

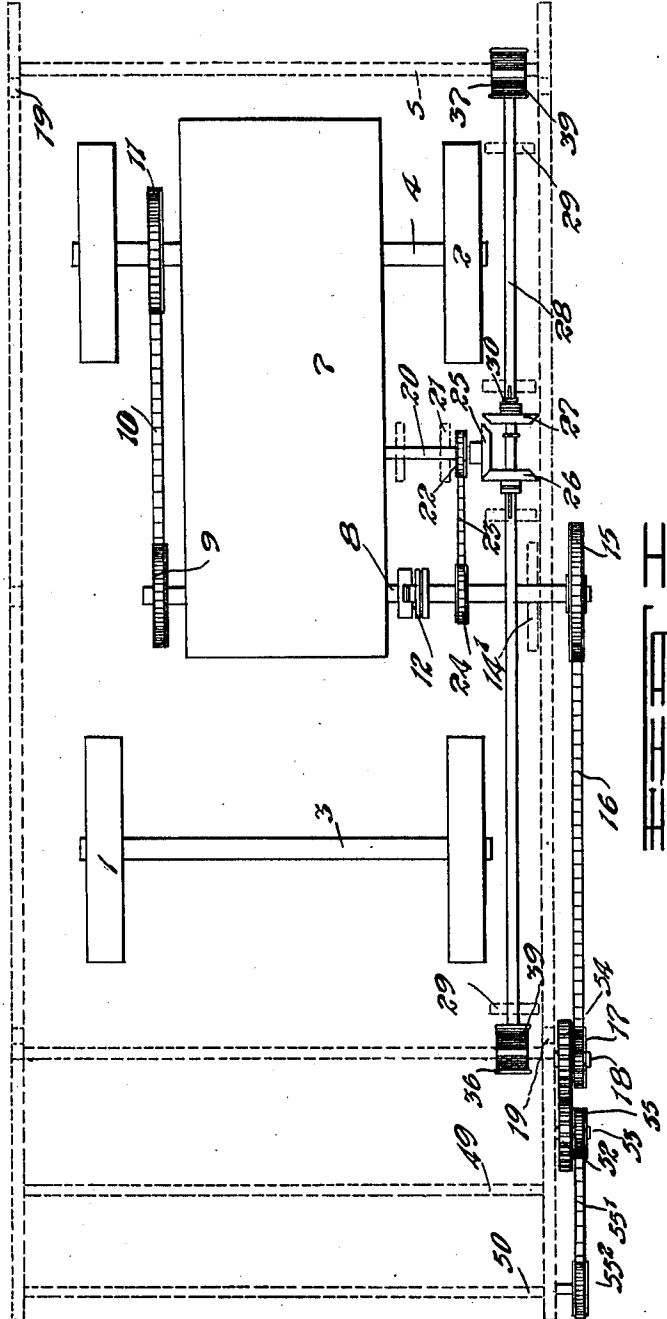
L. J. COLLINS.
SHEAF LOADER.

APPLICATION FILED MAR. 30, 1911.

1,004,149.

Patented Sept. 26, 1911.

3 SHEETS—SHEET 1.



Witnesses.
W. Wakefield.
R. Foster.

Inventor.
L. J. Collins.

By *Sheldon* Atty.

