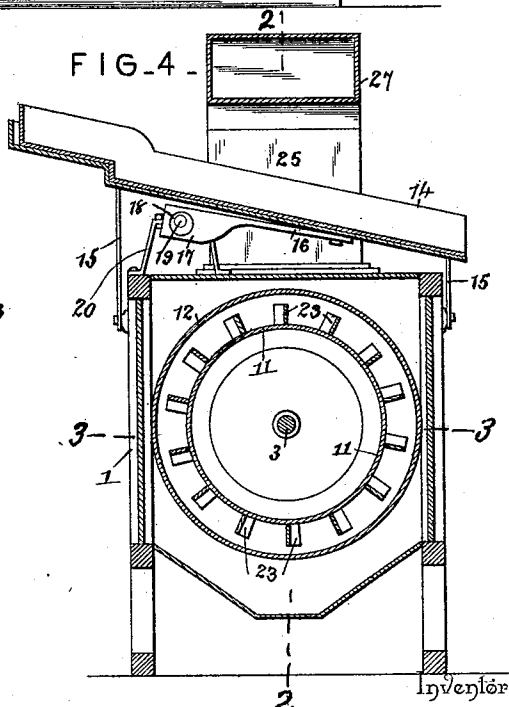
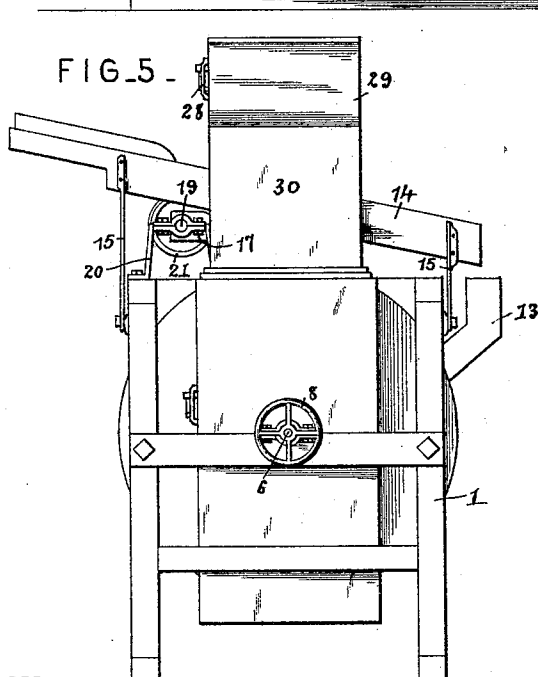
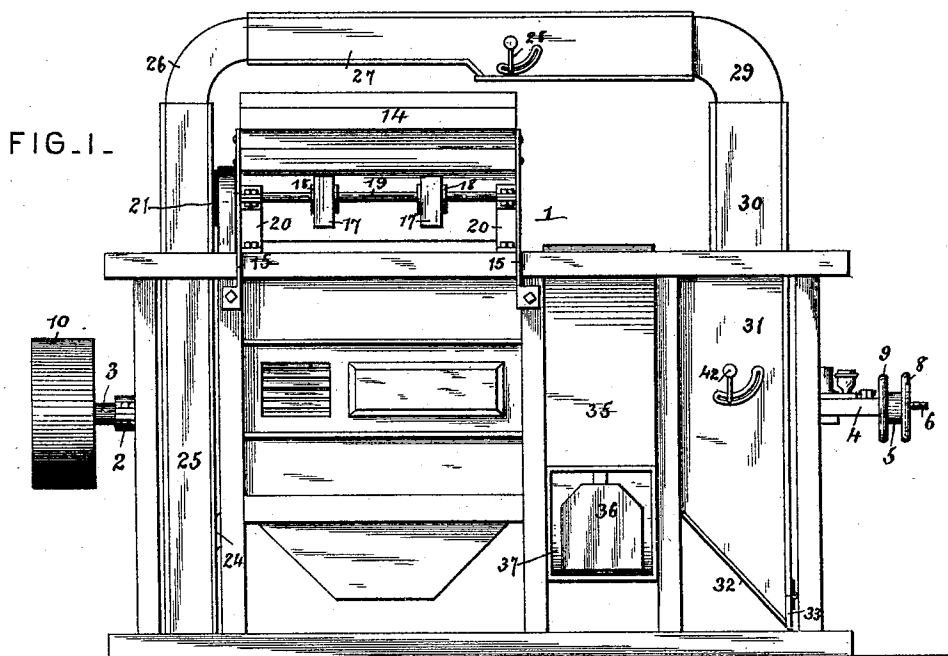


