

No. 681,476.

Patented Aug. 27, 1901.

M. A. FLAUTT.

DRIVING MECHANISM FOR ELEVATORS.

(Application filed May 4, 1900. Renewed Feb. 5, 1901.)

(No Model.)

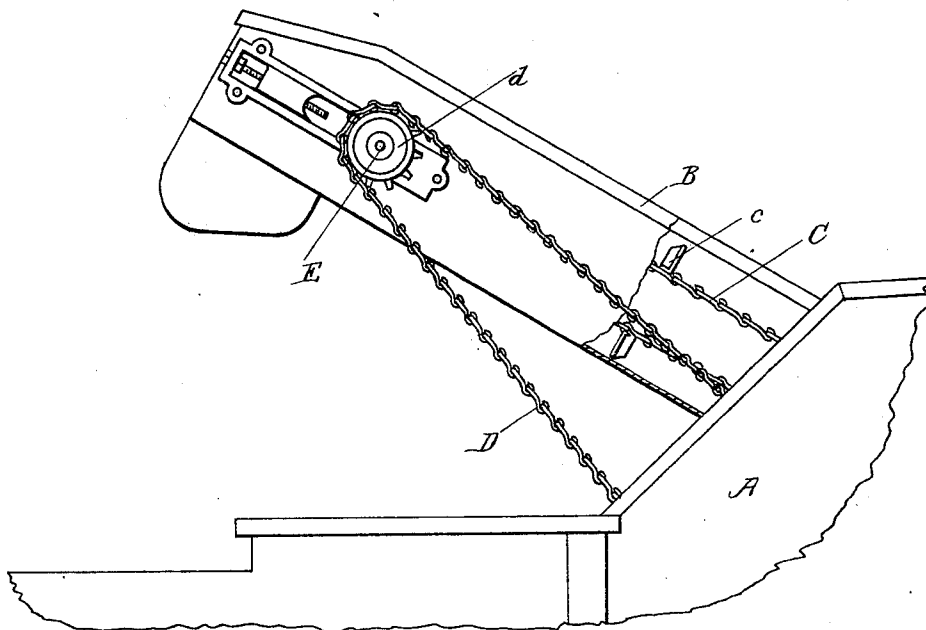
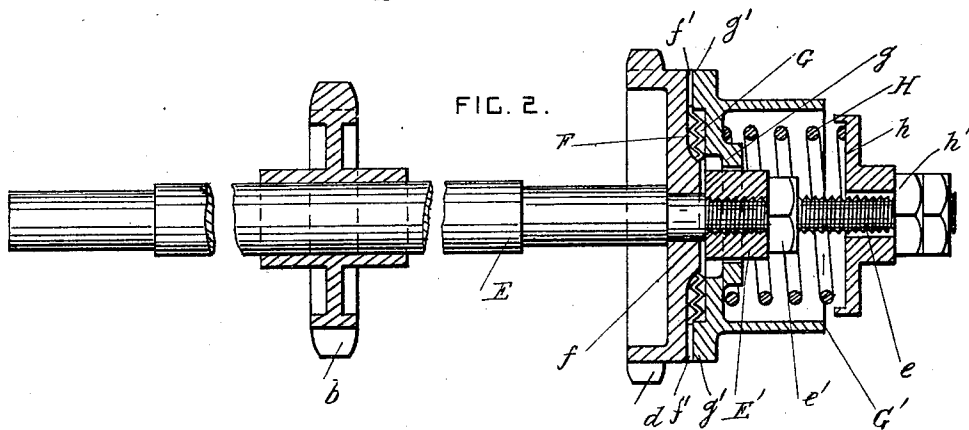
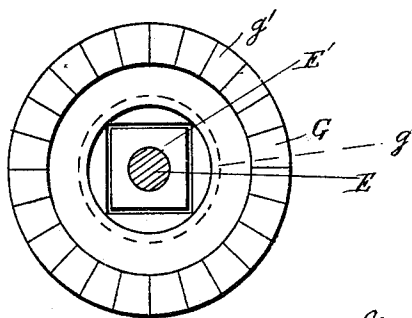


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

MELVIN A. FLAUTT, OF WAYNESBORO, PENNSYLVANIA, ASSIGNOR TO THE
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DRIVING MECHANISM FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 681,476, dated August 27, 1901.

Application filed May 4, 1900. Renewed February 5, 1901. Serial No. 46,149. (No model.)

To all whom it may concern:

Be it known that I, MELVIN A. FLAUTT, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Driving Mechanism for Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to mechanism for driving the tailings-elevators of threshing-machines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed, which permit the driving-wheel to be revolved without working the elevator when the elevator becomes choked and which then give an audible warning or signal to the thresherman.

