

No. 754,585.

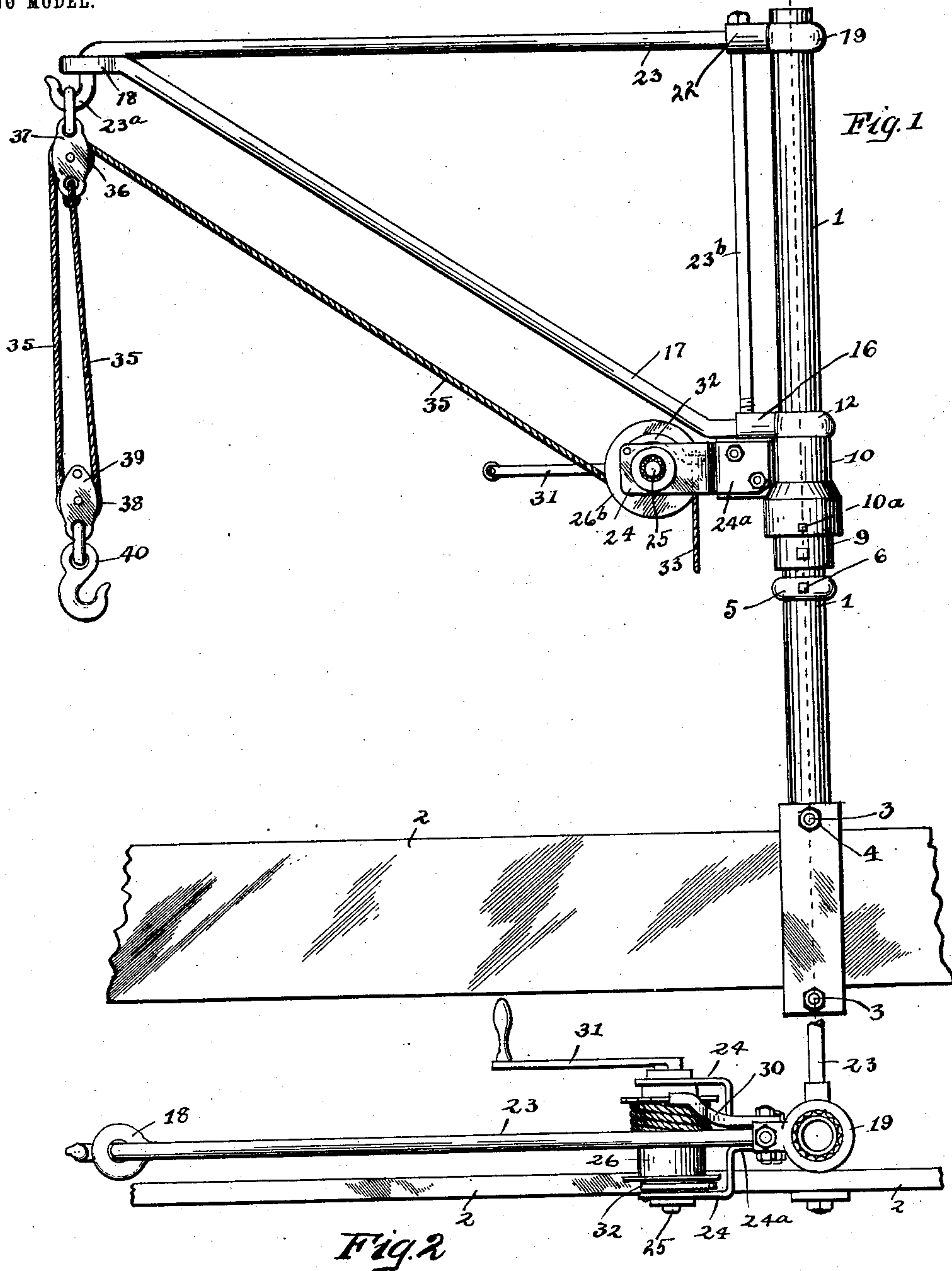
PATENTED MAR. 15, 1904.

