

C. W. CAROLIN.  
 APPARATUS FOR CLEANING CASTINGS AND THE LIKE.  
 APPLICATION FILED SEPT. 15, 1910.

999,485.

Patented Aug. 1, 1911.

Fig. 1

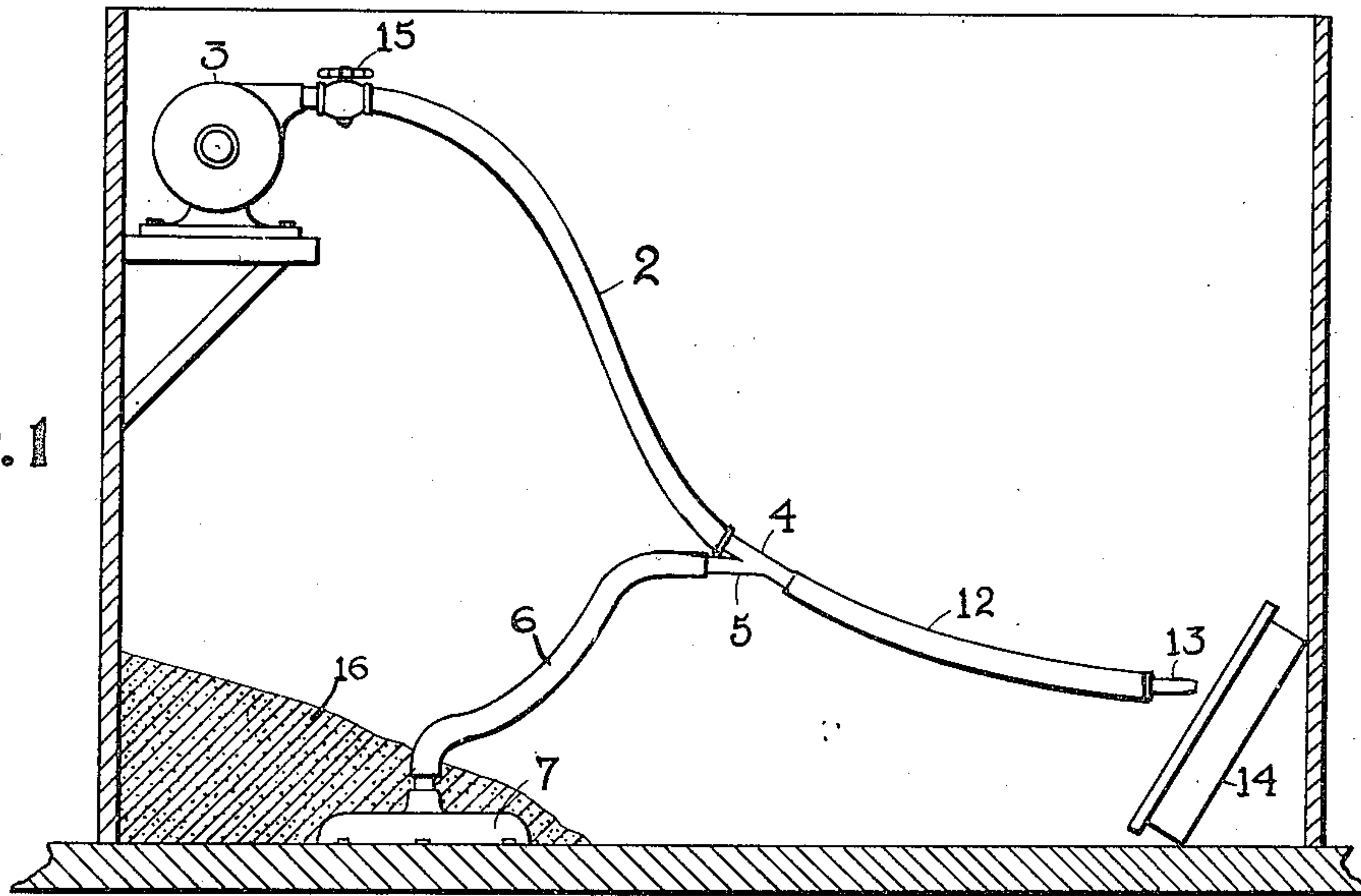


Fig. 2

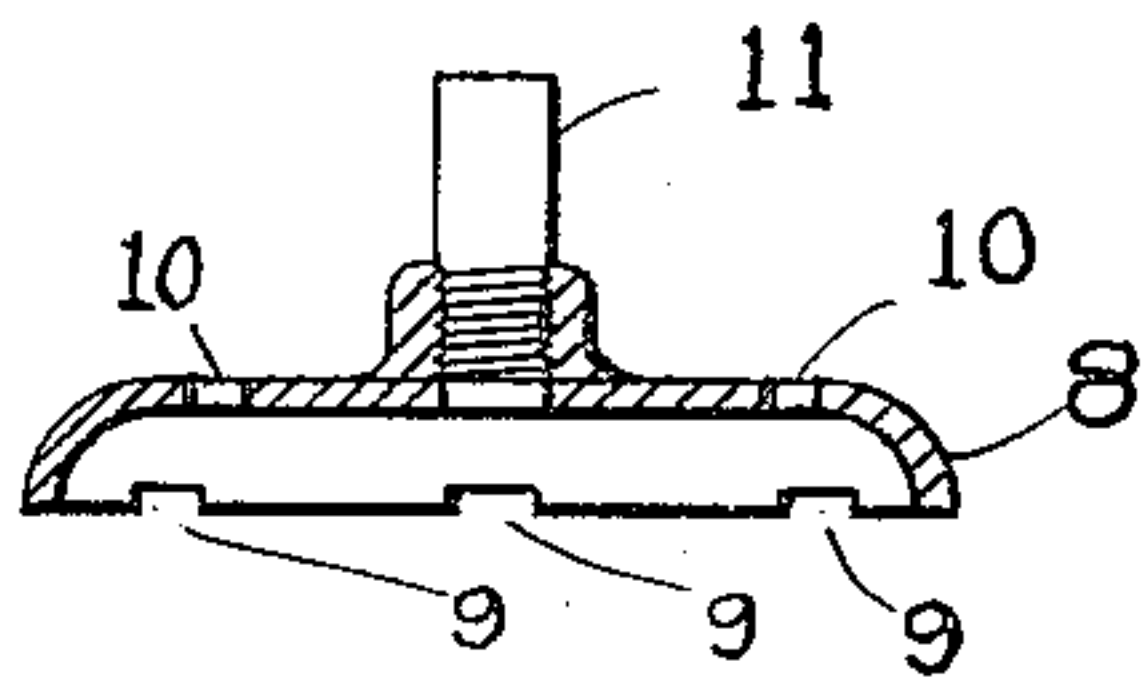


