

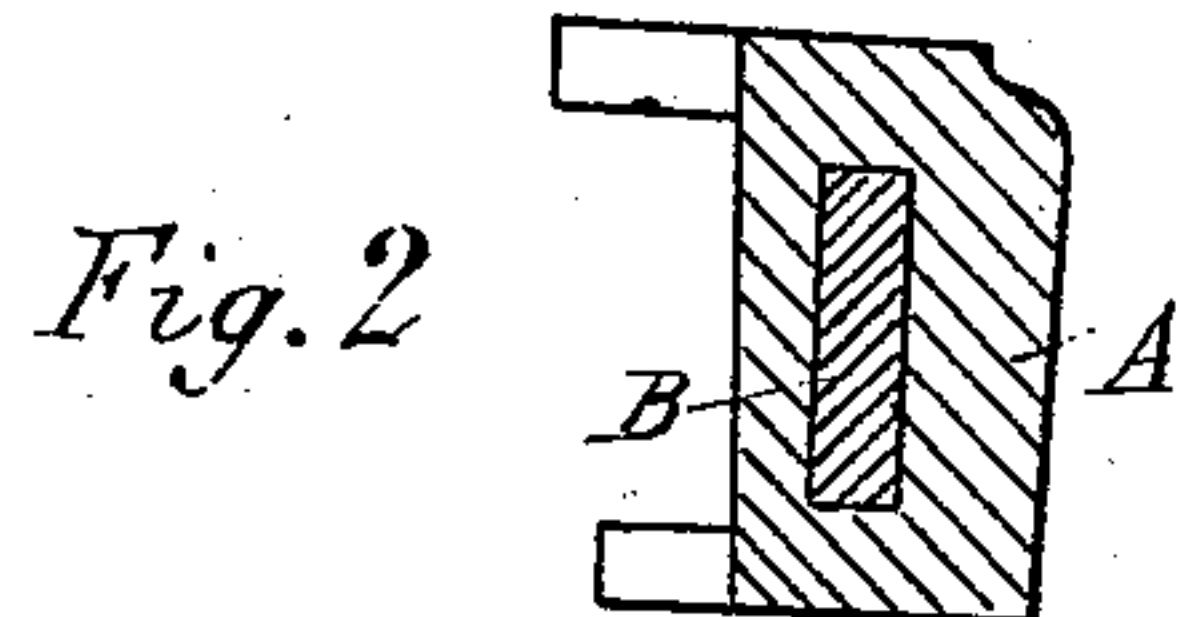
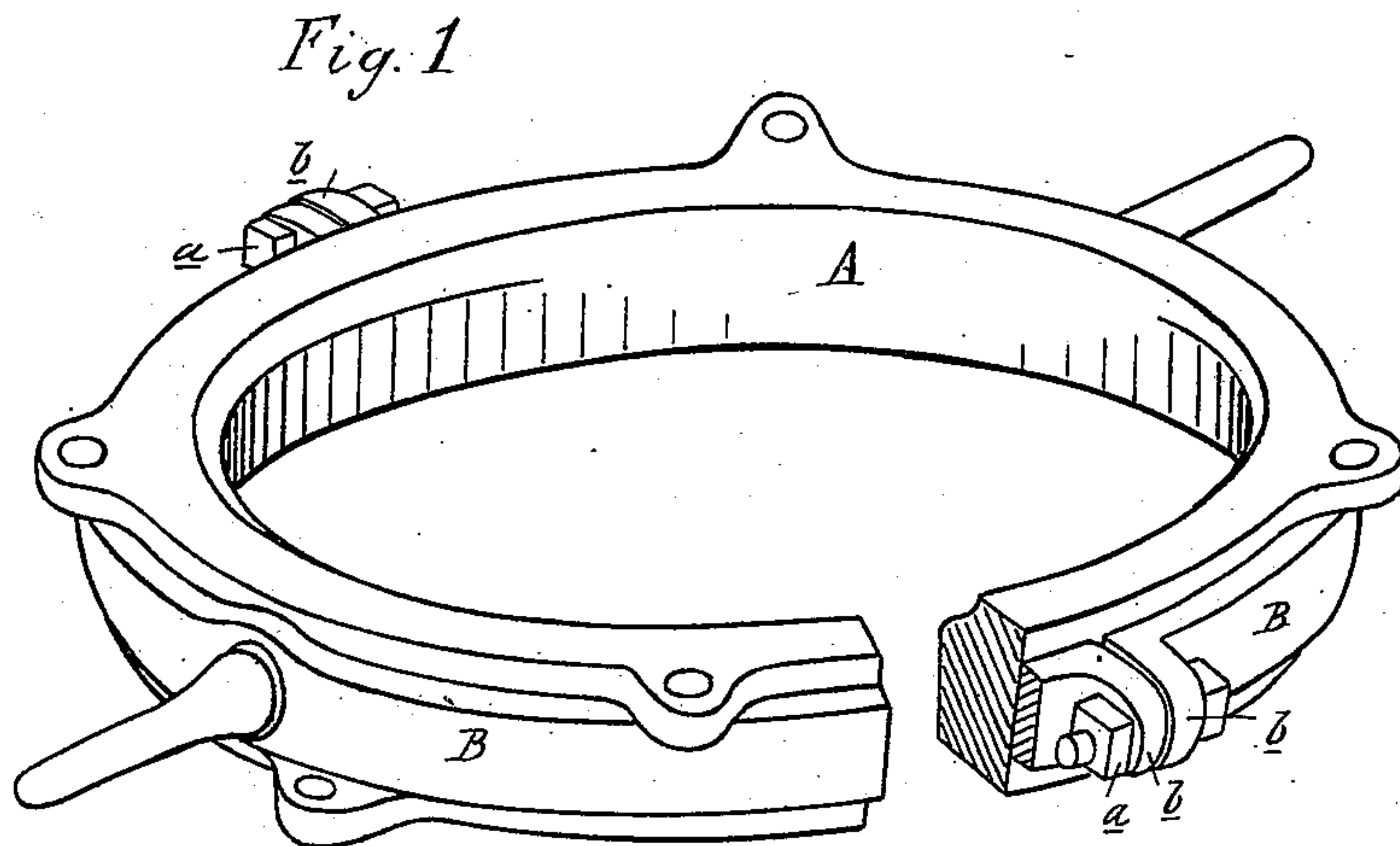
(No Model.)

