W. W. ROSENAU.

LOADER.

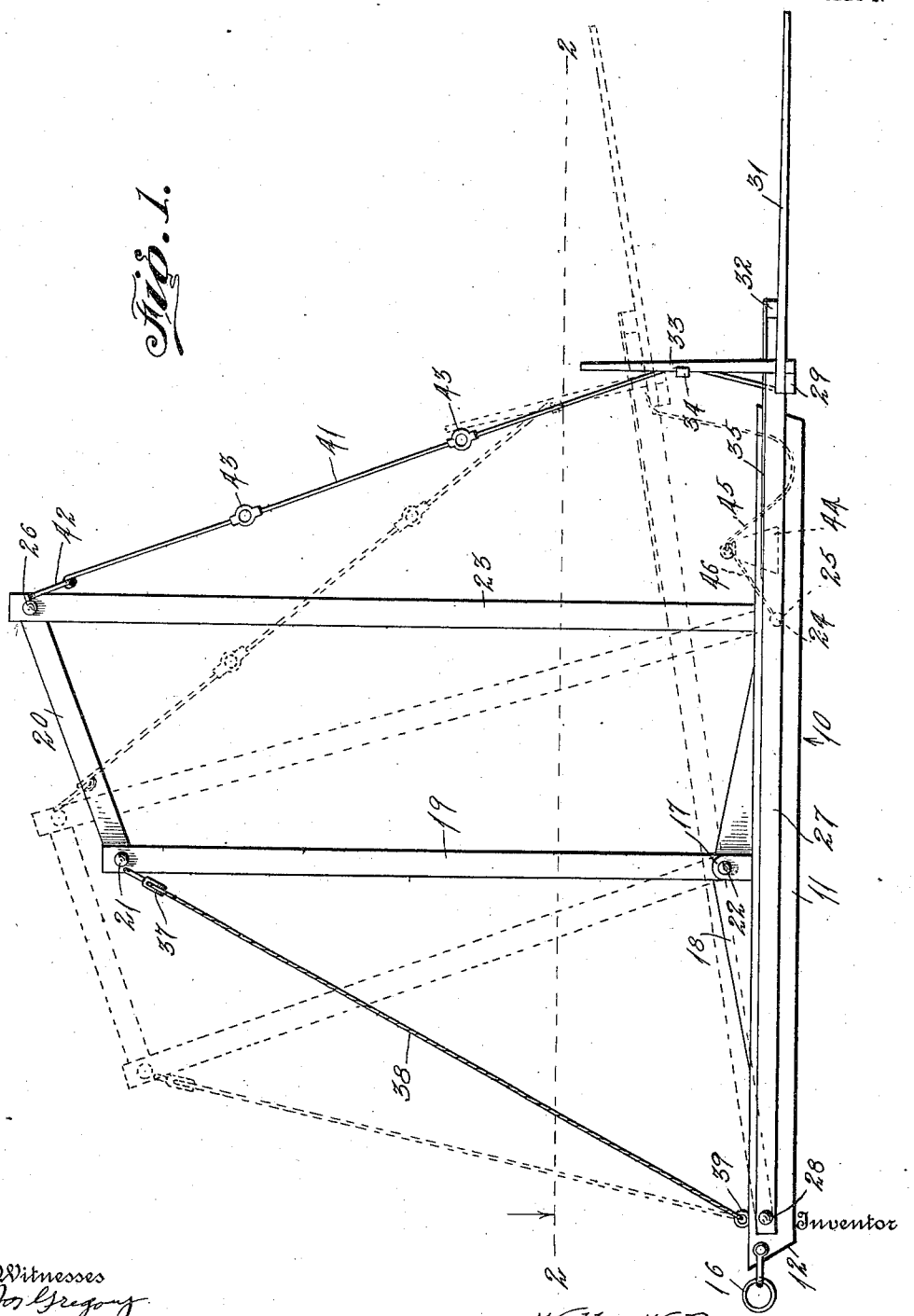
APPLICATION FILED JULY 16, 1910.

1,015,081.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Jos Gregory
Francis Boyle

Inventor
By Walter W. Rosenau
Brandenburg & Brandenburg
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

W. W. ROSENAU.

LOADER.

APPLICATION FILED JULY 16, 1910.

1,015,081.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 2.

