May 3, 1949. O. C. SIEBRING 2,469,007

MANURE LOADER

Filed March 24, 1947 2 Sheets-Sheet 1

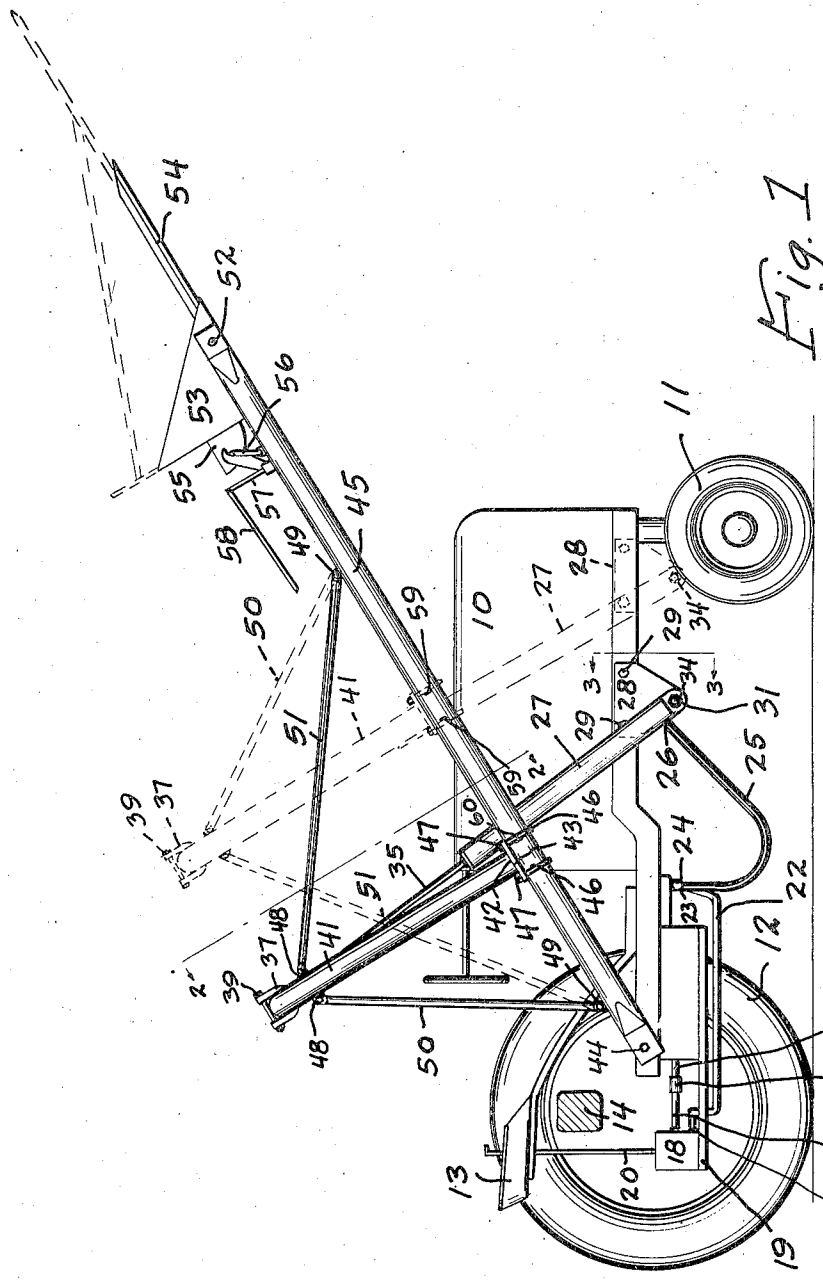


Fig. 1

INVENTOR.
Owen C. Siebring
BY
Sam J. Slotky
ATTORNEY

May 3, 1949. O. C. SIEBRING 2,469,007

MANURE LOADER

Filed March 24, 1947 2 Sheets-Sheet 2

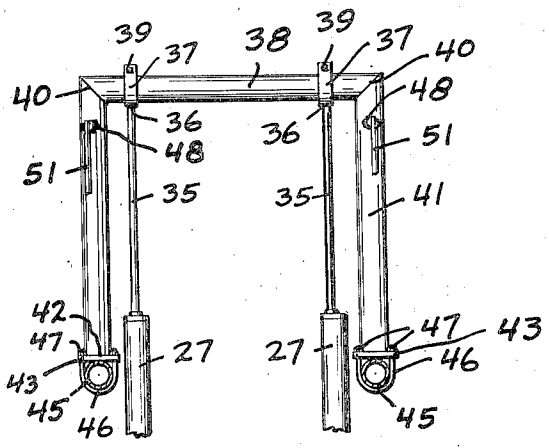


Fig. 2

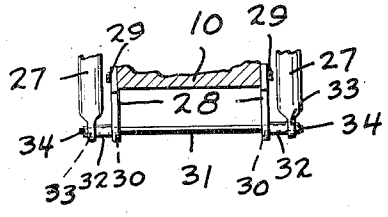


Fig. 3

INVENTOR.
Owen C. Siebring
BY
Sam J. Slotky
ATTORNEY

Patented May 3, 1949

2,469,007

UNITED STATES PATENT OFFICE

2,469,007

MANURE LOADER

Owen C. Siebring, George, Iowa

Application March 24, 1947, Serial No. 736,881

2 Claims. (Cl. 214—140)

1

My invention pertains to a manure loader.

An object of my invention is to provide a manure loader which includes a substantial framework whereby the loader will perform its operation without unduly distorting its parts.

A further object of my invention is to provide a hydraulic loader of this type.

A further object of my invention is to provide adjustable means whereby the loader framework can be shifted to allow for correspondingly lighter or heavier loads.

A further object of my invention is to provide a simplified arrangement having the above characteristics.

With these and other objects in view, my invention consists in the construction, arrangement, and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the loader as attached to a tractor, and being taken partially in section,

Figure 2 is a sectional view of Figure 1 taken substantially along the lines 2—2 thereof, and

Figure 3 is a sectional view taken along the lines 3—3 of Figure 1.

My invention contemplates principally the provision of a hydraulically operated manure loader which also can be converted to other types of loaders, and whereby certain elements are so arranged that the lifting effort required can be adjustably positioned to allow for lighter or heavier loads.

