Oct. 1, 1929. S. P. DAVIS 1,730,195

SAND BLAST DEVICE

Filed June 29, 1928 3 Sheets-Sheet 1

Fig. 1.

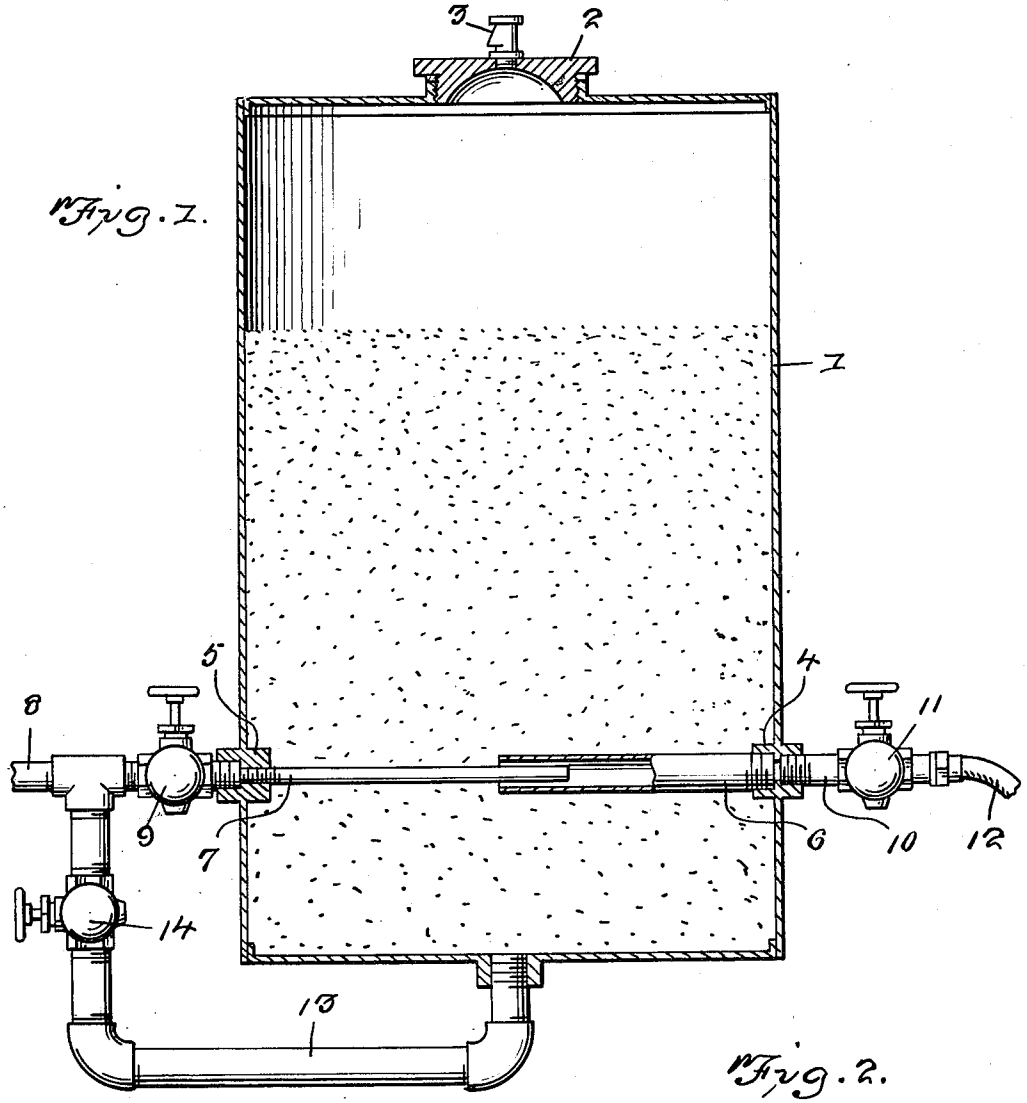
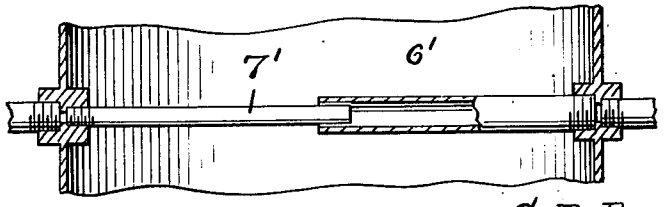


Fig. 2.



