

W. J. WATKINS.  
RAILROAD RAIL BENDERS.

No. 177,043.

Patented May 2, 1876.

Fig 1

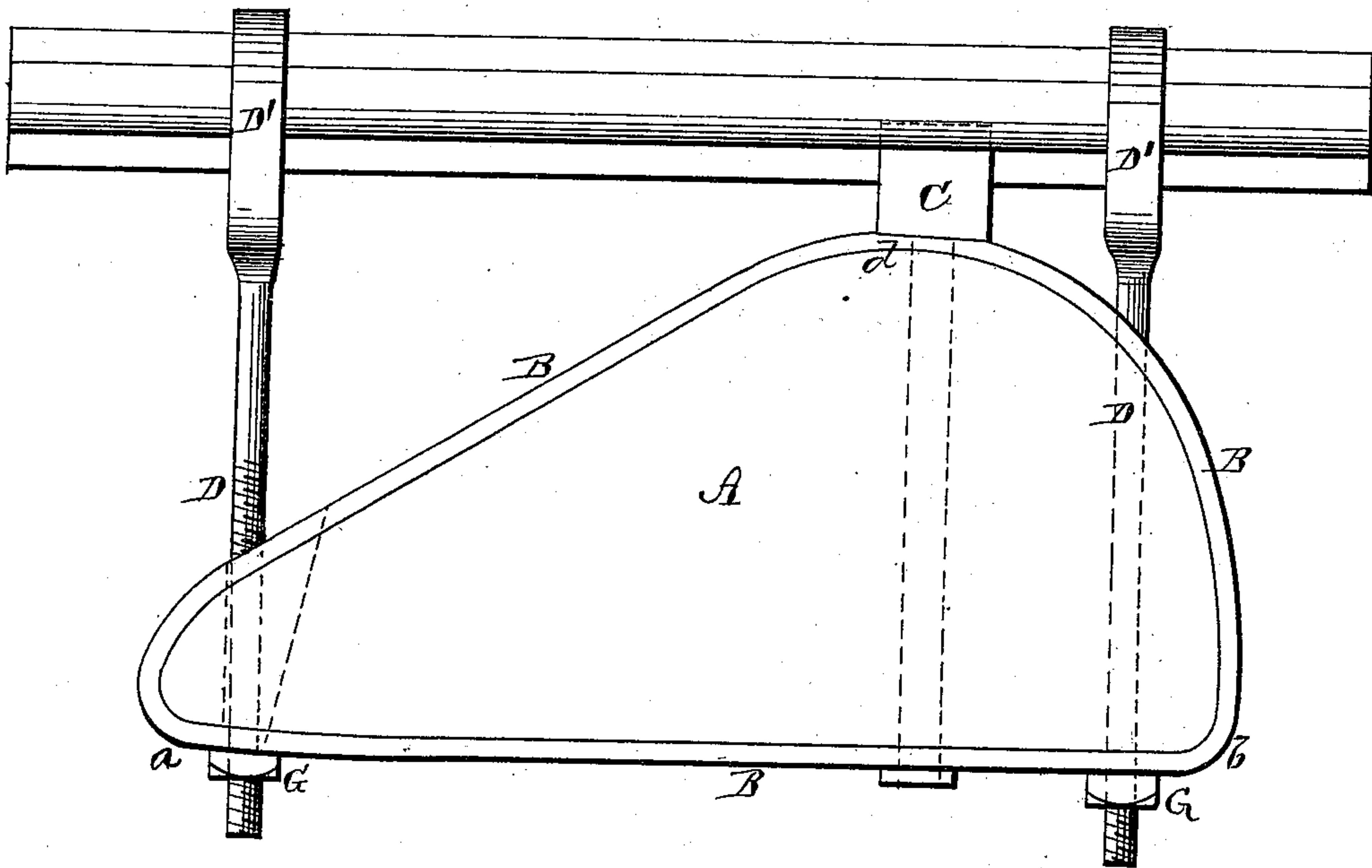


