(No Model.)

J. E. PARKER.

SAND BLAST APPARATUS FOR CLEANING MOLDS.

No. 554,300. Patented Feb. 11, 1896.

Fig. 1.

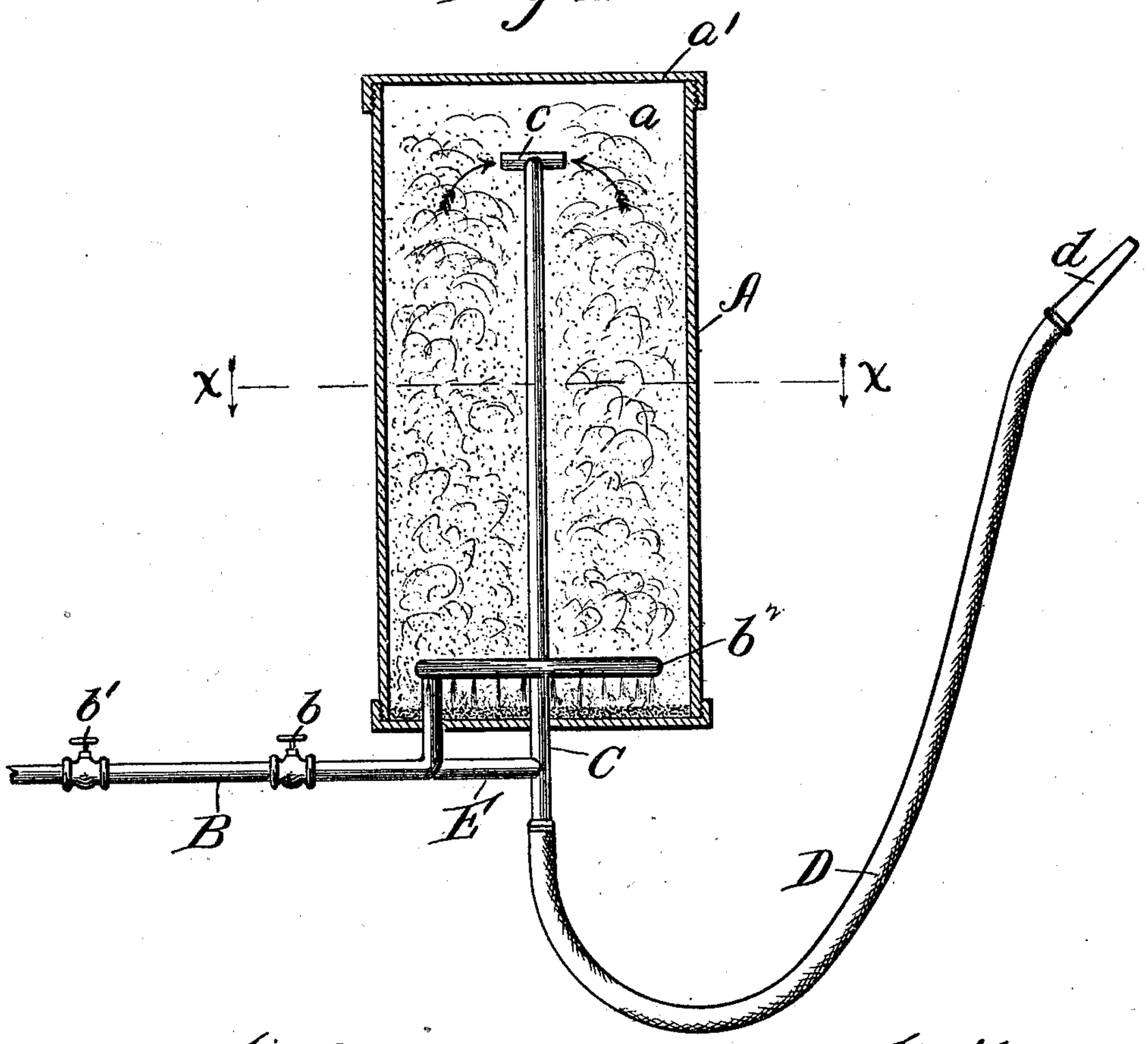


Fig. 2.

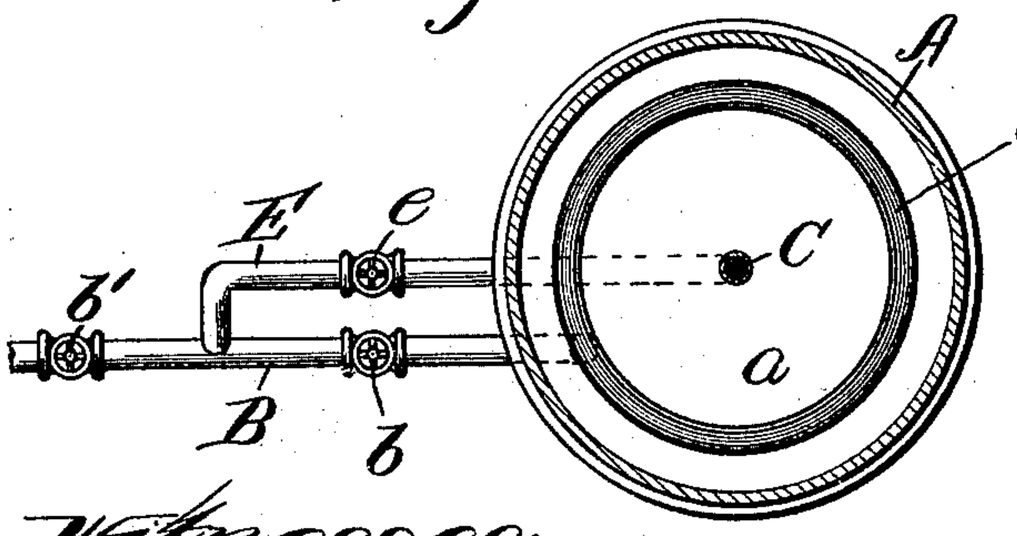
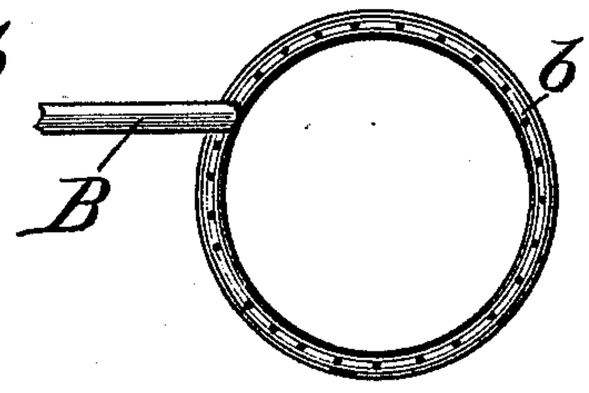