S. P. Davis INVENTOR

BY Victor J. Evans

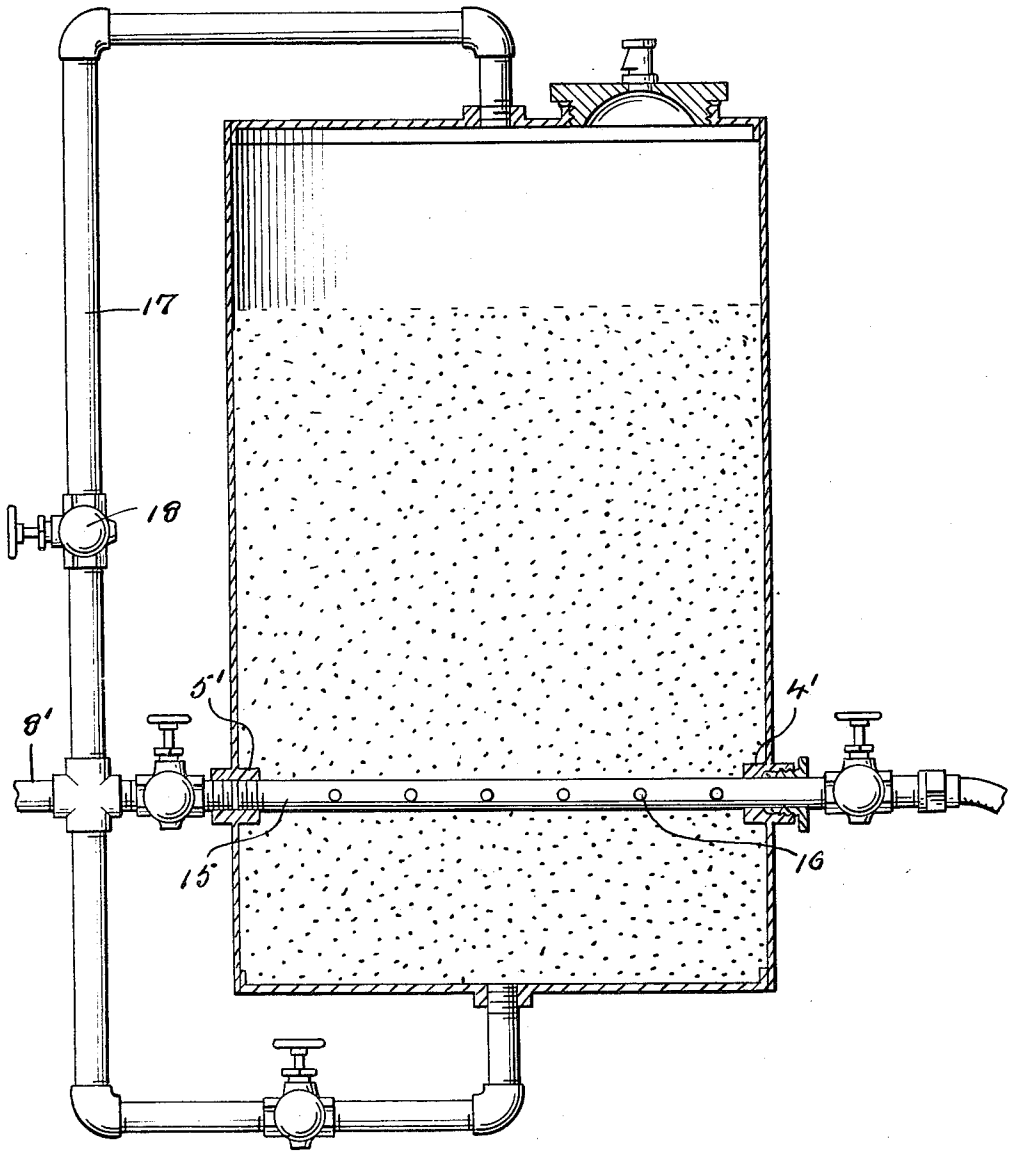
ATTORNEY

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SAND BLAST DEVICE

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Fig. 3.



