

No. 662,157.

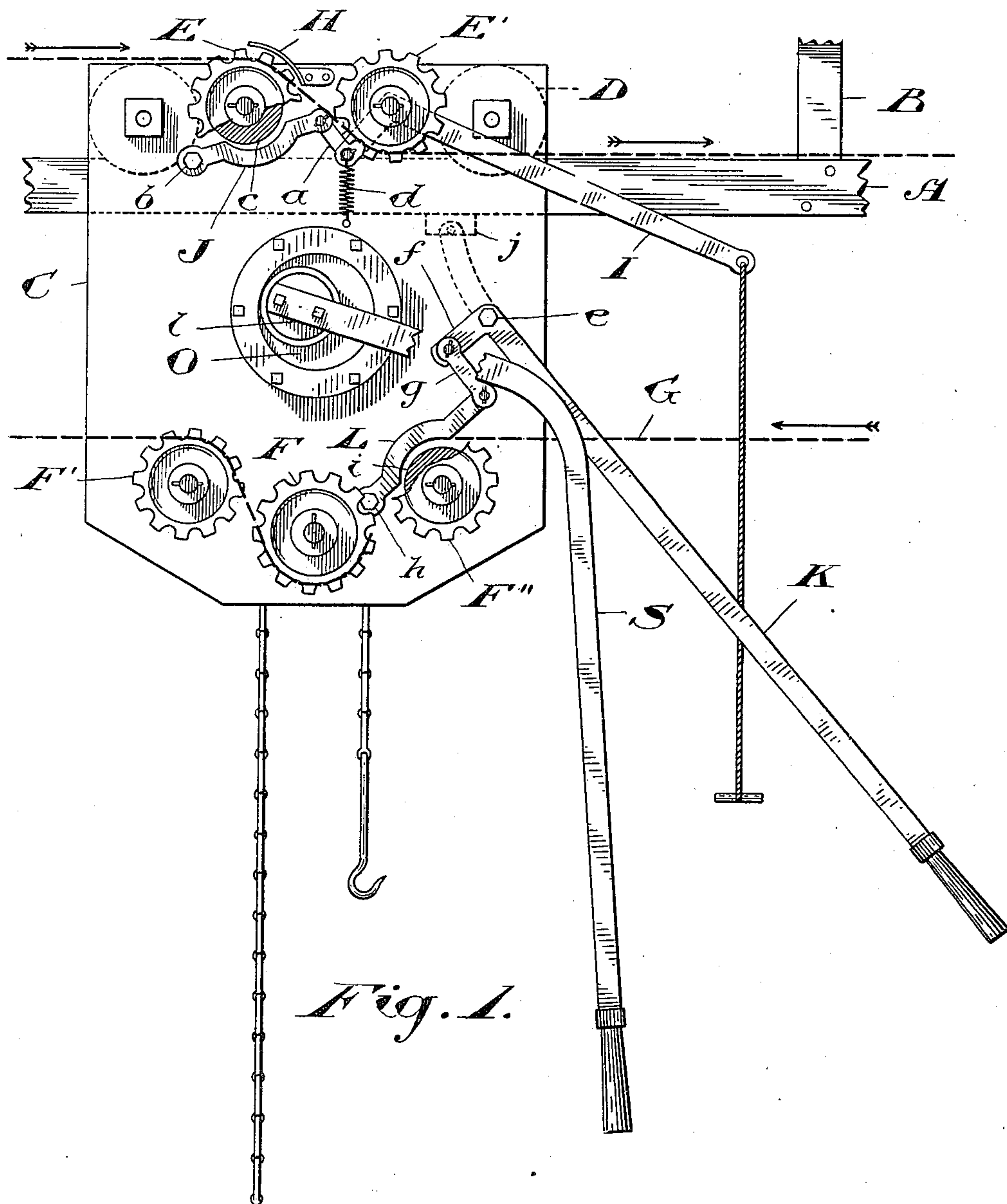
Patented Nov. 20, 1900.

J. C. WEST.  
CANNERY HOIST.

(Application filed May 28, 1900.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses.

G. J. Colbourne.

J. M. Webster

Inventor.