Fig. 4

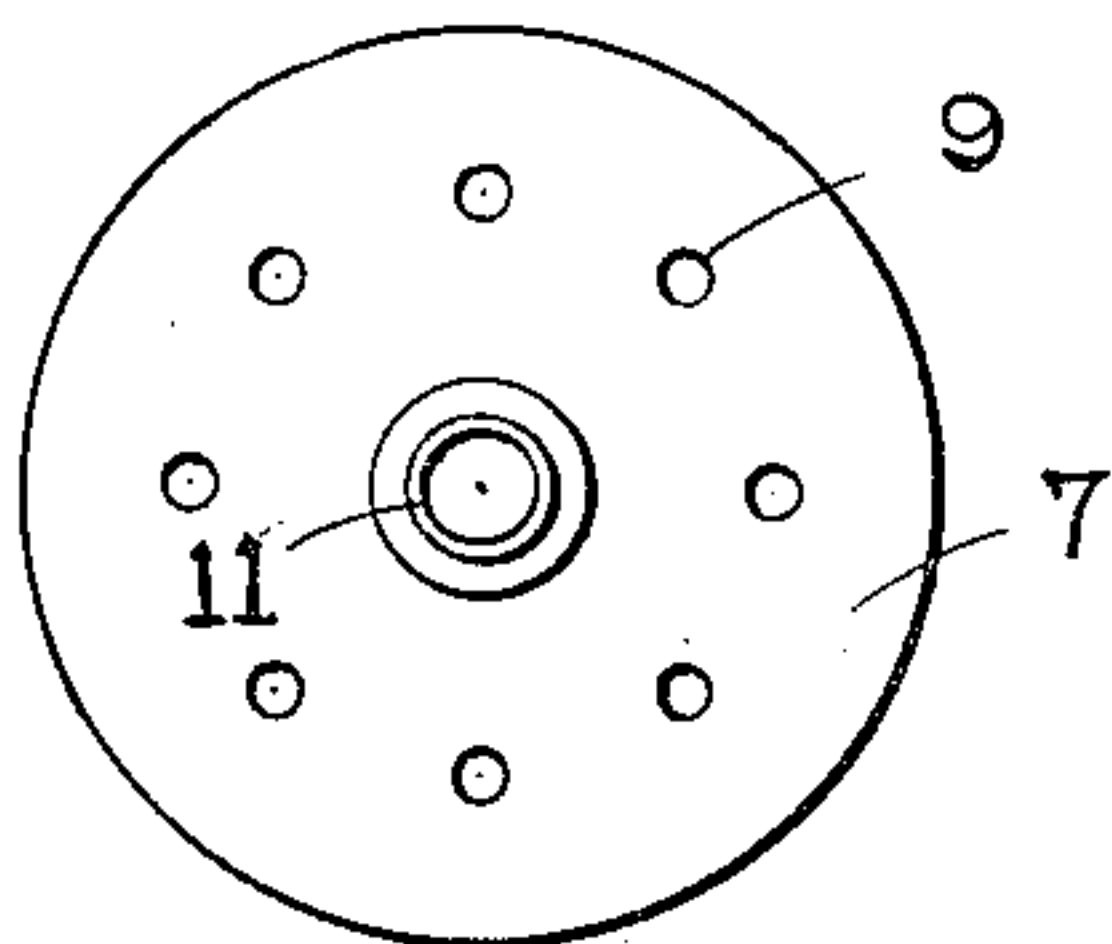
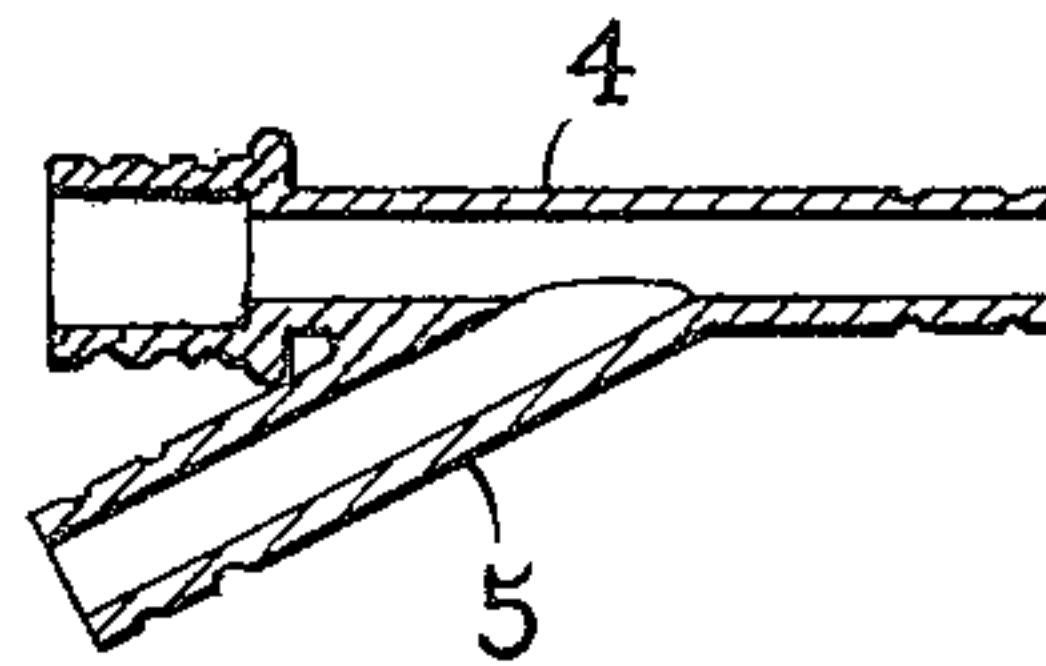


