No. 736,961. PATENTED AUG. 25, 1903.

W. GUTENKUNST.

CORN HUSKER AND SHREDDER.

APPLICATION FILED JAN. 23, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

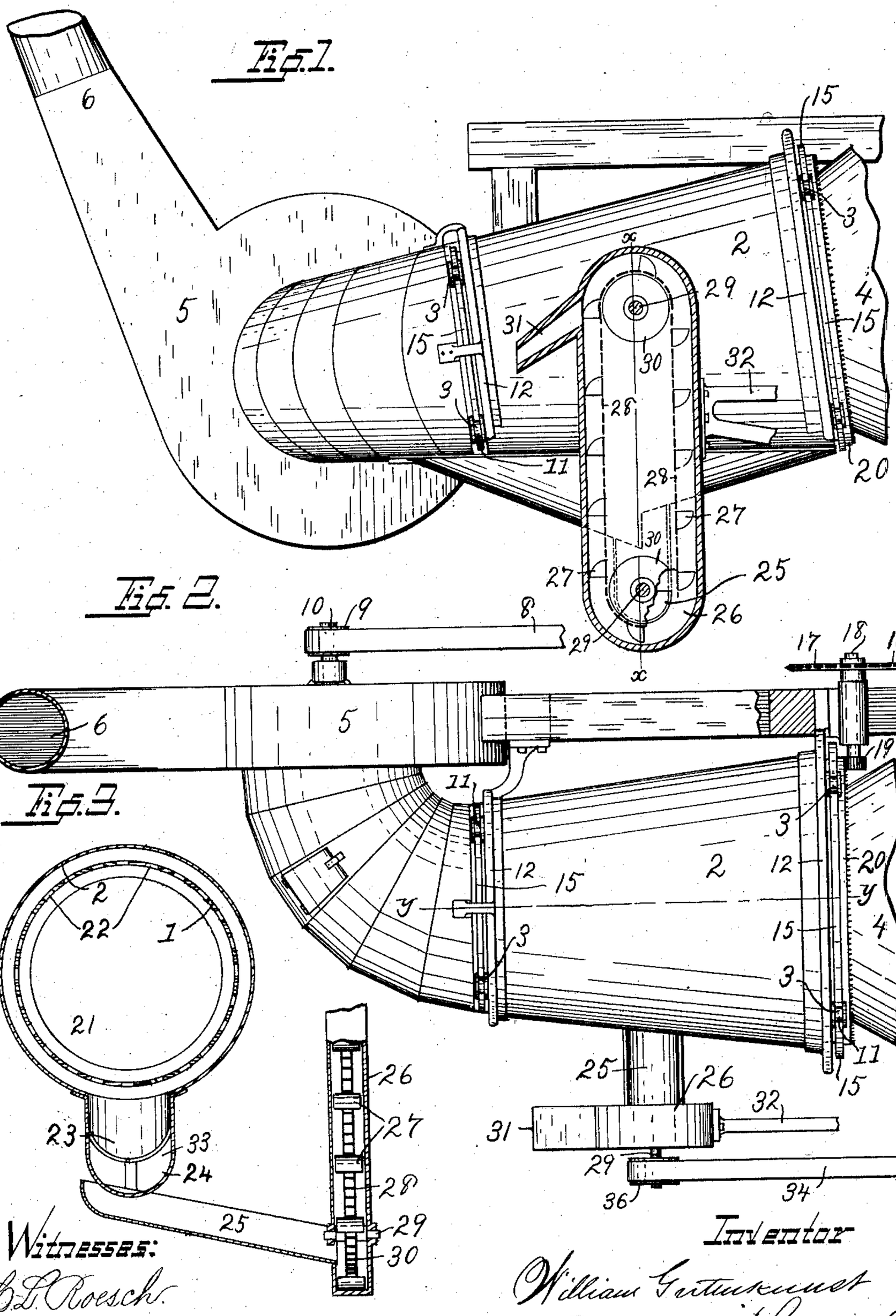

Fig. 2.