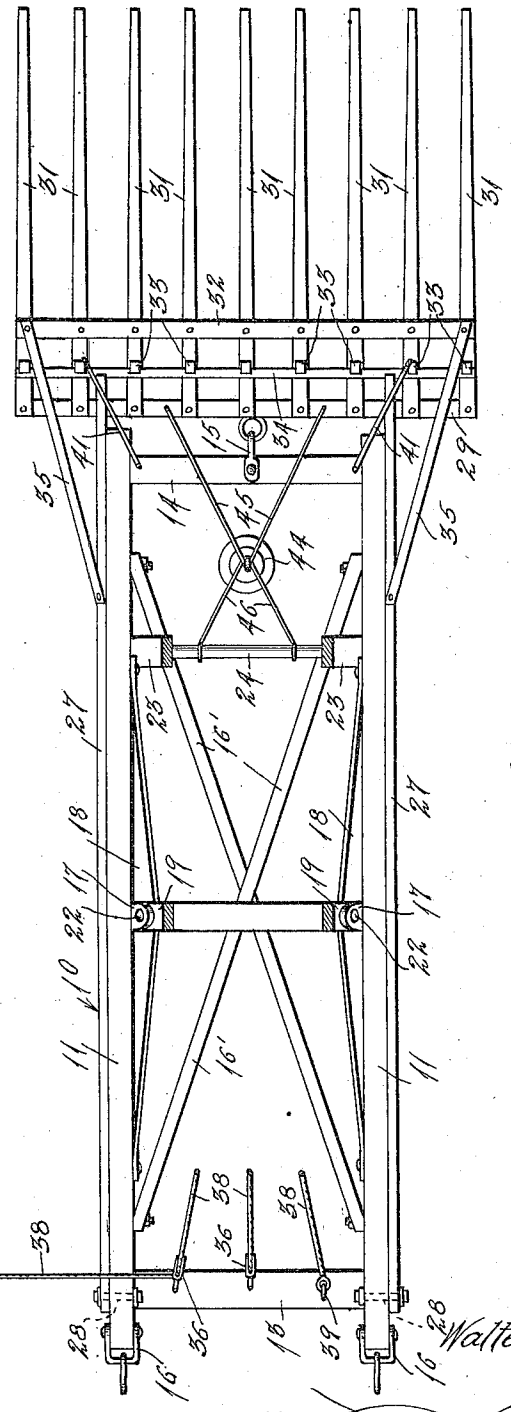


Fig. 2.

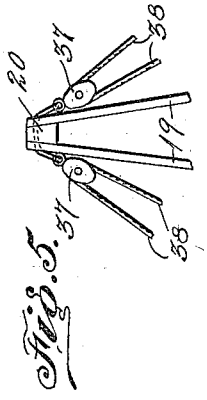


Fig. 5.

Witnesses
Jos Gregory
Francis Boyle

Inventor
Walter W. Rosenau
By Brandon & Brandon
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

W. W. ROSENAU.

LOADER.

APPLICATION FILED JULY 16, 1910.

1,015,081.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 3.

Fig. 3.

