

Jan. 19 , 1926.

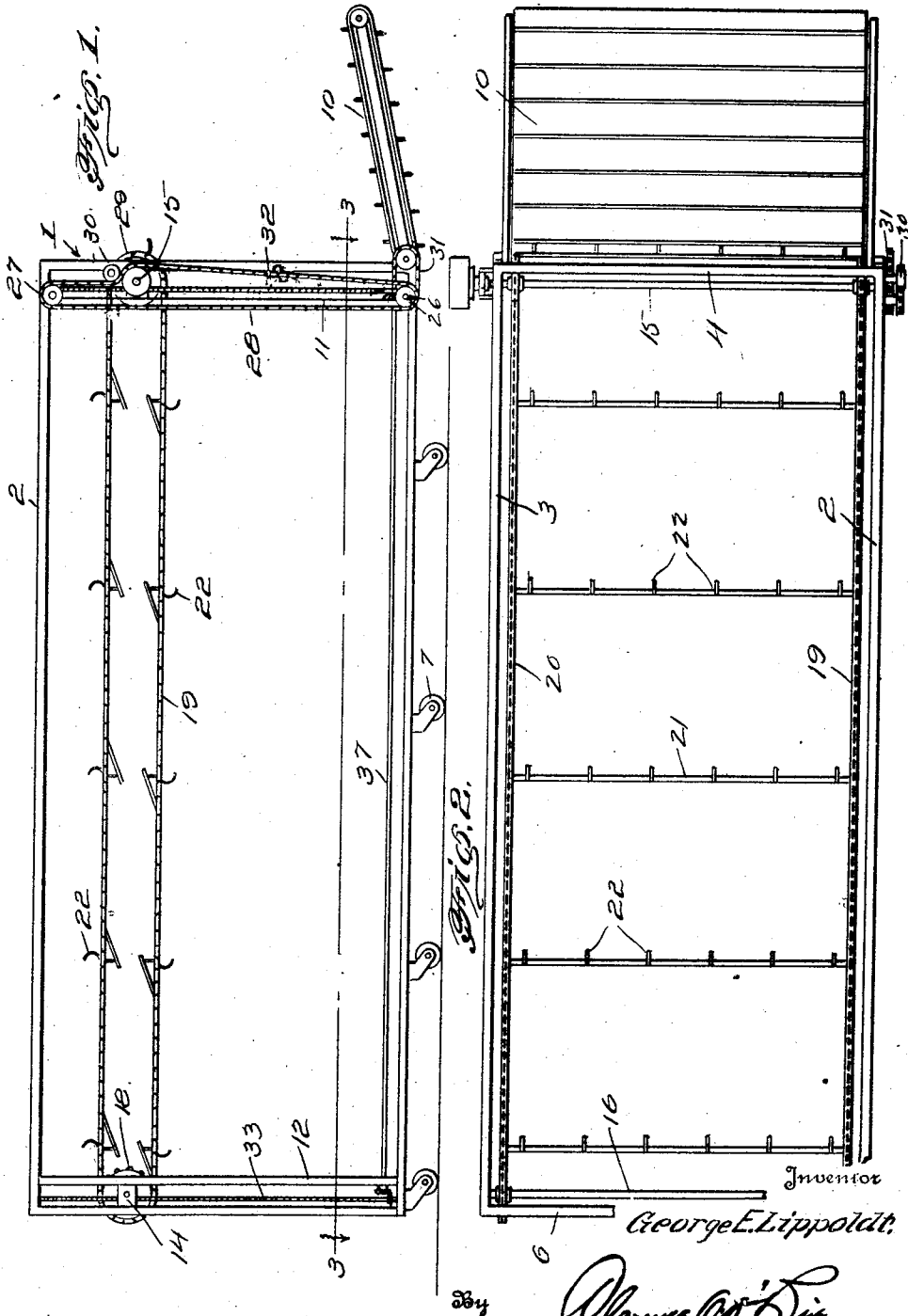
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G. E. LIPPOLDT

PORTABLE LOADER

Filed Jan. 10, 1925

2 Sheets-Sheet 1



Jan. 19, 1926.