L. J. COLLINS.

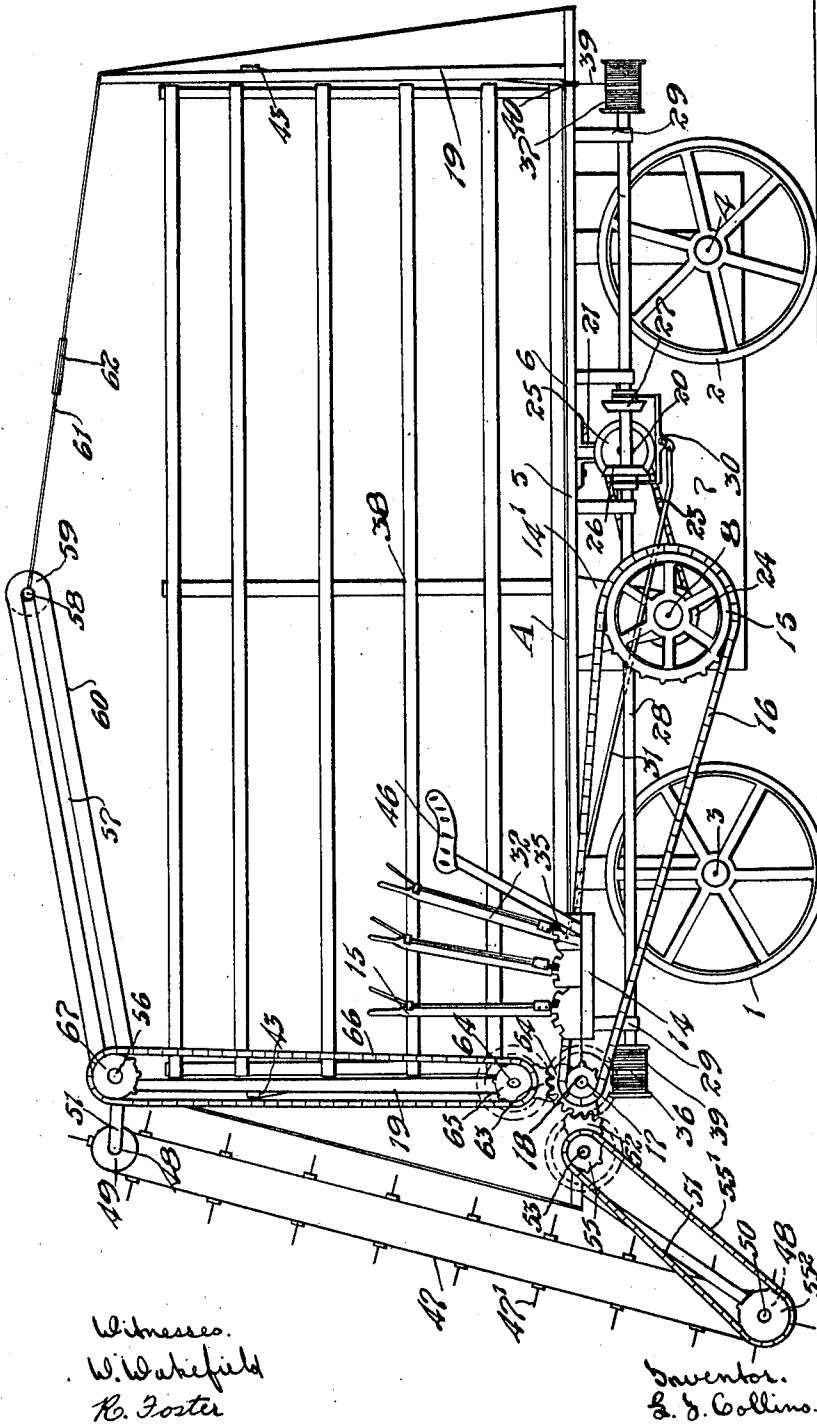
SHEAF LOADER.

APPLICATION FILED MAR. 30, 1911.

1,004,149.

Patented Sept. 26, 1911.

3 SHEETS—SHEET 2.



Witnesses.
W. Wakefield
R. Foster

Inventor.
L. J. Collins.