Fig. 3.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

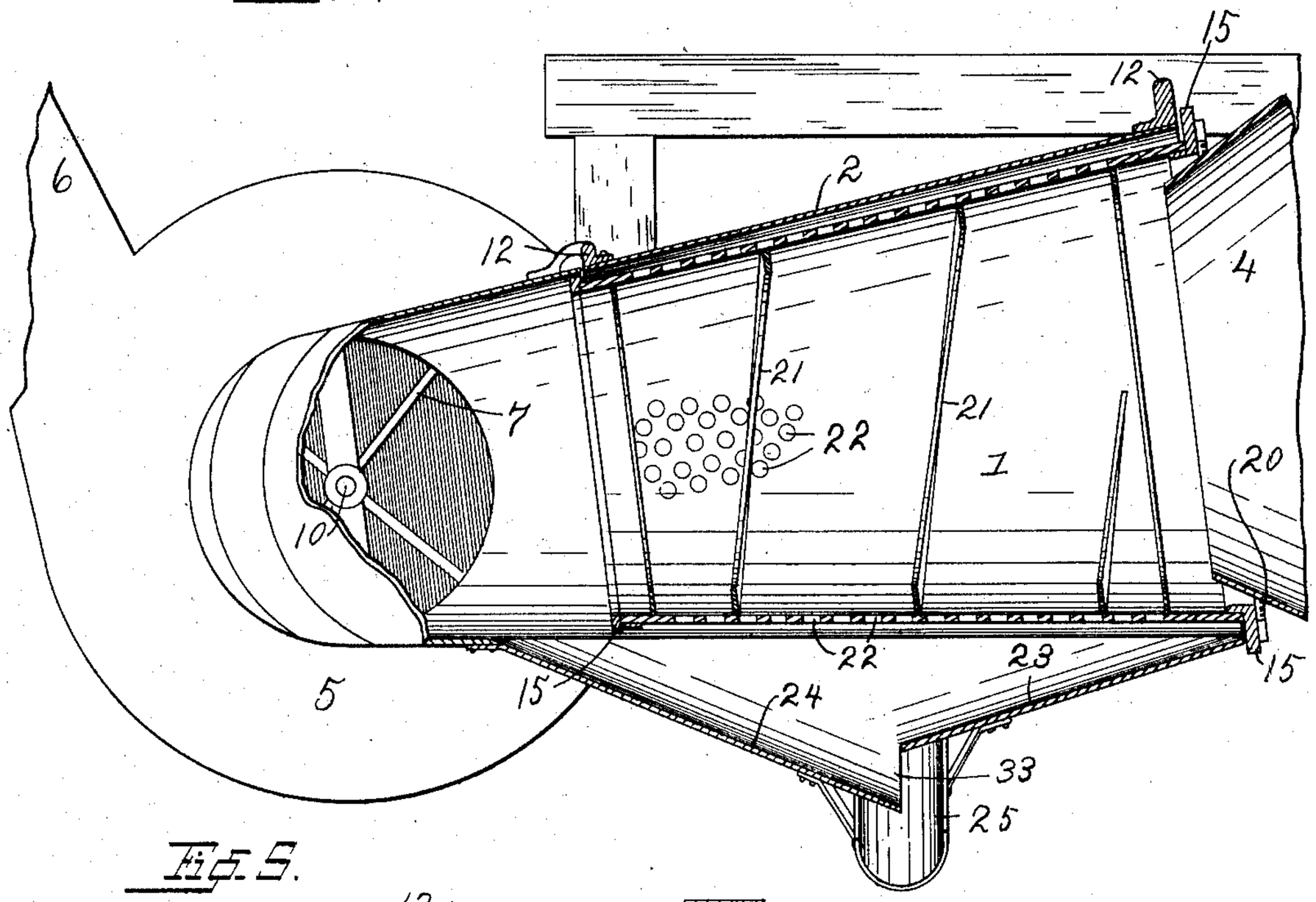


Fig. 5.

