

(No Model.)

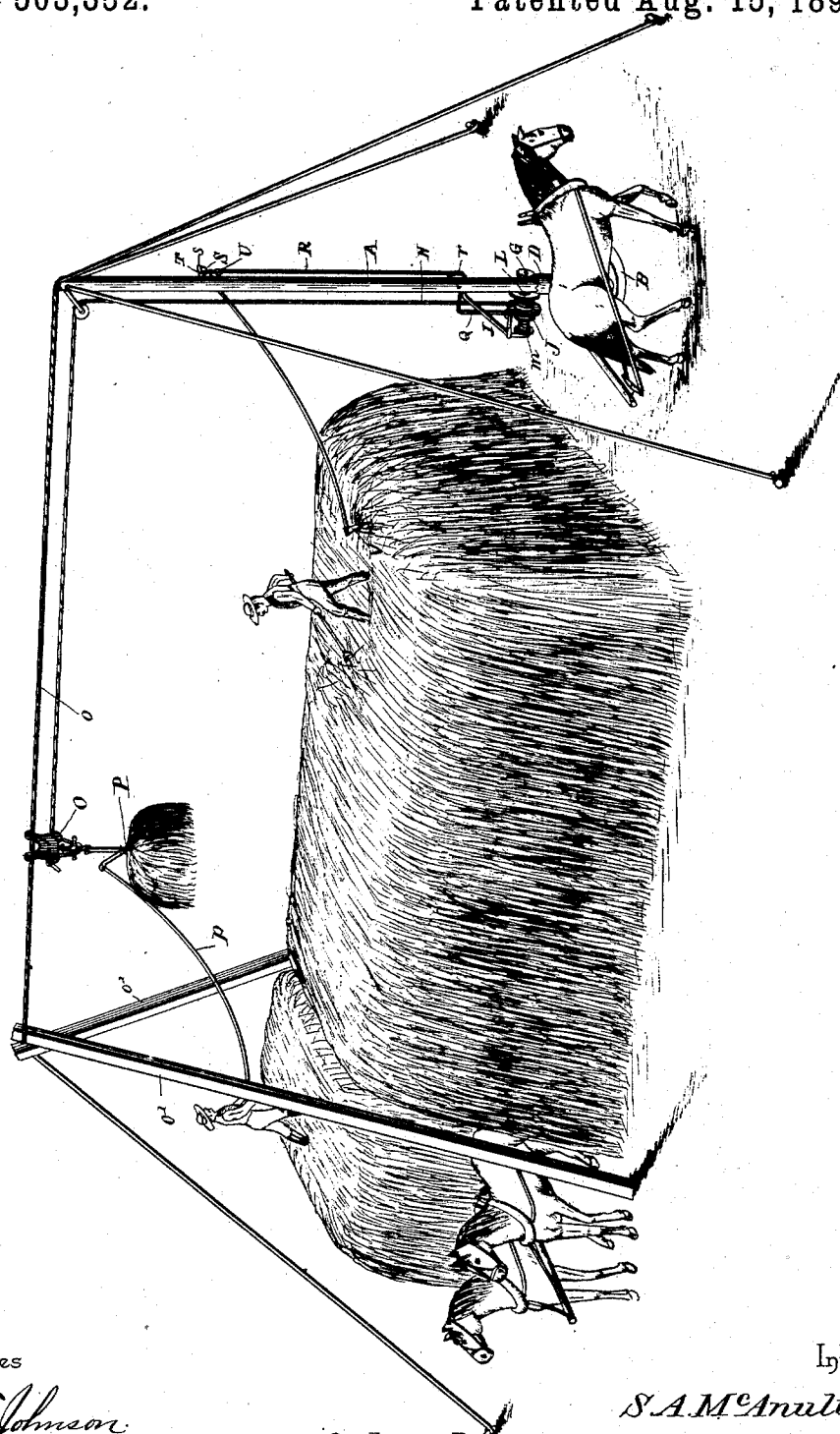
2 Sheets—Sheet 1.

S. A. McANULTY.
HAY ELEVATOR.

No. 503,352.