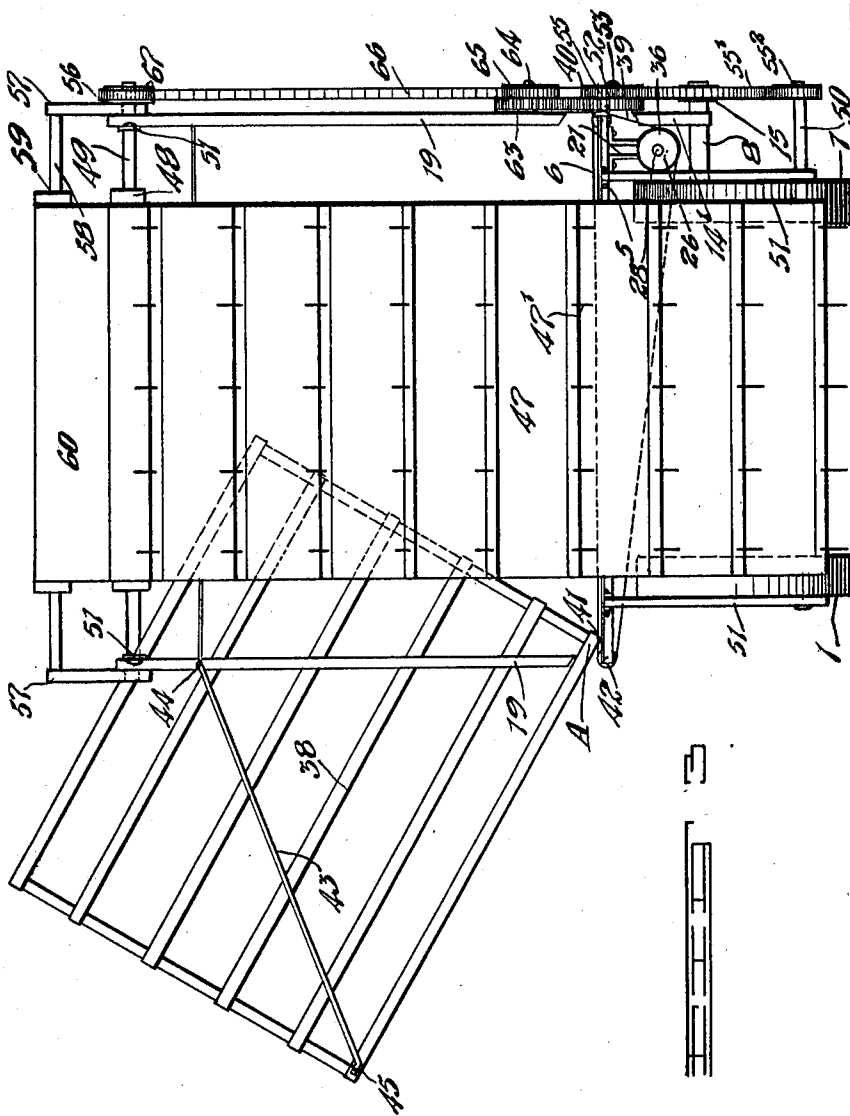
Frederick L. Lusk

L. J. COLLINS.
SHEAF LOADER.
APPLICATION FILED MAR. 30, 1911.

1,004,149.

Patented Sept. 26, 1911.

3 SHEETS—SHEET 3.



WITNESSES

R. Foster
W. Wakefield.

INVENTOR

L. J. COLLINS.

By *Frank B. Sturtevant*
Att'y.

UNITED STATES PATENT OFFICE.

LUCIUS JAMES COLLINS, OF WINNIPEG, MANITOBA, CANADA.

SHEAF-LOADER.

1,004,149.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed March 30, 1911. Serial No. 618,027.

To all whom it may concern:

Be it known that I, LUCIUS JAMES COLLINS, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Sheaf-Loaders, of which the following is the specification.

My invention relates to a device for loading sheaves from the ground into a wagon and for dumping the same from the wagon, and the object of the invention is to provide a loader of this kind which will effectually elevate the sheaves and deposit them in a box or crate located on a wagon frame to form a load, and a further and very important object is to construct the crate so that the load carried by it can be dumped quickly, the wagon being free to proceed without having to pass over the dumped material.

The invention consists essentially in the novel arrangement and construction of parts hereinafter more particularly described and later pointed out in the appended claims.