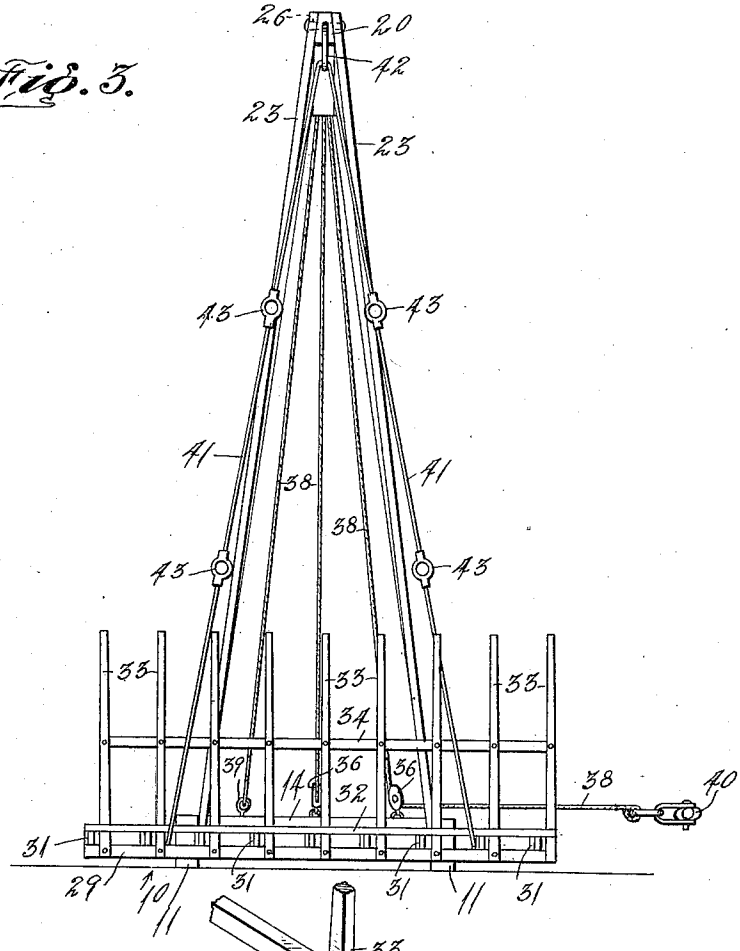
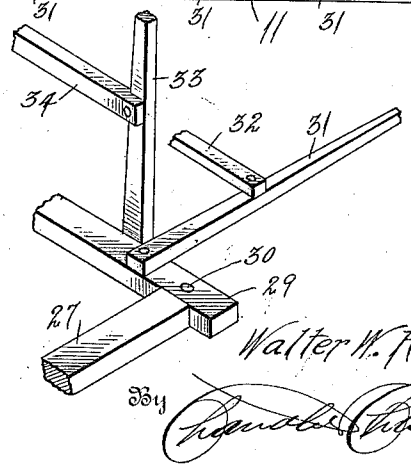


Fig. 4.



Witnesses
Jos. P. Gregory
M. Francis Doyle

Inventor
Walter W. Rosenau
By Rosenbaum & Rosenbaum
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER W. ROSENAU, OF GERMANIA, IOWA.

LOADER.

1,015,081. Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed July 16, 1910. Serial No. 572,356.

To all whom it may concern:

Be it known that I, WALTER W. ROSENAU, a citizen of the United States, residing at Germania, in the county of Kossuth, State of Iowa, have invented certain new and useful Improvements in Loaders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in hay loaders and has for an object to provide a strong and durable device for carrying hay from the ground to the top of a stack, the said hay loader being of such construction that it may be folded to require but very little space when not in use and for shipping purposes.

With the above objects in view, the invention consists of the novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawings forming part of this specification: Figure 1 is a side elevation of the loader in receiving position and dotted in a raised position, Fig. 2 is a longitudinal sectional view through the loader taken on the line 2—2 Fig. 1, Fig. 3 is a front elevation of the loader, Fig. 4 is a fragmentary view illustrating the construction of the fork, Fig. 5 is a fragmentary view illustrating the manner of attaching the draft cable to the leading standards of the loader.

Referring now to the drawings, the numeral 10 designates in general a skid, the runners of which are composed of rectangular timbers 11 having their forward ends beveled as shown at 12 to permit of the runners advancing over obstructions. The runners are connected adjacent their leading and rear ends by transverse brace timbers 13 and 14, the rear brace timber being provided with a clevis 15 to which a doubletree may be attached to permit of the skid being hauled. Engaged in the leading ends of the runners are a pair of clevises 16 which permit of a doubletree being attached to the skid to haul the skid from its leading end. Diagonal braces 16′ have their opposite extremities secured to the inner faces of the runners and reinforce the runners against spreading apart.

Arranged upon the top faces of the runners intermediate their ends are a pair of upstanding feet 17, these feet being braced against displacement by triangular shaped braces 18 one leg of each of these braces being engaged against the end edges of the feet and the opposite leg against the top faces of the runners. Pivotally connected to the upper ends of the feet 17 are a pair of inclined standards 19, these standards being spaced apart a short distance at their upper ends to permit of the insertion of a bar 20 therebetween, the standards and bar being pivotally secured together by means of a transverse bolt 21 passed through the parts. The lower ends of the standard 19 may be pivotally mounted upon the feet 17 in any suitable manner, the preferred construction being to pass a pivot bolt 22 transversely through the standard and legs as shown. When in normal position, the standards incline forwardly and the bar 20 inclines upwardly from the top ends of the standards. Pivotally mounted upon the runners in rear of the standards 19 are a pair of inclined standards, 23, the lower ends of these standards being connected by a rung 24, the terminals of which project beyond the standards and engage suitable openings 25 formed in the runners, these terminals forming gudgeons which permit of the standards rocking upon the runners. The upper ends of the standards are spaced apart sufficiently to receive the rear end of the bar 20, these standards and bar being pivotally connected together by means of a transverse bolt 26 passed through the parts. The standards 23 are of greater length than the standards 19 and are substantially parallel with the latter. These rocking standards elevate a hay fork hereinafter described when actuated.