In the drawings, Figure 1 is a side view of the upper part of a tailings-elevator. Fig. 2 is a longitudinal section through the driving mechanism. Fig. 3 is a front view of the slidable clutch member.

A is a portion of the casing of a threshing-machine.

B is the upper portion of the casing of the elevator, which raises the tailings from the cleaning mechanism and discharges it into the threshing-cylinder to be rethreshed.

C is a portion of the endless chain which forms the carrier of the elevator, and *c* represents plates or buckets secured to the said chain for causing the tailings to travel up the casing B.

D is a drive-chain which works the elevator and which passes over a sprocket-wheel *d*, journaled on the driving-shaft E. A sprocket-wheel *b* is secured on the shaft E inside the casing B and engages with the elevator-chain C. The driving-shaft E is journaled in suitable bearings supported by the sides of the elevator-casing B.

E' is a rectangular block screwed on the screw-threaded end portion *e* of the shaft E and secured by a jam-nut *e'*. The hub of the sprocket-wheel *d* is journaled on the shaft E between the block E' and a shoulder *f*.

F is a clutch member formed on one side of the sprocket-wheel *d* and provided with teeth or serrations *f'*, having their faces arranged at an angle. G is a clutch member provided with similar teeth or serrations *g'*, which interlock with those of the clutch member F. The hub *g* of the clutch member G has a rectangular hole and slides upon the block E' longitudinally.

G' is a cylindrical chamber or bell formed on the back of the clutch member G.

H is a spring which is interposed between the clutch member G and a plate *h*, supported by the shaft E. Nuts *h'* are provided for setting up the plate *h* and adjusting the pressure of the spring H, which is arranged inside the chamber G' without touching its sides.

The object of this mechanism is to permit of the use of drive-chains, both for the elevator inside the casing and for imparting motion to it outside the casing. There are advantages in the use of drive-chains over belts on machines which are exposed to changes of the weather. Ordinarily when drive-chains are used and one of them breaks it causes great delay in the working of the threshing-machine. When the elevator becomes choked with tailings, the elevator-chain is apt to be broken unless a belt is used which will slip on the driving-pulley. With the mechanism shown a positive driving connection is afforded, which can be set to drive positively up to a certain tension, which need not be much less than the breaking tension of the elevator-chain. When the elevator becomes choked and this tension is exceeded, the clutch member F slips upon the clutch member G, which ceases to revolve and is moved longitudinally against the pressure of the spring. As the sprocket-wheel *d* continues to revolve the clutch member G is moved back and forth on the block E and the teeth of the clutch members make considerable noise each time they are forced into engagement. This noise is increased by the cylinder or bell G', which is thrown into vibration and acts as a resonator, so that the operator has a warning signal provided for him. The operator can relieve the choked condition of

the elevator ordinarily without stopping the machine or removing or breaking the drive-chain.

What I claim is—

- 5 1. The combination, with a driving-shaft, and a driving-wheel journaled thereon and provided with a serrated clutch member; of a serrated clutch member which revolves the said shaft and is slidable longitudinally on it,
10 a resonator carried by one of the said clutch members and operating to give an alarm when the slidable clutch member is reciprocated longitudinally, and means for normally holding the said clutch members in driving con-
15 nection, substantially as set forth.
2. The combination, with a driving-shaft provided with a shoulder, and a screw-threaded end portion; of a rectangular block screwed on the said end portion, a driving-wheel pro-
20 vided with a clutch member and journaled on the said shaft between the said shoulder and block, a clutch member slidable longitudinally on the said block and operating to revolve the said shaft, a spring normally hold-
25 ing the said clutch members in driving connection, and means for varying the pressure of the said spring engaging with the said screw-threaded end portion of the shaft, substan-
tially as set forth.
- 30 3. The combination, with an elevator pro-
vided with a driving-shaft, of a driving-wheel

journaled on the said shaft and provided with a serrated clutch member, a serrated clutch member which revolves the said shaft and is slidable longitudinally on it, a resonator car-
35 ried by the slidable clutch member and operating to give an alarm when the slidable clutch member is reciprocated longitudinally, and a spring holding the said clutch mem-
40 bers in driving connection until the resistance in the elevator exceeds a prearranged limit, substantially as set forth.

4. The combination, with an elevator provided with a driving-shaft having a shoulder, and a rectangular block secured on the said
45 shaft; of a driving-wheel journaled on the said shaft between the said shoulder and block and provided with a clutch member, a clutch member slidable longitudinally on the said block
50 and provided with a resonator for giving an alarm when the resistance in the elevator exceeds a prearranged limit, a spring normally holding the said clutch mechanism in
driving connection, and means for varying
55 the pressure of the said spring, substantially as set forth.

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

MELVIN A. FLAUTT.

Witnesses:

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