

D. W. DURRETT.
GRAIN SCOURER.
APPLICATION FILED MAR. 11, 1912.

1,045,687.

Patented Nov. 26, 1912.

Fig. 1.

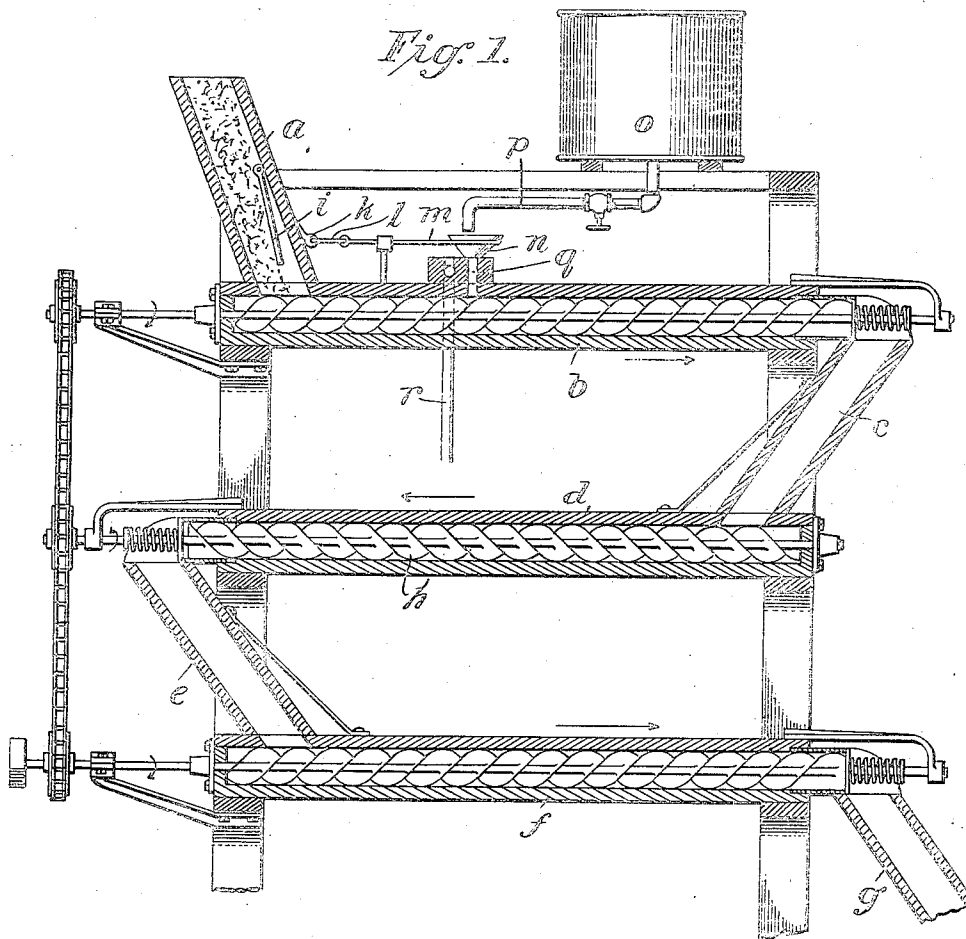


Fig. 3.

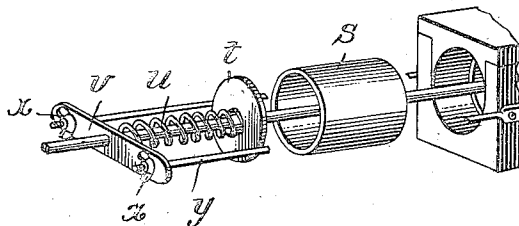
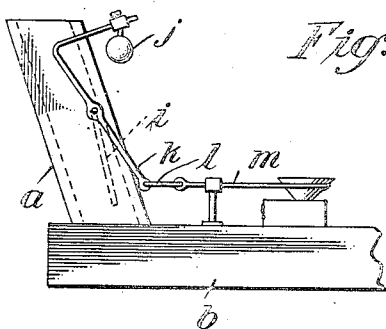


Fig. 2.



Witnesses

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DAWSON WINFIELD DURRETT, OF CLARKSVILLE, TENNESSEE.

GRAIN-SCOURER.

1,045,687.

Specification of Letters Patent.

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Application filed March 11, 1912. Serial No. 693,009.

To all whom it may concern:

Be it known that I, DAWSON W. DURRETT, a citizen of the United States, and a resident of Clarksville, county of Montgomery, State of Tennessee, have invented certain new and useful Improvements in Grain-Scourers, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of a machine embodying the essential features of my invention; Fig. 2 a side elevation in detail of the automatic moistener; and Fig. 3 a detail perspective view of the automatic scouring or peeling devices, the parts being separated for the purpose of better illustration.

