *c* *c* are cam-levers, in bearings in which the journals of the lower roll D are fitted. These cams work in inclined recesses G in the inner faces of the standards; that portion of the cams having the greater radiuses resting on the lower part of said recesses; whence, by elevating and depressing the levers, the roll D is removed from, or brought in contact with, the roll C, in accordance with the thickness of the leather or metal to be compressed. The operation of the cams in raising the roll is assisted by forming inclines *g* in the recesses, so that said cam-levers have a constantly changing fulcrum. The bearings *b* in the standards are made oblong, so as to allow the vertical movement of the roll D. The outer ends of the cam-levers may be held together by a cross-bar, *d*, to which is attached a rod, *e*, connecting said cross-bar with a treadle, *f*, for operating the cams—that is to say, for depressing their ends, as in their normal position they are elevated, as shown in the drawing, owing to the weight of the lower roll. The ends of the rolls may be connected by suitably-arranged gearing, so as to insure steady and constant rotary motion.

While this invention is especially adapted for compressing leather, as, for instance, the soles of boots, it can be effectively used for compressing metals. By turning half-round grooves in the rolls, lines or reins can be rounded; and by having one groove, harness-tugs can be formed.

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

The combination, in a rolling-mill, of the cam-levers, having variable fulcrums, with the lower roll, substantially as and for the purpose set forth.

To the above I have signed my name this 29th day of January, A. D. 1873.

HENRY R. HINKLEY.

Witnesses:
H. BARRERE,
L. T. ROGERS.