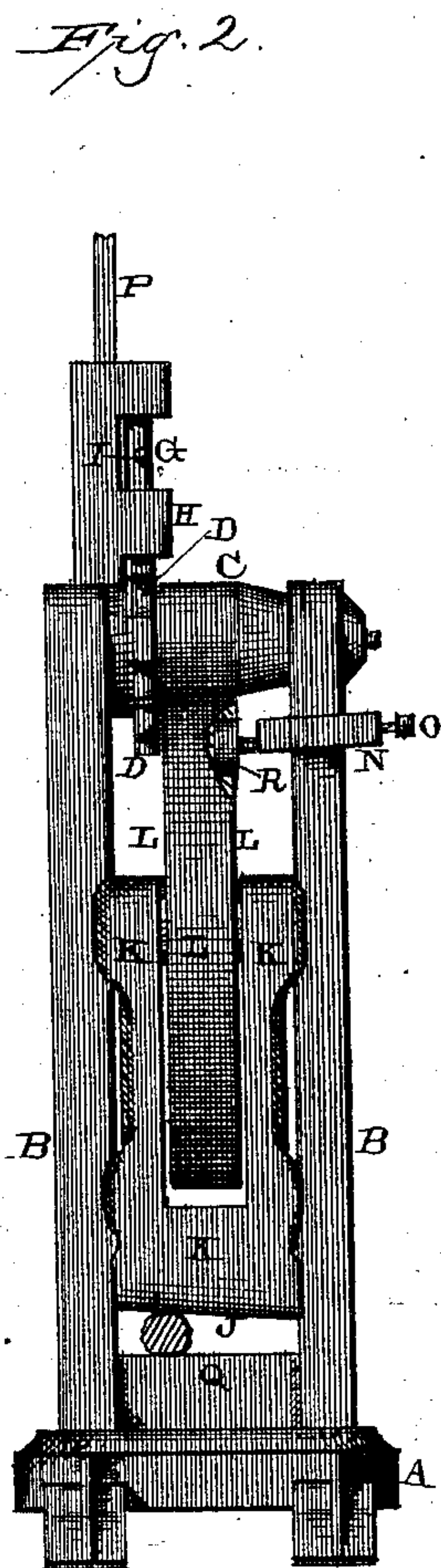
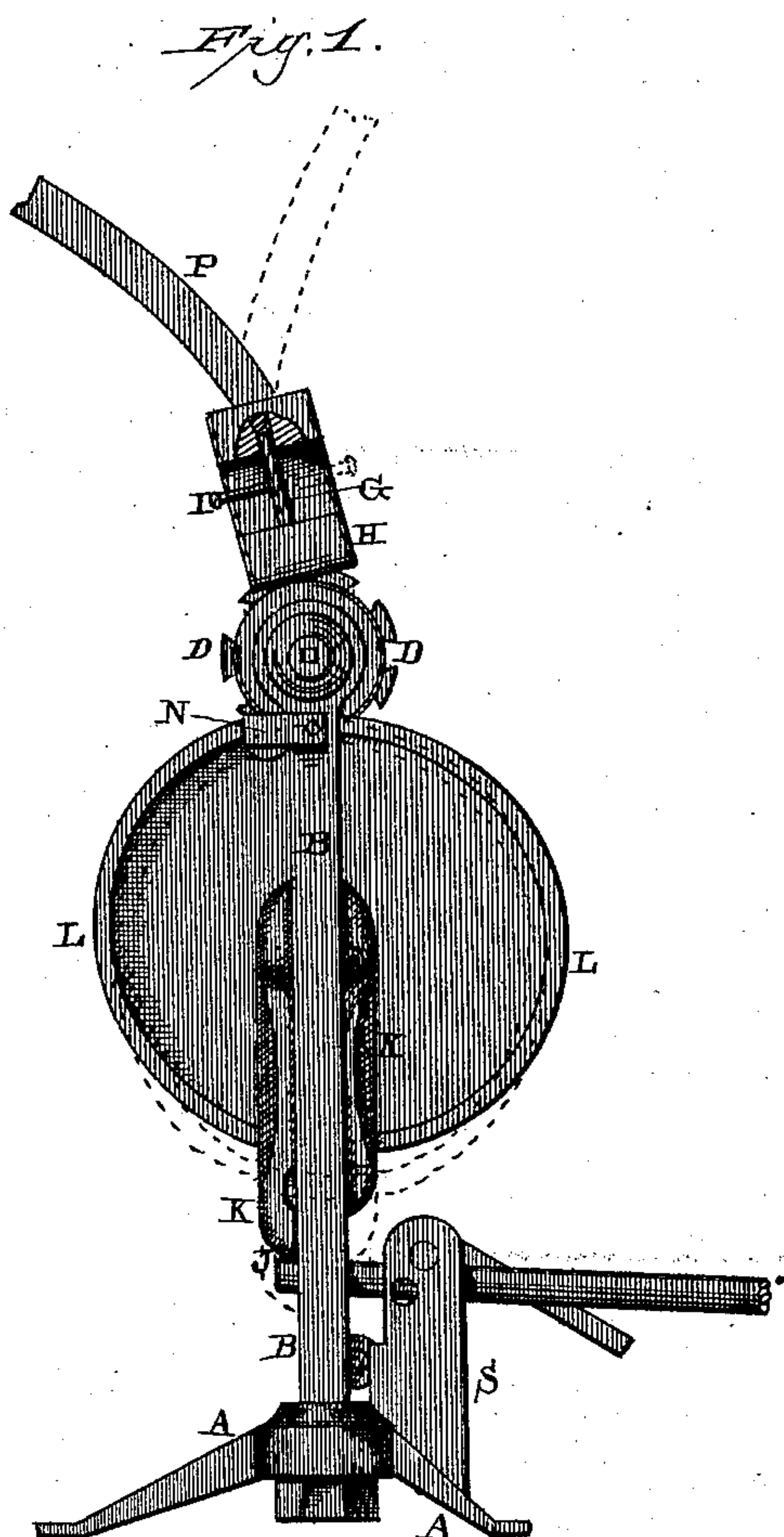