Patented Aug. 15, 1893.

Fig. 1.



Witnesses

A. Johnson
D. F. Wolhaupter

Inventor

S. A. McNulty

By *h z s* Attorneys,

C. A. Snow & Co

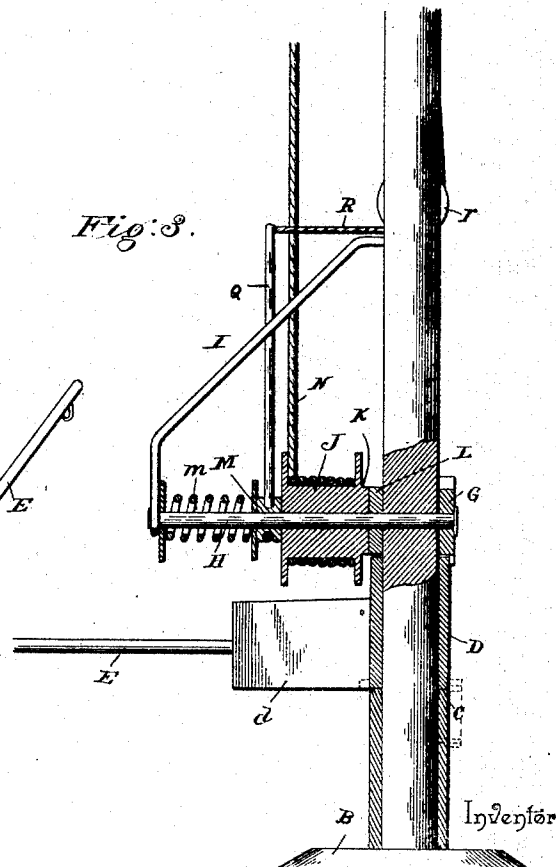
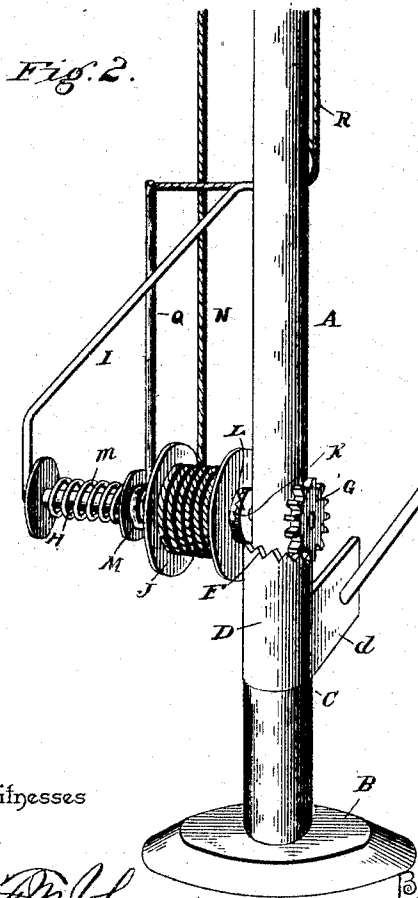
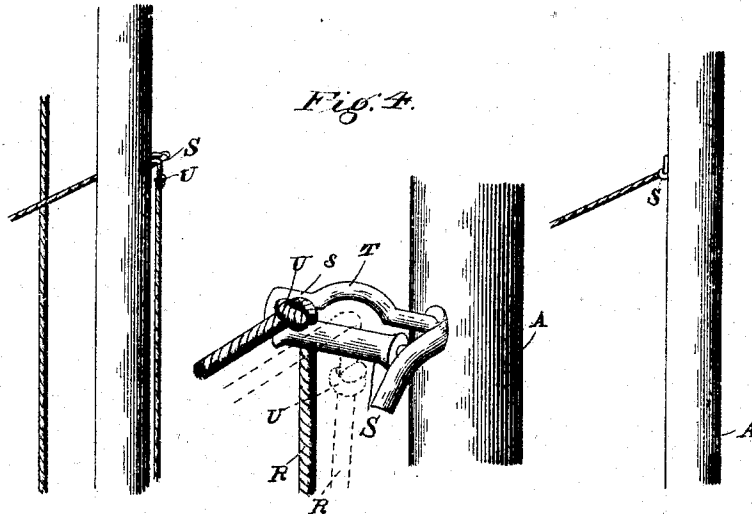
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S. A. McANULTY.
HAY ELEVATOR.

