

(No Model.)

A. MÄRKLIN.

FINISHING ROLLS FOR THE MANUFACTURE OF IRON RAILWAY SLEEPERS.

No. 377,948.

Patented Feb. 14, 1888.

Fig. 5.



Fig. 3.

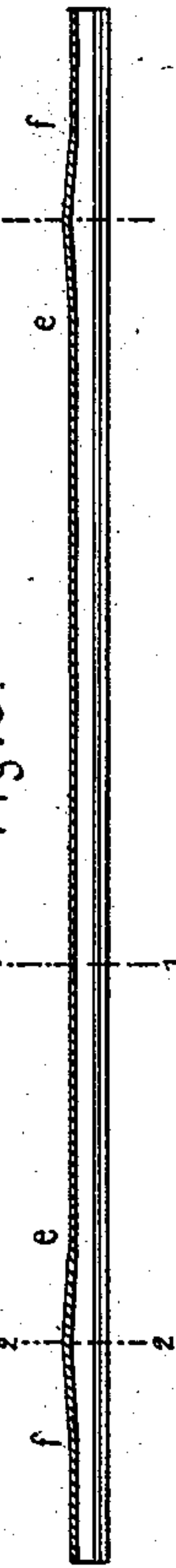


Fig. 4.



Fig. 2.

