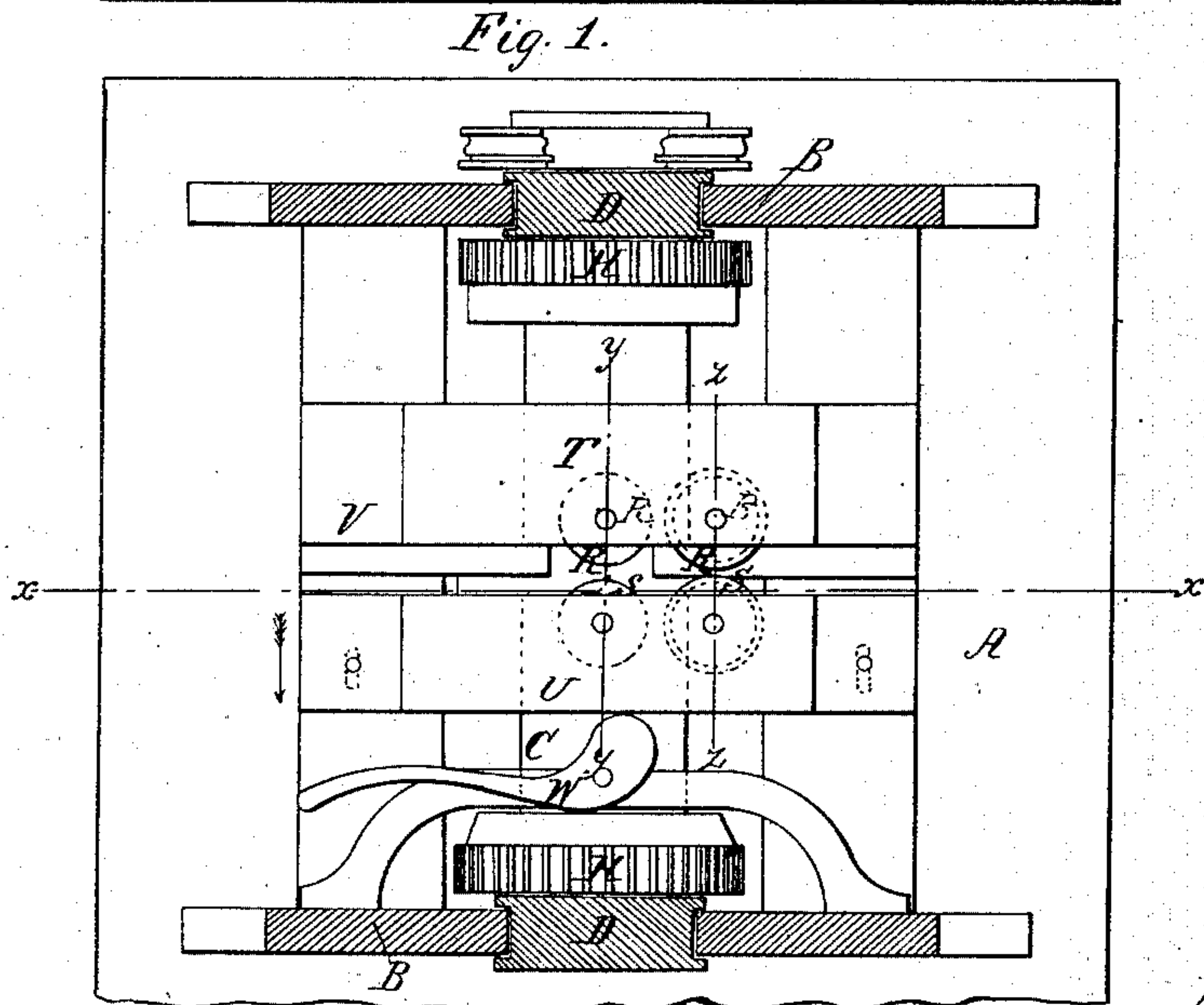
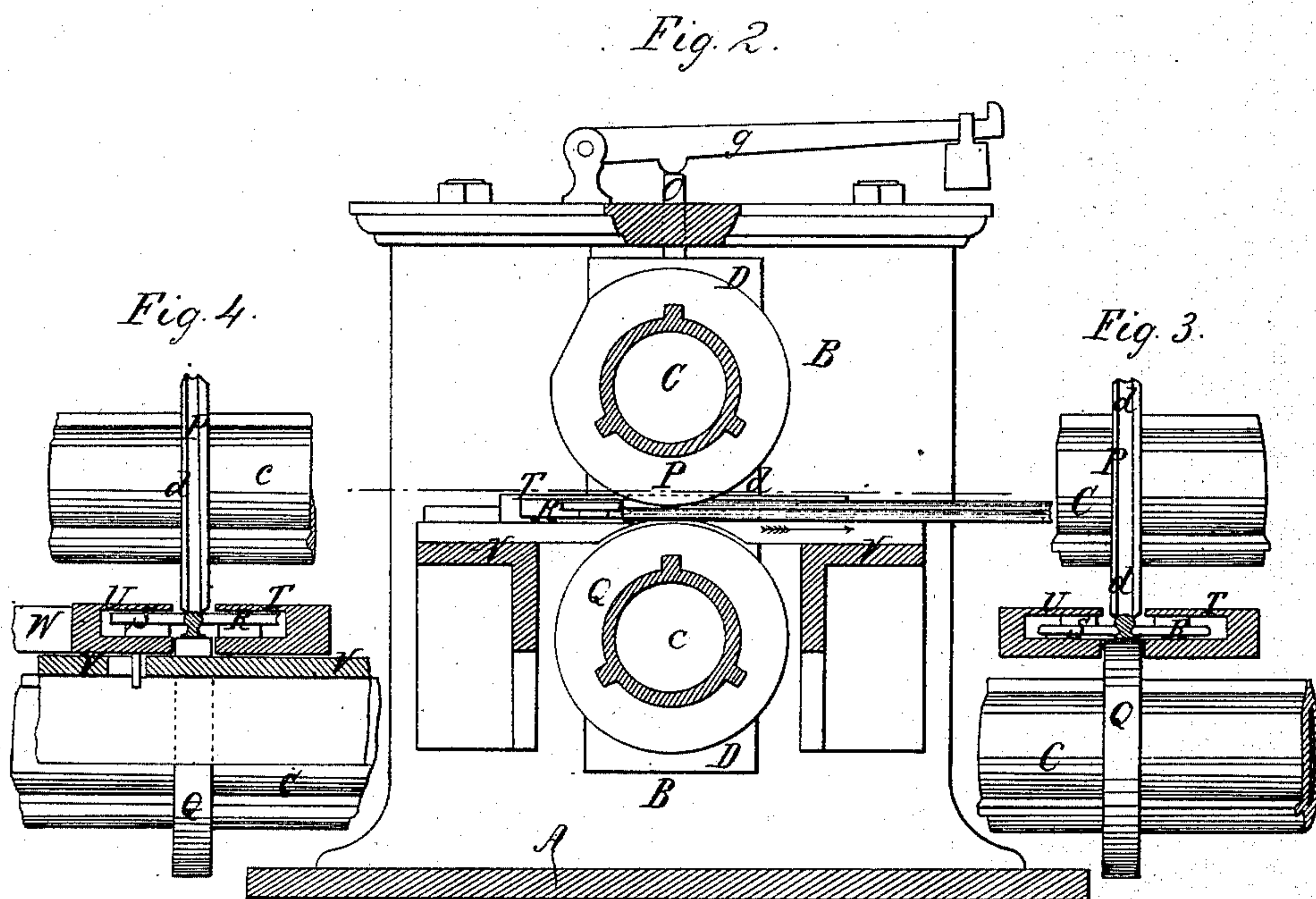


