M. DAVIS.

REDUCER FOR GRAIN SACKERS.

APPLICATION FILED NOV. 1, 1917.

1,264,024. Patented Apr. 23, 1918.

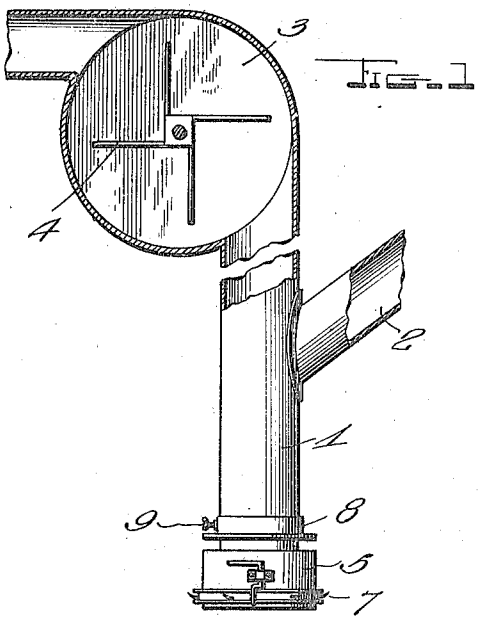


Fig. 1

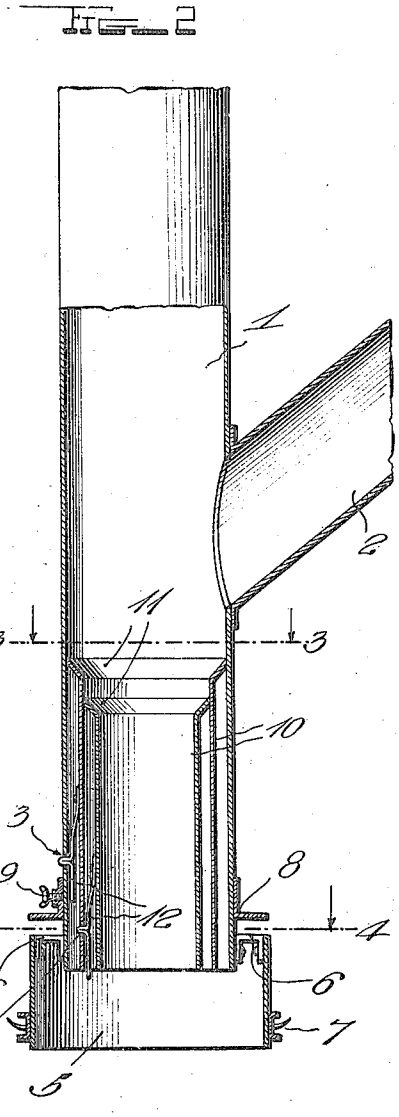


Fig. 2

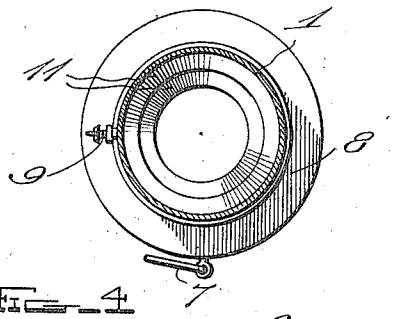


Fig. 3

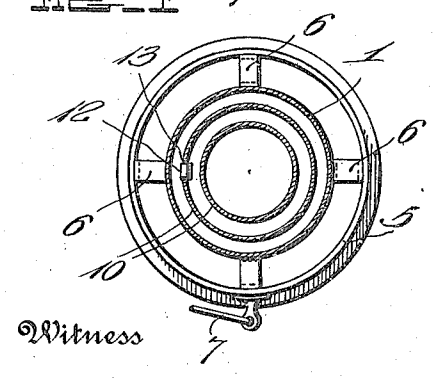


Fig. 4

Witness

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UNITED STATES PATENT OFFICE.

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REDUCER FOR GRAIN-SACKERS.

1,264,024. Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed November 1, 1917. Serial No. 199,704.