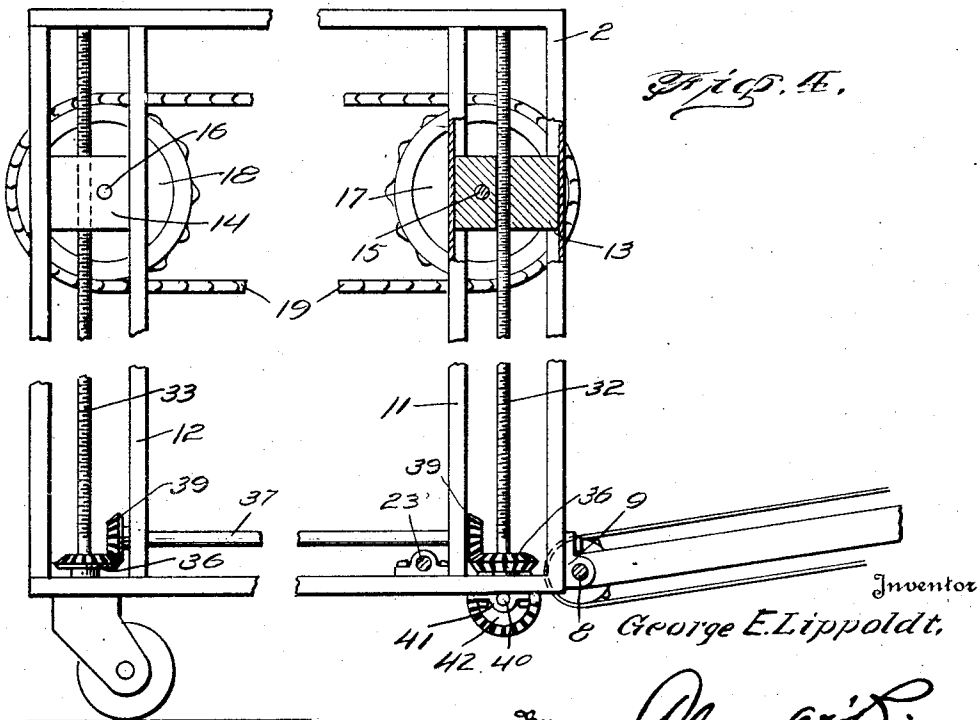
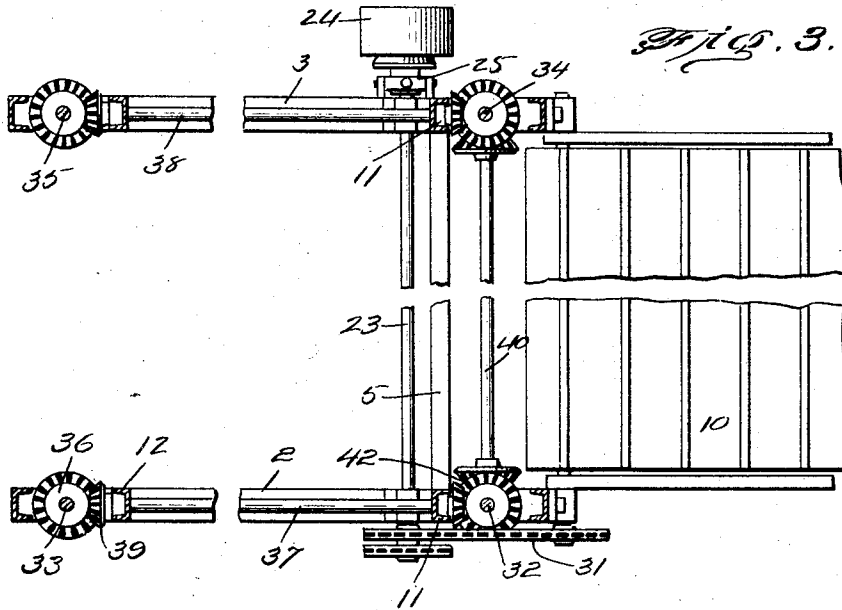
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2 Sheets-Sheet 2



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George E. Lippoldt

Attorney

Patented Jan. 19, 1926.

1,570,360

UNITED STATES PATENT OFFICE.

GEORGE E. LIPPOLDT, OF KINSLEY, KANSAS.

PORTABLE LOADER.

Application filed January 10, 1925. Serial No. 1,669.

To all whom it may concern:

Be it known that I, GEORGE E. LIPPOLDT, a citizen of the United States, residing at Kinsley, in the county of Edwards and State of Kansas, have invented certain new and useful Improvements in a Portable Loader, of which the following is a specification.

This invention relates to a highly novel device for feeding grain or the like from stacks in the field to a threshing machine.

One of the important objects of the present invention is to provide a portable loader wherein the same is of such construction as to enable the frame forming a part thereof to be disposed over the stack of grain, means being carried by the frame for feeding the grain from the stack onto a suitable conveyor associated with the frame whereby the grain will be delivered to the threshing machine.

A further object is to provide a portable loader of the above mentioned character, which includes a means for raising and lowering the grain feeding means to accommodate various types of the stacks of grain and further enabling the feeding means to properly function so that the grain within the stack may be fed to the conveyor which delivers the grain to the threshing machine.