John C. West

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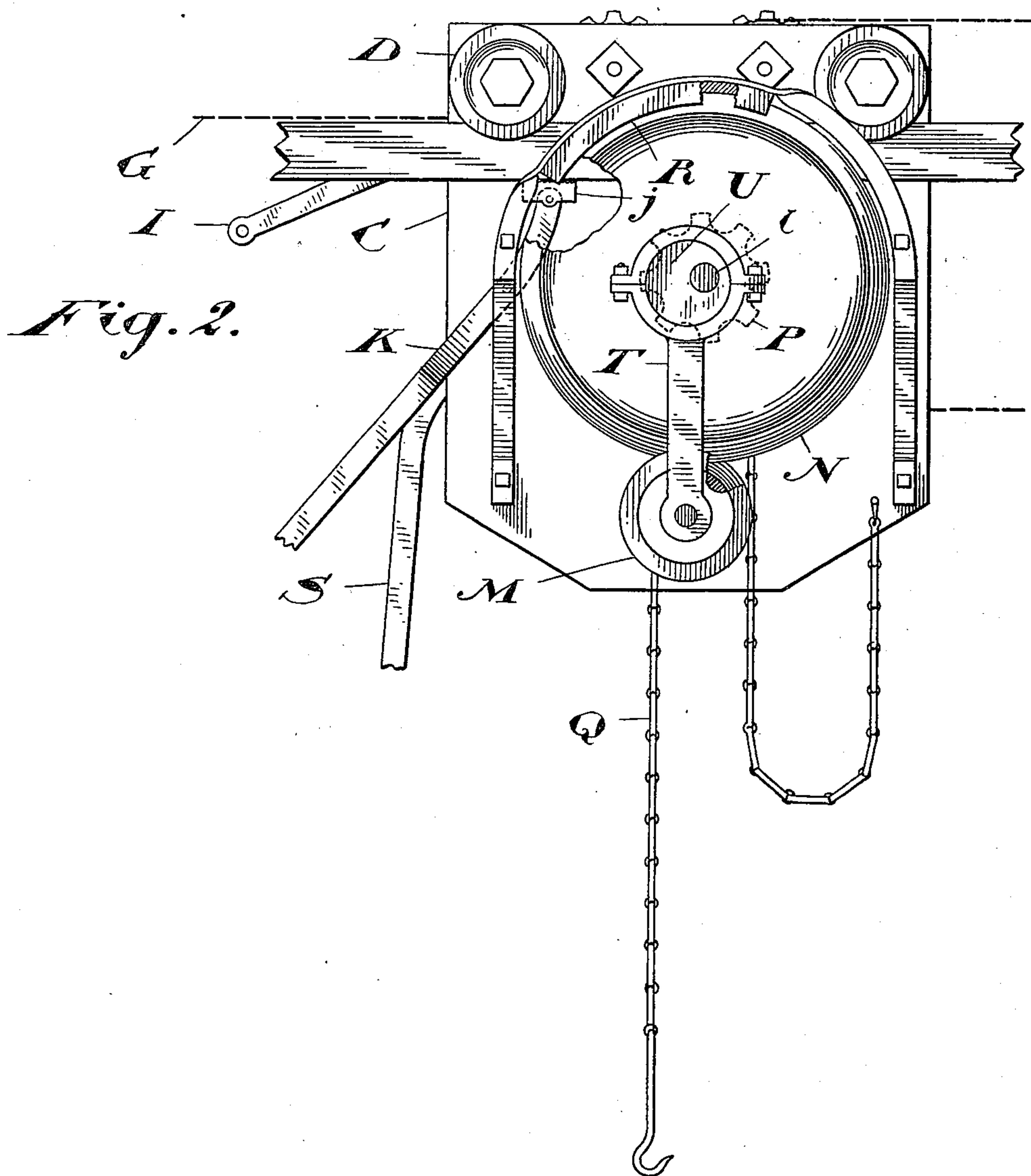
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3 Sheets—Sheet 2.



