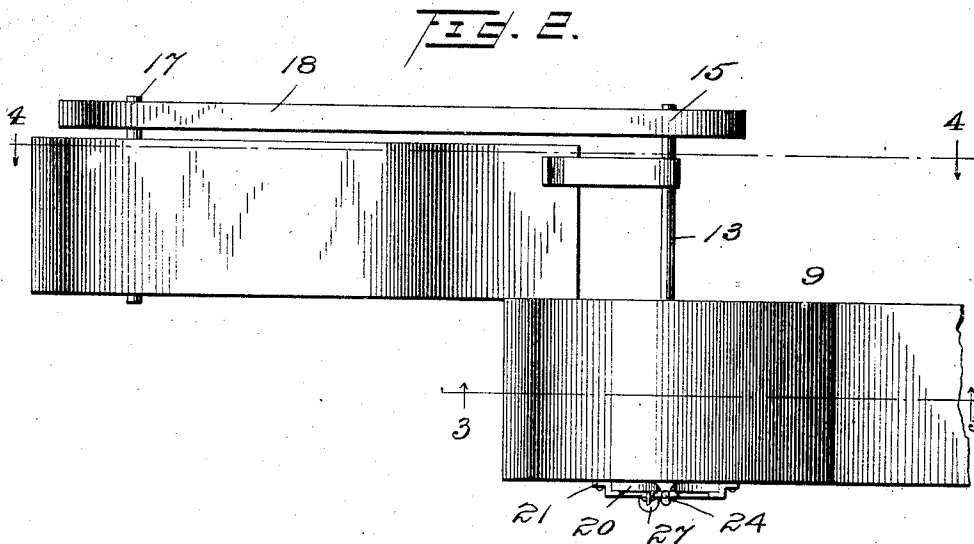
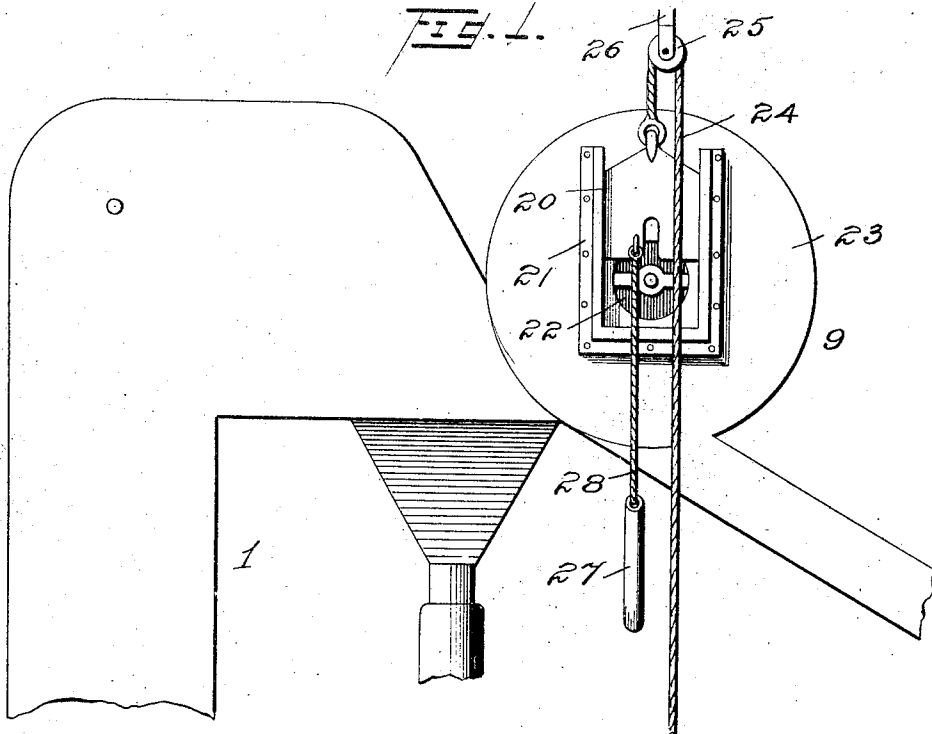


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GRAIN CLEANER.
APPLICATION FILED JUNE 9, 1911.

