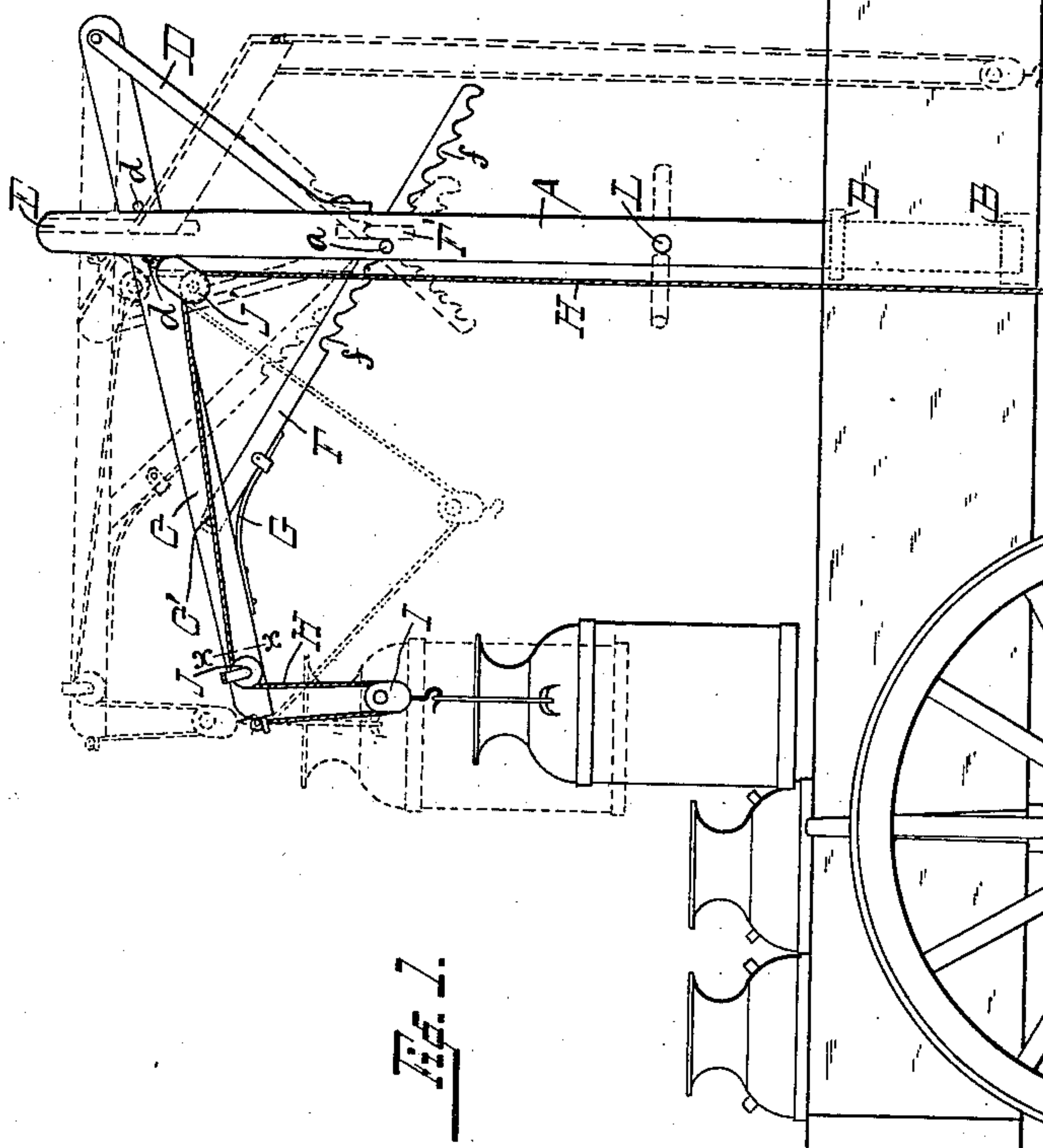
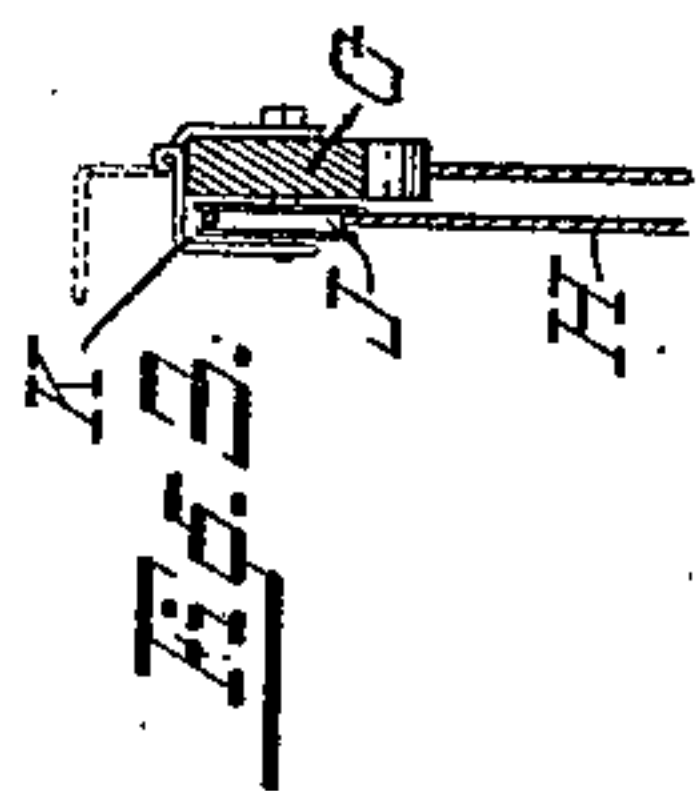