L. O. STEVENS.
OAT CLIPPING MACHINE.

No. 487.686.

Patented Dec. 6, 1892.



Witnesses

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Wm. Bagges

By his Attorneys,

Lucious O. Stevens
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FIG. 2.

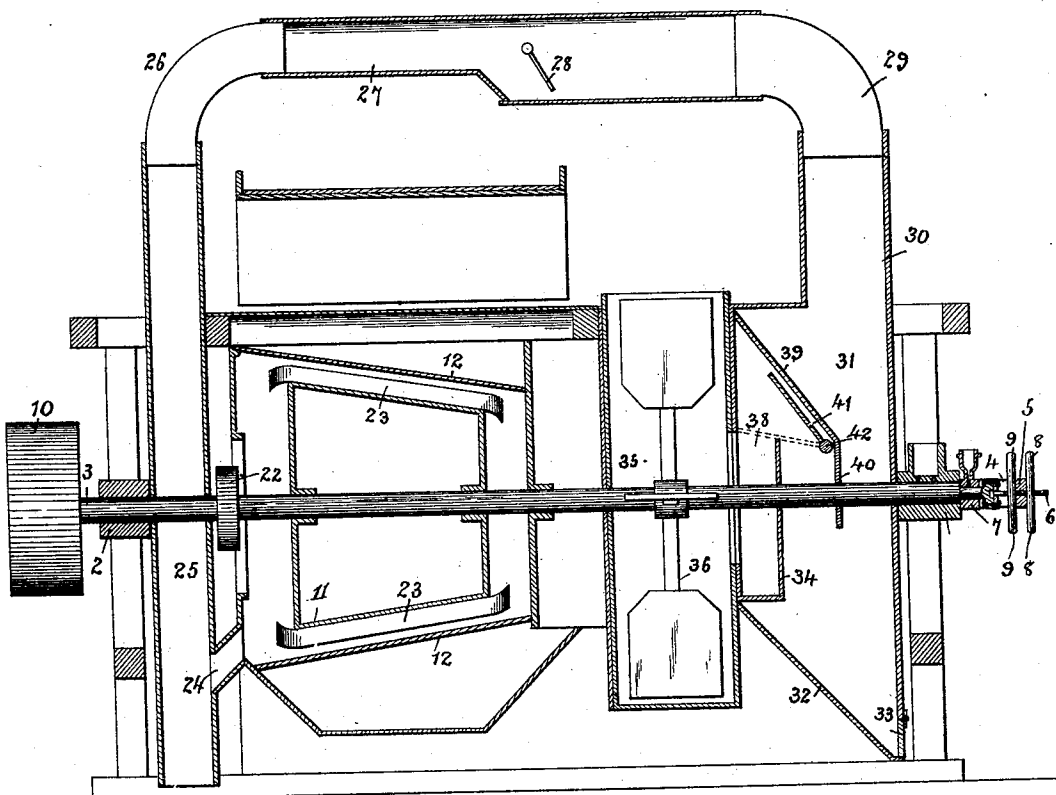
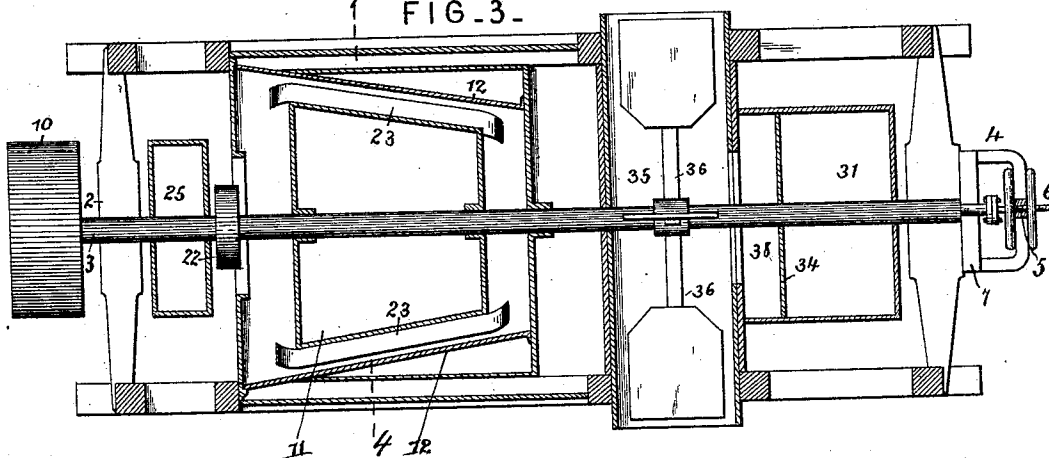