E. T. MAXWELL.
CORN SHOCK LOADER.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

S. Edwin Ward.
A. L. Phelps

INVENTOR

Elmer T. Maxwell

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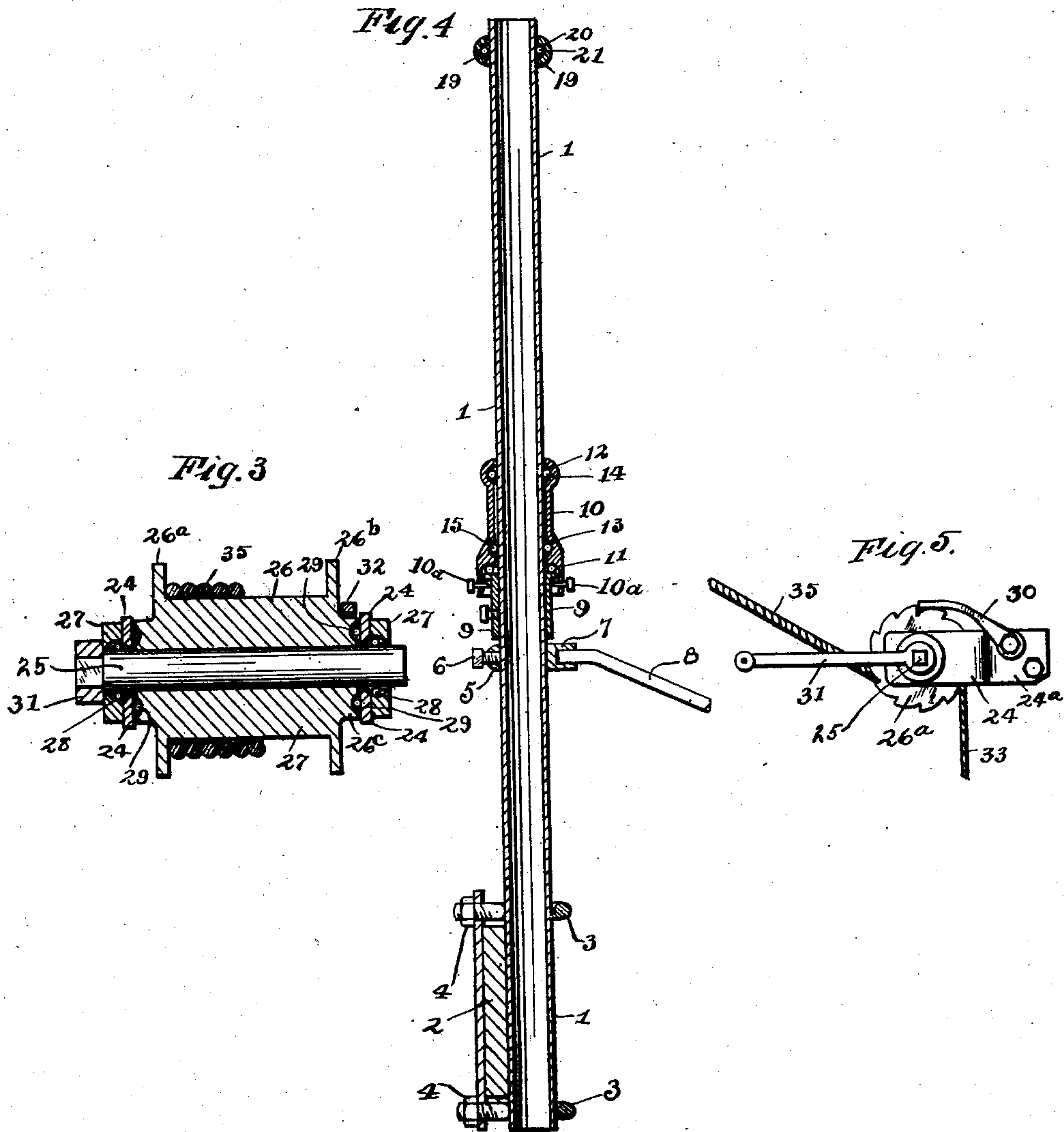
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UNITED STATES PATENT OFFICE.

ELMER T. MAXWELL, OF WOOSTER, OHIO.

CORN-SHOCK LOADER.