Figure 1 is a plan view of the driving and operating parts of my loader, the wagon frame being shown in dotted outline. Fig. 2 is a side elevation of the complete loader. Fig. 3 is a front view of the loader showing the crate in dumping position.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 and 2 represent the rear and forward wagon wheels mounted at the end of suitable axles 3 and 4. A wagon frame 5 is supported from the axles and above the wheels in the usual way and is sheeted over on the upper side by a galvanized plate 6 so as to present a smooth upper face.

7 represents a casing secured to the frame 5 and located beneath the same, which casing incloses any suitable engine of which 8 is the main shaft. The shaft is equipped with a chain wheel 9 which is connected directly through a chain 10 with a drive chain wheel 11 located on the rear axle 4. The shaft 8 is broken and a clutch 12 is inserted whereby the extending end 8' of the shaft can be rotated or held stationary as desired. The clutch is controlled by a lever 13 located on a side platform 14 extending from the frame 5.

I have not given any detailed formation

of the clutch, the lever, nor of the connecting parts between the clutch and the lever, as these form no part of my invention but are simply well known devices at present in use. The outer end 8' of the shaft is supported by a bracket 14' which extends downwardly from the frame 5. A drive gear 15 is keyed on the portion 8' of the shaft 8, which gear is connected through a suitable chain 16 with a chain wheel 17 fixed on a rotatable shaft 18 extending from one of the four corner posts 19 which pass upwardly from the frame 5.

20 is a counter shaft located beneath the frame 5 and supported by suitable hangers 21 extending downwardly therefrom. The counter shaft is supplied with a chain wheel 22 which is connected through a chain 23 with a chain wheel 24 keyed on the extending end of the shaft 8.

25 is a bevel gear secured to the outer end of the counter shaft and adapted to mesh with one or the other of two bevel pinions 26 and 27 which are feathered on a longitudinally extending drum shaft 28 located beneath the frame and suspended therefrom by brackets 29. The bevel pinions are linked together by a bar 30 which has its ends connected to sleeves extending from the bevel pinions in a manner which will allow their rotation. A link or rod 31 passes from the bar 30 to the lower end of a lever 32 located on the platform 14, which lever is supplied with the usual hand latch and detent and operates over a quadrant 35. The shaft 28 is supplied with drums 36 and 37 at the ends, the purpose of which will be shortly more apparent. Between the corner posts 19 I have located a crate 38 having an open top and bottom and closed sides and ends, which crate rests normally on the metallic sheeting which is provided on the frame. Cables 39 pass from each of the drums over pulleys 40 located on the frame and are fastened to the adjoining corners of the frame at 41 from which points they proceed across the frame over further pulleys 42 carried at the opposite side of the frame whence they return to the drums, passing beneath the frame.

43 are arms pivotally secured at 44 to the forward and rear post appearing at the opposite side of the frame to the drums and having their lower ends pivotally secured at 45 to the lower corners of the crate 38.

Consequently it will be seen that when the drums are rotated in one direction the corner A of the frame will be pulled across the smooth surface 6 to the position shown in Fig. 3 of the drawings, thereby dumping the material formerly located in the crate, on the ground. The reverse rotation of the drums will cause the crate to pass back to the original position as shown in Fig. 2 of the drawings. The bevel gear 25 and the bevel pinions 26 and 27 have been employed so that the drums can be rotated as desired by the movement of the hand lever 32 which lever it will be noticed is within convenient range of the seat 46 carried by the platform 14.

The parts just described comprising the crate and the means for operating it, form in reality the principle of my invention. 47 is an endless carrier carried by upper and lower rollers 48 which are mounted on shafts 49 and 50, said shafts being supported by suitable arms 51 extending forwardly from the upper ends of the posts 19 and forward end of the frame 5 respectively. The conveyer is supplied with suitable fingers 47' which are common in machines of this class and are adapted to catch any sheaves which may be lying on the ground, and elevate them to a second conveyer shortly referred to.