1,061,971.

Patented May 20, 1913.

2 SHEETS-SHEET 1.



Witnesses

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2 SHEETS-SHEET 2.

FIG. 3.

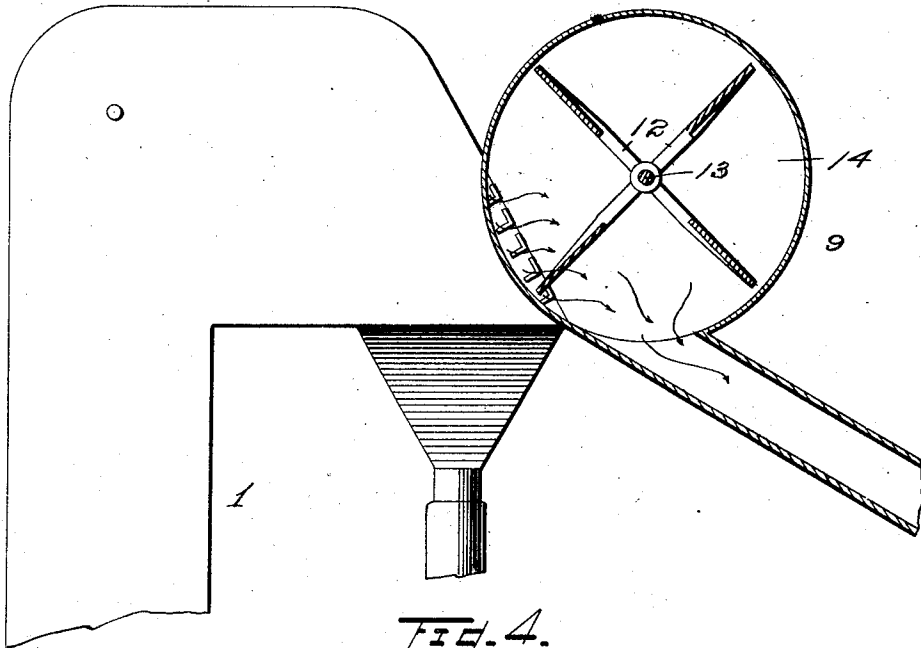
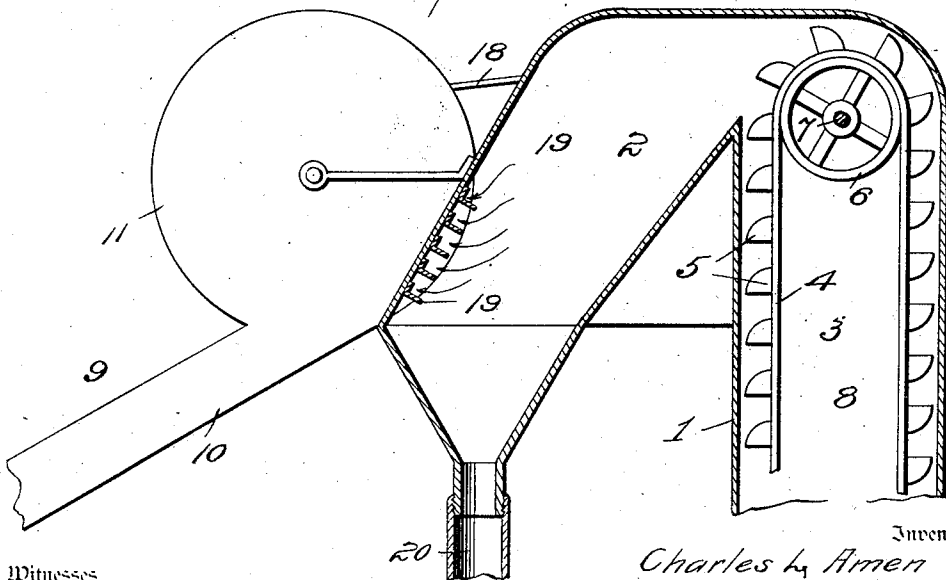


FIG. 4.



