(No Model.) 2 Sheets—Sheet 1.

A. O. SLENTZ.

GRAIN BINDER.

No. 418,242. Patented Dec. 31, 1889.

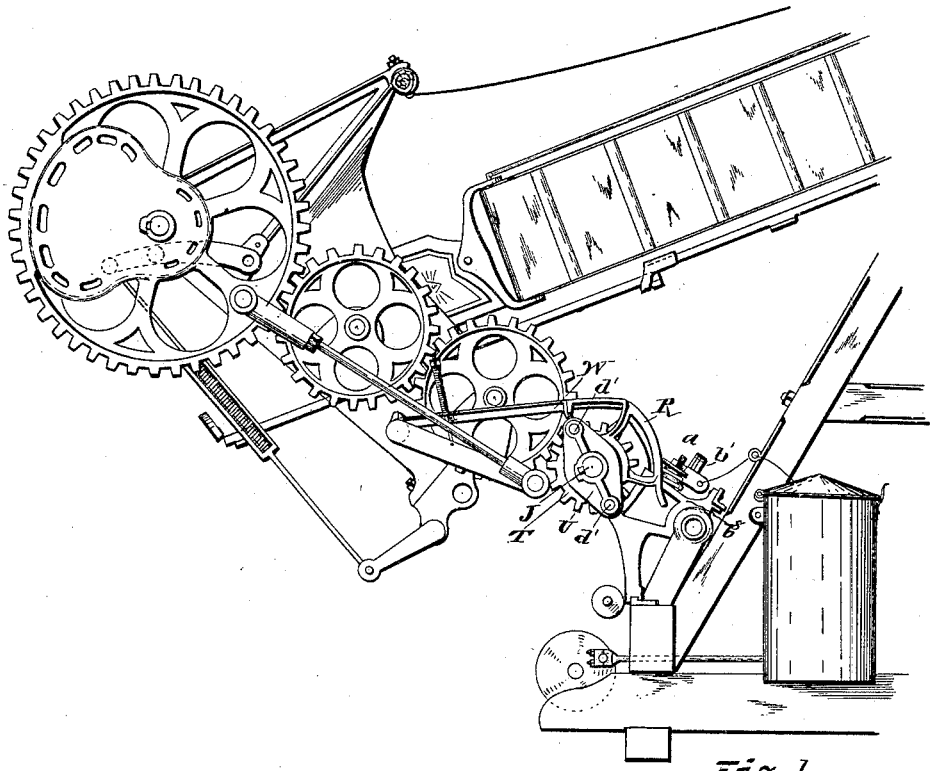

Fig. 1.

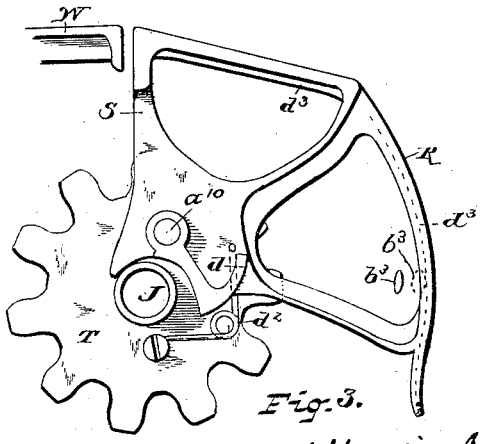

Fig. 3.

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(No Model.) 2 Sheets—Sheet 2.

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GRAIN BINDER.

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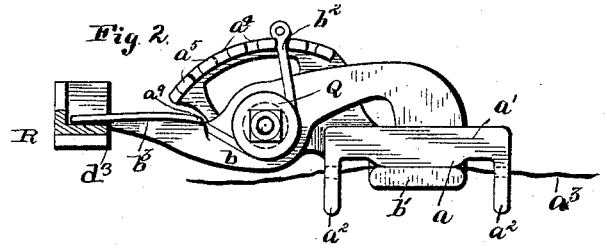
Fig. 2.



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UNITED STATES PATENT OFFICE.

ALBURTICE O. SLENTZ, OF CANTON, OHIO, ASSIGNOR TO THE PEERLESS REAPER COMPANY, OF SAME PLACE.

GRAIN-BINDER.

SPECIFICATION forming part of Letters Patent No. 418,242, dated December 31, 1889.

Application filed February 25, 1889. Serial No. 300,999. (No model.)

