No. 849,106. PATENTED APR. 2, 1907.

J. B. CASTAGNOS.

CANE LOADER.

APPLICATION FILED MAR. 29, 1906.

2 SHEETS—SHEET 1.

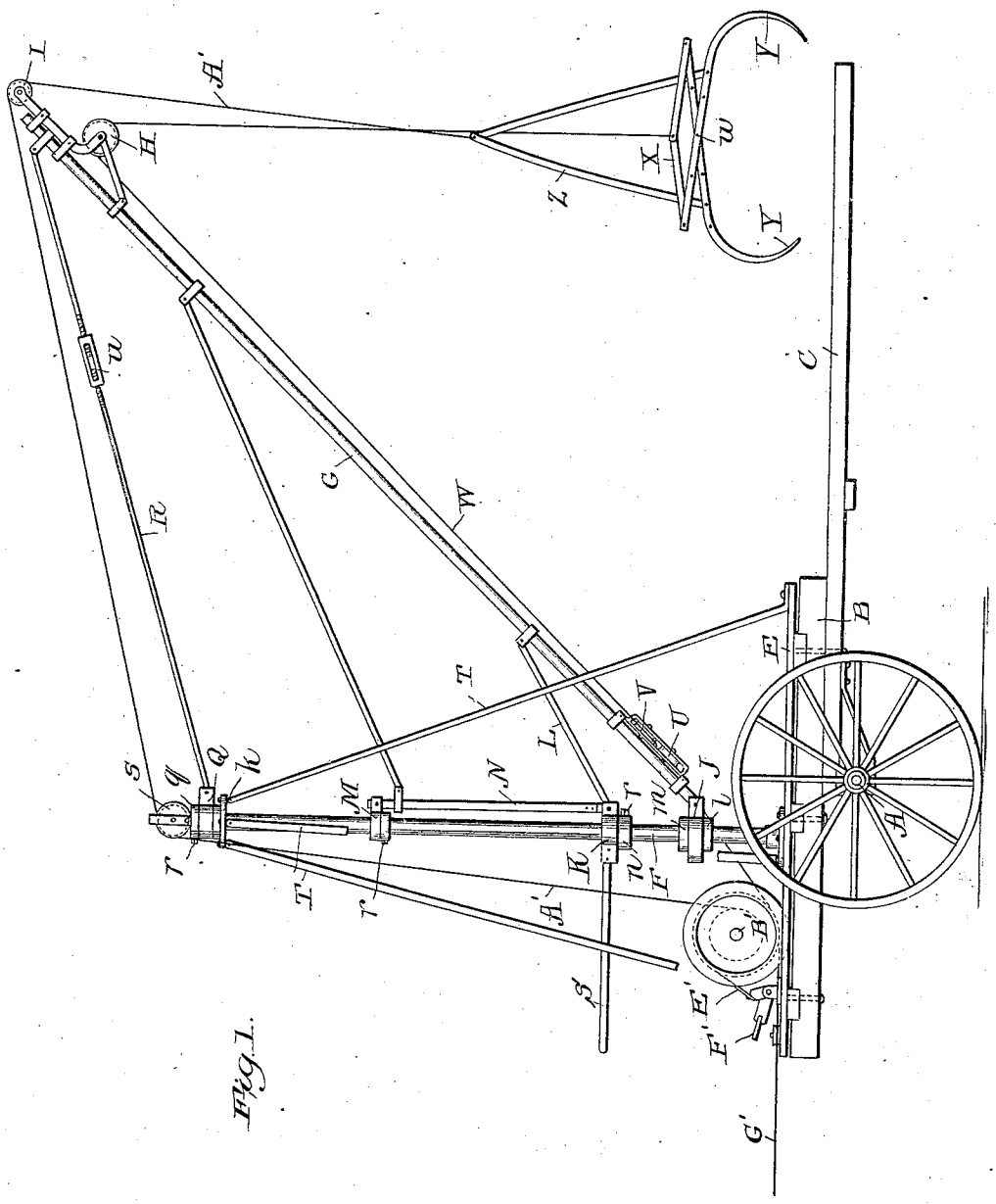


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

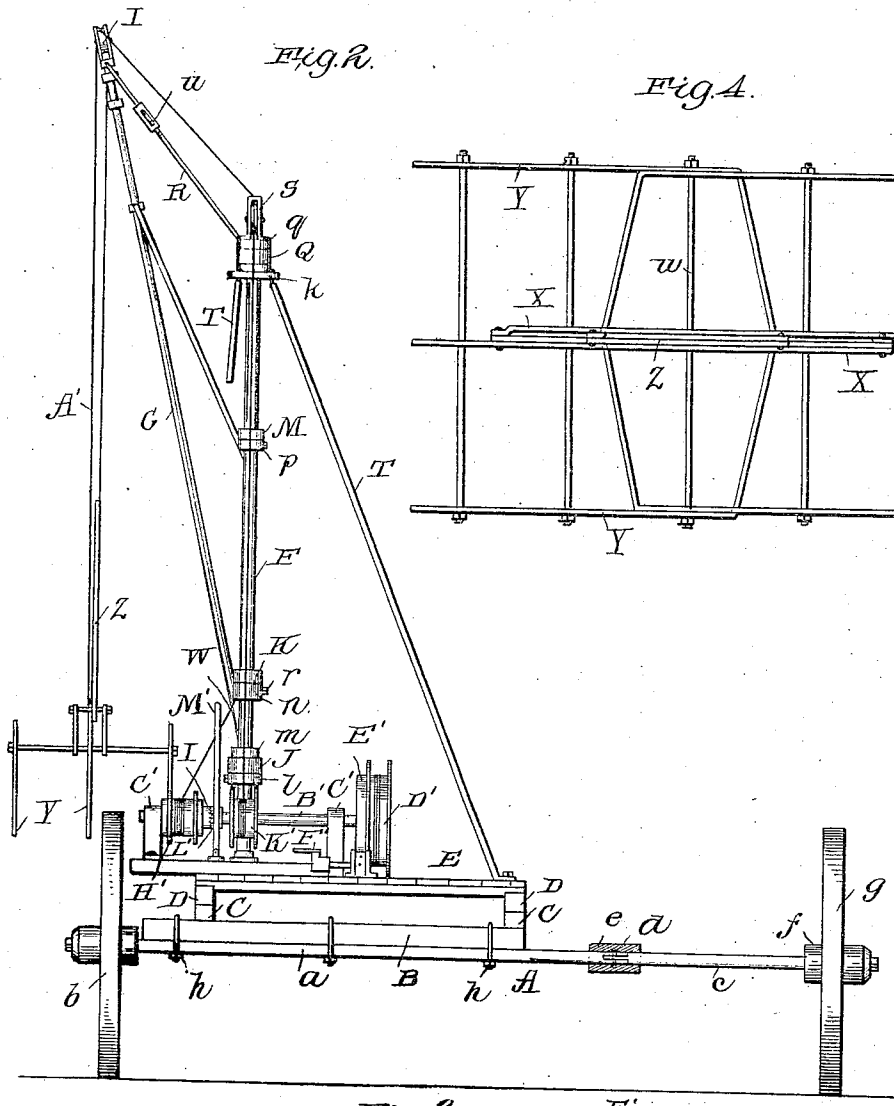
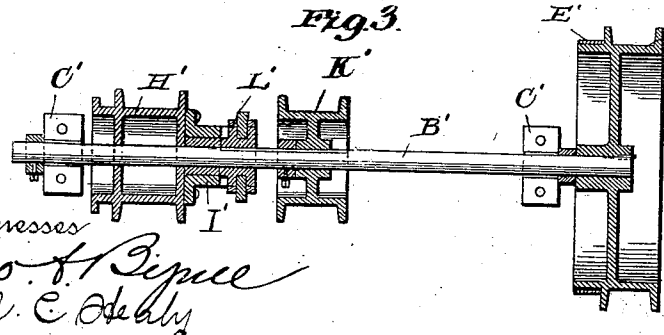


Fig. 4.

Fig. 3.



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CANE-LOADER.

No. 849,106. Specification of Letters Patent. Patented April 2, 1907.

Application filed March 29, 1906. Serial No. 308,811.

To all whom it may concern:

Be it known that I, JOSEPH B. CASTAGNOS, a citizen of the Republic of France, residing at Iberville, in the parish of Iberville and State of Louisiana, have invented new and useful Improvements in Cane-Loaders, of which the following is a specification.

My invention pertains to sugar-cane loaders of the type designed to take cane from the ground and transfer the same to a cart positioned alongside the loader; and it has for its object to provide a simple, efficient, and easily-operated loader of the type stated and one which is light of draft and may therefore be drawn by a single mule or other draft-animal.