*Witnesses*

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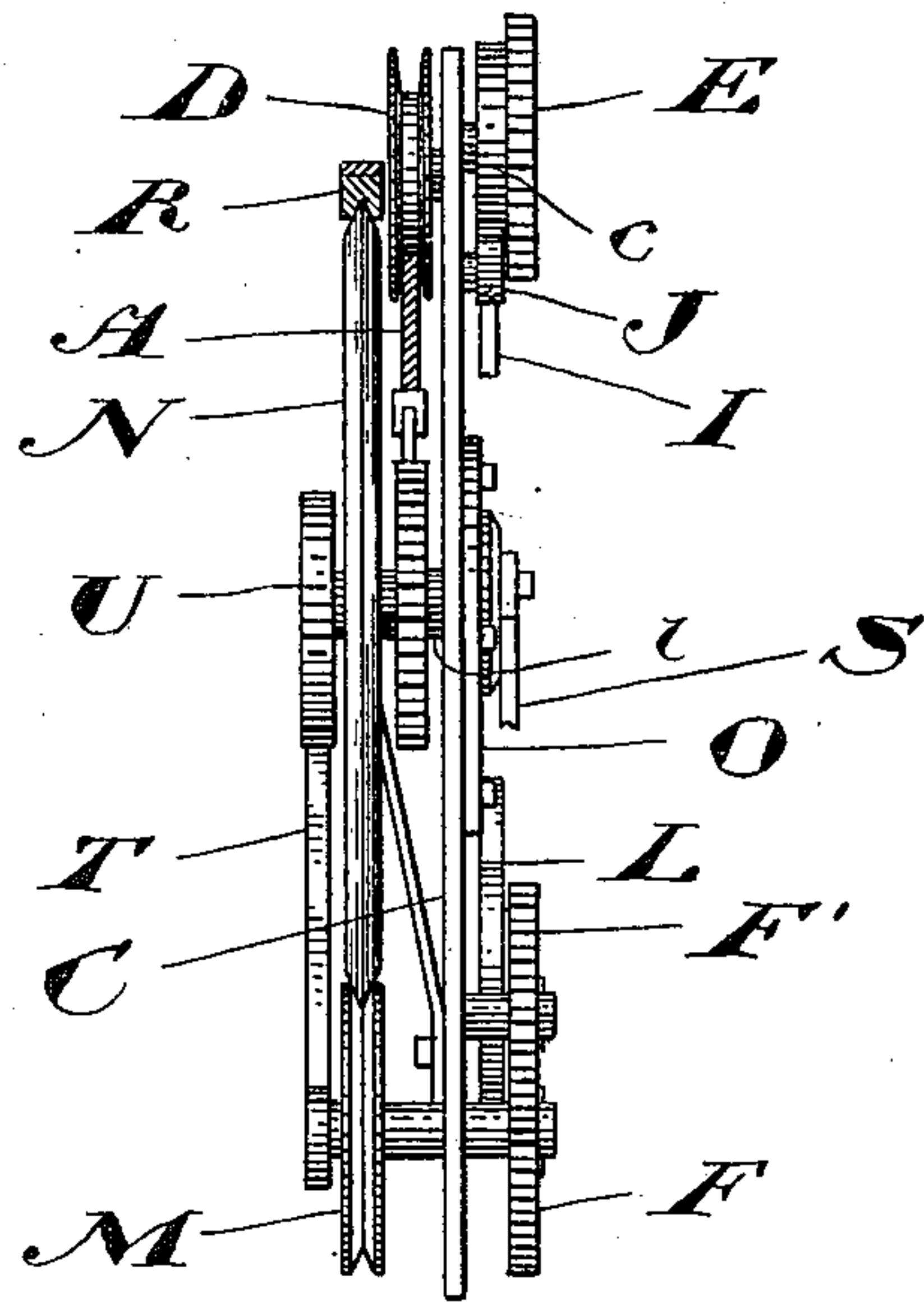
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3 Sheets—Sheet 3.



*Fig. 3.*

**Witnesses**

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# UNITED STATES PATENT OFFICE.

JOHN C. WEST, OF SIMCOE, CANADA.

## CANNERY-HOIST.

SPECIFICATION forming part of Letters Patent No. 662,157, dated November 20, 1900.

