

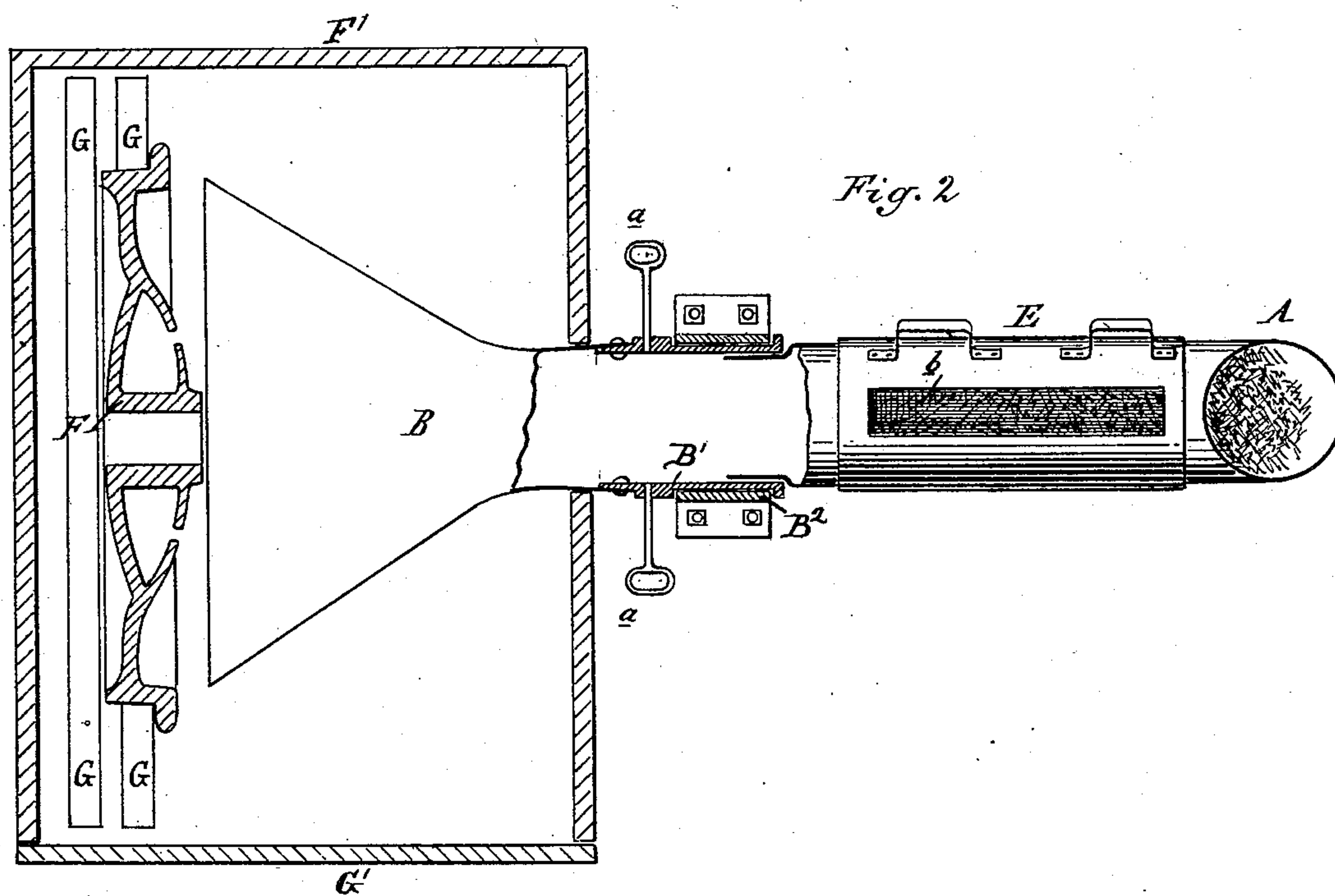