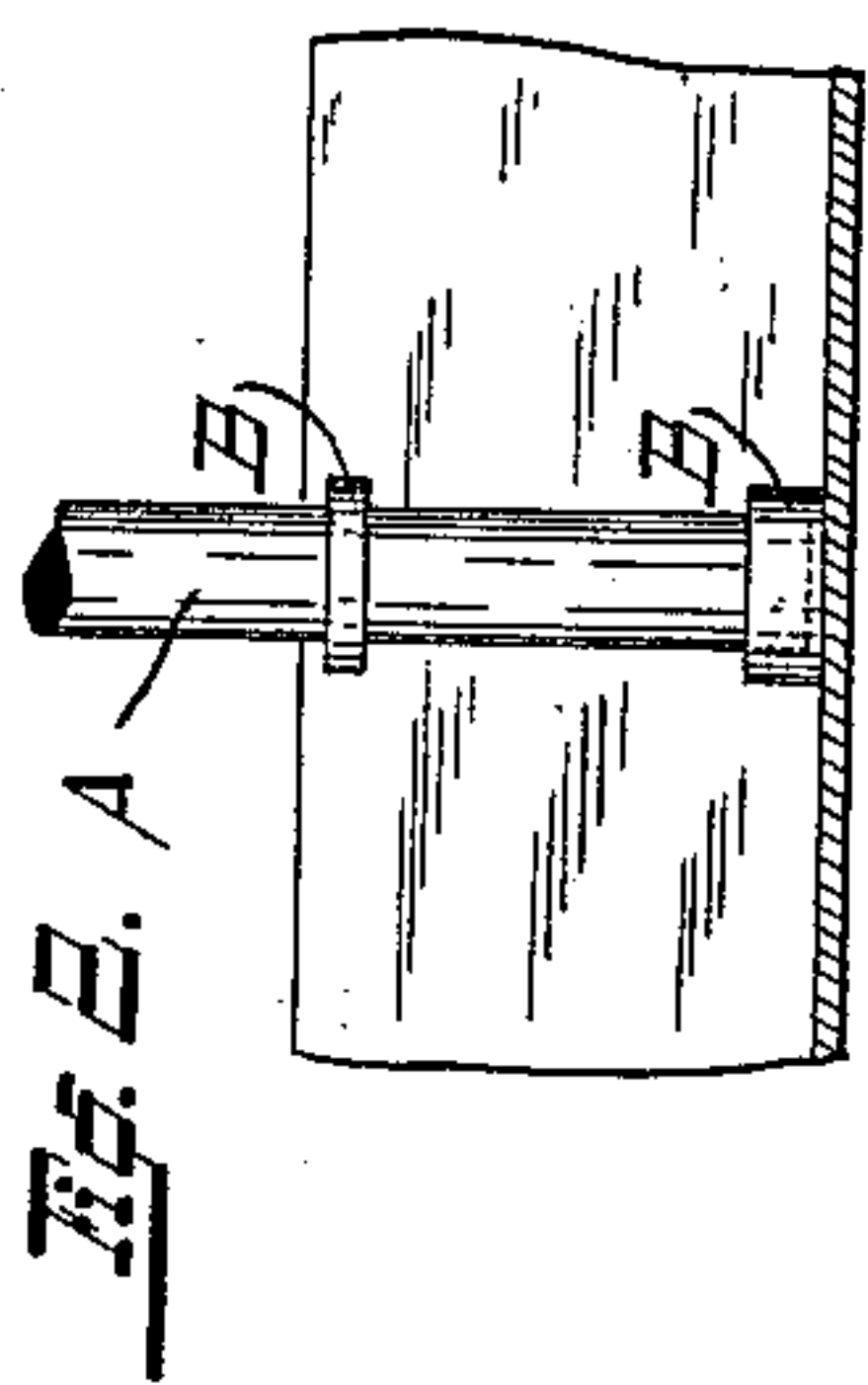


