R. PAYNE.

APPARATUS FOR PACKING ENSILAGE IN SILOS.

APPLICATION FILED JUNE 22, 1915.

1,173,024.

Patented Feb. 22, 1916.

2 SHEETS—SHEET 1.

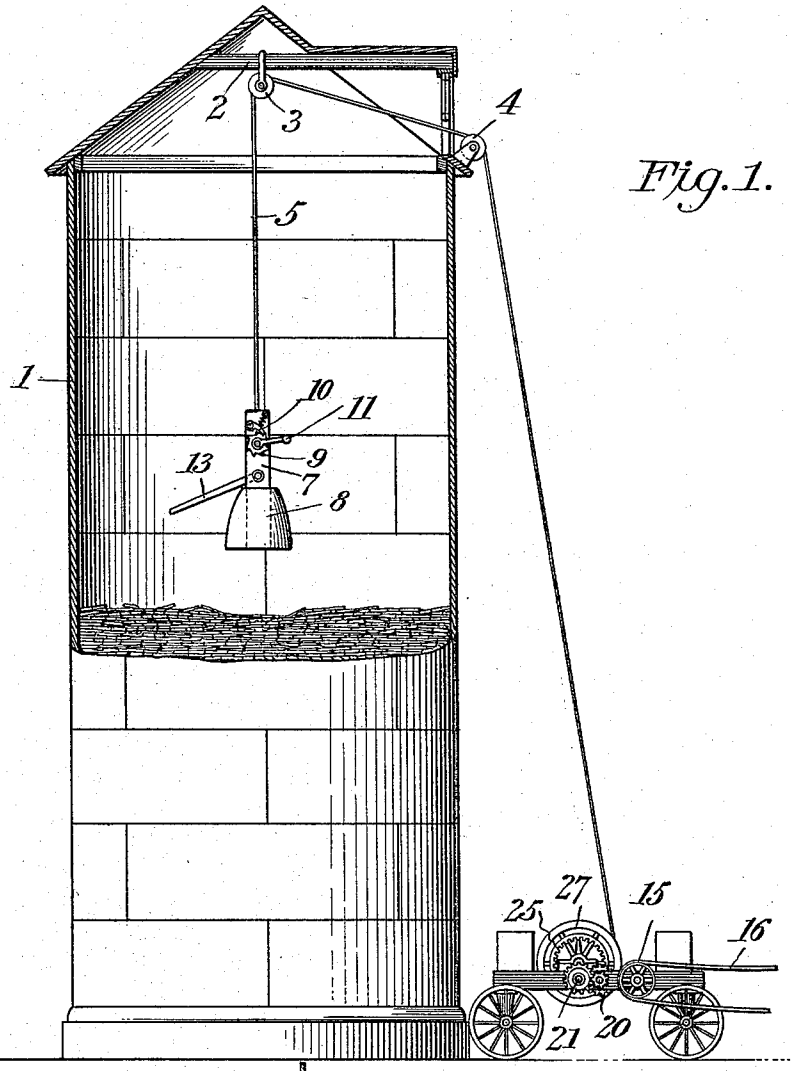


Fig. 1.

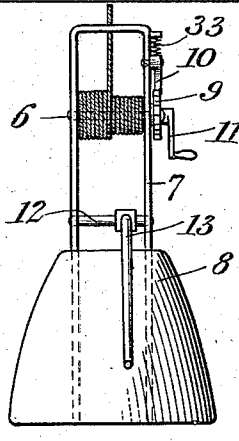


Fig. 6.

Witnesses

Fenton M. Pelt

J. W. Sherwood

Inventor

Rosco Payne

By Frankel & Hough

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

R. PAYNE.

APPARATUS FOR PACKING ENSILAGE IN SILOS.

APPLICATION FILED JUNE 22, 1915.

1,173,024.

Patented Feb. 22, 1916.

2 SHEETS—SHEET 2.

Fig. 2.

