(No Model.)

C. E. SWINERTON.

DRIVING WHEEL.

No. 412,937. Patented Oct. 15, 1889.

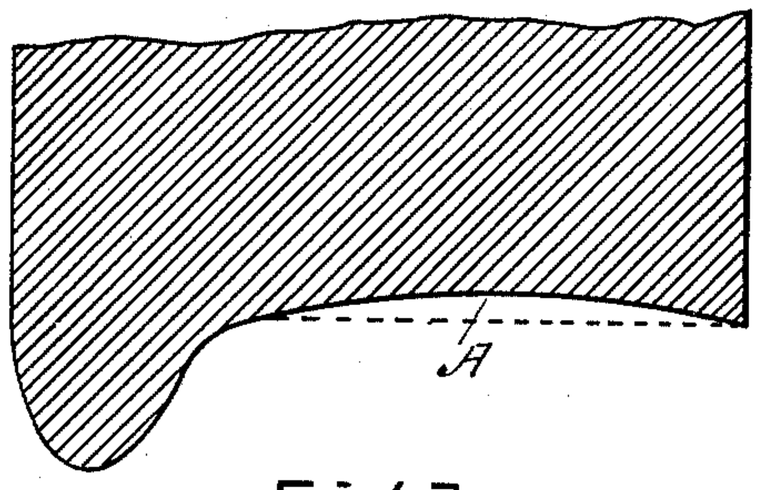

Fig. 1.

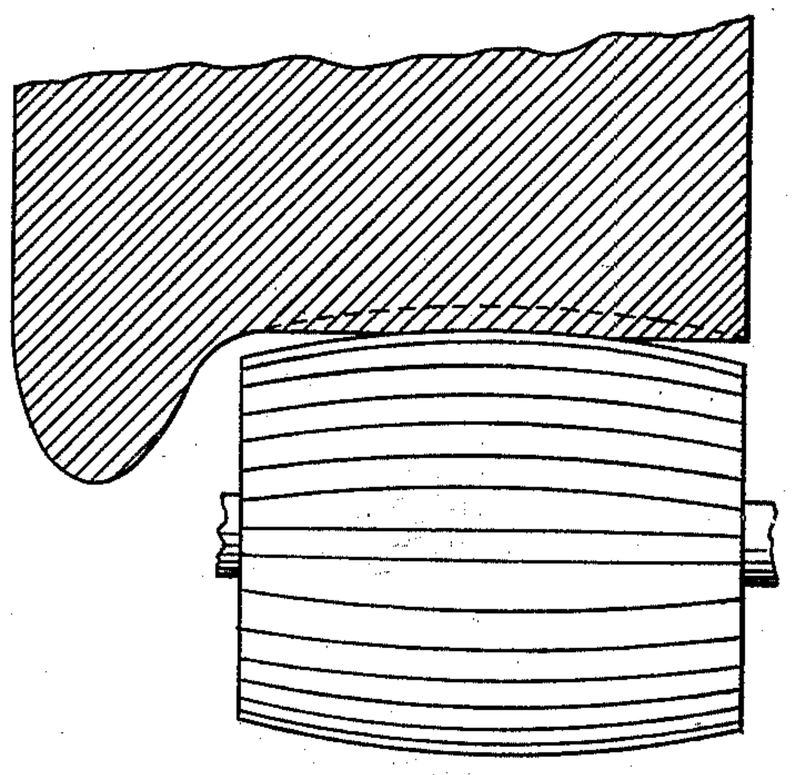

Fig. 2.

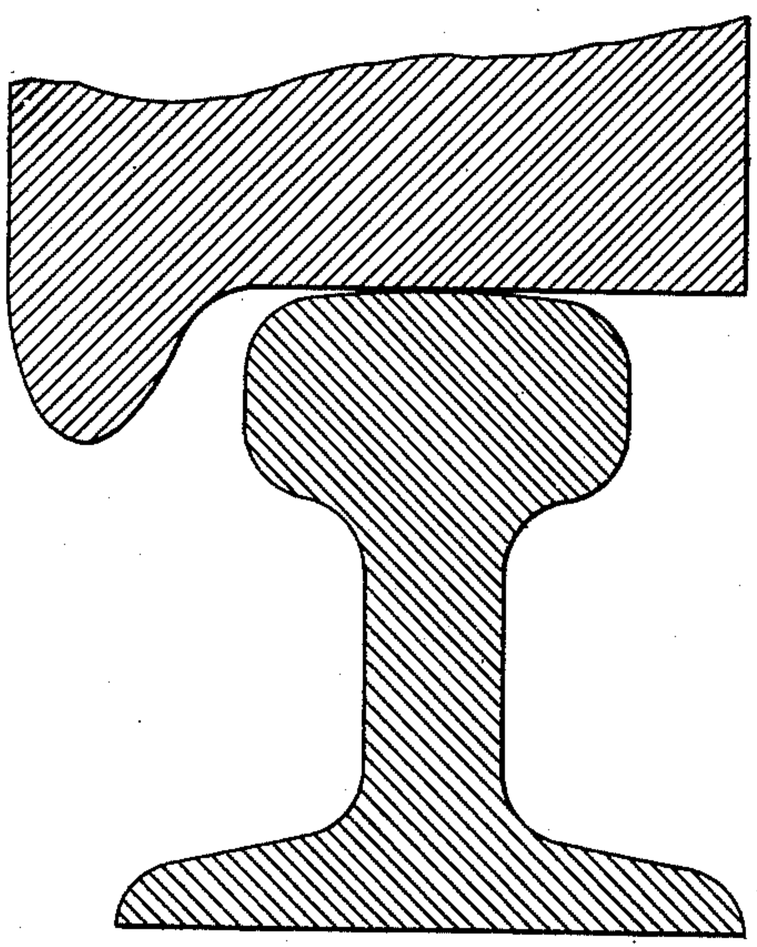

Fig. 3.