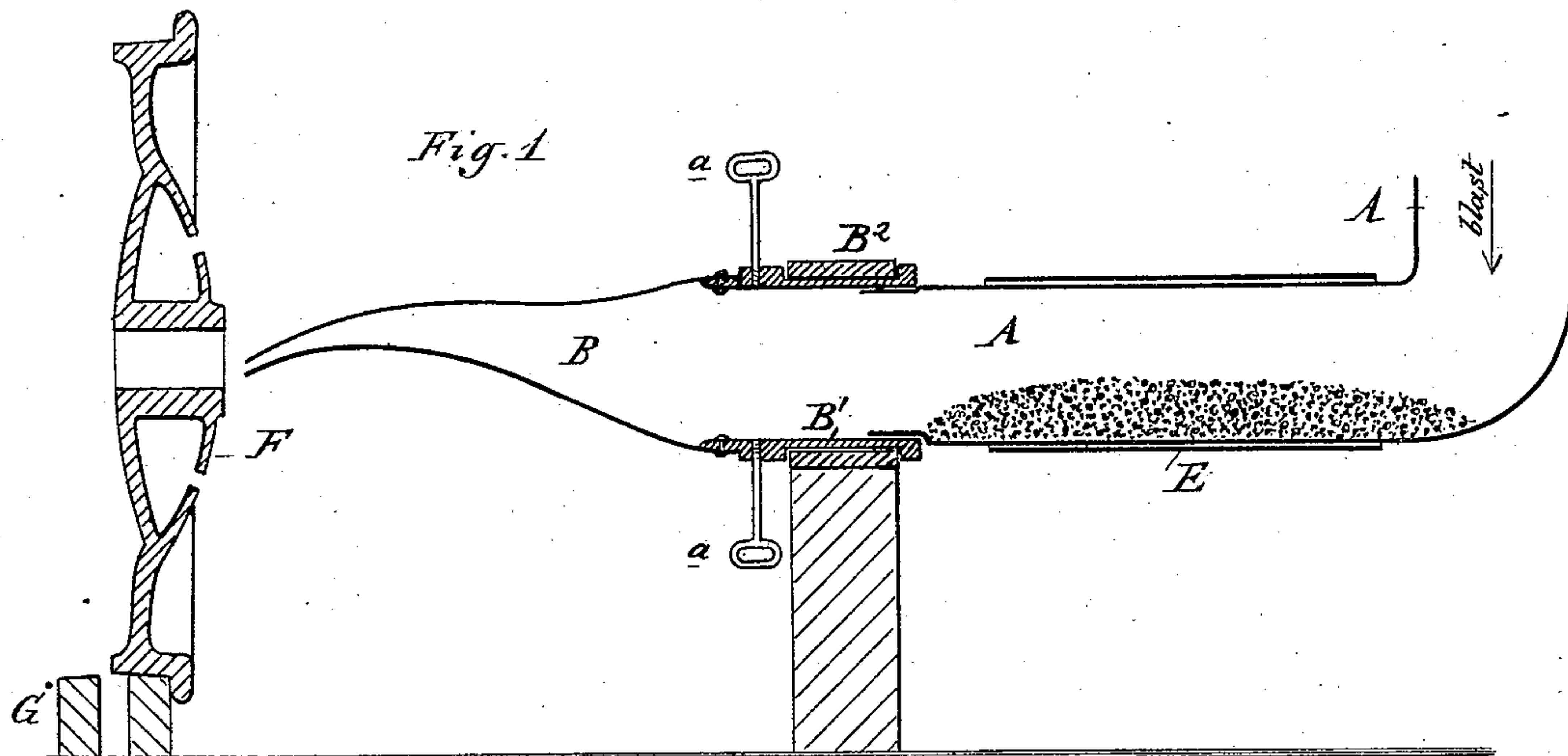
(No Model.)