SPECIFICATION forming part of Letters Patent No. 754,585, dated March 15, 1904.

Application filed September 14, 1903. Serial No. 173,211. (No model.)

To all whom it may concern:

Be it known that I, ELMER T. MAXWELL, a citizen of the United States, residing at Wooster, in the county of Wayne and State of Ohio, have invented a certain new and useful Improvement in Corn-Shock Loaders, of which the following is a specification.

My invention relates to the improvement of corn-shock loaders, and has particular relation to shock hoisting and loading attachments for wagons.

The objects of my invention are to provide a simple and effective loading mechanism whereby a corn-shock may be readily and easily elevated and deposited on a wagon or other receptacle, to so construct my improved loading apparatus as to insure ease and convenience in operation, and to produce certain improvements in details of construction which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved hoisting or loading apparatus. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged longitudinal section through the reel or windlass body. Fig. 4 is a central vertical section through the main standard of the device, and Fig. 5 is an end view of the reel or windlass.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention I employ a vertical standard, such as is indicated at 1 and which is preferably in the nature of a pipe or tubular body. The lower end portion of the standard 1 is adapted to be detachably connected with and supported from a side frame-bar 2 of a wagon or other structure, this connection preferably being made through the medium of the suitable keepers 3 in the end of eyebolts, the threaded ends of which pass above and below the frame-bar 2 and are engaged by nuts 4. At a point above the frame-bar 2 the standard 1 carries a band or ring 5, which is adjustably held thereon by means of a set-screw 6. The band 5 on its inner side is provided with a socket projection 7, with

which is adapted to engage one end of a brace-rod 8, which extends outwardly and downwardly and has its outer end adapted to be secured to the opposite side of the wagon-frame or other structure. At a desirable height on the standard 1 is adjustably secured by the aid of set-screws a collar 9, and above the latter is rotatably mounted on said standard a sleeve 10. This sleeve 10 has its enlarged lower end portion recessed on its under side, said recessed portion adapted to embrace loosely the upper portion of the collar 9 and to turn on a set of bearing-balls 11, which are mounted between the under side of the sleeve 10 and the upper outwardly-flanged end of the collar 9. The sleeve 10 is further held against vertical displacement by set-screws 10^a, which extend into the lower portion of the sleeve below the outturned upper flange of the collar 9. The sleeve 10 is also provided with internal ball-raceways 12 and 13, within which are arranged bearing-balls 14 and 15, which contact with the periphery of the standard. The sleeve 10 has formed with one side thereof and in its upper portion a projecting socket-arm 16, with which engages the lower and inner end of a rod or derrick-arm 17, the latter inclining upwardly, as shown, from the socket 16 and terminating in a horizontal eye portion 18. Fitting loosely about the upper portion of the standard 1 is a band or ring 19, which in cross-section is of a concavo-convex form, resulting in the production of an internal ball-raceway 20, within which is arranged a set of bearing-balls 21. The ring or band 19 is also provided on one side with a socket projection 22, with which is connected the inner end of a horizontal outwardly-extending derrick-rod 23, the outer end of the latter terminating in a downwardly and thence upwardly bent hook portion 23^a, which passes through the eye 18 of the rod 17. The socket portions 22 and 16 are connected by a vertical stay-rod 23^b.

Bolted to a lateral projection of the sleeve 10 below the socket projection 16 are the parallel end portions 24^a of opposing outwardly-projecting angular plates 24, which form a

yoke-like reel or windlass support, as shown more clearly in Figs. 1 and 2. Journaled in the outer portions of these frame-yoke sections are the ends of a reel-shaft 25, the latter carrying between the supporting members 24 a reel or windlass body 26, which is formed with spool-flanges 26^a and 26^b. Secured to the outer side of each of the supporting members 24 is a bearing-plate 27, between each of which and the adjoining member 24 are mounted in a suitable raceway bearing-balls 28. A circular raceway is also formed on each end of the body of the reel 26, in which are mounted bearing-balls 29, the latter being thus arranged between the members 24 and ends of the reel-body and serving to take up the end thrust of said reel. The reel-flange 26^a is, as shown more clearly in Fig. 5 of the drawings, formed with peripheral ratchet-teeth, thereby converting said flange into a ratchet-wheel which is rigid with the reel-body. Supported in the path of these teeth and adapted to engage therewith is the outer end of a suitable pawl-finger 30, the remaining end of which is pivotally connected with the inner portions 24^a of the yoke-sections. With one end of the shaft 25 is suitably connected on the outer side of the plate 27 a crank-handle 31. Loosely embracing the upper side of the hub extension 26^c of the reel-body is a curved brake-shoe 32, one end of which is pivoted to the inner side of the adjoining member 24 and the remaining end of which is connected with a brake-pulley rope 33, which depends therefrom.