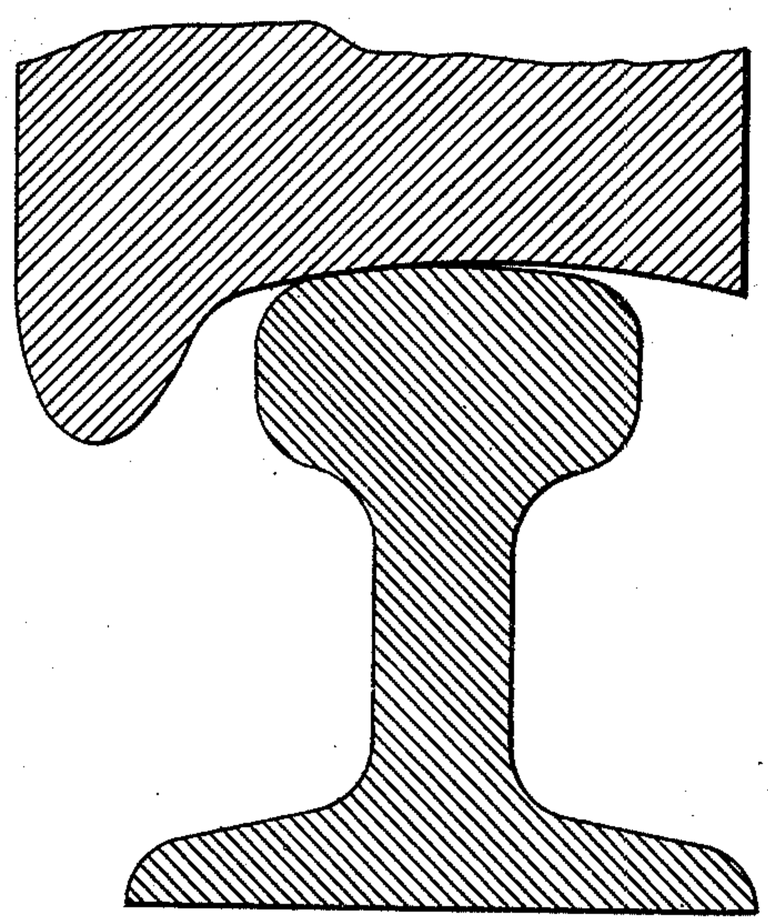

Fig. 4.

WITNESSES.

John H. Taylor

Ellen B. Tomlinson.

INVENTOR.

Charles E. Swinerton

by Alex. P. Browne,

attorney.

UNITED STATES PATENT OFFICE.

CHARLES E. SWINERTON, OF NEW YORK, N. Y.

DRIVING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 412,937, dated October 15, 1889.

Application filed January 31, 1889. Serial No. 298,209. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SWINERTON, of the city, county, and State of New York, and a citizen of the United States, have invented certain new and useful Improvements in Driving-Wheels, of which the following is a specification.

My present invention relates to locomotive driving-wheels, and its object is to produce a driving-wheel having certain improved features of construction whereby its efficiency and value are increased.

In the accompanying drawings, at Figure 1, I have shown in vertical section a portion of a driving-wheel embodying my present invention. I have also shown at Fig. 2, for the further illustration of my invention, the cutting-tool which I prefer to use in producing my improvement, and I have represented it in connection with a partially-formed facet. Figs. 3 and 4 are views of certain details, which will be hereinafter more fully described.

In my United States patent, No. 362,046, dated April 26, 1887, I described and claimed a driving-wheel having a tread provided with plane faces or facets, which plane faces and their interposed angles collectively formed a polygon.

According to my present improvement, instead of making the wheel with plane faces, I make it with concaved faces or facets—that is to say, faces made concave transversely to the bearing face or tread of the wheel. This construction is represented at A, Fig. 1, of the drawings.

As is well known, the tread or upper surface of the railway-rail now ordinarily used has a convex form, substantially as represented at Figs. 3 and 4. In view of this fact it follows that by forming the tread of the wheel with facets concaved transversely to the tread I obtain an increased efficiency of the wheel as a driving-wheel, while at the same time, as is obvious, I need not alter the distance from angle to angle of the concaved face as compared with that of the plane face of my prior patent.

As will be seen by comparison of Figs. 3 and 4, one of which represents substantially the extent of contact between the present rail and a wheel constructed according to my former patent and the other the increased extent of contact between the same rail and a wheel embodying my present improvement, the last-named construction gives a material increase of effective contact-surface.

While it is obvious that the concave faces of my present invention may be formed upon the tread of the wheel by any suitable mechanism, I prefer to employ for this purpose a rotary cutter the blades of which shall have a convexity substantially corresponding to the convexity of the tread of the ordinary railway-rail. In this way exact similarity of concavity in the several facets of different wheels is readily secured. It will be understood that this cutter is a well-known implement in metal-working, and in doing its work is operated in the ordinary well-known manner.

I claim—

A driving-wheel having its bearing-face provided with facets concaved transversely to the tread of the wheel to approximately conform to the surface of the rail, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 29th day of January, A. D. 1889.

CHARLES E. SWINERTON.

Witnesses:
ELLEN B. TOMLINSON,
JOHN H. TAYLOR.