(No Model.)

J. M. ROSS.  
SLIDING SHEARS.

No. 272,388.

Patented Feb. 13, 1883.



witnesses:  
J. E. Clark  
W. H. Kern

Inventor:  
J. M. Ross,  
per  
F. A. Lehmann,  
Attorney

# UNITED STATES PATENT OFFICE.

JOHN M. ROSS, OF BATH, NEW YORK.

## SLIDING SHEARS.

SPECIFICATION forming part of Letters Patent No. 272,388, dated February 13, 1883.

Application filed August 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. ROSS, of Bath, in the county of Steuben and State of New York, have invented certain new and useful  
5 Improvements in Metal Shears or Cutters; 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 pertains to make and use it,  
10 reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in cutters or shears for iron; and it consists in the combination of a suitable frame, a cam  
15 which moves a gate having one of the knives connected thereto, a friction-wheel, and a reversible lever and ratchet, whereby the cam is made to operate the cutters, as will be more fully described hereinafter.

20 Figure 1 is a side elevation of my invention complete. Fig. 2 is an edge view of the same.

A represents a suitable base or standard, to which the posts B are secured in any suitable manner. The upper ends of these posts are  
25 secured together by means of a steel rod or bolt, which passes through them, and which forms a journal or pivot for the friction-roller C to turn upon. This friction-roller has formed upon it a ratchet, D, in which the inner end of  
30 the spring-actuated dog G is made to catch. The inner end of this dog passes through a suitable guiding-frame, H, and it is provided with a stop, I, to prevent it from becoming detached. The operating-lever P is bent so  
35 that it can be swung around to either side, and thus made to operate the cam in different directions. The teeth of the ratchet are so formed that the inner end of the dog will operate  
40 equally well in either direction.

45 Moving vertically between the two posts B, and secured to the cam by a steel pin, is the gate K, to the lower end of which is secured the cutter J. This cutter is made removable from the gate in any suitable manner, so that  
50 when injured it can be readily removed and replaced by another. Journaled in the upper end of this gate, upon a steel pin or block, is the cam L, which has its upper edge to bear against the under side of the friction-roller by  
means of which the cam is operated. Passed  
over one of the posts is a suitable loop or

frame, N, which can be secured in any suitable position by means of a set-screw, O, and which frame has a friction-roller, R, secured to its inner end. This friction-roller R catches  
55 against the under side of the flange formed on the side of the cam, and serves to hold the cam up against the friction-roller, so that the slightest movement of the roller will cause the cam to move at the same time. In between  
60 the lower ends of the two posts is secured the second one, Q, of the knives or cutters, and which knife Q is made removable, so that it can be removed and replaced at any time. When the cam, which is made more bulging  
65 upon one side than the other, is moved in one direction, it is specially intended to cut heavy rods and bolts or heavy plates of metal, while when turned in the opposite direction it is specially adapted for cutting light material.  
70

Upon the front of the base A are formed suitable standards, in the upper end of which is placed a suitable cam for locking the iron in place while it is being cut. The steel pin,  
75 which passes through the cam L into the gate K, is set eccentrically to the center of the cam. This cam being held up against the friction-roller C by the wheel R, the gate is moved vertically by the pin as the cam is made to revolve by the dog G and lever P. By setting  
80 this pin nearer to or farther from the center of the cam a greater or less movement can be given to the gate, according to the thickness of the iron to be cut.

Having thus described my invention, I  
85 claim—

1. The combination of a suitable supporting-frame, a friction-roller, ratchet, dog, and operating-lever, with a cam, sliding gate, and the cutters, the parts being combined and arranged to operate substantially as shown.  
90

2. In a metallic shears or cutter, the combination of the friction-roller, the cam, the supporting wheel or roller R, gate, and a mechanism for turning the cam, substantially as described.  
95

In testimony whereof I affix my signature in presence of two witnesses.

JOHN MARTIN ROSS.

Witnesses:

REUBEN E. ROBIE,  
C. F. KINGSLEY.