No. 827,213. PATENTED JULY 31, 1906.

F. W. COMSTOCK.

GRAIN CLEANING MACHINERY.

APPLICATION FILED MAY 16, 1905.

Fig. 1

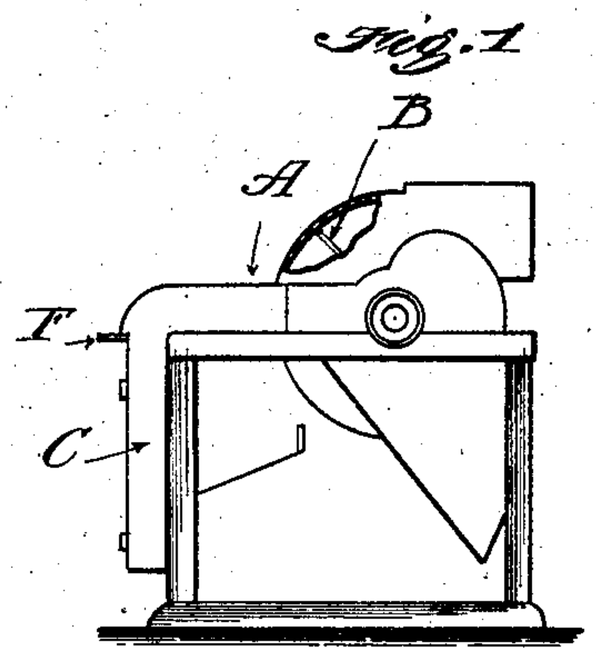


Fig. 2

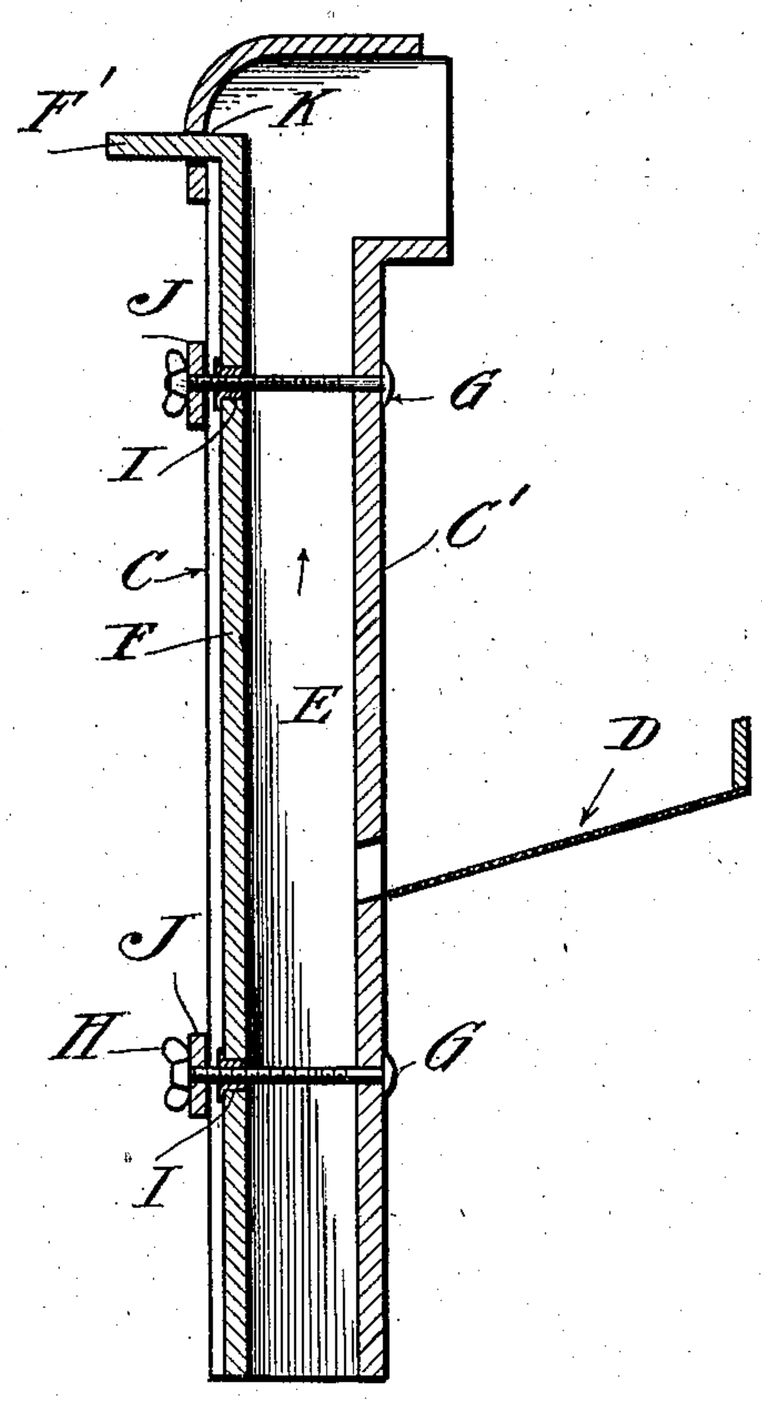


Fig. 3