To all whom it may concern:

Be it known that I, ALBURTICE O. SLENTZ, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Grain-Binders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention has relation to grain-binders; and it consists in providing means by which the flow of cord may be regulated.

With this end in view the invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, wherein like letters of reference denote corresponding parts, Figure 1 is a side elevation of a binder, showing the position and relation of the parts hereinafter described. Fig. 2 is a top plan view of the cord-check or tension device. Fig. 3 is a side elevation of the cam by which the check is operated.

As the invention is applicable to many of the well-known forms of grain-binders now in use, I will proceed to describe the improvement, referring to the binder only in conjunction thereto.

In the accompanying drawings, Q designates the cord-clamp composed of the stationary portion a, (fixed to the frame of the binder, as shown at b^8, Fig. 1,) having a jaw a', provided with parallel perforated lugs a^2, through the perforations of which a cord a^3 is guided, and an integral segmental rack a^4, having upwardly-projecting teeth a^5. To the said stationary portion a a lever b is pivoted to vibrate, and is provided at its end adjacent to the jaw a' with a corresponding jaw b', which is adapted to contact with the jaw a' and retard the movement of the cord a^3. The opposite end of this vibrating lever is projected, as shown at b^3, to afford means for actuating it. A spring b^2 encircles the pivot securing the vibrating lever and the portion a, and has one end engaged with a shoulder a^9 and its opposite end engaged with the teeth of the segmental rack a^4. This spring exerts a pressure upon the vibrating lever to force its jaw b' against the stationary jaw a' for the purpose of grasping the cord a^3 to check and regulate its movement during the process of binding.

The mechanism for operating the cord-check consists of the clutch-dog S, pivotally secured, as shown at a^{10}, to the pinion T, mounted upon the packer-shaft J and provided with the peripheral cam R, having a laterally-extended flange d^3 to engage the extended end d^3 of the vibrating lever, and further provided with a cam d near its point of pivotal engagement with the pinion T. A spring d^2 is secured at one end and at its intermediate portion to the pinion T, and has its opposite end bent and suitably secured to the back of the cam d. The energy of this spring is exerted to throw the cam R out of engagement with the extended end b^3 of the vibrating lever and to throw the cam d into engagement with the driving-pins d' on the inside of the driving-arm U.

The operation of these parts is as follows: During the operation of gathering and compacting the bundle to be bound the driving-pins d' will pass over the cam d, the shaft J rotating continuously and the binder parts at rest, until a determined degree of compactness has been reached, during which operation the binding-cord a^3 will pass freely down into the bundle-receptacle, at which time a stop-arm W, operated by suitable mechanism, which forms no part of this invention, will be raised, thus releasing the dog S, which will thus permit the cam d to be thrown by the spring d^2 into the track of the driving-pins on the constantly-revolving shaft J, which will put the binding mechanism into operation, and at the same instant the rear end of the cam R will be thrown out into the position shown in Fig. 3, releasing the extending end b^3 of the vibrating lever and allowing the spring b^2 to throw the jaw b' on the cord a^3 to check and resist its movement while it is being placed about the bundle and the knot being tied, during which time the pins d' on the revolving shaft J will engage the cam d, and the cam R will stand out of contact with the vibrating-lever extension b^3; but when the bundle has been discharged and the needle

is returned the stop-arm W will drop in front of the dog S, as shown in Figs. 1 and 3, by which the cam R will be swung on its pivot in toward the shaft J, when in the revolution of the shaft J the cam R strikes the arm W, by which movement the finger b^3 will be moved inwardly to open the jaws to release the cord, as hereinbefore stated.

Having thus described my invention, I claim—

1. In a grain-binding harvester, the combination of the dog S, having the cams d and R, the pinion T, to which said dog is pivoted, the stop-arm W, and the clamps a' b', one of which is provided with a finger to engage the cam R, substantially as set forth.

2. In combination, a dog held under tension against rotation by a suitable stop and provided with suitable engaging devices, one to act in conjunction with the binder-shaft to cause the dog to rotate therewith, and another to act in conjunction with a cord-check, a cord-check consisting of a vibrating lever held under tension to vibrate by the said dog, and a stationary jaw adapted to co-operate with one end of the vibrating lever to grasp the cord, substantially as set forth.

In testimony whereof I have hereunto set my hand this 21st day of February, A. D. 1889.

ALBURTICE O. SLENTZ.

Witnesses.
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W. K. MILLER.