Application filed May 28, 1900. Serial No. 18,348. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. WEST, of the town of Simcoe, in the county of Norfolk, Province of Ontario, Canada, have invented certain new and useful Improvements in Cannery-Hoists, of which the following is a specification.

The object of my invention is to devise a traveling hoist for canneries which by suitable mechanism and the action of a constantly-running horizontal endless chain may be caused to travel in either direction or held stationary and operated to lift a crate from a steam-box; and it consists, essentially, in the construction hereinafter specifically described and then definitely claimed.

Figure 1 is a front side elevation of my hoist. Fig. 2 is a rear side elevation of the same. Fig. 3 is an end view.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is a horizontal track supported at intervals by suitable hangers B. In practice this track will be located over a row of cannery steam-boxes, the hoist being intended to lift crates of cans from the steam-boxes and transport them to the cooler.

C is a plate forming the frame of the hoist. Behind the upper part of this plate are journaled the grooved rollers D, adapted to run on the track A. At the top of the plate and on the front side are journaled two sprocket-wheels E E'. At the lower end of the plate and in front are journaled the sprocket-wheels F F' F''. Around the sprocket-wheels E E' passes the upper portion of the endless chain G, and around the sprocket-wheels F F' F'' passes the lower side of the chain, as shown in Fig. 1. The chain G will of course be carried and driven by sprocket-wheels in the ordinary manner, which it is not necessary to illustrate. Over the upper side of the sprocket-wheel E is placed a guard H, suitably secured to the plate C and intended to prevent the chain jumping the teeth of the sprocket-wheel E. Upon the spindle of the sprocket-wheel E' is pivoted the L-shaped lever I. The shorter arm of this lever is pivotally connected by the link a with one end of a brake lever J, the other end of which is pivoted on the frame at b. This brake-lever

is suitably shaped to engage the friction-drum c, formed on or secured to the sprocket-wheel E. The long arm of the lever I is provided with a cord and handle, as shown, by means of which the lever may be drawn upon to force the brake-lever J in contact with the drum c.

Supposing the endless chain to be traveling in the direction indicated by arrows, the stoppage of the sprocket-wheel E by the action of the brake-lever J will cause the hoist to travel in the same direction as the upper portion of the chain. A coil-spring d is preferably connected with the short arm of the lever I and a suitable part of the plate C. This spring withdraws the brake-lever J from contact with the friction-drum c when the lever I is released by the operator. This spring might be arranged in many different ways to that shown.

K is a lever pivoted at e upon the frame and forked to pass on each side of the frame. The part of the lever in front of the plate C has an arm f formed thereon, which is pivotally connected by the link g with one end of the brake-lever L, the other end of which is pivoted at h upon the plate C. This brake-lever L is suitably shaped to engage the friction-drum i, formed on or secured to the sprocket-wheel F''. The part of the forked lever K behind the plate C extends up in proximity to the lower side of the track A, and has pivoted thereon the brake-shoe j, the upper surface of which is preferably roughened, as indicated in Fig. 2, to give it a better grip of the track. It is of course not absolutely essential that the brake-shoe be so pivoted, as a rigidly-attached brake-shoe would answer the purpose.

From the construction described it is evident that when the parts are in the position shown in the drawings the hoist is held stationary while the brake is in contact with the track and that before the brake-lever L can be brought in contact with the friction-drum i the brake-shoe j is withdrawn from contact with the track. When the brake-lever L is in contact with the friction-drum i, the sprocket-wheel being held stationary, the hoist is caused to travel in the direction of motion of the lower part of the chain, as indicated by arrows.



Behind the plate C the grooved pinion M is secured to the spindle of the sprocket-wheel F. Above this pinion is situated the friction-wheel N, having its periphery shaped to engage the pinion M. This friction-wheel N is journaled on the spindle *l*, carried by the eccentric O, suitably journaled on the plate C. (See Fig. 1.) Formed on or secured to the friction-wheel N is a sprocket-wheel P, with which engages a chain Q, one end of which is provided with a hook for engagement with the crates to be hoisted. Over the friction-wheel N is secured the brake R, suitably grooved to engage the periphery of the wheel. Secured to the eccentric O in front of the plate is the lever S. By swinging this lever it is evident that the friction-wheel N may be lowered in contact with the grooved pinion M or raised in contact with the brake R, and thus held stationary.