I have used the character 10 to designate a standard tractor having the forward wheels 11 and the rear wheels 12, and the character 13 designating the rear seat, and the character 14 the rear axle. The rear power take-off shaft is indicated by the character 15 and is connected at 16 to a further shaft 17 which drives a suitable pump 18 secured to the drawbar 19. The pump 18 is controlled by means of the rod 20, and communicating with the pump 18 at 21 is a tube 22 which communicates at 23 to a Y-connection 24 which branches into the pair of flexible tubes 25 which are connected at 26 to a pair of hydraulic cylinders 27.

A pair of brackets 28 are attached at 29 to openings in the tractor frame, the brackets 28 including openings at 30 whereby the single rod 31 (see Fig. 3) can be inserted therethrough beneath the tractor frame, the rod 31 passing through spacers 32 and also passing through the

2

openings 33 at the lower ends of the cylinders 27, the nuts 34 serving to retain the hydraulic cylinders, the hydraulic cylinders thus being pivotally secured at their lower ends.

Suitable pistons are received within the cylinders 27, and attached to the pistons are the rods 35 which are attached at 36 (see Fig. 2) to the arcuate bearing members 37 which receive the transverse pipe member 38, the bolts 39 passing through the upper ends of the members 37, with the members 37 being fairly snugly engaged with the member 38 to allow journalling action therein. The member 38 is preferably made in the form of a hollow pipe and is joined at 40 with a pair of substantially vertical further pipe members 41 which are welded at 42 to the plates 43.

Pivotally attached at 44 to the rear end of the tractor framework are a pair of lengthened hollow pipe beams 45, and receiving the beams 45 are the U-bolts 46 which are attached at 47 to the plates 43.