FIG. 3.



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UNITED STATES PATENT OFFICE.

LUCIOUS OREN STEVENS, OF PEORIA, ILLINOIS, ASSIGNOR TO THE STEVENS MANUFACTURING COMPANY, OF SAME PLACE.

OAT-CLIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 487,686, dated December 6, 1892.

Application filed January 7, 1891. Serial No. 376,990. (No model.)

To all whom it may concern:

Be it known that I, LUCIOUS OREN STEVENS, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented a new and useful Oat-Clipping Machine, of which the following is a specification.

This invention relates to machines for clipping or scouring oats and other grain; and it has for its object to provide a machine of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency and which may be readily adjusted to operate upon various grades of grain.

The invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of a machine constructed in accordance with my invention. Fig. 2 is a longitudinal vertical sectional view of the same, taken on the line 2 2 in Fig. 4. Fig. 3 is a horizontal sectional view taken on the line 3 3 in Fig. 4. Fig. 4 is a vertical transverse sectional view taken on the line 4 4 in Fig. 3. Fig. 5 is an end view.

Like numerals of reference indicate like parts in all the figures.

The casing 1 of my improved clipping or scouring machine is provided with bearings 2 for a shaft 3, which is longitudinally movable in said bearings. At one end of the frame is arranged a yoke or bracket 4, having a perforation 5, through which extends a screw-threaded rod 6, the inner end of which is connected by a swivel-joint 7, with the end of the shaft 3. Upon the screw-threaded rod 6 are mounted a pair of nuts or hand-wheels 8 and 9, bearing, respectively, against the outer and inner sides of the yoke or bracket 4. It will be seen that by manipulating the said hand-wheels the shaft 3 may be adjusted longitudinally in its bearings at any time without necessity for stopping the said shaft from rotating. The shaft 3 is provided at one end with a drum or pulley 10, adapted to receive motion from any suitable source of power. The shaft 3 carries a frustum-shaped shell 11, arranged within a correspondingly-shaped cas-

ing 12, the inner small end of which is connected with the feed-spout 13. The latter receives the grain from a chute 14, which is suspended upon springs 15 transversely above the casing, and which is connected by a rod 16, having an eccentric-strap 17, with an eccentric 18 upon a shaft 19, journaled in brackets or bearings 20 upon the casing, and having a band-wheel 21, which is connected by a belt or band with a corresponding band wheel or pulley 22, upon the shaft 3, from which latter a shaking motion will thus be transmitted to the chute 14.