Fig 2

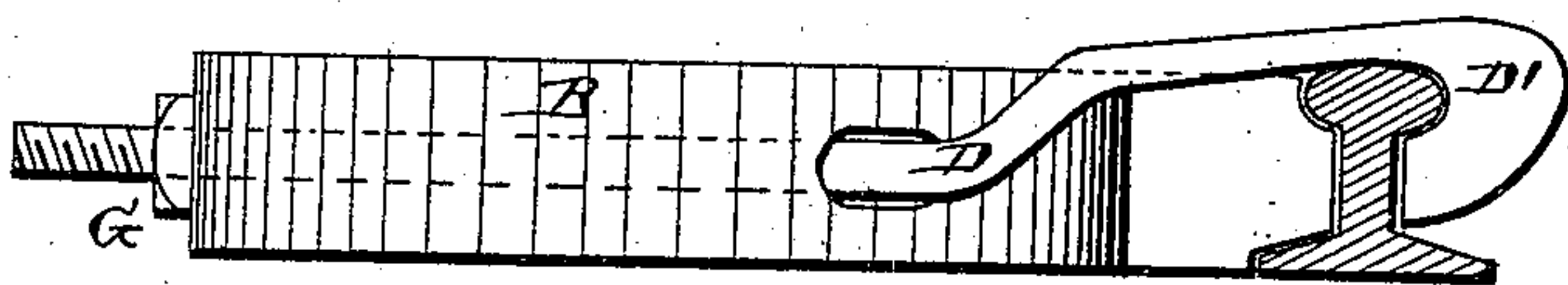
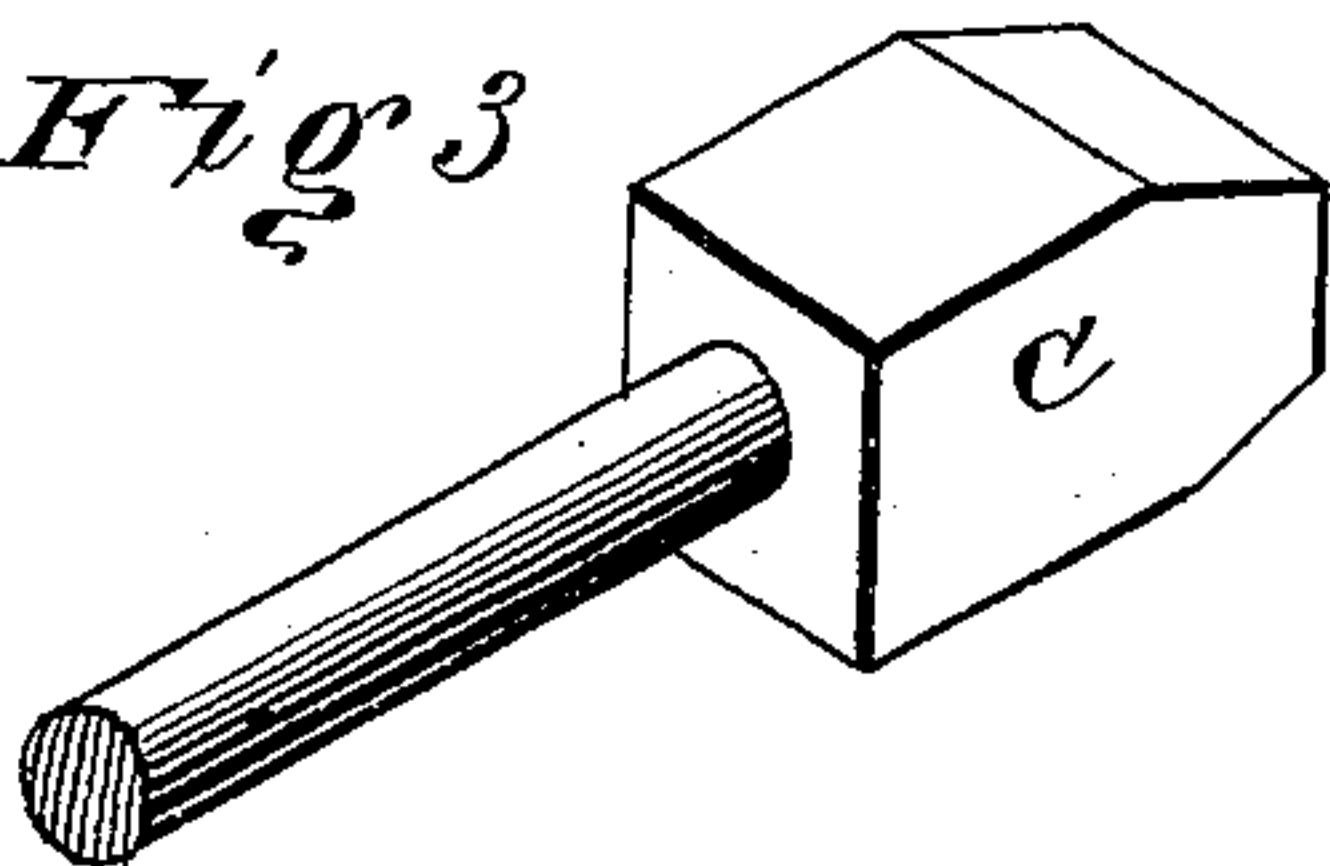


