W. J. McADAMS AND E. A. SPOHRER.

PUMP ATTACHMENT.

APPLICATION FILED JULY 27, 1920.

1,405,053. Patented Jan. 31, 1922.

Fig. 1.

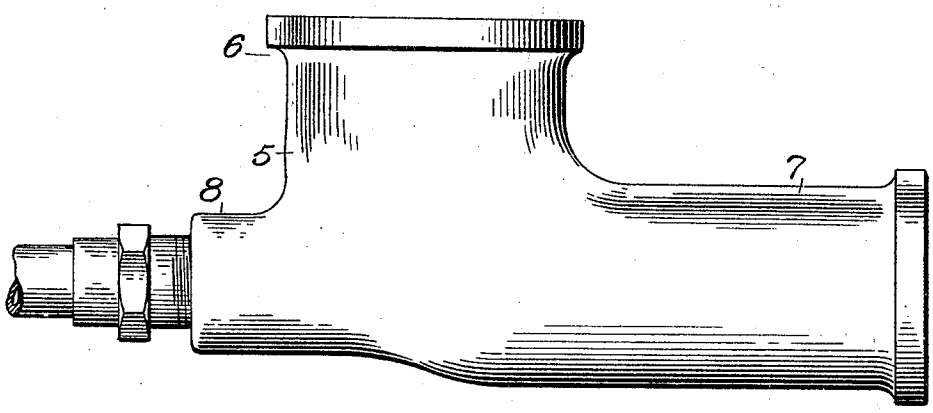


Fig. 2.

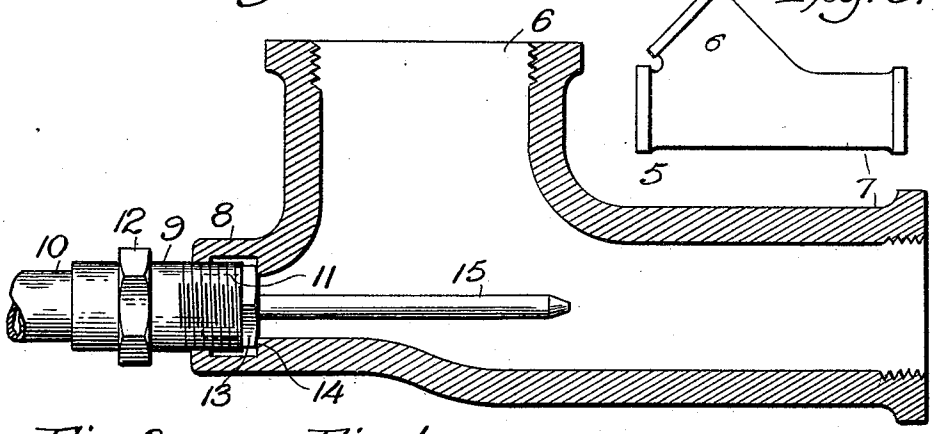


Fig. 5.

Fig. 3.

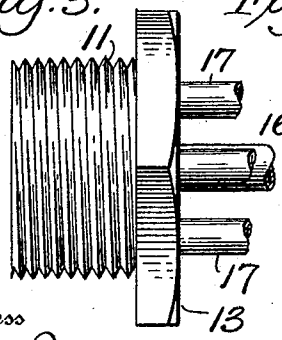
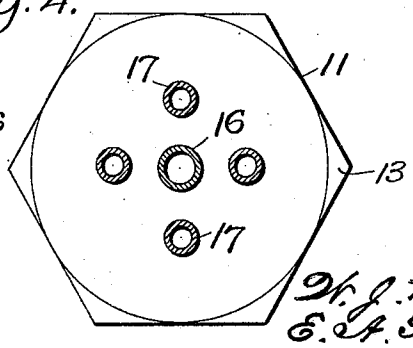


Fig. 4.



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PUMP ATTACHMENT.

1,405,053. Specification of Letters Patent. Patented Jan. 31, 1922.