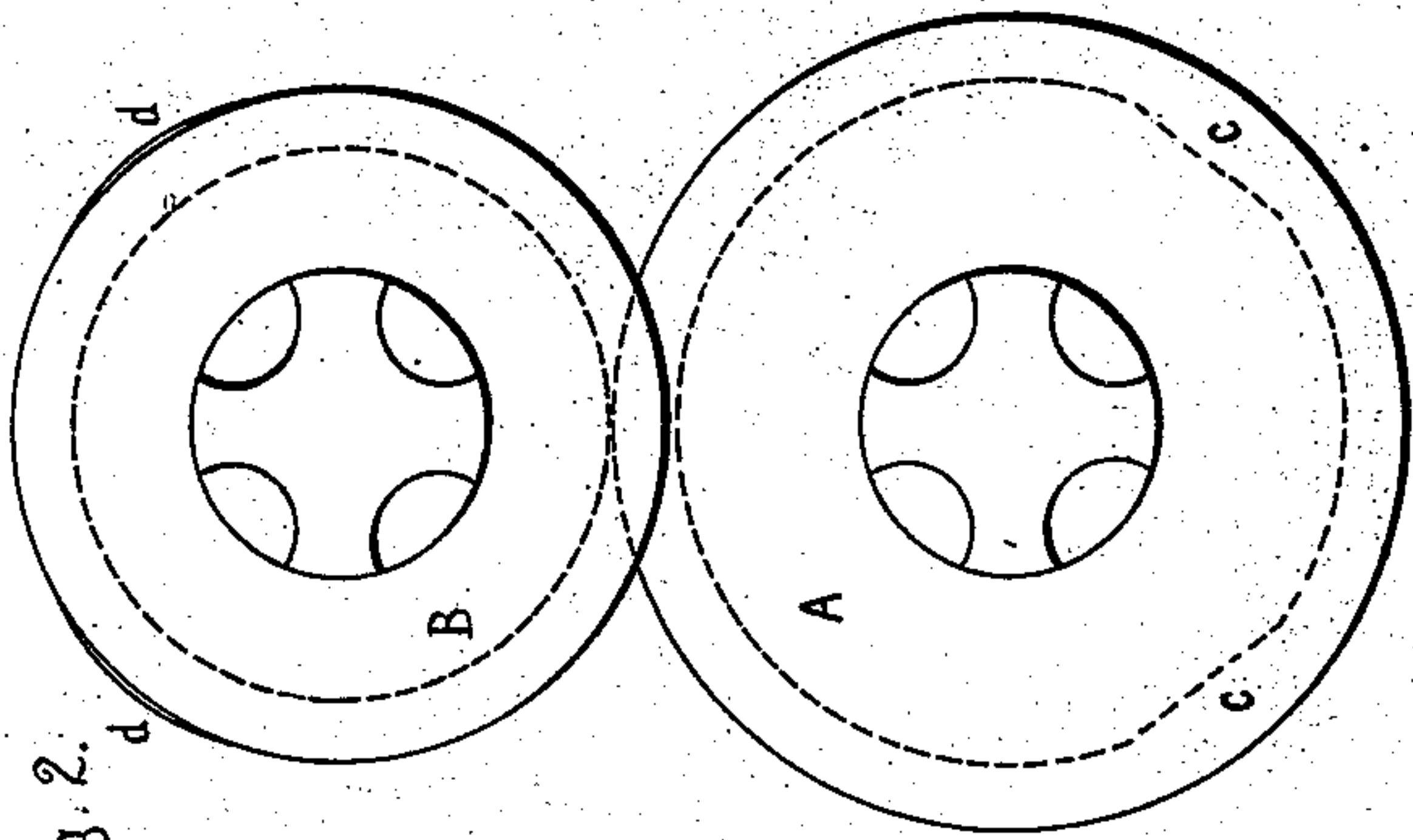
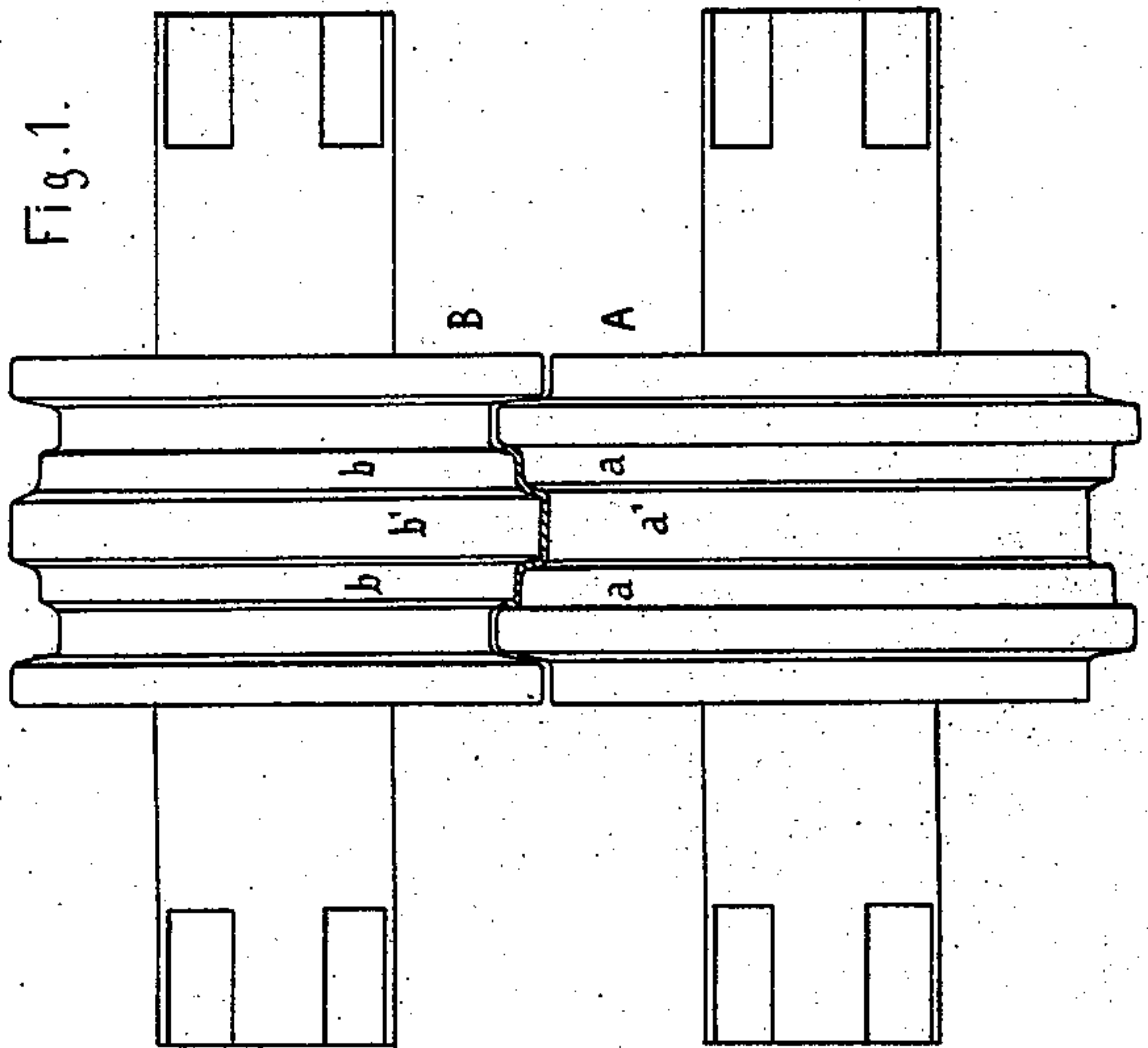


Fig. 1.