The frustum-shaped shell 11 upon the shaft 3 is provided with a series of radially-extending ribs or beaters 23, the front and rear ends of which are curved, respectively, in a rearward and in a forward direction with regard to the direction of rotation, thus causing the grain fed into the small end of the casing to be intercepted and forced in a rearward direction and be forcibly expelled at the lower or discharge end. The ribs or beaters may, if preferred, be arranged spirally throughout the entire lengths upon the frustum-shaped shell.

The rear end of the casing 12 has a discharge-opening 24 opening into a flue 25, through the lower end of which the cleaned grain will be discharged. The upper end of the flue 25 is connected by an elbow 26 with a flue 27, extending longitudinally above the casing and having a damper 28 to regulate the passage of dust and chaff through said flue. The front end of the flue 27 is connected by an elbow 29 with a downwardly-extending flue 30, which opens into a chamber 31, having an inclined bottom 32 and provided with a hinged door 33. A partition 34 separates the compartment 31 from the casing 35, in which the suction-fan 36 is arranged, said fan being mounted upon the shaft 3. The blast from the said fan is discharged through an opening 37 in the side of the casing. The partition 34 between the chamber 31 and the fan-case has an opening 38 at its upper end. An inclined deflector 39, having a depending shield 40, is arranged above said opening and the latter is adapted to be closed either entirely or partially by a valve or damper 41, 100

mounted upon a rock-shaft 42, which is arranged in the angle between the inclined deflector 39 and the depending shield 40.

In operation the oats or grain that is to be operated upon is fed into the machine through the spout 14. It is scoured by the action of the beaters upon the revolving shell 11 against the walls of the casing 12. It will be seen that by adjusting the shaft 3 longitudinally in its bearings the ribs or beaters of the shell 11 may be brought to any desired distance from the walls of said casing, thus causing the grain to be operated upon more or less forcibly, as may be desired, according to the nature and quality of the grain. The purified grain is discharged through the opening 24 and the lower end of the flue 25. The dust and chaff will be drawn by the suction created by the fan 36 through the flues 25, 27, and 30 into the chamber 31, where it drops to the bottom and from which it may be readily removed through the door 33. The air, with the lightest particles of dust, will be expelled through the opening 37 in the side of the casing.

Having thus described my invention, what I claim is—

1. In a machine of the class described, the combination of the frame, the frustum-shaped casing, the longitudinally-movable shaft carrying the frustum-shaped shell provided with ribs or beaters, a yoke or bracket at one end of the frame, a screw-threaded rod mounted in said yoke and having its inner end connected by a swiveled joint with the longitudinally-movable shaft, and the nuts or hand-wheels mounted upon said screw-threaded rod and bearing, respectively, against the inner and outer sides of said yoke or bracket, substantially as and for the purpose set forth.

2. In a machine of the class described, the combination of the fan-casing and the adjacent chamber, the partition having an opening at its upper end, the inclined deflector having a depending shield, and the rock-shaft arranged in the angle between said shield and deflector and having a damper arranged to close the opening at the upper end of the partition, substantially as and for the purpose set forth.

3. In a machine of the class described, the combination of the frame, the frustum-shaped casing, the longitudinally-movable shaft carrying a frustum-shaped shell provided with ribs or beaters and a suction-fan, a casing for the latter, a chamber arranged adjacent to the fan-case and having an inclined bottom and a door at its lower end, a partition separating said chamber from the fan-case, said partition having an opening at its upper end, the inclined deflector having a depending shield, a rock-shaft arranged in the angle between said shield or deflector and having a damper adapted to close the opening in the partition between the fan-case and the adjacent chamber, a valved flue connecting the latter with the discharge-opening at the rear end of the frustum-shaped casing, suitable feed mechanism, and means for adjusting the main operating-shaft longitudinally in its bearings, substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LUCIOUS OREN STEVENS.

Witnesses:

FRANK HUDSON,
JOS. V. JOHNSON.