P. H. GRIFFIN.

DEVICE FOR CLEANING CAR WHEELS.

No. 247,045.

Patented Sept. 13, 1881.



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UNITED STATES PATENT OFFICE.

P. HENRY GRIFFIN, OF DETROIT, MICHIGAN.

DEVICE FOR CLEANING CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 247,045, dated September 13, 1881.

Application filed May 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, P. HENRY GRIFFIN, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in
5 Devices for Cleaning Car-Wheels, of which the following is a specification.

In the process of manufacturing car-wheels they necessarily become coated to a greater or less degree with the molding-sand; and in all
10 instances it is burned and baked upon the surface of the wheel. To clean them and remove this sand and scale generally takes a man with brush and scrapers from one-half to three-quarters of an hour to effect it, thereby increasing
15 the cost of the wheel to the manufacturers.

The object of this invention is to construct a device for cleaning car-wheels through the medium of coarse cinders or other analogous substances, which are projected against the
20 wheel under the influence of a blast; and the invention consists in the peculiar construction, arrangement, and various combinations of the parts, all as more fully hereinafter set forth.

Figure 1 is a longitudinal vertical central
25 section. Fig. 2 is a sectional plan.

In the accompanying drawings, which form a part of this specification, A represents a pipe, which leads to any proper blast-fan. To the forward end of this pipe A is secured a nozzle,
30 B, in such a manner that said nozzle may be revolved by means of the handles *a* upon the end of the pipe A. The nozzle B is formed so that its discharge will be fan-shaped, and come directly upon a line with the center of the hub
35 in the wheel which is to be cleaned. This nozzle is curved so that the discharge will be in an oblique line from the axis of the pipe through which the air-blast comes.

The sides of the discharge-tube gradually
40 come closer together from the sleeve B' to its fan-shaped end, so as to more effectually spread the cinders or other cutting materials as they escape from said fan-shaped discharge. The fan-shaped end can be formed by gradually
45 compressing the largest end of a conical tube until the end of said tube is of the desired shape. By this method of construction the discharge end of the tube is easily formed and remains of nearly the same capacity as the

body of the tube, although it may be made 50 much smaller, if desired, by continuing the compressing process.

In the pipe A there are formed one or more openings, *b*, through which the cinders are introduced into the pipe, said openings to be
55 closed during the operation of the blast by means of a thimble, E, around the pipe, said thimble having an opening or openings to correspond with the pipe, and adapted to turn on the latter, or in any other convenient or de- 60 sired manner.

In practice the cinders are introduced into the pipe A through the openings *b* until said pipe is about half full, when the opening or openings are closed, and the wheel F to be
65 cleaned is blocked upon a track, G, in close proximity to the discharge of the nozzle B, the hole through the hub of the wheel being opposite the center of the discharge. The air-blast is then turned on and passes through the
70 pipe A with considerable force, gradually carrying the cinders with it and projecting them through the nozzle B in an oblique direction against the face of the wheel and through the cored openings in the wheel. During this op- 75 eration the nozzle B is revolved one or more times by means of the handle *a*, thus bringing the cinder-blast upon all points of the wheel upon the side which is presented to the blast, and thereby effectually removing the sand from 80 the wheel, the ribs, and the cored center.

A box, F', of any suitable form surrounds the wheel undergoing the cleaning operation, and is provided with a door, G', to allow the passage of the wheel into and out of the box. 85 The purpose of this box is to prevent the undue spreading of the cinders or material used to clean the wheel.

By the use of this device I am enabled to clean a car-wheel in the space of one to two 90 minutes, whereas heretofore it has taken from one-half to three-quarters of an hour to do the same by hand labor.

Although the drawings and specifications only show my device as applied to one side of the 95 wheel to be cleaned, in practice it is the intention to apply it simultaneously to both sides in the same manner.

I am aware that it is not broadly new to clean the surface of cast or wrought iron with what is known as a "sand blast," and therefore I do not broadly claim such invention.

5 What I claim as my invention is—

1. In a device for cleaning car-wheels, a revolving nozzle provided with a fan-shaped discharge, gradually decreasing in thickness from its inlet to its outlet end, and adapted to deliver a cinder-blast in a direction oblique to its axis, whereby a scraping action of the cinders upon the surfaces to be cleaned is obtained, substantially as set forth.

15 2. In a device for cleaning car-wheels, a nozzle, B, having a fan-shaped discharge gradually decreasing in thickness from its inlet to its outlet end, and adapted to be rotated in a fixed bearing, in combination with a suitable pipe for supplying said nozzle with a supply
20 of cinders or other analogous substance, and

of air for propelling said substance, substantially as and for the purpose specified.

3. In combination with the rotating nozzle B, the sleeve B', and the bearing B², the stationary blast-pipe A, having one or more openings, b, and the sleeve or thimble E, provided with corresponding openings, substantially as
25 and for the purpose specified.

4. The sleeve B', adapted to rotate within the fixed bearing B², and provided at one end with an opening to receive the blast-pipe, and at the other end with a flange for entering the end of the nozzle B, in combination with the blast-pipe A, nozzle B, and suitable means for rotating the sleeve B' and nozzle B, substantially as and for the purpose specified.
30 35

P. HENRY GRIFFIN.

Witnesses:

H. S. SPRAGUE,
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