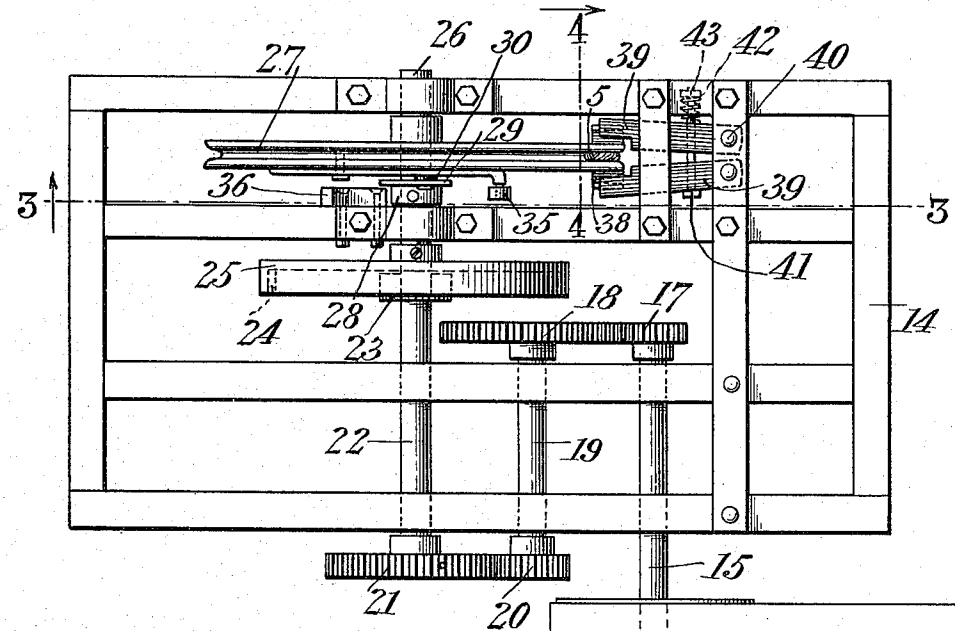


Fig. 3.

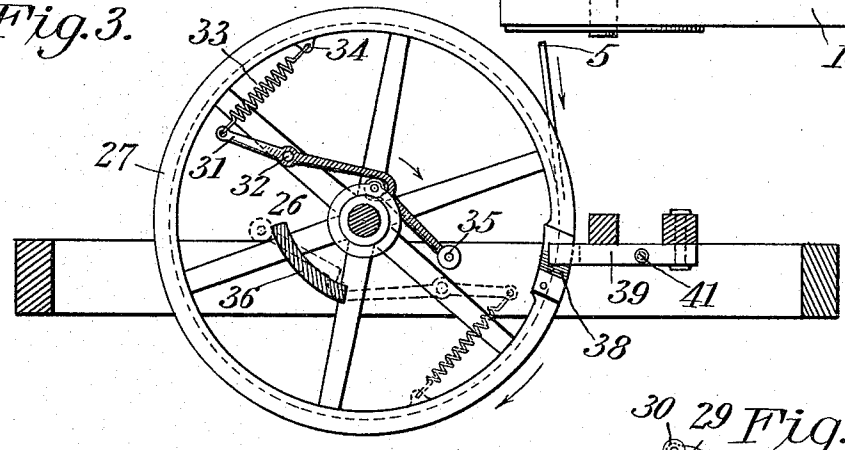


Fig. 4.

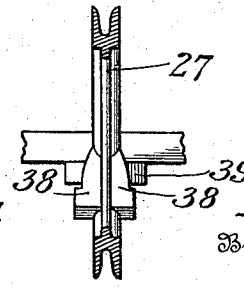
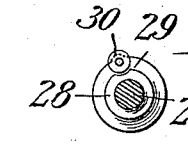


Fig. 5.



Witnesses

Fenton S. Belt

J. A. Sherwood

Inventor

Rosco Payne

By Frankl. N. Hough

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ROSCO PAYNE, OF MACEDONIA, ILLINOIS.

APPARATUS FOR PACKING ENSILAGE IN SILOS.

1,173,024. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed June 22, 1915. Serial No. 35,654.

To all whom it may concern:

Be it known that I, ROSCO PAYNE, a citizen of the United States, residing at Macedonia, in the county of Hamilton and State of Illinois, have invented certain new and useful Improvements in Apparatus for Packing Ensilage in Silos; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in apparatus for packing ensilage in silos and comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:

Figure 1 is an elevation of the apparatus, partly in section. Fig. 2 is a top plan view of the gear mechanism for driving the pulley for raising a tamping member. Fig. 3 is a sectional view on line 3—3 of Fig. 2. Fig. 4 is a sectional view on line 4—4 of Fig. 2. Fig. 5 is a detail sectional view, and Fig. 6 is an enlarged view in elevation of a tamping member.

Reference now being had to the details of the drawings by numeral, 1 designates a silo having a beam 2 at the upper end supporting a pulley 3, and 4 is another pulley upon the silo. A rope 5 passes about said pulleys and is adapted to wind about a shaft 6 mounted in the yoke 7 which is secured to the tamping member 8. A ratchet wheel 9 is fixed to the shaft 6 and is engaged by a spring-pressed pawl 10. A handle 11 is fixed to the shaft and affords means for rotating the same. A rod 12, mounted upon the yoke, carries a handle 13 movable thereon, forming a convenient means whereby the depending weight may be swung about within the silo.