S. F. Davis
INVENTOR

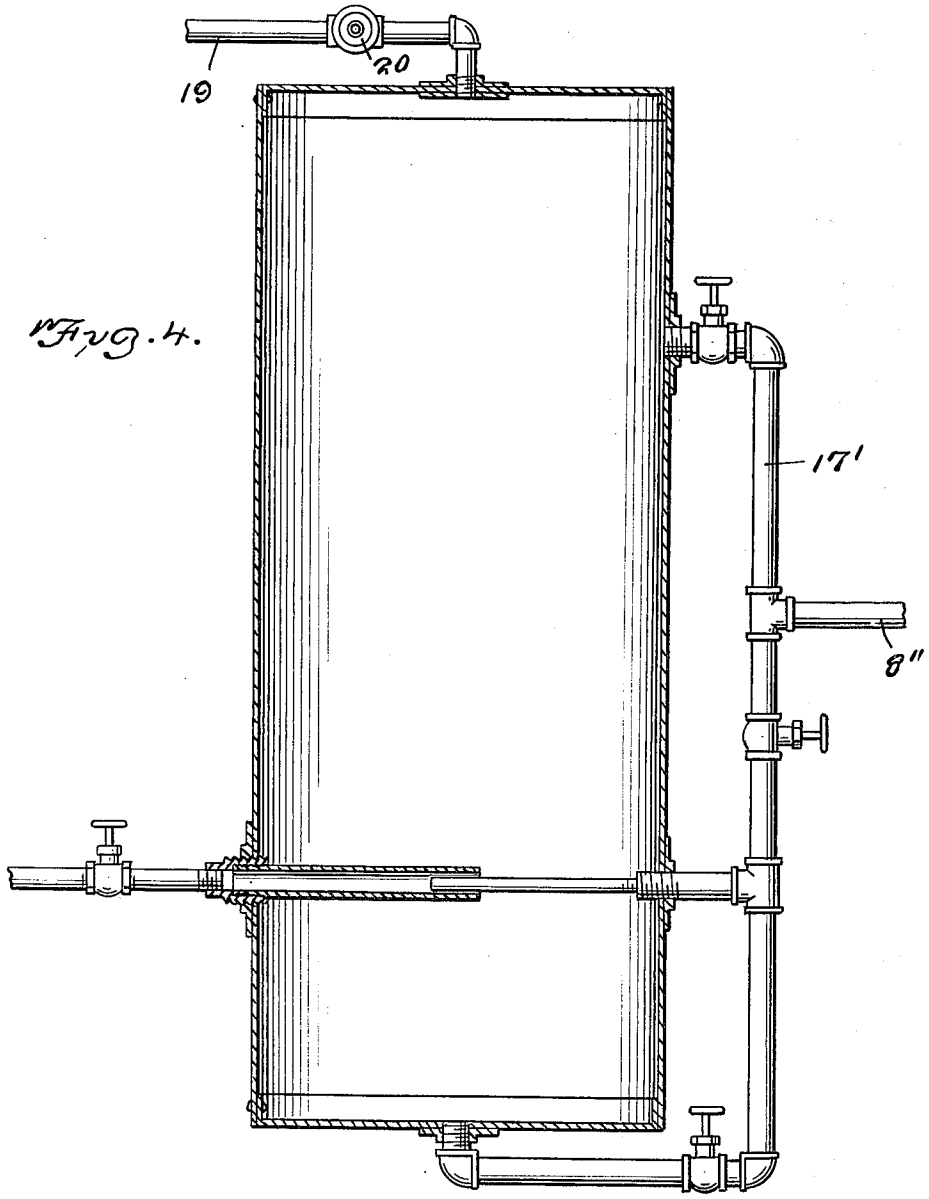
BY Victor J. Evans
ATTORNEY

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SAND BLAST DEVICE

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Fig. 4.



Inventor
S. P. Davis

By Victor J. Evans
Attorney

Patented Oct. 1, 1929

1,730,195

UNITED STATES PATENT OFFICE

SAMUEL P. DAVIS, OF SILSBEE, TEXAS, ASSIGNOR OF ONE-FOURTH TO STERLING F. THOMPSON AND ONE-FOURTH TO OTTO F. MATTIZA, BOTH OF SILSBEE, TEXAS

SAND-BLAST DEVICE

Application filed June 29, 1928. Serial No. 289,260.