52 is a gear wheel located on the shaft 53 extending from the frame 5, which gear wheel meshes with a gear wheel 54 fixed on the shaft 18. A chain wheel 55 is secured to the shaft 53 and is connected through a chain 55' with a chain wheel 55² of the shaft 50. By this construction the conveyer 47 is operated by the rotation of the shaft 8.

56 is a shaft mounted in suitable bearings located at the upper ends of the forward posts 19, and 57 are opposing bars passing from the shaft 56 backwardly over the crate. A shaft 58 is mounted in the rear ends of the bars and carries a roller 59 which is connected through an endless belt 60 with a roller similar to that 59 located on the shaft 56. The bars are supported at their rear ends by the rods 61 which pass rearwardly to the upper ends of the rear posts 19 and are supplied with turn buckles 62.

63 is a gear wheel meshing with the gear wheel 54 and located on a shaft 64 extending from the adjoining post 19.

65 is a chain wheel fixed on the shaft 64 and connected through a chain 66 with a chain wheel 67 appearing at the end of the shaft 56.

I am aware that conveyers and endless belts such as those just described have long been in common use and consequently I lay no claim to the precise construction of these and have only shown them so that the manner in which the sheaves are placed in the crate may be understood. Various elevat-

ing means could be used to equal advantage in my loader and would operate with equal facility.

What I claim as my invention is:

1. The combination comprising a suitable wheeled frame, a crate carried by the frame and having an open top and bottom and closed sides and ends, means for passing the crate laterally across the frame and for returning the same to the original position, and means for raising one edge of the crate from the frame as it passes across it, as and for the purpose specified.

2. The combination comprising a wheeled frame provided with a smooth upper face, a crate located on the frame and having an open top and bottom and closed sides and ends, means for shifting the crate laterally across the frame and for returning it to the original position, and means for supporting and raising the advancing corner of the crate as it passes across the frame, as and for the purpose specified.

3. The combination comprising a suitable wheeled frame provided with a smooth upper face, a crate carried by the frame and having an open top and bottom and closed sides and ends, means for dragging the crate laterally across the frame and returning the same to the original position, corner posts adjoining the ends of the crate and extending upwardly from the frame, and bars pivotally secured to the corner posts and to the advancing corner of the crate, as and for the purpose specified.

4. The combination comprising a wheeled frame provided with a smooth upper face, a crate carried by the frame and provided with an open top and bottom and closed sides and ends, rotatable drums carried by the frame, cables extending from the drums and secured to the crate, means for rotating the drums in a forward or reverse direction to advance or recede the crate laterally across the frame, and means for supporting and raising the advancing corner of the crate as it passes across the frame, as and for the purpose specified.

5. The combination comprising a wheeled frame provided with a galvanized upper surface, a crate located on the frame and having an open top and bottom and closed sides and ends, a rotatable longitudinally extending shaft mounted in suitable brackets extending from the frame, drums fixed on the shaft, endless cables passing from the drums and secured to the crate, said cables passing over suitable pulleys located at the sides of the frame, corner posts extending upwardly from the frame and adjoining the ends of the crate, and arms pivotally secured to the bottom of the crate and to the posts, as and for the purpose specified.

6. The combination comprising a wheeled frame presenting a smooth upper face, a

crate carried by the frame and provided with an open top and bottom and closed sides and ends, a longitudinally extending shaft located at one side of the frame and supported beneath the same by brackets extending therefrom, drums fixed on the shaft, endless cables carried by the drums and passing upwardly over pulleys located at the opposite sides of the frame, said cables being further secured to the inner or lower corners of the crate adjoining the drums, means for rotating the drums in a forward or reversed direction, said means being controlled by a lever, corner posts extending upwardly from the frame and adjoining the ends of the crate, and arms pivotally secured to the upper ends of the corner posts and to the outer corners of the crate, as and for the purpose specified.

Signed at Winnipeg, in the Province of Manitoba, this 30 day of August, 1910.

LUCIUS JAMES COLLINS.

In the presence of—

G. S. ROXBURGH,
J. K. ELKIN.

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