2 Sheets—Sheet 2.

No. 503,352.

Patented Aug. 15, 1893.



Witnesses

J. M. Johnson.
L. P. Holhauser.

By *his* Attorneys, *S. A. McNulty*

Chas. Snow & Co.

UNITED STATES PATENT OFFICE.

SAMUEL A. McANULTY, OF GLENN'S FERRY, IDAHO.

HAY-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 503,352, dated August 15, 1893.

Application filed January 31, 1893. Serial No. 460,313. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. McANULTY, a citizen of the United States, residing at Glenn's Ferry, in the county of Elmore and State of Idaho, have invented a new and useful Hay-Elevator, of which the following is a specification.

This invention relates to hay elevators; and it has for its object to provide certain improvements in hoisting apparatus of this character, whereby the same shall be rendered simple in construction and more easily operated.

To this end the main and primary object of the invention is to improve a construction of hay elevators or hoists, which may be used for other hoisting purposes, so that the hoisting operation can be continued without the many disadvantages attendant upon the driving a horse forward to elevate and backing to lower.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts, hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a hay elevating apparatus constructed in accordance with this invention as set up for outdoor stacks. Fig. 2 is an enlarged detail in perspective of the hoisting apparatus disconnected from the track and other appurtenances. Fig. 3 is a central vertical longitudinal sectional view of the construction disclosed in Fig. 1. Fig. 4 is a detail in perspective of the catch for the gear cord or rope.

Referring to the accompanying drawings, A represents the vertical hoist pole or standard which is secured in a stationary base plate B, and is braced in any suitable manner, either inside of a barn when the stacking is being done therein, or in connection with an open stack as clearly illustrated in Fig. 1 of the drawings.

Arranged on the pole A directly above the base thereof is the bearing box C, which supports the gear sleeve D, embracing and mounted to turn on the pole A. The said gear sleeve may be provided at its lower end with a suitable ratchet device, as illustrated in dotted

lines, for preventing the same from turning backward, and is provided with an extended arm *d*, to which is secured the inner end of the sweep lever E, to which the animal is attached for carrying said sweep around the hoist pole. The upper edge of the gear sleeve D, is provided with cogs F, meshing with a gear pinion G, arranged at one side of the pole directly above the upper edge of said sleeve and securely mounted on the inner end of the rotating winding shaft H, journaled in said pole and the lower bearing end of the combined bearing and brace bracket I, which is secured at its upper end firmly to the pole at a point above the shaft. The shaft H accommodates the winding drum or spool J, loosely mounted thereon, and provided with a clutch face K, at one side, adapted to be normally held in engagement with the clutch collar L, fast on the shaft. The said drum or spool J, is further provided on its opposite side, or at least has connected thereto the grooved collar M, against one side of which bears the spring *m*, which is arranged on said shaft to hold the spool or drum in engagement with said clutch collar, so that as the horse carries the gear sleeve around, the winding spool or drum winds up the hay rope N. The said hay rope N, passes from the winding spool or drum to a suitably arranged hay carrier or traveler O, arranged to move over the suitably supported track *o*, held in a suitable position above the point of stack, either in the barn, or outside thereof by the supports *o'*, as illustrated in Fig. 1 of the drawings. The free end of the hay rope carries the hay fork P, to which is attached the trip rope *p* leading therefrom to the wagon being unloaded, as shown in the drawings. Now it will be readily seen that after the person on the hay wagon has loaded the fork, as the horse revolves the gear sleeve and turns the winding drum or spool which is in gear with the winding shaft, the hay rope will elevate the fork from the wagon and at the same time by means of the carrier or traveler will carry the fork load of hay over the stack, where it is dropped by pulling the trip rope in the ordinary manner. After the fork has been relieved of its load over the stack it is necessary to throw the drum J, out of gear with the shaft on which it is mounted, so that the person on the hay