This invention relates to a sand blast apparatus, the general object of the invention being to provide a nozzle arrangement located within the container for the sand, with means for attaching one part of a nozzle arrangement to a supply of compressed air so that the air will force the sand through the outlet part of the nozzle arrangement and means for introducing compressed air into the container when desired, to provide additional means for forcing the sand from the container.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a sectional view with parts in elevation of one form of the invention.

Figure 2 is a detail sectional view showing a form of nozzle device for use with paint or the like.

Figure 3 is a view similar to Figure 1, but showing a modification.

Figure 4 is a view showing another modification.

In these drawings, the numeral 1 indicates a cylinder or container for holding the sand or other material to be used with the device, the top of the container being provided with an opening which is closed by a plug 2 having a valve 3 therein. Bushings 4 and 5 are detachably arranged in the sides of the container adjacent the bottom thereof, these bushings being arranged opposite each other. A pipe 6 has one end threaded into the inner part of the bushing 4 and a pipe 7 has one end threaded into the inner part of the bushing 5, these pipes forming a nozzle, with the pipe 7 of much smaller diameter than the pipe 6 and extending into the open end of the pipe 6.

A supply line 8 has a portion threaded into the outer part of the bushing 5 and contains a valve 9 so that the air supply through the pipe 7 can be controlled, it being understood that the line 8 is connected with a suitable source of compressed air. A coupling 10, containing a valve 11, is connected with the outer part of the bushing 4 and a hose 12 is connected with the coupling for leading the sand blast to the point of use. A branch line 13 connects the line 8, beyond the valve 9, with the bottom of the container or tank 1 and has a valve 14 therein.

From the foregoing it will be seen that by opening the valves 9 and 11 and closing the valve 14, compressed air will pass through the pipe 7 into the pipe 6 so as to create a suction in the open end of the pipe 6 and thus draw sand into the pipe 6 through the space between the free ends of the pipes 6 and 7 and this sand, with the air, will pass through the coupling 10 into the hose 12 and thus be delivered to the point of use. In order to increase the action of the device or to handle coarse sand and damp sand, the valve 14 may be opened so as to supply compressed air into the bottom of the tank which will not only act to agitate the sand, but will place the same under pressure and thus force the sand into the pipe 6.

Figure 2 shows an arrangement whereby the pipe 7′ is of larger diameter than the pipe 7 and extends into the pipe 6′ a less distance than the arrangement shown in Figure 1 so that with this arrangement, paint and the like can be handled by the device.

Figure 3 shows a modification in which the pipes 6 and 7 are substituted by a single pipe 15 which is connected with the bushing 5′ and passes through the bushing 4′ and has perforations 16 therein so that the air flowing through this pipe 15 will draw sand through the perforations. This figure also shows a branch line 17 having a valve 18 therein for connecting the supply line 8′ with the top of the tank so that compressed air can be supplied to the top of the tank as well as the bottom thereof to increase the pressure within the tank.

Figure 4 shows another modification in which the nozzle arrangement is similar to that shown in Figures 1 and 2 and in which

the branch line 17′ enters the side of the tank adjacent the top thereof, with the supply line 8″ arranged out of alignment with the nozzle arrangement. This figure also shows another supply line 19 having a valve 20 therein to supply compressed air to the top of the tank.

From the foregoing it will be seen that I have provided means for forcing compressed air through a nozzle device arranged within the tank so that sand or the like in the tank will be drawn into the nozzle by the suction created therein by the air, with means for introducing compressed air into the tank to agitate the contents thereof and also to place said contents under pressure.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

It is to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a tank, oppositely arranged bushings in the sides thereof, a nozzle device connected with the inner ends of the bushings and located within the tank, discharge means connected with one of the bushings, a compressed air supply line connected with the other bushing, a branch line connecting the supply line with the interior of the tank at the bottom thereof for agitating the sand and valves in the branch line, the supply line and the discharge means.

In testimony whereof I affix my signature.

SAMUEL P. DAVIS.