With the reel-body is connected and adapted to be wound thereon a rope 35, which extending outward runs over a pulley-wheel 36, pivoted in a pulley-block 37, which is hooked into engagement with the hook 23^a. The rope 35, depending from said pulley-wheel 36, passes about a second pulley-wheel 38, mounted in a block 39, said block having a depending hook 40. From the wheel 38 the rope 35 extends upward and is connected with the lower end of the pulley-block 37.

In utilizing the above-described mechanism for the purpose of loading corn-shocks onto a wagon or other receptacle it will be understood that the derrick-arms 17 and 23 are swung outward to the desired point and the rope 35 sufficiently unwound from the reel to facilitate the suitable engagement of the depending portions of said rope with the body of the corn-shock. This being accomplished, the reel is rotated by the turning of the crank-handle until the corn-shock is at a proper elevation, when the crane members may be swung inward and the shock deposited upon the load.

It will be understood that when the pivoted pawl 30 is in the path of the teeth of the ratchet-wheel the outer end of said pawl will successively drop into engagement with said

teeth as the reel is rotated in the lifting operation, thus preventing any chance of the elevated or partially-elevated shock dropping or being lowered from gravity. Owing to the employment of the brake-shoe 32, however, it will be understood that when the operator on the wagon leaves his position at the reel to remove the shock or manipulate the crane he may first throw the pawl 30 back out of the path of the ratchet-teeth, the reel being held from rotation by the operator or man on the ground pulling upon the brake-shoe rope 33, and produce a desirable frictional contact of said shoe with the extended portion of the reel-hub. When the shock has been deposited on the load and detached from the rope, a release on the pull of the rope 33 will permit of the hook-supporting end of the rope again descending by gravity to the ground.

From the construction and operation which I have described it will be understood that a comparatively simple yet reliable hoisting construction is provided for attachment to wagons or other receptacles, which may be conveniently utilized for the rapid and safe loading of corn-shocks or other material onto the wagon or other receptacle or support. It will also be observed that the bearing connections between the various parts of my device are such as to insure ease in operation, the ball-bearings insuring movement of the parts without undue friction or binding.

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

1. In a corn-shock loader, the combination with a standard having a rigid support at its lower end, a sleeve rotatably mounted on said standard and also capable of being vertically adjusted thereon, a reel-supporting frame carried by said sleeve and a reel-body journaled therein, of a crane-body comprising upper and lower arms, the latter connected with said sleeve and the former rotatably mounted on the standard, a pulley-block adapted to be supported from the crane and a rope running over the pulley of said block and adapted to be wound upon said reel, substantially as specified.

2. In a corn-shock loader, the combination with a supporting-framework, a standard rigidly connected therewith and rising therefrom, a collar adjustably connected with said standard, a sleeve rotatably mounted on said standard and collar and a journaled reel-body supported from said sleeve, of a crane-frame comprising upper and lower members, said lower member being connected with said sleeve and said upper member rotatable on said standard and a pulley-carrying block connected with the outer end of said crane, substantially as specified.

3. The combination with a standard, of a vertically-adjustable collar thereon provided with an external annular flange, a sleeve rotatably supported upon the collar and embracing the flange thereof, set-screws piercing the sleeve and underlying the flange of the collar to prevent upward displacement of the sleeve, a crane member carried by the sleeve, a reel upon the sleeve, and a hoisting-cable hung from the crane member and engaging the reel.

ELMER T. MAXWELL.

In presence of—

CLIFTON C. EUANS,
C. C. SHEPHERD.