A further object of the invention is to provide a portable loader of the above mentioned character, which is of such construction as to save considerable time and labor and further obviating the necessity of having to employ a number of persons in feeding the grain from stacks to a threshing machine.

A still further object is to provide a portable loader of the above mentioned character, which is simple in construction, inexpensive, strong and durable and further well adapted for the purposes for which it is designated.

Other objects and advantages will become apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals designate like parts throughout the same:

Figure 1 is a side elevation of the portable loader embodying my invention.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view taken approximately on line 3—3 of Figure 1, and

Figure 4 is an enlarged fragmentary de-

tail of the means for raising and lowering the feeding means.

In the drawings wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates generally the substantially rectangular frame, the same comprising the open side members 2 and 3 which are connected together in spaced relation at the top and bottom of the forward ends thereof as illustrated at 4 and 5 respectively, the rear ends of the side members being secured together at their upper portions as illustrated at 6, the lower rear ends being open as clearly illustrated in Figure 3. The purpose of this construction will hereinafter be more fully described.

Ground engaging wheels such as are shown generally at 7 are associated with the lower longitudinally extending portion of each of the side members whereby the device is rendered portable. As the frame is of relatively great length, a number of these ground engaging rollers or wheels are provided.

A transversely extending shaft 8 is journaled at its respective ends in suitable bearings 9 secured on the forward ends of the lower portions of the side members of the frame 1. An inclined conveyor designated generally by the numeral 10 is associated with the shaft 8 and the same may be of any conventional construction, the purpose thereof being hereinafter more fully described.

Extending vertically between the upper and lower longitudinally extending portions of each of the side members adjacent the forward and rear ends thereof are the guide members 11 and 12 respectively. As is clearly illustrated in Figures 3 and 4 of the drawings, the frame as well as the guide members are formed of channel iron and the guide members 11 and 12 cooperate with the forward and rear ends of each of the side members respectively for receiving the blocks 13 and 14 respectively. Four of such blocks are provided, one being arranged at each corner of the frame 1 and the same being adapted for vertical movement in the manner to be presently described.

A transversely extending shaft 15 is journaled at its respective ends within the block 13 arranged at the forward end of the frame 1 while a similar shaft 16 is journaled at its respective ends in the rear pair of blocks

14. A pair of sprocket wheels such as is shown at 17 is secured on the transverse shaft 15 inwardly of the side members 2 and 3 of the frame, and a similar pair of sprocket wheels 18 are secured on the rear transverse shaft 16, the rear sprocket wheels being in alignment with the forwardly arranged sprocket wheels whereby suitable sprocket chains 19 and 20 may be trained thereover.

A series of transversely extending rods such as are shown at 21 are secured at their respective ends to the sprocket chains 19 and 20, the rods being arranged at spaced intervals. Carried by each of the rods are the curved raking teeth 22. The raking teeth 22 provide a means for feeding the grain from the stack onto the inclined conveyor 10 in a manner hereinafter to be more fully described.

The operating means for the sprocket chains 19 and 20 comprises a transversely extending shaft 23 which extends through the lower forward portions of the side members of the frame 1. A drive pulley 24 is secured on one end of the shaft 23. The drive pulley 24 is loosely mounted on the shaft 23, and a suitable clutch mechanism designated generally by the numeral 25 is associated with the drive shaft and the drive pulley for locking the latter on the shaft 23. The drive pulley 24 is adapted to be driven by any suitable means. A sprocket wheel 26 is secured on the opposite end of the shaft 23 and cooperates with a sprocket wheel 27 supported on the upper forward portion of the side member 2. A sprocket chain 28 is adapted to travel over the aligning sprocket wheels 26 and 27. The sprocket chain 28 further cooperates with a suitable sprocket wheel 29 secured on one end of the shaft 15 adjacent the side member 2 whereby the shaft 15 may be rotated for simultaneously effecting the actuation of the sprocket chains 19 and 20 and the raking teeth 22 carried thereby. A roller 30 is provided for holding the sprocket chain in engagement with the sprocket wheel 29 thus assuring the positive operation of the feeding device.

The endless conveyor 10 is adapted to be driven simultaneously with the operation of the feeding device through the medium of a sprocket chain 31 which is trained over aligning sprocket wheels secured on the shaft 23 and the outer end of the shaft 8.

Vertically extending threaded rods 32 and 33 are journaled at their upper and lower ends in the upper and lower longitudinally extending portions of the side member 2 adjacent the forward and rear ends thereof respectively. A similar pair of vertically extending threaded rods 34 and 35 are associated with the side member 3 of the frame 1. The threaded rod of each of the side

members are adapted to be threaded through the blocks 13 and 14 in the manner more clearly illustrated in Figure 4. The ends of the blocks are disposed within the channeled portions of the ends and the adjacent sides of each of the side members whereby the blocks are held against rotation and will move vertically when the threaded rods are rotated.