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN E. PARKER, OF CHICAGO, ILLINOIS, ASSIGNOR TO FRED W. MORGAN AND RUFUS WRIGHT, OF SAME PLACE.

SAND-BLAST APPARATUS FOR CLEANING MOLDS.

SPECIFICATION forming part of Letters Patent No. 554,300, dated February 11, 1896.

Application filed April 30, 1895. Serial No. 547,619. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. PARKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Sand-Blast Apparatus for Cleaning Molds, of which the following is a specification.

My invention relates to sand-blast apparatus particularly adapted for finely-ground and bolted sand and designed for service as a means for cleaning molds.

The object of my invention is to provide a simple construction and to cause the sand to rise in the form of a cloud preparatory to its discharge along with the issuing blast of air, thereby avoiding clogging and caking of the sand, which should be directed against the mold in a finely-powdered condition, so as to avoid cutting and unduly wearing the surface of the mold.

In the accompanying drawings, Figure 1 represents an apparatus embodying my invention, the drum or casing being shown in vertical central section and the remaining portion of the apparatus being shown in elevation. Fig. 2 is a sectional plan on line *x x* in Fig. 1. Fig. 3 is a bottom plan of the annular air-blast distributer.

A indicates a closed drum in which the sand is to be contained. The closed chamber *a* within this drum is to be only partially filled with sand, and as a means for introducing a suitable supply the drum can be provided with a removable cap *a'*. The air-blast pipe B is connected with any suitable means for supplying a blast of air, and is arranged to enter the closed chamber through the lower portion of the drum. This pipe B terminates in an annular pipe portion b^2, which is arranged within the lower portion of the chamber. This annular pipe portion b^2 is perforated, so as to permit the air-blast to issue in jets, and thereby be diffused in the body of sand. Said pipe portion b^2 constitutes therefore a distributer for the air-blast.

The outlet-pipe C, which may be termed the "sand-blast" pipe, extends upwardly and centrally through the bottom of the drum and has a T-shaped receiving end *c* arranged within the upper portion of the chamber. D indicates a flexible pipe or hose which is connected with the lower end of the sand-blast pipe C and provided with a suitable nozzle *d*.

E indicates a pipe which is provided with a cock or valve *e* and arranged to form a by-pass between the air-blast-supply pipe B and the sand-blast pipe C, it being observed that the pipe B is provided with cocks or valves *b b'*, and that pipe E connects with pipe B at a point between said valves, and also conveniently connects with the lower portion of pipe C.

The air-blast admitted into the body of sand within the chamber *a* causes the sand to rise in the form of a cloud, and hence the sand thus carried up is carried by the outgoing air into the ends of the T-shaped receiving end of pipe C, and thence down such pipe and to and through the flexible pipe D and its nozzle. The volume of sand in the discharging sand-blast can be varied by adjusting the cock or valve *e*. Thus if it is desired to lessen the volume of sand, the cock *e* can be opened so as to admit a portion of the air-blast from pipe B directly into the pipe C, and in this connection further regulation can also be made by adjusting the cock or valve *b*. In order to entirely cut off the blast, the cock or valve *b'* can be closed.

What I claim as my invention is—

1. A sand-blast apparatus comprising a closed chamber in which the sand is contained, the sand-blast pipe having its receiving end arranged within the upper portion of the chamber and the air-blast-supply pipe connected with means for supplying the blast and terminating in a perforated blast-distributer arranged within the lower portion of the chamber and constructed and positioned to direct the blast-air in jets into the body of sand so as to cause the same to rise in the form of a cloud of dust, substantially as described.

2. A sand-blast apparatus comprising a closed chamber in which the sand is contained, the sand-blast pipe C extending up through the bottom of the chamber and having its receiving end arranged within the upper portion of the same, and the air-blast-supply pipe B terminating in an annular perforated distributer which is arranged within the

lower portion of the chamber, substantially as described.

3. A sand-blast apparatus comprising the drum A, the sand-blast pipe C leading from a point within the upper portion of the drum, the valved air-blast-supply pipe B connected with a suitable source of supply and terminating in a perforated distributer which is arranged within the lower portion of the drum, and a valved by-pass E connecting the pipe B with the pipe C, substantially as described.

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