*H. Baines.*

*Railroad Track Iron.*

*N<sup>o</sup> 68,936.*

*Patented Sept. 17, 1867.*



*Witnesses;*  
*Thos. Truett*  
*Wm. Dean Overell*

*Inventor;*  
*H. Baines*  
*Per [Signature]*  
*Attorneys*



# UNITED STATES PATENT OFFICE.

HUGH BAINES, OF MANCHESTER, ENGLAND.

## IMPROVED APPARATUS FOR ROLLING RAILS.

Specification forming part of Letters Patent No. 68,936, dated September 17, 1867.

*To all whom it may concern:*

Be it known that I, HUGH BAINES, of Manchester, in the county of Lancashire, England, have invented new and useful Improvements in Rolling-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates more particularly to a rolling-machine invented by me, and secured by a grant of Letters Patent of the United States bearing date the 11th day of December, A. D. 1866.

The invention consists in a novel application and arrangement of rollers, to be now described, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a plan or top view of the rolling-machine with the present improvements applied thereto; Fig. 2, a transverse vertical section taken in the plane of the line *x x*, Fig. 1; Figs. 3 and 4, vertical sections taken, respectively, in the planes of the lines *y y* and *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A A in the drawings represents the bed or foundation plate of the machine, having parallel uprights B B, between which two rollers, C C, are placed, the one above the other, and each turning in suitable blocks or bosses D, arranged in the uprights B. Both rollers C are made hollow through their entire length from end to end.

H H, gear-wheels at each end of rollers C, upon the inside of the uprights B, the gear-wheels at the same end of each roller interlocking with each other. These gear-wheels H H are keyed to the rollers, so as to turn in conjunction therewith, but yet allow of their easy detachment from the same.

To the upper side of each of the uprights B is hung a weighted lever, *g g*, that rests through a pin, O, upon the journal-box or boss of the upper roller, C, the object of which weighted levers is to hold the upper roller firmly down to its work, the weight upon each lever being susceptible of adjustment according to the amount of pressure desired.

The arrangement of the parts above de-

scribed, as well as a reversible gearing in connection with the lower roller of the two rollers C C, is the same as that described in the schedule annexed to the Letters Patent hereinbefore referred to, and therefore need no further or particular description herein.

The upper roller C of the two rollers C C is provided with a raised flange or roller, P, the periphery or edge of which is grooved suitably to roll the upper or bearing surface of a railroad-rail from a suitable metal bar when passed between it and the raised flange or roller Q to the lower roller of the two rollers C, which roller Q is flat upon and around its periphery or edge.

R R and S S, four rollers, carried in boxes T and U, respectively. The one T of these boxes is fixed, and the other arranged so as to be moved or slid upon the fixed bearings V, toward or away from the other box, when operated upon, by properly turning the cam-lever cam W in the proper direction therefor. These rollers R R and S S are for rolling the sides to a railroad-rail, and upon their peripheries are formed accordingly, as is apparent from an inspection of the Figs. 3 and 4 of the drawings more particularly.

The raised flange-roller to the upper roller, if desired to forge or roll the center portion of a bar without heating the ends, has a segment cut off of its periphery, thus allowing the cold part to pass through, while when the heated portion approaches, the rollers are put in motion, at the same time bringing the side rollers into position through the cam-lever, forging the metal to the required size.

In cases where the metal is heated from one end or all over, the cam-lever and flat place on roller or flange P are not employed.

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

The rollers P, Q, R, and S, in combination with each other, when constructed and arranged together substantially as and for the purpose described.

The above specification of my invention signed by me this 3d day of July, 1867.

HUGH BAINES.

Witnesses:

JOHN L. BLAICKIE,  
THOS. E. LOCKIE.