Referring to the truck, an enlarged detail of which is shown in Fig. 2, 14 designates the frame in which a driving shaft 15 is journaled with a belt 16 thereon adapted to be driven from any suitable source of power, not shown. Said shaft carries a pinion wheel 17 at one end which is in mesh with the pinion wheel 18 fixed to the shaft 19 journaled in the frame 14 and to which shaft 19 a pinion 20 is keyed which is in mesh with a pinion 21 fixed to the shaft 22. The inner end of the shaft 22 has a pinion wheel 23 fixed thereto which is in mesh with the interior teeth 24 upon the gear wheel 25 which latter is fixed to a shaft 26 journaled in suitable bearings in the frame. The teeth of the pinion wheel 23 are in engagement with the teeth 24 and are adapted to drive the wheel 25. A grooved wheel 27 is loosely mounted upon the shaft 26 and about which the cable or rope 5 is adapted to wind as said wheel 27 is given an oscillatory movement.

Pivotally mounted upon the shaft 26 is a pulley 28 having a flange 29, a detail of said pulley and flange being shown in Fig. 5 of the drawings, and 30 designates a roller pivotally mounted upon the flange 29. A hook, designated by numeral 31, is pivotally mounted upon the pin 32, as shown in Fig. 3 of the drawings, and has a spring 33 connected at one end and its other end connected to a lug 34 upon the rim of a wheel 27. Said hook carries an anti-friction roller 35 at its free end. A fixed cam 36 is mounted upon the frame and is in the path of the roller 35 and against the outer convexed surface of which cam said roller is adapted to contact at each revolution of the wheel 27.

Projecting from the opposite faces of the rim of the wheel 27 are the inclined lugs 38 and which are adapted to contact with the spring-pressed brake members 39, shown in top plan view Fig. 2, which members 39 are mounted upon pivots 40 in the crosspiece of the frame. A bolt 41 passes through the members 39 and a spring 42 is interposed between a nut 43 and one of said members and each of the latter is recessed upon its inner edge, and said recessed portions are adapted to be positioned in the path of the inclined lugs 38, serving as a brake to limit the rotary movement of the wheel, the springs serving to avoid unnecessary jar as the rotary movement of the wheel in one direction is arrested.

The operation of my apparatus will be readily understood and is as follows:—The ensilage being placed within the silo and a rotary movement being imparted to the wheel 25 through the medium of the gear

mechanism shown, the gear wheel 25 rotating the shaft 26 will cause the roller 30 to come in contact with the hook 31 and impart a single revolution to the shaft 27. When the antifriction wheel 35 comes in contact with the convexed surface of the cam 36, the hook 31 will be tilted upon its pivot and be released from out of the path of the anti-friction roller 30, thus arresting the movement to the right of the wheel 27. As the wheel 27 rotates, the tamping member 8 will be elevated and, when the wheel 27 is released, the weight of said tamping member will cause the wheel 27 to make a reverse rotary movement which is limited by the inclined lugs 38 coming in contact with the brake members 39. After the hook is released by the cam member, the spring 33 attached thereto will return the hook to its normal position. Through the medium of the handle 13, the operator may cause the tamping member to be positioned at different locations to tamp evenly the ensilage within the silo.

By the provision of the ratchet and handle connected thereto, as the ensilage is filled within the silo, a rope may be wound up upon the shaft in the manner shown in Fig. 6 of the drawings.

What I claim to be new is:—

1. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a hook pivoted upon said oscillating wheel and in the path of said roller, fixed means for throwing said hook out of the path of said roller, and means for applying the brake to said oscillating wheel.

2. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, a fixed cam in the path of said hook and adapted to throw the same out of the path of said roller, and brake mechanism for limiting the movement of the oscillating wheel in one direction.

3. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, and brake mechanism for limiting the movement of the oscillating wheel in one direction.

4. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, inclined lugs projecting from the opposite edges of the rim of the oscillating wheel, spring-pressed brake members mounted upon the frame and against which said inclined lugs are adapted to contact.

5. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, inclined lugs projecting from the opposite edges of the rim of the oscillating wheel, two members pivotally mounted upon the frame, having recesses in their inner edges, a bolt passing through said member, a spring upon the bolt adapted to normally hold the members in the paths of said inclined lugs.

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

ROSCO PAYNE.

Witnesses:
D. H. REED,
B. L. LEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."