The object of this invention is to provide a simply constructed apparatus for automatically moistening and scouring or peeling grain, and the invention consists of certain novel features of construction hereinafter described and claimed.

In the drawing *a* designates a spout or hopper adapted to conduct the grain into one end of the top conveyer tube *b*. The other or tail end of the tube *b* discharges into an inclined tube *c* which in turn discharges into a second conveyer tube *d* arranged below tube *b*. The other end of the tube *d* discharges by means of an inclined tube *e* into the forward end of still another conveyer tube *f*, and the tail end of this latter tube discharges into a spout *g* from whence the grain is conducted to a suitable receptacle.

A rotary conveyer *h* in each one of the conveyer tubes serves to forcibly move the grain along the same, these screw conveyers being driven in the direction of the arrows by any suitable mechanism. In the spout *a* is a depending valve plate *i* whose shaft is extended through the side wall of the spout and is weighted at *j* to cause the valve to normally close. Attached to one end of the shaft of this valve is an arm *k*, the free end of this arm being connected by means of a link *l* to a sliding rod *m*, the outer end of this rod *m* carrying a funnel shaped tube *n*. A water tank *o* supplies water to this funnel through a suitable valved pipe *p*.

The funnel is adapted to discharge either into a passage *q* leading into the upper conveyer tube *b* or into the inlet end of a waste pipe *r*. When no grain is passing through the spout the valve plate *i* is held closed and

the funnel is normally in communication with a waste pipe *r* so that the water which drips from the water supply means will run off into the waste pipe; but as soon as the grain begins to flow down through the spout the valve plate will be shifted, the weight *j* will be raised and the funnel will be pushed back until its outlet is coincident with the passage *q*, so that thereafter the water will be discharged into the upper conveyer tube. In this way I provide a simple automatic mechanism which will cut off the supply of water as soon as the supply of grain to the upper conveyer ceases, thereby avoiding the necessity of manually cutting off the water every time there is an intermission in the supply of grain.

This construction is advantageous for the further reason that it avoids the use of means for automatically opening and closing the valve in the supply pipe *p*, it being simply necessary to properly adjust the valve at the beginning of the operation of the machine, and thereafter the feed will be uniform. This construction also provides a sight-feed for the water since at all times the dropping of the water from the end of pipe *p* may be observed.

In the tail or discharge end of each of the conveyer tubes is mounted a metal open ended tube *s* into which the end of the conveyer extends. The outer or discharge end of this tube *s* is normally closed by a disk *t* which may be constructed of some rigid material as metal or of some flexible or yielding material such as stiff leather or rubber. This disk fits squarely against the outlet end of the tube and normally completely closes the same, it being pressed to its seat on the end of the tube by a coil spring *u* whose outer end bears against a pressure bar *v* supported on rods *w*, suitable thumb screws *x* being threaded on the ends of the rods for the purpose of varying the action of the spring on the disk. With a construction of this character it will be observed that the screw conveyer will forcibly press the grain against the disk and this will result in the disk moving away from the end of the tube far enough to permit discharge of the grain. The grain will be forcibly pressed out and the friction between the face of the disk and the annular edge of the tube *s* will be sufficient to clean and scour or peel the grain, the pressure being regulated to suit the exigencies of the case and the number of conveyer

tubes and scouring devices being sufficient to repeatedly operate upon the grain until it is thoroughly cleaned, etc.

By providing adjusting mechanism and mounting the same on the end of the conveyer tube and employing the shaft of the conveyer to assist in supporting the adjusting means, it will be seen that I provide means whereby the attendant may readily have access at all times to the parts in order that the pressure of the disks may be nicely regulated.

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

1. A grain scourer consisting of a conveyer tube, a screw conveyer therein having its shaft extending beyond the end of said tube, a scouring disk adapted to close the end of said tube and being mounted slidably on the extended end of the conveyer shaft, a

spring on the extended end of the conveyer shaft, and means mounted on the conveyer tube and said shaft for varying the pressure of said spring on said disk.

2. A grain scouring means consisting of a conveyer tube, a screw conveyer therein having its shaft extending beyond the end of the tube, a scouring disk adapted to close the end of the tube and mounted on the conveyer shaft, a pressure bar slidably mounted on said shaft, a spring between said pressure bar and the disk, and adjusting means for the pressure bar supported on the conveyer tube, for the purposes set forth.

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

DAWSON WINFIELD DURRETT.

Witnesses:

J. D. HUFFMAN,
S. D. DURRETT.