J. H. WHITING.

CHILL FOR CASTING CAR WHEELS.

No. 310,007.

Patented Dec. 30, 1884.



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UNITED STATES PATENT OFFICE.

J. HILL WHITING, OF DETROIT, MICHIGAN.

CHILL FOR CASTING CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 310,007, dated December 30, 1884.

Application filed July 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, J. HILL WHITING, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Chills for Casting Car-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in chills especially adapted for the casting of car-wheels, where it is necessary to chill the "tread" of the wheel. By the employment of the chills as ordinarily constructed and used, there is great liability in the cooling of the wheel that chill-cracks will be formed in the wheel, which ruin it. This is occasioned by the fact that the contact between the face of the chill and the tread of the wheel is broken by the unequal expansion and contraction of the two parts named, it being a well-known fact that such contraction and expansion are unequal in metals of different density and under varying conditions of heat.

The object of the present invention is to prevent the breaking of contact between the chill and wheel during the cooling of the latter.

The invention consists in providing the chill with a band of wrought-iron, which resists the expansion of the chill by its contact with the hot iron as the metal is poured into the mold, and prevents the breaking of the contact between the parts, as above described.

Figure 1 is a perspective view of a chill of the kind employed for chilling car-wheels, with the band of wrought-iron secured to the periphery of the chill. Fig. 2 is a vertical cross-section of a chill with the band concealed within the body of the same.

In the accompanying drawings, which form a part of this specification, A represents a chill for chilling the tread of a car-wheel cast and finished in the usual manner. Around this chill there is secured tightly the two-part band B, made of wrought-iron, the two parts being secured together tightly around the chill by means of the bolts *a*, passing through the ears *b*, with which each end of each half of the band is provided.

As this method of employing the band requires much labor to accurately fit the parts so that the strain of the band will bear equally upon the periphery of the chill, I prefer to prepare the band and cast the chill around it, as shown in Fig. 2, where the band is concealed within the casting which forms the chill. This is equally effective for the purpose, with the other way described, of securing the band around the outside of the chill, while it requires no fitting.

Practical experience has demonstrated the fact that this band employed with the chill preserves the contact between the chill and tread of the wheel necessary to produce a perfect chill and to prevent the chill-cracks hereinbefore described.

What I claim as my invention is—

1. In combination with a chill for casting car-wheels, a wrought-iron band extending around the chilling-surface at a distance from the same, as and for the purposes specified.

2. In combination with a chill for casting car-wheels, the wrought-iron band or ring embedded within said chill, substantially as and for the purposes described.

J. HILL WHITING.

Witnesses:

H. S. SPRAGUE,
E. SCULLY.