T is a link in which the rear end of the spindle of the sprocket-wheel F and the grooved pinion M are journaled. The upper end of this link is formed as an eccentric-strap to embrace an eccentric U, similar to the eccentric O, and carrying the rear end of the spindle *l* of the friction-wheel N. This link effectually prevents any springing of the spindle of the grooved pinion M when the weight of the friction-wheel N and the crate being lifted comes upon it. Although I prefer to use a friction-wheel and grooved pinion, as shown, other forms of frictional drive would answer the purpose of the invention.

Having described my invention, I will briefly set out its mode of operation.

Supposing the hoist is at one end of the track, where it has discharged a crate full of cans at the end of the cooler, the operator will pull down the lever I, thus stopping the sprocket-wheel E and causing the hoist to travel in the direction of motion of the upper part of the chain. Having got the hoist accurately above the desired steam-box, he releases the lever L, when the motion of the chain freely revolves the sprocket-wheels E E' without imparting motion to the hoist. When the hoist is traveling, as indicated, the brake-shoe J will slip freely over the track A, but will resist any attempt to move the hoist in the reverse direction. Holding the lever S in a midway position, so that the friction-wheel N is not in contact with either the grooved pinion or the brake, the operator draws down the chain Q and engages its hook with the bale of the crate. He then throws up the lever S and drops the friction-wheel N in contact with the grooved pinion M. As this grooved pinion is constantly running, owing to its connection with the sprocket-wheel F, the motion of the lower part of the chain causes it to rotate the friction-wheel, and with it the sprocket-wheel P, thus raising the end of the chain bearing the hook, and with it the crate. When the crate is raised the desired distance, the lever S is

drawn down again and the friction-wheel N stopped and securely held by contact with the brake R. Now by operating the lever K the brake-shoe *j* will be released from the track, where it has been resisting the tendency of the chain to pull the hoist in the direction of motion of the lower part of the chain while the crate was being hoisted, and the brake-lever L engaged with the friction-drum *i*, thus causing the hoist to travel in the direction of motion of the lower part of the chain toward the cooler.

It will be noticed that the sprocket-wheel E' serves as an idler to give the upper part of the chain a sufficient engagement with the sprocket-wheel E. It will also be noticed that the sprocket-wheel F answers the purpose of an idler to give the lower part of the chain a sufficient engagement with the sprocket-wheel F'', while when the sprocket-wheel F is doing its work the sprocket-wheels F' F'' answer the purpose of idlers to give the sprocket-chain the extensive engagement with the sprocket-wheel F which the latter needs owing to the considerable weight it sustains in lifting.

From the above description it will be seen that I have devised a hoist for canneries in which the motion of a constantly-running horizontal endless chain is utilized for the purpose of causing the hoist to travel in either direction and also for the purpose of raising the load. The parts, it will be noticed, are also arranged so that when it is desired to cause the hoist to move in the direction of motion of the lower part of the chain the brake engaging the track must first be released, that the friction-wheel N must be disengaged from the grooved pinion M before it can be stopped by bringing it in contact with the brake R, and that even if the lever L be operated while the brake-shoe *j* is in contact with the track the latter will automatically release itself. From this arrangement it results that breakage of the apparatus due to the carelessness or want of knowledge of the attendant is impossible.

In practice many variations may be made from the detailed construction of my invention without departing from the spirit thereof.

What I claim as my invention is—

1. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the upper portion of the chain; a sprocket-wheel engaging the lower portion of the chain; and means for holding either of the sprockets from rotating, substantially as and for the purpose specified.

2. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-



wheel engaging the upper portion of the chain; a sprocket-wheel engaging the lower portion of the chain; means for securely holding the said chain in engagement with the said sprocket-wheels; and means for holding either of the sprockets from rotating, substantially as and for the purpose specified.

3. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the upper portion of the chain; an idler adapted to hold the chain in engagement with the said sprocket-wheel; a sprocket-wheel engaging the lower portion of the chain; an idler adapted to retain the chain in engagement with the said sprocket; and means for holding either of the said sprockets from rotating or releasing the same, substantially as and for the purpose specified.

4. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the upper portion of the chain; an idler adapted to hold the chain in engagement with the said sprocket-wheel; a sprocket-wheel engaging the lower portion of the chain; an idler adapted to retain the chain in engagement with the said sprocket; a friction-drum formed on or secured to each sprocket-wheel; a brake-lever pivoted on the frame in proximity to each drum; and levers pivoted on the frame and adapted to operate the said brake-levers, substantially as and for the purpose specified.

5. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the upper portion of the chain; an idler adapted to hold the chain in engagement with the said sprocket-wheel; a sprocket-wheel engaging the lower portion of the chain; an idler adapted to retain the chain in engagement with the said sprocket; means for holding the first-mentioned sprocket-wheel from rotating or releasing the same; a lever pivoted on the frame; a brake-shoe carried by the said lever and adapted to engage the said track; and means operated by the said lever for stopping the rotation of the sprocket-wheel engaging the lower side of the chain when the brake-shoe is released from the track and for releasing it when the brake is so engaged, substantially as and for the purpose specified.

6. As a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-

wheel engaging the upper portion of the chain; an idler adapted to hold the chain in engagement with the said sprocket-wheel; a sprocket-wheel engaging the lower portion of the chain; an idler adapted to retain the chain in engagement with the said sprocket; means for holding the first-mentioned sprocket-wheel from rotating or releasing the same; a lever pivoted on the frame; a brake-shoe carried by the said lever and adapted to engage the said track; a friction-drum formed on or secured to the sprocket-wheel engaging the lower side of the chain; a brake-lever pivoted on the frame in proximity to the drum and means whereby when the lever is operated to press the brake-shoe against the track the brake-lever is raised from the drum, and vice versa, substantially as and for the purpose specified.

7. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; a friction-pinion secured to the said axle behind the plate; a friction-wheel having its shaft carried by bearings vertically movable on the plate; a sprocket-wheel secured to the said friction-wheel; and means for moving the said bearings to move the friction-wheel into or out of engagement with the friction-pinion, substantially as and for the purpose specified.

8. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; means for retaining the chain in engagement with the said sprocket-wheel; a friction-pinion secured to the said axle behind the plate; a friction-wheel having its shaft carried by bearings vertically movable on the plate; a sprocket-wheel secured to the said friction-wheel; and means for moving the said bearings to move the friction-wheel into or out of engagement with the friction-pinion, substantially as and for the purpose specified.

9. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; a friction-pinion secured to the said axle behind the plate; a friction-wheel having its shaft carried by bearings vertically movable on the plate; a sprocket-wheel secured to the said friction-wheel; a stationary brake located above the said friction-wheel; and means for moving the said bearings to press the friction-wheel against the friction-pinion or the brake as de-



sired, substantially as and for the purpose specified.

10. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; a friction-pinion secured to the said axle behind the plate; a friction-wheel located above the said friction-pinion; a sprocket-wheel secured thereto; a shaft on which the said wheel is journaled; an eccentric carrying the said shaft and journaled in the frame; and a lever secured to the eccentric by which it may be rotated, substantially as and for the purpose specified.

11. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; means for retaining the chain in engagement with the said sprocket-wheel; a friction-pinion secured to the said axle behind the plate; a friction-wheel located above the said friction-pinion; a sprocket-wheel secured thereto; a shaft on which the said wheel is journaled; an eccentric carrying the said shaft and journaled in the frame; a lever secured to the eccentric by which it may be rotated; and a stationary brake located above the said friction-wheel, substantially as and for the purpose specified.