Fig 3



WITNESSES

P. L. O'Rand  
C. L. Sweet.

INVENTOR

W. J. Watkins,  
By J. H. Alexander  
Attorneys

# UNITED STATES PATENT OFFICE.

WILLIAM J. WATKINS, OF MAHANOEY CITY, PENNSYLVANIA, ASSIGNOR OF  
ONE-HALF HIS RIGHT TO DANIEL D. JONES, OF SAME PLACE.

## IMPROVEMENT IN RAILROAD-RAIL BENDERS.

Specification forming part of Letters Patent No. **177,043**, dated May 2, 1876; application filed  
April 1, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM J. WATKINS, of Mahanoy City, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Benders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for bending railroad-rails, designed especially for laying short curves in coal-mine roads, or in laying down turnouts, switches, &c., or for bending the ends of guard-rails opposite casting on large railways, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my invention. Fig. 2 is a side view thereof. Fig. 3 shows a detached part of the same.

A represents a former, made of hard wood, of substantially the form shown in Fig. 1—that is to say, it has one straight side or edge from *a* to *b*, and from the end it has an inclined side to *d*, from which it is rounded to the end *b*, the widest point of the board being a line drawn from the curve *d* at right angles to the side *a* *b*. The board or former A is bound all around its edges with band-iron B. At the point *d*, on the edge of the board, is swiveled a metal block, C, which is shaped to fit the side of the rail. Through each end of the block A is passed a screw-bolt, D, formed with a hook,

D', on its end, which is shaped to fit over the top, and over and against the opposite side of the rail. On the screw-ends of the bolts D are placed nuts G.

This rail-bender works on the principle of a lever, with a screw pulling on the end of the lever giving it double power. The block C forms the fulcrum, which may be within six inches of the end of the rail, and thus bend the rail to that point. The fulcrum C turns as on a swivel, so as to fit and fill the hollow of the rail when the instrument is turned end for end, in order to get at both ends of the rail if need be.

Should it become necessary to bend a rail edgewise for top or bottom of inclined planes, &c., the fulcrum should be turned partially around, and the bolt-hooks placed to pull opposite each other. It will then bend the rail as little or as much as required.

The device may be made of any size desired, and is designed especially for use in collieries, but may also be used on any railways where it is desired to bend any rails.

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

The within-described rail-bender, consisting of the blocks A bound with iron, as described, the swiveled fulcrum, and the bolts D, with hook D', and nuts G, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in the presence of two witnesses.

WILLIAM J. WATKINS.

Witnesses:

S. JEFFRIES,  
D. O'CONNOR.