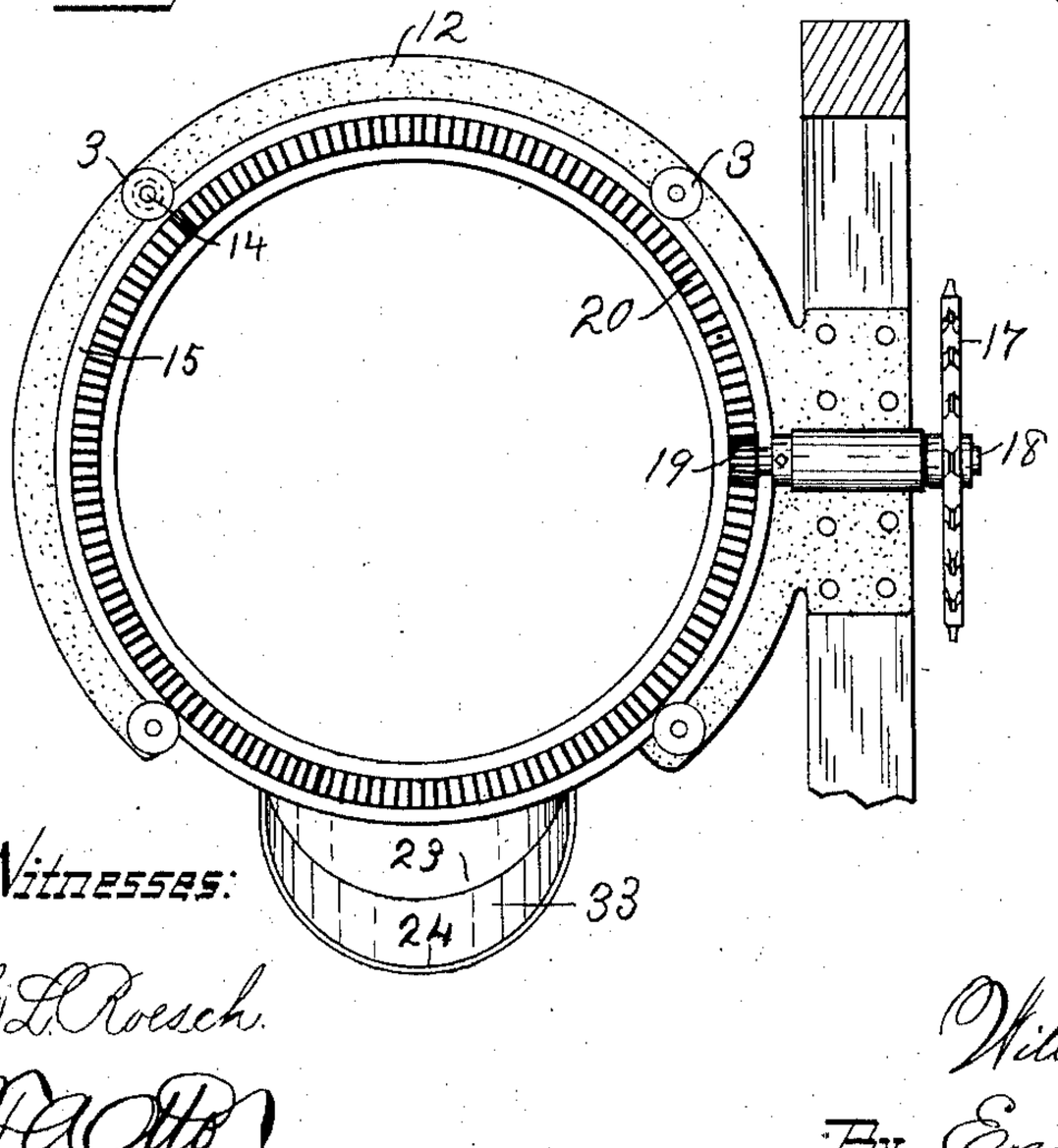
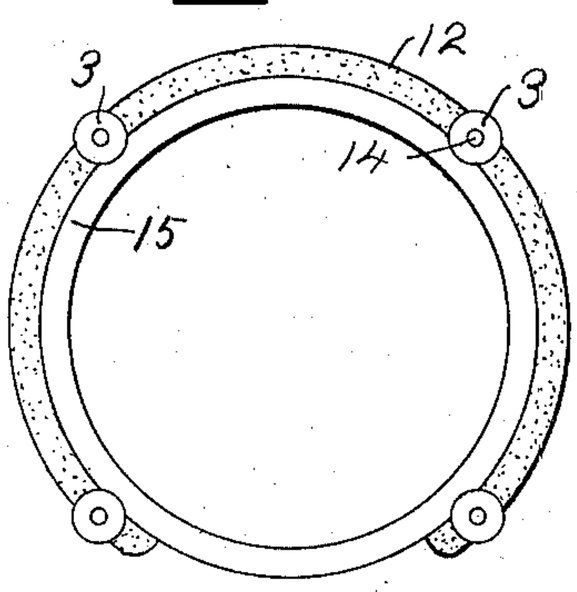


Fig. 6.



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No. 736,961. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM GUTENKUNST, OF MILWAUKEE, WISCONSIN.

CORN HUSKER AND SHREDDER.

SPECIFICATION forming part of Letters Patent No. 736,961, dated August 25, 1903.

Application filed January 23, 1902. Serial No. 90,872. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GUTENKUNST, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Corn Huskers and Shredders, of which the following is a specification.

My invention relates to improvements in corn huskers and shredders, and it pertains more especially to the peculiar construction and location of the revoluble cylindrical screen within the discharge-duct of the husker, between the husker and the fan-closing case, and the relative arrangement of such parts to each other, whereby a section of the discharge-duct through which the stalks are led to the stacker serves as a screen-inclosing case and the same fan which is used to elevate the stalks is also employed to clean the shelled corn as it escapes from the screen.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a side view showing a device for elevating the shelled corn in section. Fig. 2 is a top view. Fig. 3 is a transverse section drawn on line *x x* of Fig. 1. Fig. 4 is a longitudinal vertical section drawn on line *y y* of Fig. 2. Fig. 5 is a rear view, and Fig. 6 is a front view, of the cylindrical screen and its inclosing case as such parts appear when disconnected from the husker and the fan-case.