Attached to the pipe members 41 are the ears 48, and to the beams 45 the ears 49 and secured to the ears 48 and 49 are the bracing rods 50 and 51, these bracing rods being removable as will be explained hereinafter. Pivotally attached at 52 to the beams 45 is a manure loading bucket 53 having the prongs 54 and including the member 55 which can be tripped by means of the mechanism 56 and 57 which is operated by means of a rod or cable 58.

The beams 45 include markings at 59 and 60 for indicating proper positioning of the U-bolts as desired.

It will now be seen from the foregoing arrangement that when it is desired to lift manure, etc., the arrangement is positioned as shown in the solid lines in Figure 1, with the pump 18 forcing the oil through the pipes 25 into the cylinders 27 thereby raising the entire arrangement to the position shown, after which the bucket can be tripped for unloading. The hydraulic oil supply can be obtained from the tractor itself or from any suitable tank, and for lifting the lighter loads the arrangement is positioned as shown.

In many instances however, it may be desired to cause the arrangement to be operated as a hay loading arrangement or in some other similar capacity, the hay rake being indicated by the dotted lines. For lifting these heavier loads it is desirable to place the lifting effort or the cylinders forwardly on the tractor in which instance the bracket is moved forwardly to the dotted position shown in Figure 1, the attachment being made in the usual openings, and the bolts 47 are

loosened, the rods 50 and 51 are removed, and the members 41 are placed in the dotted position shown in Figure 1 with the U-bolts 46 being retightened in this new position, and with the rods 50 and 51 being then reversed, the rods being made the exact length for this purpose.

The lifting effort is then directed forwardly towards the heavier load on the unit 61 thereby fully taking care of the requirements necessary. By virtue of this construction then, the load operated by the tractor will not be excessive for the lighter load conditions, thereby requiring less power and fuel and resulting in the economies desired, and for the heavier loads the lifting effort will be thereby minimized since the leverage is applied at the more appropriate location.

It will be understood of course, that any spacing can be effected as desired consistent with the above structure.

It will now be seen that I have provided the advantages mentioned in the objects of my invention with further advantages being readily apparent.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

1. A manure loader comprising a pair of arms, hydraulic means for raising said arms including a pair of hydraulic cylinders pivotally attached to a tractor to which said arms are pivoted, said cylinders having pistons therein, rods attached to said pistons, an inverted U-shaped brace member attached to said arms, bearing members attached to said rods receiving the horizontal portion of said U-shaped bracing member, means for positioning said bracing member at selected positions along said arms for providing greater lifting effort to said arms, rods attached to said bracing member and said arms, said rods adapted to provide further bracing means, said rods being

of such lengths so that upon adjustable positioning of said bracing member, said rods can be interchangeably attached, brackets attached to the tractor, said cylinders being pivotally attached to said brackets, means for adjustably positioning said brackets at selected positions to the tractor.

2. A manure loader comprising a pair of arms, hydraulic means for raising said arms including a pair of hydraulic cylinders pivotally attached to a tractor to which said arms are pivoted, said cylinders having pistons therein, rods attached to said pistons, an inverted U-shaped brace member attached to said arms, bearing members attached to said rods receiving the horizontal portion of said U-shaped bracing member, means for positioning said bracing member at selected positions along said arms for providing lifting effort to said arms, rods attached to said bracing member and said arms, said rods adapted to provide further bracing means, said rods being of such lengths so that upon adjustable positioning of said bracing member, said rods can be interchangeably attached, brackets attached to the tractor, said cylinders being pivotally attached to said brackets, means for adjustably positioning said brackets at selected positions to the tractor, means for adjustably securing said U-shaped member to said arms including plates secured at the lower ends of said member, U-bolts receiving said arms and attached to said plates.

OWEN C. SIEBRING.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,268,689	Andrus	Jan. 6, 1942
2,319,921	Dooley et al.	May 25, 1943
2,338,361	Shinn, Jr.	Jan. 4, 1944
2,393,435	Wachter	Jan. 22, 1946
2,395,622	Galbreath	Feb. 26, 1946
2,403,808	Laughead	July 9, 1946