wagon can draw the fork back for another load. In order to provide for throwing the parts of power or hoist out of gear, I employ a gear lever Q. The gear lever Q, is pivotally
5 connected with the bracket I, and has its lower end loosely embracing the grooved collar of the winding drum. The upper end of the gear lever has connected thereto the gear cord or rope R, which passes over a guide pulley r,
10 attached to the pole directly over the winding drum or spool, so that as the said gear rope or cord is drawn on, the upper end of the lever will be drawn toward the pole, and thereby carry the winding drum or spool away from
15 the clutch collar L.

Arranged on the pole above the guide pulley r, or at a suitable point on the barn, when used in connection therewith, is the supplemental guide pulley S, over which passes the
20 cord or rope R. A catch wire s, embraces the upper portion of the supplemental pulley S, and is provided near one end of said pulley with a loop portion T, through which is designed to pass the stop projection or knot U, on
25 the gear rope. Now it will be readily seen that when the gear rope is drawn, so as to pull the parts of the hoist out of gear, the stop projection or knot on the gear rope, passes through the loop of the catch wire. The operator, on
30 the stack, by giving the gear rope a side jerk or pull, throws the stop projection or knot to one side of the catch wire loop, and therefore holds it fast between the supplemental pulley S and the said catch wire. A reverse jerk or
35 pull allows the said stop projection or notch to pass through the catch wire loop so that the parts of the hoist may be thrown into gear by the spring on the winding shaft. The free end of the gear rope is provided with a stake
40 V, which the operator on the stack can stick into the stack at the point where he is operating, so as to be convenient for use.

Changes in the form, proportion and the minor details of construction may be resorted
45 to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—
50

1. In a hoist, a stationary vertical pole having a bearing box at its base, a bearing bracket extended to one side of said pole, a rotating winding shaft journaled at its ends in the
55 pole and said bearing bracket and having a pinion at one end, a sweep controlled gear sleeve loosely turning on said pole and said bearing box and having teeth at its upper

edge meshing with said pinion, a winding drum loosely mounted on said shaft, clutch
60 devices for said drum, and means for throwing said drum out of gear with the shaft and holding the same out of gear, substantially as set forth.

2. In a hoist, the combination of a vertical
65 pole, a bearing bracket extended to one side of said pole, a winding shaft journaled in the pole and said bearing bracket and having a bearing pinion at one end, a clutch collar fast on said shaft, a winding drum mounted loosely
70 on the shaft and having a clutch face at one side, a spring arranged at one side of said drum to hold the same normally in engagement with said collar, a gear sleeve embracing and turning on said pole, said gear sleeve
75 being provided at its upper edge with gear cogs meshing with said pinion and also having an extended arm, a sweep connected to said arm, and means for relieving said drum from the tension of said spring, substantially
80 as set forth.

3. In a hoist, the combination of a winding shaft, a winding drum loosely mounted on
85 said shaft and having a grooved collar at one end, clutch devices for said drum to connect the same with said shaft, an upright lever pivoted to a suitable point of attachment and having its lower end loosely engaging the
90 grooved collar of said winding drum, a controlling pull rope attached to the upper end of said lever and passing over suitably arranged guide pulleys, and a suitably arranged catch device for said rope to hold the drum
95 out of engagement with its clutch devices, substantially as set forth.

4. In a hoist, the combination of a suitably
100 arranged winding drum, clutch devices for said drum, a suitably arranged controlling lever loosely connected at one end with the drum to throw the same in and out of gear
105 with its clutch devices, a pull rope connected to the other end of said lever, and having at a suitable point thereon a knot or stop projection, suitably arranged guide pulleys for
110 said rope, and a catch wire arranged over one of said pulleys and provided with a raised loop portion adapted to permit the knot or stop projection of the pull rope to pass there-
115 through, substantially as set forth.

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

SAMUEL A. McANULTY.

Witnesses:

J. A. PURTELL,
E. H. JONES.