Like parts are identified by the same reference characters throughout the several views.

1 represents a cylindrical screen, which is preferably conical in shape, converging slightly toward its front end. The screen 1 is supported at its respective ends in the inclosing case 2, which forms a section of the discharge-duct of the husker, upon the rollers 3, which rollers are in turn supported from the annular collars 12 12 upon the pins or trunnions 14. The screen-inclosing case 2 is also conical in shape, conforming substantially to the shape of the screen 1. This case is rigidly connected at its rear end with the discharge end 4 of the husker proper and at its front end with a fan-case 5 by bolts or other equivalent means.

6 represents the discharge-duct through which the shredded stalks from which the corn has been separated are conducted to the place of deposit.

7 is a fan of ordinary construction, to which motion is communicated from one of the operating-shafts of the machine through the belt 8, pulley 9, and shaft 10.

The rollers 3 are preferably provided with grooves 11, formed in their peripheries, for the reception of the peripheries of the annular flanges 15 15, one of which flanges 15 is secured at the front and one at the rear end of said revoluble screen. A rotary movement is communicated to the screen 1 from an operative pulley of the husker proper through the sprocket-chain 16, pulley 17, shaft 18, pinion 19, and gear 20, which gear 20 consists of an annular ring provided upon one side with gear-teeth meshing with the teeth of said pinion 19, said annular gear being open at its center and rigidly affixed to the walls of said cylindrical screen, whereby as said pinion 19 is revolved a rotary movement is communicated to said cylindrical screen.

To facilitate conveying the shredded stalks and such shelled corn as is discharged into the screen forwardly or toward the discharge end thereof, said screen is preferably provided with spiral flanges 21, which as said screen is revolved have a tendency to distribute the shelled corn uniformly over its entire surface and facilitate its passage through the apertures 22 therein, while they prevent the corn from being drawn by the air-blast into the fan-case. The shredded stalks are drawn by the action of the fan 7 into the case 5, when they are forced therefrom by a current of air out through the discharge-duct 6 in the ordinary manner, while the corn which is screened out from the stalks drops of its own gravity into the troughs 23 and 24, which troughs incline downwardly toward each other in such a manner that the corn deposited thereon will pass of its own gravity therefrom into the central trough 25, and from thence it passes of its own gravity into the elevator-case 26, when it is elevated by a series of buckets 27, which are supported from a sprocket-chain 28, the sprocket-chain 28, with the buckets 27, being in turn supported from the inclosing case 26 by the shafts 29 29 and pulleys 30 30. As the buckets 27 pass

over the upper pulley 30 their contents are discharged from the inclosing case through the spout 31 into a sack or other receptacle which may be suspended therefrom. The case 26, with its inclosing mechanism, is supported from the frame of the husker by the brackets or arms 32 or in any other equivalent manner.

It will of course be understood that by the rotation of the fan 7 a partial vacuum is formed within the case 2, whereby not only the shredded stalks are drawn forward into the fan-case 5, but a strong current of air is drawn into said case through the opening 33 beneath the center of the cylindrical screen, whereby the dust and all fine foreign substances which pass through the perforations of the screen are drawn up into the fan-case and discharged therefrom with the stalks. Motion is communicated to the set of elevator-buckets and connecting parts located in the case 26 from an operating-pulley of the machine through the belt 34, shaft 29, and pulley 36.

While I have shown and described means for separating the dust and other foreign substances from the corn which has been separated from the stalks by vacuum-pressure and have also shown and described means for elevating the shelled corn when thus separated and depositing it in a receptacle therefor and while I purpose to use such devices in connection with my cylindrical screen, substantially as shown, I do not limit my present invention to the use of such devices for removing the dust or elevating the corn in connection with the revoluble cylindrical screen, as said cylindrical screen may be used for conveying the shredded stalks to the fan-case and separating the shelled corn therefrom without removing the dust or elevating the corn which has been separated. The mechanism shown and described for separating the dust from the shelled corn by vacuum-pressure and the device for elevating such corn form the subject-matter of a separate application for a patent bearing even date herewith.

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

1. The combination with the discharge-duct of a corn husker and shredder which communicates between the husker and fan of a revoluble cylindrical screen, located in said duct between said husker and fan.

2. The combination with the discharge-duct of a corn husker and shredder which communicates between the husker and fan of a revoluble cylindrical screen located in said duct between the husker and fan, an elevator for elevating shell-corn from which dust has been separated, a duct communicating from the screen-inclosing case with the interior of said elevator, a discharge-spout located at the upper or discharge end of said elevator, and means for communicating motion from an operative shaft of the husker and shredder to said elevator, substantially as set forth.

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

WILLIAM GUTENKUNST.

Witnesses:
CHAS. Q. GUTENKUNST,
JAS. B. ERWIN.