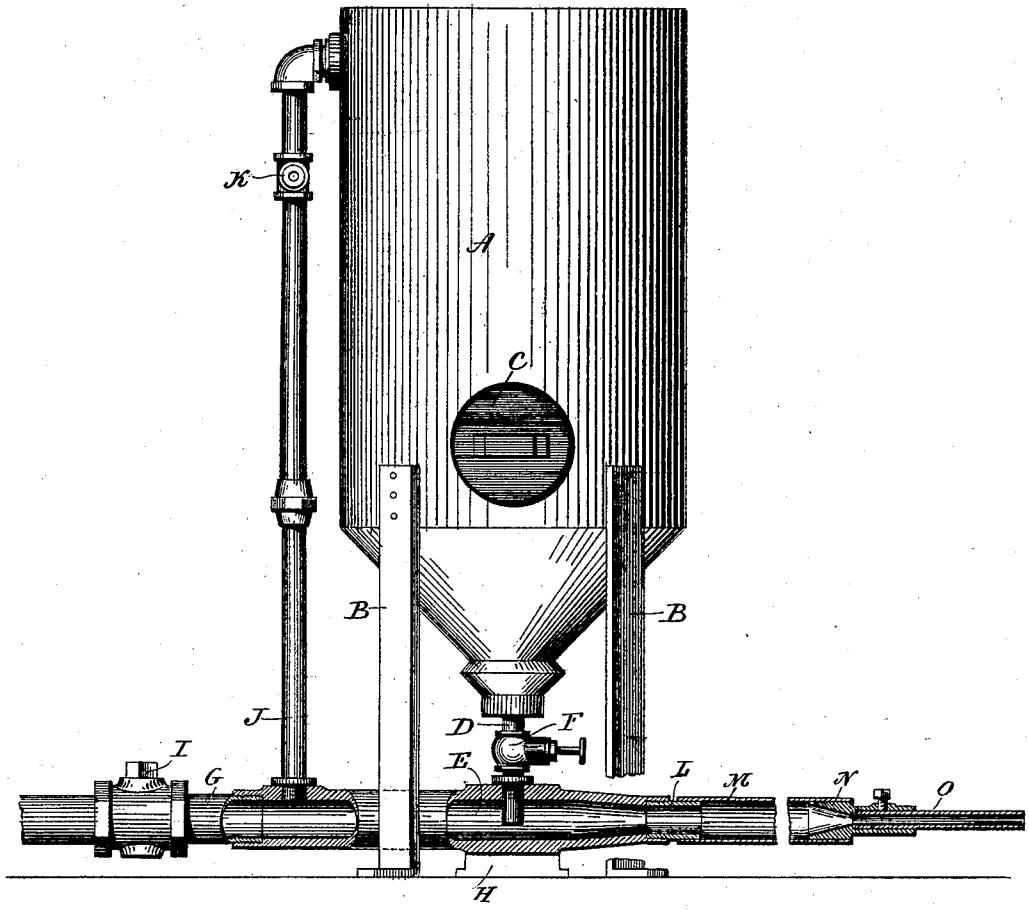
No. 671,303. Patented Apr. 2, 1901.

A. G. WARREN.

MIXER FOR SAND BLAST APPARATUS.

(Application filed May 26, 1900.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

AMBROSE G. WARREN, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO J. W. PAXSON COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

MIXER FOR SAND-BLAST APPARATUS.

SPECIFICATION forming part of Letters Patent No. 671,303, dated April 2, 1901.

Application filed May 26, 1900. Serial No. 18,040. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE G. WARREN, of Holyoke, in the county of Hampden and State of Massachusetts, have invented a new Improvement in Mixers for Sand-Blast Apparatus; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents a side view, partially in section, of a mixer for sand-blast apparatus constructed in accordance with my invention.

This invention relates to an improvement in mixers for sand-blast apparatus, and particularly for the device for mixing the sand with air and conducting it to the point where it is to be discharged, the object of the invention being a simple arrangement of mechanism whereby the sand from the reservoir or hopper may be discharged into the blast of air; and it consists in the construction as hereinafter described, and particularly recited in the claim.

As herein shown, the device consists of a reservoir or hopper A, preferably cylindrical, with a tapered or conical lower end and substantially air-tight. This reservoir is supported with its conical end downward by suitable legs or braces B. In one side is a hand-hole which is adapted to be tightly closed by a cap C in any suitable manner, and, if desired, a similar hand or filling hole may be formed in the top of the hopper. Coupled with the lower end of the hopper is a discharge-pipe D, which opens into a cylindrical chamber E and extends downward therein to a point preferably just below the horizontal center. In this pipe D is a valve F, of any preferred form, which is adapted to open or close the discharge through the pipe. The chamber E is adapted at one end to be coupled with a pipe G from the receiver or source of supply. Preferably this chamber will also be formed with a foot or base H, which will assist in supporting it. In the supply-pipe G is a valve I, of ordinary construction, and adjacent to the valve is an outlet into a pipe J for the passage of air into the top of the hopper, and preferably this pipe will be provided with a cut-off valve K. At the opposite end the mixing-chamber is reduced in diameter and is internally threaded for connection with a coupling-sleeve L, over which a flexible hose or tube M may be passed. This tube is of any desired length, and in its opposite end a nipple N is inserted, the opening through the nipple contracted, and its outer end adapted to receive a discharge-nozzle O.

The operation of the device is as follows: Air is admitted through the pipe G into the chamber E, and the valve F being open permits sand to pass from the hopper through the pipe D into the chamber and into the blast of air, with which it mingles and by which it is carried through the chamber into the flexible tube M and discharged through the nozzle O. If necessary to maintain a proper pressure and so as to cause the sand to feed, the valve K may be opened to permit a portion of the air to enter the top of the hopper and so as to force it through the discharge-opening at the bottom.

It is evident that instead of having the pipe J open out of the chamber it may lead from the receiver direct or from any part of the conducting-pipe to the mixing-chamber.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a mixer for sand-blast apparatus, the combination of a hopper contracted at its lower end, a mixing-chamber below said hopper, a pipe opening from the lower end of the hopper and extending into said chamber to a point below the longitudinal center thereof, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

AMBROSE G. WARREN.

Witnesses:
EUGENE W. KING,
CHARLES C. FORD.