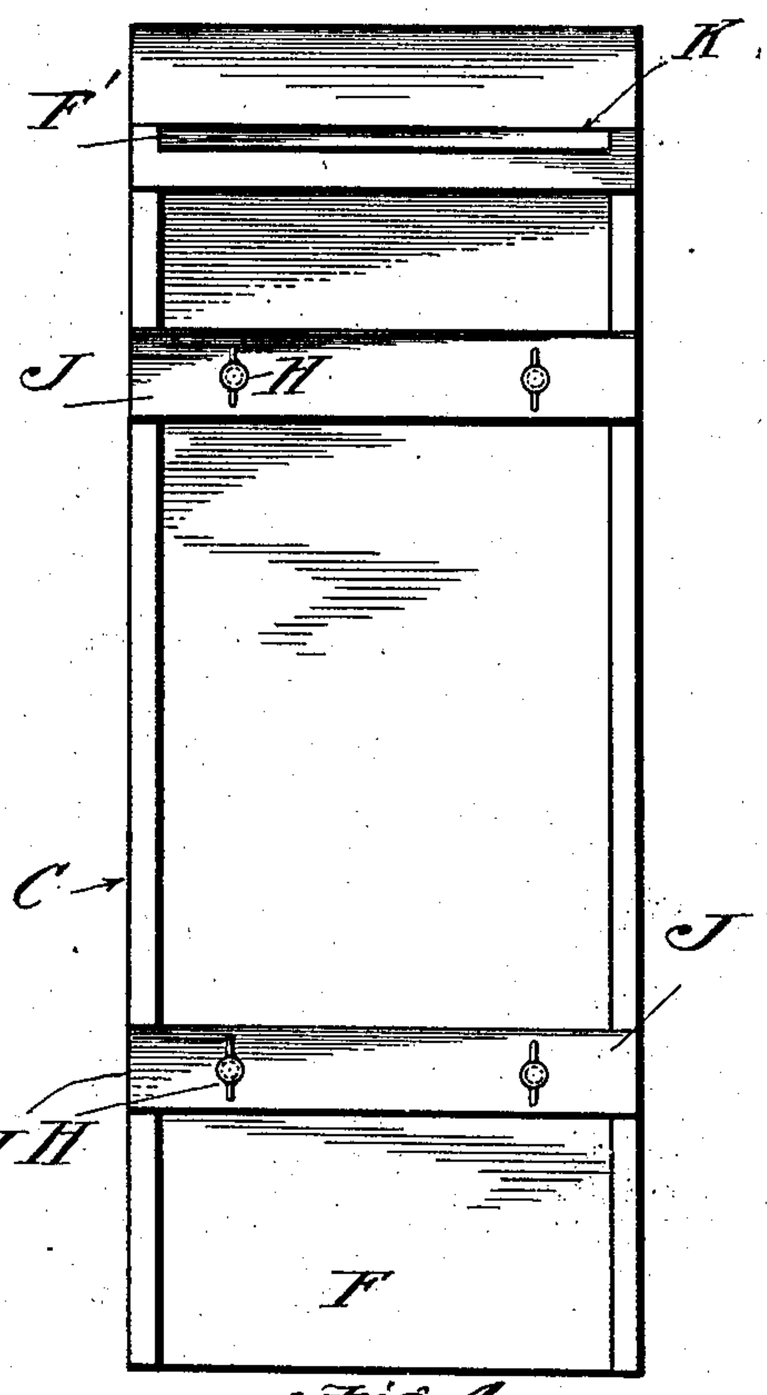
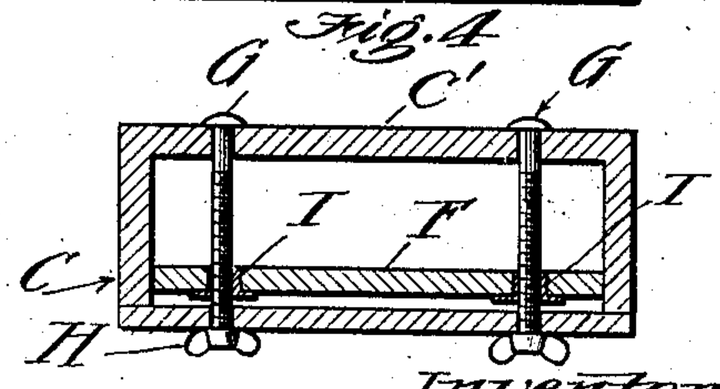


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

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GRAIN-CLEANING MACHINERY.