Fig. 3

Witnesses

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# UNITED STATES PATENT OFFICE.

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APPARATUS FOR CLEANING CASTINGS AND THE LIKE.

999,485.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, CHARLES W. CAROLIN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Apparatus for Cleaning Castings and the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to apparatus for cleaning castings whereby sand is used over and over without rehandling for removing the scale, dirt and the like matter from the surfaces of irregular castings or the like.

The invention consists in the matters hereinafter set forth and more particularly pointed out in the appended claim.

In the drawings, Figure 1 is a view partly in section and partly in elevation of an apparatus embodying features of the invention; Fig. 2 is a view in section of a suction plate; Fig. 3 is a plan view thereof; and Fig. 4 is a view in section of an inspirator union.

As herein indicated, a closed bin or casing 1 in which a quantity of blast sand may be placed, has an air blast pipe 2 which may be supplied with air under pressure from a blower 3 of any preferred type, or from exterior sources. The pipe terminates in an inspirator union 4, or Y, the branch 5 of which is connected by a sand suction pipe 6 with a suction plate 7. Preferably the passage from the pipe 2 through the Y is direct and the duct through the off-set 5 opens into it obliquely at a point where it is reduced in diameter to increase the velocity of the air jet. The suction plate 7 which is preferably circular is adapted to rest on a flange 8, when placed on the floor of the bin or casing. A number of notches 9 are formed in the flange and perforations 10 in the body of the plate. A pipe 6 is secured to a central nipple 11 of the plate. A hose 12 or like flexible connection leads from the mouth of the union 4 and has a nozzle 13 by which a jet issuing from the pipe may be directed against the casting, as for example a plate 14 standing in the bin.

The blast may be regulated by any preferred means as for example, by a hand valve 15.

In operation the suction plate which is proportioned to stand readily on the floor of the bin is pushed under sand which is thrown into the bin and the blast from the air fan or like source turned on. The current of air passing through the inspirator sucks in and drives the sand into the nozzle pipe and projects it against the face of a casting or like object toward which the nozzle is directed. The force used is sufficient to cause the sand to rebound from the casting a considerable distance and accumulate on the floor of the bin. The operator by shifting the plate around as the sand accumulates uses it over and over without having to shovel into a special receptacle or compartment or without being obliged to use a conveyer for raising the sand to an overhead bin as is the case with casting cleaning apparatus of the so-called gravity type. This eliminates one step in the process as usually conducted and does without expensive and cumbersome apparatus usually employed for rehandling the sand.

Obviously, changes in the details of construction may be made without departing from the spirit of the invention and I do not wish to limit myself to any particular form or arrangement of parts.

I claim as my invention:

Casting cleaning apparatus comprising a closed casing, an apertured suction pipe provided with a nipple on its upper face and adapted to rest on the floor of the casing, an air blast pipe within the casing from a source of supply of air under pressure, an inspirator union on the outlet end of the pipe, a flexible suction pipe connecting the union and the plate nipple, a flexible hose leading from the outlet of the inspirator union, and a discharge nozzle for the hose.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. CAROLIN.

Witnesses:

OTTO F. BARTHEL,  
C. R. STICKNEY.