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UNITED STATES PATENT OFFICE.

CHARLES L. AMEN, OF CARTHAGE, SOUTH DAKOTA.

GRAIN-CLEANER.

1,061,971.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed June 9, 1911. Serial No. 632,131.

To all whom it may concern:

Be it known that I, CHARLES L. AMEN, a citizen of the United States, residing at Carthage, in the county of Miner and State of South Dakota, have invented certain new and useful Improvements in Grain-Cleaners, of which the following is a specification.

This invention relates to a grain cleaner, and the primary object of this invention is to provide a simple and efficient device of this character that may be applied to a grain elevator, for the purpose specified.

With the foregoing and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts illustrated in the drawings and more particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a side elevation illustrating the application of the device to an elevator. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a longitudinal section taken on the line 3—3 of Fig. 2, and looking in the direction indicated by the arrows, and Fig. 4 is a similar view taken on the line 4—4 of Fig. 2.

Referring to the drawings for a more particular description of the invention, 1 indicates the elevator casing, 2 the head of the casing, 3 the elevator which is herein shown as consisting of an endless belt 4 provided with a continuous series of grain cups 5, said belt passing over the pulley 6 on a shaft 7 at the upper end of and extending through and beyond the side walls 8 of the elevator casing.

The numeral 9 indicates the cleaner, as a whole, consisting of the exhaust 10 and the cylindrical fan casing 11 which is offset to one side of the head 2 of the elevator casing. A blower fan 12 is revolubly mounted in the head or casing 11 and is driven by the shaft 13, one end of which projects through the wall 14 of the casing 11, and is provided with the belt wheel 15 over which and a second belt wheel 17 passes the drive belt 18. By this arrangement power is derived from the elevator shaft 7 to drive the fan shaft 13. The elevator shaft is usually driven at approximately one hundred revolutions per

minute, and is capable of handling twelve thousand bushels of wheat per hour or six thousand bushels of barley while the fan is preferably geared to run at the rate of three hundred and fifty revolutions per minute.

In practice, the grain is thrown from the upper end of the elevator against a series of angle iron deflectors 19 which deflect the grain downwardly into the discharge spout 20, while the barley beards, chaff, dust, and especially smut, the one great wheat evil, is drawn or sucked into the casing 11 of the cleaner by the suction fan and subsequently drawn into the exhaust 10 to the outside. The strength of the suction is controlled by the vertically sliding valve 20 mounted to slide in the guide-way 21 and adapted to entirely or partially close the valve or intake opening 22 in the wall 23 of the cleaner casing. The valve is raised by the cable or rope 24 connected with the upper end of the valve and passing over the pulley 25 mounted in the hanger 26 suitably suspended from a rafter above or other suitable support. The valve is provided with the weight 27 connected therewith by the rope 28 whereby it may be held closed or held down in an adjusted position.

From the foregoing description taken in connection with the drawings, it is thought that the construction and advantages of this invention will be readily understood without requiring a more extended explanation.

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

1. A grain cleaner for grain elevators comprising a housing at the upper end of the elevator casing, said housing extending downwardly at an angle with the casing, a cylindrical fan casing disposed at one side of and communicating with the housing, a suction fan revolubly mounted in the fan casing, and a series of alined angle iron deflector plates on the inner wall of the housing and disposed at an angle with a vertical plane for deflecting the grain downward.

2. A grain cleaner for grain elevators comprising a housing, a series of alined

horizontally disposed and vertically spaced angle iron deflector plates arranged on the inner wall of the housing and disposed at an angle with a vertical plane for deflecting the grain downward and a suction fan near the upper end of the housing for removing the chaff and smut from the grain.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES L. AMEN.

Witnesses:

GEORGE H. BARBER,
A. N. JOHNSON.