12. As a cannery-hoist, a track in combination with a plate or frame adapted to move thereon; an endless sprocket-chain suitably carried and driven parallel to the track and in proximity to the plate; a sprocket-wheel engaging the said chain and secured to an axle journaled in the plate; a friction-pinion secured to the said axle behind the plate; a friction-wheel located above the said friction-pinion; a sprocket-wheel secured thereto; a shaft on which the said wheel is journaled; an eccentric carrying the said shaft and journaled in the frame; a lever secured to the eccentric by which it may be rotated; a link in which is journaled the end of the shaft of the friction-pinion; and an eccentric similar to the aforesaid eccentric journaled in the upper part of the link and having the rear end of the friction-wheel shaft secured thereto, substantially as and for the purpose specified.

13. As a cannery-hoist, the track A in combination with the plate or frame C adapted to move on the said track; the endless sprocket-chain G; the sprocket-wheel F and the friction-pinion M secured to the same axle; the sprocket-wheel F''; the lever K pivoted at *e*; the brake-shoe *j* carried by the lever; means operated by the lever for stopping the rotation of the sprocket-wheel F'' when the brake-shoe *e* is released from the track; the friction-wheel N journaled on the shaft J; the sprocket-wheel O secured thereto; and means for moving the shaft vertically in the frame, substantially as and for the purpose specified.

14. In a cannery-hoist, the track A in combination with the plate or frame C adapted to move on the said track; the endless sprocket-chain G; the sprocket-wheels F, F''; the friction-drum *i* secured to the sprocket-wheel F''; the brake-lever L pivoted at *h*; the forked lever K pivoted at *e*; the brake-shoe *j* carried by the lever; the arm *f* of the lever and the link *g* pivotally connecting the arm *f* and the brake-lever L, substantially as and for the purpose specified.

15. In a cannery-hoist, the track A in combination with the plate or frame C adapted to move on the said track; the endless sprocket-chain G; the sprocket-wheels F, F''; the friction-drum *i* secured to the sprocket-wheel F''; the brake-lever L pivoted at *h*; the forked lever K pivoted at *e*; the brake-shoe *j* carried by the lever; the arm *f* of the lever; the link *g* pivotally connecting the arm *f* and the brake-lever L; the sprocket-wheels E, E'; the friction-drum *c* secured to the sprocket-wheel E; the L-shaped lever I pivoted on the frame; the brake-lever J pivoted at *b*; and the link *g* pivotally connecting the lever and the brake-lever, substantially as and for the purpose specified.

16. In a cannery-hoist, the track A in combination with the plate or frame C adapted to move on the said track; the endless sprocket-chain G; the sprocket-wheels F, F''; the friction-drum *i* secured to the sprocket-wheel F''; the brake-lever L pivoted at *h*; the forked lever K pivoted at *e*; the brake-shoe *j* carried by the lever; the arm *f* of the lever and the link *g* pivotally connecting the arm *f* of the brake-lever L; the sprocket-wheels E, E'; the friction-drum *c* secured to the sprocket-wheel E; the L-shaped lever I pivoted on the frame; the brake-lever J pivoted at *b*; the link *g* pivotally connecting the lever and the brake-lever; and the coil-spring *d*, substantially as and for the purpose specified.

17. In a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track in combination with an endless sprocket suitably carried and driven parallel to and in proximity to the track; means for rigidly connecting either side of the chain with the frame so that the latter may be moved in either direction; a brake adapted to engage the track to hold the frame stationary; a sprocket-wheel adapted to engage a lifting-chain and means controlled by the operator for rotating the said sprocket-wheel from the said endless chain when the frame is stationary, substantially as and for the purpose specified.

18. In a cannery-hoist, a track in combination with a plate or frame adapted to move on the said track in combination with an endless sprocket suitably carried and driven parallel



to and in proximity to the track; means for  
rigidly connecting either side of the chain  
with the frame so that the latter may be  
moved in either direction; a brake adapted to  
5 engage the track to hold the frame station-  
ary; a sprocket-wheel adapted to engage a  
lifting-chain; means controlled by the opera-  
tor for rotating the said sprocket-wheel from  
the said endless chain when the frame is sta-

tionary; and means for holding the said sprocket-wheel when it is not being driven by the endless chain, substantially as and for the purpose specified.

Simcoe, Canada, April 19, 1900.

JOHN C. WEST.

In presence of—

W. E. TISDALE,  
FRANK REID.