No. 827,213. Specification of Letters Patent. Patented July 31, 1906.

Application filed May 16, 1905. Serial No. 260,681.

To all whom it may concern:

Be it known that I, FRANK W. COMSTOCK, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Grain-Cleaning Machinery, of which the following is a specification.

My invention relates more particularly to a cleaning or aspirating machine; and my invention resides particularly in the means which I have herein shown and described to increase or decrease the channel through which the air passes in screening or cleaning the grain of dust, chaff, and other foreign substances; and the objects of my invention are to improve the capacity, efficiency, and adaptability of the present grain cleaning or aspirating machine for the various duties called upon it to perform, owing to the different weight, size, and configuration of the grain operated upon and the different conditions in which the grain is found as to cleanliness or otherwise. I accomplish these objects by means of the device described herein and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of an aspirating-separator embodying my invention. Fig. 2 is a vertical longitudinal section of the casing of the air-channel with my adjustable and supplementary side therein. Fig. 3 is a rear elevation of the casing surrounding the air-channel. Fig. 4 is a transverse section of the casing and adjustable side, taken on line 4 4 of Fig. 3.

In all machines of this character of which I am familiar various devices and means have been resorted to to increase the volume of air and the rapidity with which it passes up through the air-channel, such as valves and means to increase rapidity in the movement of the fan; but no machine of which I am aware has heretofore employed any means to increase and decrease the size or capacity of the air-channel.

In the drawings, A represents an aspirating-separator having the usual fans B therein with means to operate the same (not shown) and has secured thereto the casing C, surrounding the air-channel E.

D represents the wire-screen over which the grain passes on its way to the air-channel.

The air passes up through the channel in the direction indicated by the arrow-heads therein. Now it is a matter of importance that the operator should have at hand reliable means to increase the velocity of the air passing upward through this channel, and I have therefore provided a supplementary movable and adjustable side F, the later movement of which will increase or decrease the area of the channel, and thereby decrease or increase the movement of the air passing therethrough without the manipulation of valves or increasing or decreasing the rapidity with which the fan is operated. This adjustable side has an air-tight fit in the casing, I have provided means to impart lateral movement to the supplementary side by means of the adjusting-bolts G, carrying on their outer end thumb-nuts H. These bolts are revolubly mounted in the inner casing C′, but are prevented from longitudinal movement therein and pass transversely through the air-channel and thence through an internally-threaded nut I, rigidly secured in the supplementary side, and cause the side to move on the rotation of the bolts. These bolts also pass through the casing C, on which there are secured cross-bars J, in which the bolts are free to revolve, although having no longitudinal movement therein.

Now when it is desired to increase or decrease the size of the channel E the adjusting-bolts G are turned by means of the thumb-nuts H on the projecting end of the bolts. This will cause the supplementary side F to move out or in, as desired. This adjustment can be made while the machine is in operation, and the velocity of the air passing through the air-channel can be regulated to properly treat the grain that is being passed through the machine.

On the upper part of the adjustable side I have provided a lateral extension F′, disposed at right angles to the main side to provide for the lateral movement of the side and prevent the access of air to the channel, this extension having an air-tight fit in the top of the casing, as at K. By means of this horizontal extension F′ also the air is shut off outside of the supplementary side F regardless of the position to which the latter is adjusted instead of the channel.

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

In a cleaning or aspirating machine for cleaning grain or the like, the herein-described means to increase or decrease the size of the air-channel comprising the laterally-

movable side F having on the upper end thereof the horizontal extension F′, having an air-tight fit in the casing C of the channel and means to move the movable side laterally comprising the adjusting screw-threaded bolts G, revolubly mounted in the inner side C′ of the casing of the channel but secured against longitudinal movement therein, the said bolts having on their outwardly-projecting ends thumb-nuts H; internally-threaded nuts I affixed in the supplementary side and adapted to receive the bolts G; cross-bars J secured to the casing G and adapted to permit the rotation of the bolts therein.

In witness that I claim the foregoing I have hereunto subscribed my name this 9th day of May, 1905.

FRANK W. COMSTOCK.

Witnesses:

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G. E. HARPHAM.