(No Model.)

G. F. KNORR.  
MILK CAN LOADER.

No. 594,478.

Patented Nov. 30, 1897.



Witnesses.

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# UNITED STATES PATENT OFFICE.

GOTLEIB F. KNORR, OF FONTANELLE, IOWA.

## MILK-CAN LOADER.

SPECIFICATION forming part of Letters Patent No. 594,478, dated November 30, 1897.

Application filed April 29, 1897. Serial No. 634,492. (No model.)

*To all whom it may concern:*

Be it known that I, GOTLEIB F. KNORR, a citizen of the United States, residing at Fontanelle, in the county of Adair and State of Iowa, have invented new and useful Improvements in Milk-Can Loaders, of which the following is a specification.

My invention relates to improvements in milk-can loaders.

The object of my invention is to provide a form of crane adapted to be used in combination with a wagon-box and arranged to be adjusted so as to facilitate loading milk-cans or other heavy weights in all parts of the wagon-box.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a side view of a wagon, showing my loader as it is applied thereto, with dotted lines indicating various points of adjustment. Fig. 2 is a detail view showing the manner in which the standard is supported in the interior of the wagon-box. Fig. 3 is a detail view of the outer pulley, showing the means for releasing the rope therefrom.

Like parts are identified by the same reference-letters throughout the several views.

The standard A of the crane is adapted to be removably inserted in the wagon-box with its end resting on the bottom. The side of the box is provided with metallic straps or staples B for holding the standard in an upright position.

C is an adjustable boom pivotally attached at its rear end to a brace D and extending through an open-ended slot E in the top of the standard, with transverse pins *d d* to prevent the arm from shifting longitudinally in the slot. The boom C is supported in front of the standard by an adjustable brace F, which is pivoted to the boom at C', with its lower end projecting through a slot F' in the standard A, and provided with notches *f*, in which a cross-pin *a* is adapted to be engaged.

G is a spring connecting the bar F with the boom C and adapted to exert a downward pull upon the lower end of the bar to prevent the latter from being accidentally disengaged from the pin *a*.

H is a rope attached to the outer end of the boom C and passing under the pulley I of the tackle-block and over the pulleys J and J', at-

tached to the boom C. The pulley J is covered by a hinged bracket K, which is adapted to be raised, as shown by dotted lines in Fig. 3, to permit the release of the rope from the pulley.

L is a lever for rotating the standard A.

My device is operated in the same manner as an ordinary crane, the standard A being turned and the boom C swung from side to side when the cans are in the raised position in order to convey them to the desired position in the wagon-box. The boom is adjusted by means of the brace-bar F, so that the cans when raised will just clear the edge of the wagon-box, and when a deeper box is used or when it is desired to load a second tier of cans or other heavy objects, such as sacks or barrels of produce, the boom can be raised by adjusting the brace-bar, as shown by dotted lines in Fig. 1. A great advantage is attained by adjusting the boom properly, as the load is then known to be at the proper height when raised to it. It will be observed, however, that it is also desirable to convey some of the cans to a point nearer to the standard A than the outer end of the arm C, and for this purpose I release the rope from the pulley J by lifting the hinged bracket K, thus permitting the tackle-block to occupy a position midway between the outer end of the arm C and the pulley J', thus supporting the cans at a point quite near the standard.

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

1. The combination with a wagon-box, of a removable rotary standard mounted therein, a boom adjustably mounted upon the upper end of said standard, and provided with suitable pulleys and tackle for elevating the milk-cans, the outer of said pulleys being provided with a hinged bracket adapted to release the rope from the pulley, substantially as and for the purpose set forth.

2. The combination with a wagon-box, of a removable rotary standard mounted therein, and provided with an open-ended slot at its upper end, a boom extending through said slot and pivoted to an arm or brace projecting from the standard, an adjustable brace for supporting the boom in front of the standard, and suitable pulleys and tackle for ele-

vating the milk-cans, substantially as described.

3. The combination with a wagon-box, of a removable standard mounted therein, and  
5 provided with an open-ended slot at its upper end, a boom extending through said slot and pivoted to an arm or brace projecting from the standard, a brace pivotally connected to said boom in front of the standard and hav-  
10 ing a notched lower end projecting through a slot in the standard and adapted to be engaged

by a cross-pin therein, a spring for holding said brace in engagement with the cross-pin, and suitable pulleys and tackle for elevating the milk-cans, substantially as and for the  
15 purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

GOTLEIB F. KNORR.

Witnesses:

FRED J. KNORR,  
JOHN KNORR.