To all whom it may concern:

Be it known that I, MONROE DAVIS, a citizen of the United States, residing at Enid, in the county of Garfield and State of Oklahoma, have invented certain new and useful Improvements in Reducers for Grain-Sackers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in grain sacking devices and more particularly to those in which suction is created in the reverse direction from the travel of the grain, the principal object being to provide one or more reducers for reception in the delivery end of the sacking pipe, so that the strength of the suction through this pipe may be varied according to the weight of the grain.

Another object is to provide a novel form of air inlet at the delivery end of the sacking pipe, and means for controlling the entrance of air at said inlet.

With the foregoing general objects in view, the invention resides in the novel features of construction and unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which form a part of this specification and in which:—

Figure 1 is a side elevation partly in section;

Fig. 2 is an enlarged vertical section; and

Figs. 3 and 4 are horizontal sections on the planes on the lines 3—3 and 4—4 respectively of Fig. 2.

In the drawings above briefly described, the numeral 1 designates a vertical grain sacking pipe into one side of which the grain is delivered by the inclined pipe 2, the upper end of said sacking pipe being in communication, directly or indirectly, with a fan housing 3 in which is located a suction fan 4, so that as this fan is rotated, it will create an upward suction of air through the sacking pipe 1, thus carrying off any dust which would otherwise be discharged with the grain.

The lower end of pipe 1 extends loosely into a sleeve 5 which is secured thereto by suitable radiating arms or the like 6, the lower end of said sleeve being adapted for reception in a sack and having any preferred means 7 for securing said sack in place. As the fan 4 is operated, air is taken into the pipe 1 through the space between the pipe and the sleeve 5, and as means for controlling the entrance of air, I preferably provide a valve ring or collar 8 which is slidably mounted on pipe 1 and movable toward and away from the sleeve 5, a set screw or the like 9 being employed for holding the collar in adjusted position. In some instances, the adjustment of the collar 8 is sufficient, but other occasions require that one or more reducers 10 be employed within the delivery end of the pipe 1 for controlling the suction through the latter.

Each reducer 10 is provided at its upper end with an upstanding upwardly flared flange 11 for contact with the pipe 1 or with another reducer as the case may be. By employing one or more of these reducers as shown in Fig. 2, the strength of the suction through the pipe 1 may be accurately controlled according to the weight of the grain, so that perfect separation of the dust and the like from such grain may be obtained. Spring detents 12 are preferably employed for securing the reducers in place, said detents being carried by said reducers and receivable in openings 13.

In operation, as the fan 4 is creating suction through the pipe 1, the grain is deposited into this pipe through the branch pipe 2, so that the upward current of air through the sacking pipe will carry off any dust and the like from the grain, the strength of the suction being in the meantime controlled by adjustment of the collar 8 or by the insertion of one or more of the reducers 10. Although two of these reducers have been shown, it is to be understood that any preferred number could be utilized.

Since probably the best results are obtained from the specific details shown and described, these features are preferably employed, but I wish it understood that within the scope of the invention as claimed, numerous minor changes may well be made.

I claim:—

1. The combination with a grain discharge pipe and means for creating suction therethrough in the reverse direction from the travel of the grain, of a reducer insertible into the lower end of said pipe and having at its upper end an outstanding flange for contact therewith, and means for securing said reducer in place.

2. The combination with a grain discharge pipe and means for creating suction therethrough in the reverse direction from the travel of the grain, of a reducer insertible into the lower end of said pipe and having at its upper end an outstanding flange for contact therewith, said pipe having an opening, and a spring detent on said reducer for reception in said opening to secure said reducer in place.

3. In a sacking device, the combination of a discharge pipe, an open-ended sleeve into which the outlet end of said pipe projects, means securing said pipe and sleeve together in spaced relation, a valve ring slidable on said pipe for controlling the amount of air entering the same through the inner open end of said sleeve, and means for drawing a current of air into the pipe through said open end of the sleeve and for moving said current reversely from the direction of movement of the material being sacked.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MONROE DAVIS.

Witnesses:
GEO. D. WILSON,
J. N. KEYS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."