(No Model.)

T. A. SEIP.

MACHINE FOR CLEANING GRAIN.

No. 489,504. Patented Jan. 10, 1893.

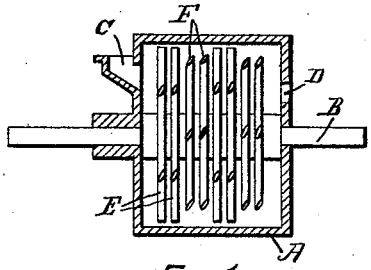

Fig. 1.

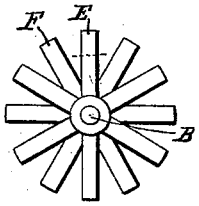

Fig. 3.

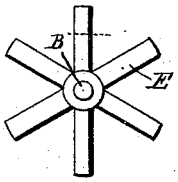

Fig. 2.

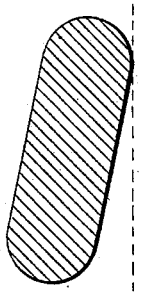

Fig. 4.

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UNITED STATES PATENT OFFICE.

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MACHINE FOR CLEANING GRAIN.

SPECIFICATION forming part of Letters Patent No. 489,504, dated January 10, 1893.

Application filed November 30, 1891. Serial No. 413,471. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. SEIP, of Dayton, Montgomery county, Ohio, have invented certain new and useful Improvements in Machines for Cleaning Grain, &c., of which the following is a specification.

This invention pertains to improvements in beaters to be used in scouring grain &c. and the improvements will be readily understood from the following description taken in connection with the accompanying drawings in which:—

Figure 1, is a front elevation of my improved beater, its casing appearing in vertical diametrical section: Fig. 2, a face view of one of the pairs of spiders: Fig. 3, a face view of the entire group of spiders: and Fig. 4, a transverse section of one of the spider arms, upon an enlarged scale.

In the drawings:—A, indicates the usual cylindrical casing, such as is ordinarily used in grain scouring machines employing rotary beaters: B, the beater-shaft, axially mounted in the case: C, the grain inlet to the case: D, the grain outlet from the case: E, a pair of spiders, fast on the shaft at one end of the casing, these two spiders being provided with radial arms, the cross-section of the arms being oblong with its greatest length at right angles to the axis of the shaft and disposed obliquely to the axis of the shaft so that as the spiders revolve the rearmost edges of the arms are in longitudinal advance of the foremost edges, the faces of the arms toward the discharge end of the casing valve being oblique to the axis of the beater and tending to urge the grain toward the discharge end of the casing, the two spiders of this first pair being so disposed that corresponding arms of the two spiders project in the same planes: and F, a similar pair of spiders secured to the shaft alongside the first pair, but with their arms projecting in radial planes intermediately between the planes of the arms of the pair of spiders E.

Next beyond the pair of spiders F is a third pair with their arms projecting in the same radial planes as those of the first pair E, and beyond this third pair, is a fourth pair with its arms projecting in the same radial planes as those of the second pair F.

The action of the beater is peculiar. If the arms were arranged in spiral course they would have a great feeding capacity, but little rubbing capacity upon the grain within the casing. But in the present case the two arms of a pair act together, the second one of the pair doing the feeding. The first one of the pair has the same feeding tendency as the second one but the grain which it tends to feed forward abuts directly against the second arm. The consequence is that the first arm of the pair is a rubbing arm, and the second one a feeding arm. The arrangement of arms therefore provides that the grain shall receive a rubbing action: then be fed forward with a tumbling action: then receive a second rubbing action: then be fed forward again: and so on and on. The result of the action of this peculiar beater is the removal from the grain of an impurity not removed, as far as ascertained, by any former system of scouring. I get from my scouring-machine a peculiar bluish mortar-like substance which strikes the millers as a novelty. This substance is somewhat moist and sticky and when a handfull of it is thrown against the wall it will adhere. The removal of it appears to materially lighten the color of the flour produced.

I claim as my invention:

In a machine for cleaning grain &c., the combination, substantially as set forth, of a beater-case, a shaft journaled therein, and a group of spiders having radial and oblique arms, said group of spiders being arranged in dissimilarly set contiguous sub-groups of similarly set spiders.

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Witnesses:
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