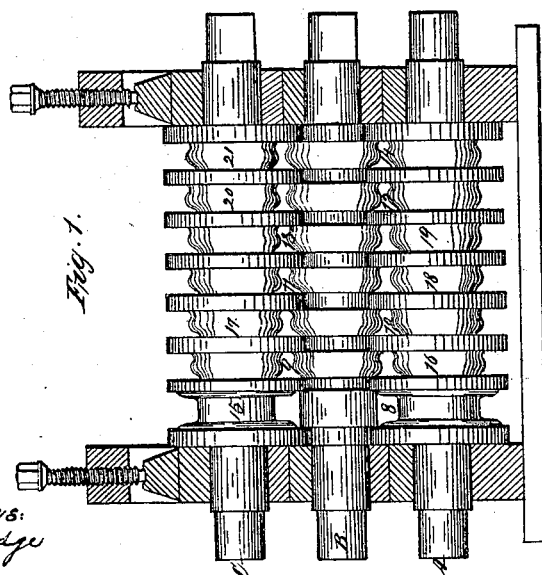
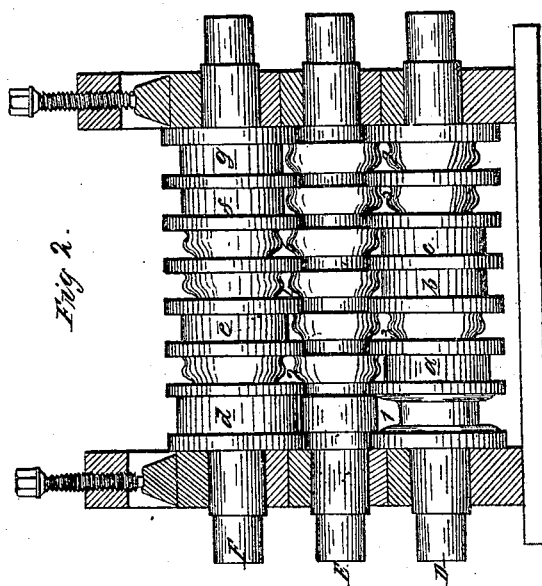


A. J. GUSTIN.  
 ROLLS FOR ROLLING RAILROAD RAILS.

No. 50,816.

Patented Nov. 7, 1865.



Witnesses:  
 Thos H Dodge  
 H L Fuller

Inventor:  
 A J Gustin

# UNITED STATES PATENT OFFICE.

A. J. GUSTIN, OF WORCESTER, MASSACHUSETTS.

## IMPROVEMENT IN ROLLS FOR ROLLING RAILROAD-RAILS.

Specification forming part of Letters Patent No. 50,816, dated November 7, 1865.

*To all whom it may concern:*

Be it known that I, A. J. GUSTIN, of the city and county of Worcester, and State of Massachusetts, have invented a certain new and useful Improvement in Rolls for Rolling Railroad-Iron; 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, forming part of this specification, in which—

Figure 1 represents a front view of my improved rolls, the frame-work being shown in section; and Fig. 2 represents a similar view of the rolls heretofore in use.

In rolling rails by the old style of three-high rolls, as indicated in Fig. 2, the iron passed through groove 1, back through groove 2, thence through groove 3, back through groove 4, and thence through finishing-groove 5. The grooves 4 and 6 are alike, and 5 and 7, so that when the finishing-grooves 4 and 5 become too much worn and roughened to do the work properly the rail is passed through grooves 6 and 7, instead of 4 and 5. It will be observed that the blanks *a*, *b*, and *c* on roll D and the blanks *d*, *e*, *f*, and *g* on roll F are of no use or service, and in rolling rails heretofore have never been utilized. I make the blank *d* to correspond with groove 1, blank *e* to correspond with groove 3, blanks *b* and *c* to correspond with grooves 4 and 6, and blanks *f* and *g* to correspond with grooves 5 and 7, when a set of three-high rolls will appear in position as indicated in Fig. 1. The iron is passed through groove 8, back through 9, thence through 10,

back through 11, and thence through 12. When the finishing-grooves 11 and 12 are worn rough the grooves 13 and 14 are to be used in lieu thereof. When the grooves 8, 9, 10, 11, and 13 and 12 and 14 have become worn, so that no further use can be made of the rolls by the old mode of construction shown in Fig. 2, they were thrown away and entire new rolls substituted, while by my mode of construction the rolls A and C are changed, A being put at the top and C at the bottom, so that by the use of a new roll, B, I obtain a set of three-high rolls capable of doing as much service as has heretofore ever been obtained from a full set of new rolls, thus making a great saving in time and expense. I thus make the rolls A and C answer for and do as much and good work as could be obtained by wearing out two top and two bottom rolls as heretofore constructed and used.

Having described my improved rolls, what I claim therein as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of a set of three high rolls, A, B, and C, for rolling railroad-iron, constructed, arranged, and operating as set forth, whereby the blank spaces in the top and bottom rolls as heretofore used are utilized and made available, as shown and described.

A. J. GUSTIN.

Witnesses:

THOS. H. DODGE,  
H. L. FULLER.