Application filed July 27, 1920. Serial No. 399,318.

To all whom it may concern:

Be it known that we, WILLIAM J. McADAMS and EDWARD A. SPOHRER, citizens of the United States, residing at Pittston, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Pump Attachments, of which the following is a specification.

This invention relates to pumps and more especially to attachments for suction and lift pumps and consists of adjustable and interchangeable air supplying nozzles, the object of which is to provide the pump and its supply pipe with more or less air so that in pumping or moving pulverized or granulated solids the air blast will tend to disintegrate and separate the particles in order to readily effect the movement of coal, grain, coffee, rice, oil shale, shavings, saw-dust and sand.

These and other objects and details of the invention are more fully described in the following specification, set forth in the appended claims and illustrated in the accompanying drawings, wherein:

Fig. 1 is a side elevation of the improved attachment.

Fig. 2 is a vertical longitudinal sectional view of the same.

Fig. 3 is a side view of a modified form of nipple plug.

Fig. 4 is a face view of the same.

Fig. 5 is a view showing another form of pipe to which the invention may be applied.

The improvement comprises a casing 5 having the suction inlet 6 and the discharge outlet 7, the latter being reduced and opposite a heel 8 that is perforated to contain the bushing 9 that is screwed therein. The bushing 9 is the terminus of an air supply pipe 10 and while threaded externally at one end for the heel, it is internally threaded for the pipe and for a plug 11, the latter filling its extremity. The bushing 9 has the hexagonal part 12 while the plug has the polygonal head 13 that is forced against the shoulder 14 by the bushing to lock it.

The plug is perforated and tapped for the insertion of a nipple 15 that is adapted to discharge the air into the casing and towards the outlet 7 as the material moves in that direction.

When it is desired to provide a greater amount of air than will pass into the nipple 15, a nipple 16 may be provided as shown in Figs. 3 and 4, and where the latter nipple is surrounded by several more smaller nipples 17 of sufficient number to provide air in quantities for different materials. The weight of some materials require greater or less air in lifting the same while material that shows a tendency to adhere and clog also require various air mixtures.

Plugs with suitable air inlets are therefore supplied by removing the plug and substituting the proper one and this operation is simple and quickly performed.

It is obvious that the parts may be otherwise arranged and modified without departing from the essential features above described or from the scope of the appended claims.

What we claim as new is:

1. The pump attachment herein described, comprising a coupling having an inlet and outlet portion and a heel extending from said inlet, said heel having a threaded opening, a chamber, and a shoulder around said chamber, a threaded injector pipe engaging the threaded opening of said heel, extending into the chamber and formed with interior threads, a cap having a threaded portion engaging said interior threads and bearing against said shoulder and a nozzle extending from said cap into the outlet of said coupling

2. The pump connection herein described, consisting of a casing having a threaded inlet, a threaded outlet, and a heel extending outward from said inlet, and forming a chamber, said chamber being formed with an annular shoulder, an air supply pipe fitting in said chamber, and a cap fitting in said air supply pipe and carrying a nipple extending into said outlet of the casing and said cap bearing against said annular shoulder.

3. The herein described pump attachment consisting of a unit having an inlet and an outlet forming a coupling or connection, a heel formed upon said unit, and having a chamber surrounded by a shoulder, an injector pipe connected to said heel portion, a head connected to said pipe, and bearing against said shoulder, and a nozzle connected to said head and extending into the said unit in the outlet thereof.

4. The herein described coupling unit having an inlet formed with threads and an outlet formed with threads, whereby proper connection is made, and a heel extending from said unit, and providing a chamber

having a shoulder, screw threads within said heel, a threaded injector pipe engaging the threads of said heel, said pipe being also provided with interior threads, a head formed with a threaded sleeve to engage the interior threads of said pipe, said head bearing against the shoulder around said chamber and a nozzle projecting from said head into the said unit.

In testimony whereof we affix our signatures.

WILLIAM J. McADAMS.
EDWARD A. SPOHRER.