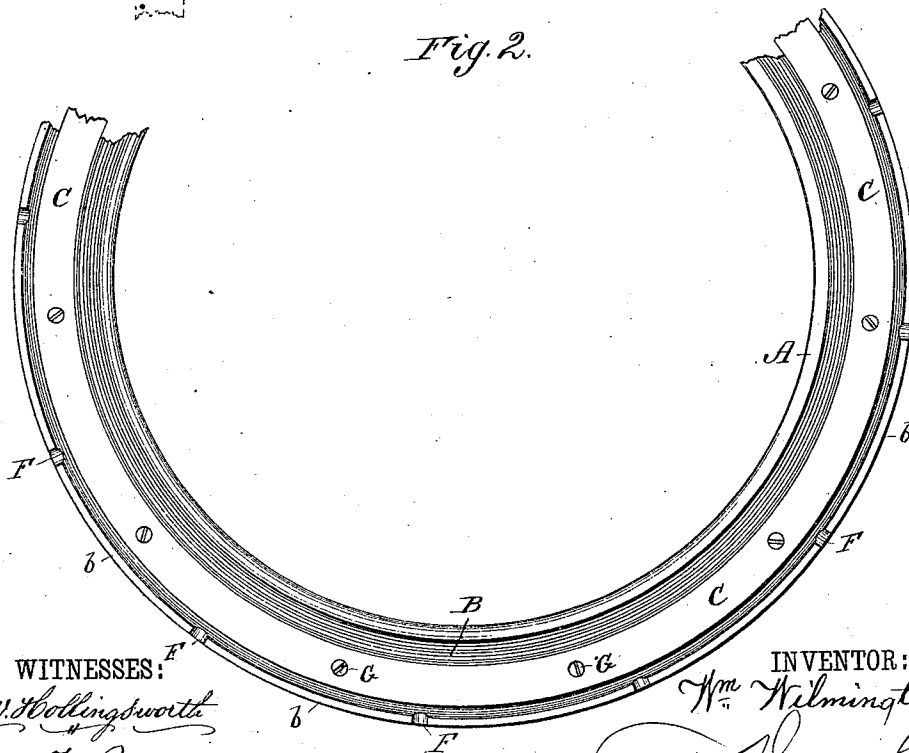
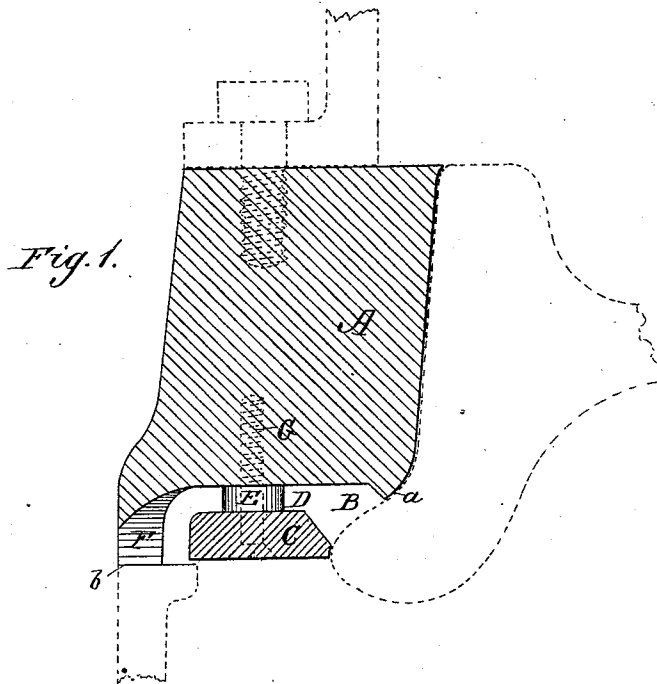


(No Model.)

W. WILMINGTON.
CAR WHEEL CHILL,

No. 282,825.

Patented Aug. 7, 1883.



WITNESSES:
W. W. Hollingsworth
Edw. W. Byrnes

INVENTOR:
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UNITED STATES PATENT OFFICE.

WILLIAM WILMINGTON, OF TOLEDO, OHIO.

CAR-WHEEL CHILL.

SPECIFICATION forming part of Letters Patent No. 282,825, dated August 7, 1883.

Application filed January 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, WM. WILMINGTON, of Toledo, in the county of Lucas and State of Ohio, have invented a new and Improved Car-
5 Wheel Chill; 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.

10 This invention relates to improvements in car-wheel chills of that class which have in the outer portion of the flange-face a peripheral receptacle for the reception of sand, or its equivalent, the purpose of which is to retard the cooling of the molten iron composing
15 the outer portion of the flange, to increase the depth of the chilled iron in the concave part of the tread and flange of the wheel. Heretofore this class of car-wheel chills had a series of openings which communicated at intervals with the rear of the receptacle and extended
20 outward for the escape of gases from the receptacle to the outer air. This method of ventilation of the peripheral receptacle is imperfect and the construction of the chill expensive.
25

To lessen the cost of the chill and improve the method of escapement outward of gases generated in the receptacle is the object of
30 my improvement, which consists in providing the inner portion of the drag-face of the chill with a ring separated from the body of the chill by washers or projections on the ring or body of the chill. The ring is fastened to
35 the body of the chill by screw-bolts or otherwise, and arranged to form a circular opening communicating with the peripheral receptacle, and forming a passage-way for the escape of gases from this receptacle around the outer
40 periphery of the ring through suitable devices to the outer air; thus preventing the gases generated in the receptacle from being forced inward in contact with the semi-solidified iron forming the tread of the wheel, which involves the objection of impairing its durability.
45

Figure 1 is a cross-section of the chill, showing in dotted lines the position of the cope, drag, and the wheel that is being cast. Fig.
50 2 is a partial view of the drag-face of the chill, shown on a reduced scale.

In the drawings, A represents the body portion of the old form of chill, whose drag-face I cut away, forming a circular recess. The part *a* of the flange-face forms the inner wall
55 of the sand-receptacle B, and the portion of the drag-face of the chill outside of the recess is formed, at intervals of about six inches, into radial channels F, extending to the outer periphery of the chill. The parts of the drag-
60 face between the channels at *b* project slightly below the plane of the ring C for the purpose of relieving the ring from the weight of the chill.

The ring C forms the inner portion of the
65 drag-face of the chill, and also the outer wall of the receptacle B. This ring can be made of wrought or cast iron in a single piece, or in sections, as may be desired.

The washers or projections E are placed at
70 intervals between the ring and the bottom of the recess in the chill, and the circular opening D forms a continuous passage-way for the gases from said receptacle B to the radial
75 channels F in the drag-face and thence to the outer air. The ring is retained in place by countersunk screw-bolts G, or by suitable lugs on the periphery of the ring and chill. However, I do not confine myself to any particular
80 method of retaining the ring in place, but adopt the method that may be preferred, depending on the character of the chill.

What I claim is—

1. A car-wheel chill composed of two annular sections, forming between them both a re-
85 ceptacle for sand or other non-conducting material and the vent-opening leading therefrom, substantially as and for the purpose described.

2. A car-wheel chill composed of a main body portion having its flange-face and inner
90 drag-face recessed, as described, and provided with channels F, in combination with a separate ring held to the chill-body, as described, and forming between it and the said body portion both a receptacle for sand or
95 other non-conducting material and the vent-opening leading therefrom outwardly, substantially as described.

WILLIAM WILMINGTON.

Witnesses:

GEORGE R. MILLER,
CHARLES I. SCOTT.