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UNITED STATES PATENT OFFICE.

ADOLF MÄRKLIN, OF HOERDE, PRUSSIA, GERMANY, ASSIGNOR TO HOERDER
BERGWERKS UND HÜTTENVEREIN, OF SAME PLACE.

FINISHING-ROLLS FOR THE MANUFACTURE OF IRON RAILWAY-SLEEPERS.

SPECIFICATION forming part of Letters Patent No. 377,948, dated February 14, 1888.

Application filed December 1, 1887. Serial No. 256,681. (No model.) Patented in England May 30, 1884, No. 8,428; in Belgium June 3, 1884, No. 65,362; in Luxemburg June 4, 1884, No. 408, and in France September 20, 1884, No. 164,401.

To all whom it may concern:

Be it known that I, ADOLF MÄRKLIN, a subject of the King of Prussia, and residing at Hoerde, Kingdom of Prussia, have invented
5 new and useful Improvements in Finishing-Rolls for the Manufacture of Iron Railway-Sleepers, (for which Letters Patent have been granted in Great Britain, May 30, 1884, No. 8,428; in Belgium, June 3, 1884, No. 65,362;
10 in Luxemburg, June 4, 1884, No. 408, and in France, September 20, 1884, No. 164,401,) whereof the following is a specification.

My invention relates to rolling-mills for the manufacture of iron or steel railway-sleepers
15 having the shape of an inverted flanged gutter; and the object of the same is to form upon these sleepers, by the last pass through the mill, inclined projections, such as are required at the bearing-points of the rails, in view of causing
20 the rails to lean toward each other.

The improvement by which this object is attained consists in the combination together of two co-operating rolls having the requisite profile for finishing the said sleepers, and one
25 of which is provided on its periphery with recesses, while the other one is either circular or made with corresponding elevations, the said recesses, or both the recesses and elevations, having such shape and being so arranged
30 that in the rolling operation the desired projections will be formed thereby.

On the annexed sheet of drawings, Figures 1 and 2 are two views of a pair of rolls, A B, having recesses and also elevations. Fig. 3 is
35 a longitudinal section of a sleeper produced by the said rolls, while Figs. 4 and 5 are transverse sections of the same on the respective lines 1 1 and 2 2.

The roll A has the cylindrical parts *a a*, and
40 the roll B the like parts *b b*, co-operating with the former to form the flanges of the sleeper, whereas, by means of the groove *a'* of the roll

A and the projecting part *b'* of the roll B, the gutter-like portion of the sleeper is produced. In the bottom surface of the groove *a'* there
45 are the recesses *c c*, and on the projecting part *b'* the elevations *d d*, corresponding in form and reciprocal distance with the former. While with the rolls thus constructed the cylindrical parts *a a* and *b b* roll out the flanges of the
50 sleeper in a straight line, the elevations *d d* press the portions *e f e f* into the recesses *c c* and thereby raise them, so that while projecting outside they are hollow inside.

If the projecting part *b* of the roll B is made
55 without the elevations *d*—that is to say, if it is circular—the sleeper will be rolled with the inclined projections *e f* on its outer top surface, while its inner surface becomes straight, the projecting portions increasing in thick-
60 ness from *e* to the highest point and then diminishing again.

I claim as my invention—

1. In a rolling-mill, the combination together of the roll A, having the cylindrical
65 parts *a a* and the groove *a'*, with recesses *c c*, and the roll B, having the cylindrical parts *b b* and the projecting part *b'*, substantially as and for the purpose described.

2. In a rolling-mill, the combination to-
70 gether of the roll A, having the cylindrical parts *a a* and the groove *a'*, with recesses *c c*, and the roll B, having the cylindrical parts *b b* and the projecting part *b'*, with the elevations *d d*, corresponding to the recesses *c c*,
75 substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ADOLF MÄRKLIN.

Witnesses:

FRITZ MOELLENHOFF,
HERMANN KUHUS.