The hay fork consists of a pair of arms 27 which are greater in length than the length of the runner and are terminally pivoted to the leading ends of the runners by means of pivot bolts 28 passed transversely through the arms and runners. To the free ends of the arms is attached a cross bar 29, the connection between the parts being made by bolts or similar connectors 30. Secured to the cross bar 29 is a plurality of forwardly projecting rods 31, these rods being connected adjacent their junctures with the

transverse bar 29 by a cross rod 32 as shown. These rods form the lower section of the fork. Fixedly secured to the rods 31 adjacent the cross bar 29 are a plurality of upwardly projecting rods 33, these rods being connected adjacent their juncture with the rods 31 by a cross rod 34. These rods form the upper section of the fork. A pair of inclined braces 35 are secured to the arms 27 and to the cross bar 32 of the lower section of the fork and brace the lower section against being displaced by the weight of the hay placed thereupon.

For actuating the fork, I attach a pair of pulley blocks 36 to the leading cross bar 13 of the skid and a pair of pulley blocks 37 to the leading standards 19 at their meeting with the cross bar 20. A cable 38 is trained over these pulley blocks and is terminally connected at its free end to the leading runner as shown at 39, the opposite end of this cable being connected to a swingletree 40. A pair of guy wires 41 are connected at their opposite ends to the cross bar 29 of the fork arms and to a ring 42 carried by the rear standards 23 adjacent their meeting with the cross bar 20, these guy cables being provided with turnbuckles 43 by means of which the lowered or engaging position of the fork may be adjusted. The guy wires bear against the cross bar 34 of the upper section of the fork when the latter is in lowered position and brace the upper section to receive the load. The guy wires form limp connectors between the fork and rear standard and lift the fork to any loading position when the rear standards are rocked forward.

A draft animal is attached to the swingletree 4 and when started advances the cable through the pulley blocks, thus rocking forward the standards 19 and 23. This forward rocking movement of the standards serves to elevate the arms 27 until the fork is positioned vertically over the skid in which position the hay will gravitate from the fork on to the top of the stack.

For returning the fork to its initial position, a weight 44 is suspended from the cross bar 29 of the fork by means of a cable 45, this cable being prevented from abnormal swaying by means of a guide loop 46 formed of wire, cable or other suitable material and having its terminals secured to the rung 24 of the rear standards.

From an inspection of the figures of the drawings and especially Fig. 1 it will be apparent that when the guy rod 41 is released from the converged terminals of the uprights 23, these said uprights together with the uprights 19 may be moved rearwardly until the side bars or rails 27 are moved beyond the free ends thereof. These said uprights may then be moved forwardly until the members 23 lie in substantially parallel relation to the runners 11 with the uprights 19 engaging the upper edges thereof. The side bars 27 may then be folded forwardly to engage the upper edges of the uprights 19 in which position the fork will hold the several parts against displacement by its engagement with the upper edges thereof.

From the foregoing it will be apparent that a folding hay loader is provided which will fulfil all the necessary requirements of such a device.

What is claimed is:—

The device of the nature described comprising a base consisting of longitudinal brace runners, ears extending from said runners intermediate their ends, converging standards pivoted to said ears, converging standards pivoted to the runners in advance of the ears, the converged terminals of the forward standards being spaced below the converged terminals of the rear standards, a bar pivoted between the converged terminals of the standards, side bars pivoted to the rear ends of the runners and projecting beyond the forward ends thereof, a fork secured to the forward ends of the side bars, a cross bar connecting the front standards, a flexible member connecting said cross bar and fork, a weight carried by said flexible member, guy wires connecting the front standards and the fork, pulleys secured to the rear standards and the runners, an operating cable passing over said pulleys, the rear standards being foldable between the runners, the forward standards being foldable upon the rear standards, and the fork foldable upon the runners and engaging the standards and folding them against displacement.

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

WALTER W. ROSENAU.

Witnesses:
L. A. BRENNER,
A. G. WORTMENN.

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