The threaded rods are adapted for simultaneous rotation through the medium of the bevel gears 36 associated with the lower ends of each of the threaded rods, a pair of longitudinally extending shafts 37 and 38 extending through the lower portions of the vertical guide members 11 and 12 of the side members 2 and 3 respectively having suitable bevel gears 39 associated with the respective ends thereof for engagement with the beveled gears 36. A transverse shaft 40 is journaled at its respective ends in suitable bearings 41 secured on the lower forward portion of the side members of the frame 1, the shaft 40 being adapted to be driven in any suitable manner and being further provided with suitable bevel gears 42 for rotating the beveled gears associated with the lower end of the vertically extending threaded rods 32 and 34, the latter being mounted in the forward ends of the side members 2 and 3 respectively.

The operation of my improved loader may be briefly stated as follows: The loader is adapted to be disposed over a stack of grain, the rear end of the frame being open to permit the placing of the frame in position over the stack. The forward end of the inclined conveyor 10 is adapted to be disposed in cooperation with a suitable threshing machine (not shown). The shaft 23 is rotated, the sprocket chains 19 and 20 will travel over the sprocket wheels 17 and 18 causing the raking teeth 22 to engage the grain and feed the same from the stack forwardly in the frame so that the grain will be deposited onto the endless conveyor 10, the latter delivering the grain deposited thereon to the threshing machine. As the stack gradually becomes lowered, the threaded rods are actuated simultaneously causing the blocks to move downwardly between the guides provided therefor whereby the feeding means will be lowered and enabling the raking teeth 22 to be in engagement with the top of the stack to insure the feeding of the grain from the stack to the endless conveyor 10. In this manner all of the grain in a stack will be delivered to a threshing machine.

The provision of a portable loader of the above mentioned character, will obviate the necessity of having to employ a number of persons to pitch the grain or wheat to the threshing machine as is now commonly done, thus saving considerable expense as well as

time and labor. Furthermore, the provision of a portable loader of the above mentioned character, enables the same to be readily transported from place to place and may be easily set up in position for use whenever desired.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what I claim is:—

1. A portable loader comprising a wheeled frame adapted to be positioned over a stack of grain, an inclined conveyor at the forward end of the frame for delivering the grain deposited thereon to a thresher, and means extending longitudinally on said frame for feeding the grain from the stack onto said conveyor.

2. A portable loader comprising a wheeled frame adapted to be positioned over a stack of grain, an inclined conveyor at the forward end of the frame for delivering the grain deposited thereon to a thresher, means extending longitudinally on said frame for feeding the grain from the stack onto said conveyor, and means for vertically adjusting said feeding means.

3. A portable loader comprising a wheeled frame adapted to be positioned over a stack of grain, an inclined conveyor at the forward end of the frame for delivering the grain deposited thereon to a thresher, means extending longitudinally on the frame for feeding the grain from the stack onto said conveyor, said means comprising a pair of endless chains, transverse rods secured at their respective ends to said chains and arranged in spaced relation with respect to each other, and raking teeth associated with each of said rods.

4. A portable loader comprising a wheeled frame adapted to be positioned over a stack

of grain, an inclined conveyor at the forward end of the frame for delivering the grain deposited thereon to a thresher, means extending longitudinally on the frame for feeding the grain from the stack onto said conveyor, and means for actuating said feeding means and said conveyor simultaneously.

5. A portable loader comprising a wheeled frame open at its rear end, and adapted to be disposed over a stack of grain, an upwardly inclined conveyor extending upwardly from the lower forward end of the frame for delivering the grain deposited thereon to a thresher, and raking means mounted on said frame for feeding the grain from the stack onto said conveyor.

6. A portable loader comprising a wheeled frame open at its rear end, and adapted to be disposed over a stack of grain, an upwardly inclined conveyor extending upwardly from the lower forward end of the frame for delivering the grain deposited thereon to a thresher, raking means mounted on said frame for feeding the grain from the stack onto said conveyor, and means for vertically adjusting said raking means.

7. A portable loader comprising a wheeled frame open at its rear end, and adapted to be disposed over a stack of grain, an upwardly inclined conveyor extending upwardly from the lower forward end of the frame for delivering the grain deposited thereon to a thresher, raking means mounted on said frame for feeding the grain from the stack onto said conveyor, means for vertically adjusting said raking means, said last mentioned means comprising blocks associated with the raking means, said blocks being adapted for slidable movement on said frame, vertically extending threaded rods cooperating with the blocks for facilitating the vertical movement of the latter, and means for actuating the threaded rods simultaneously.

In testimony whereof I affix my signature.

GEORGE E. LIPPOLDT.