With the foregoing in mind the invention will be fully understood from the following description and claims when the same are read in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the loader constituting the present and preferred embodiment of my invention. Fig. 2 is a rear elevation of the loader with the reinforcing-sleeve of the axle in section. Fig. 3 is an enlarged view, partly in elevation and partly in section, illustrating the shaft of the loader and the appurtenances of said shaft. Fig. 4 is a top plan view of the cane-grab comprised in the loader.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is the axle of the loader, which is best shown in Fig. 2. The said axle may be of any construction compatible with the purpose of my invention without affecting the operation of other parts of the loader; but I prefer to have it comprise a main section *a*, equipped at one end with a supporting and traveling wheel *b*, an auxiliary section *c*, fixedly connected to the end of the section *a* remote from the wheel *b* through the medium of a pin *d*, which takes through a tongue on the section *c* and also through the walls of a bifurcation in the end of the section *a*, a sectional reinforcing-sleeve *e*, which surrounds the sections *a* and *c* at the point where the same are connected, and collars *f*, which are fixed on the section *c* by set-screws or other suitable means. These collars *f* receive between them a traveling and supporting wheel *g*, which is loose on the axle-section *c*. By virtue of the axle being provided with the auxiliary section or extension *c* the loader is enabled to straddle two cane-rows, with the result that the loader is well balanced and the draft-animal pulling the machine is enabled to travel in the space between two cane-rows other than the spaces between rows in which the wheels *b* and *g* travel. It will also be apparent that the provision of the auxiliary section *c* is advantageous, inasmuch as when it is desired to move the loader a considerable distance, as from one plantation to another, the section *c* may be disconnected from the section *a*, and then the wheel *g* may be removed from the section *c* and secured on the section *a* through the medium of the collars *f* and their complementary set-screws.

B is a bar of wood arranged on and connected by shackles *h* or other means to the axle A. C C are shafts for the draft-animal, fixed to and extending forwardly from the said bar B.

D D are longitudinal beams arranged on and fixedly connected to the shafts C, and E is a platform mounted on and connected to the beams D. The said platform E is designed to carry the cane-transferring machinery of the loader and to serve as a stand for the operator, as will be hereinafter pointed out in detail.

F is a mast, preferably of gas-pipe, fixed to and rising from the platform E and provided adjacent to its upper end with an enlargement *k* and also provided at intervals of its length with collars *l*, *m*, *n*, *p*, and *q*, which are fixed to it by set-screws *r*. At its upper end the mast F is further provided with a peripherally-grooved sheave *s*, the purpose of which will presently appear.

G is a boom, which is preferably made of gas-pipe and is slightly smaller in diameter that the mast F. The said boom is equipped adjacent to its outer end with peripherally-grooved sheaves H and I and is connected with the mast F in the manner best shown in Fig. 1—that is to say, through the medium of a coupling J, to which the boom is pivotally connected and which is loosely mounted on the mast between the collars *l* and *m*; a coupling K, loosely mounted on the mast

above the collar *m* and connected to a brace L, preferably of gas-pipe, which in turn is connected to the boom a coupling M, loosely mounted on the mast above the collar *p;* an upright N, connecting the couplings K and M and movable with the same; a brace P, extending between and connecting the upright N and the boom, a coupling Q, loosely mounted on the mast between the enlargement *k* and the collar *q*, and a brace extending between and connected to the coupling Q and the outer end of the boom, the said brace, which is lettered R, being provided with a turnbuckle *u*, whereby any tendency of the boom to sag may be remedied, as occasion demands. The coupling K is provided with a rearwardly-extending hand-lever S for swinging the boom on the mast, and by virtue of the construction described it will be apparent that when the said hand-lever S is moved by the operator considerable leverage is afforded, and hence the boom, with its load, may be swung to and fro with but a minimum amount of effort.

The mast F may be maintained in its upright position in any manner suitable to the purpose of my invention, although I prefer to employ for the purpose bracing-legs T, preferably of gas-pipe, which are interposed between and fixedly connected to the platform E and the enlargement *k* of the mast and are preferably arranged as shown in Figs. 1 and 2.

In addition to the sheaves H and I the boom G is equipped with sheaves U and V. These latter sheaves are arranged at the under side of the boom and adjacent to the coupling J and are designed to guide the cable W in its passage to the main hoisting-drum presently described. From the sheave V the cable W passes up and over the sheave H, and it is connected at its lower end to the links X, pivoted to and arranged between the upper arms of the grab-levers Y, as best shown in Fig. 1. In addition to the levers Y, which are pivoted together at *w*, and the links X the grab of my improvements comprises links Z, which are pivoted to the lower arms of the levers Y and are pivoted together at their upper ends and are connected at the latter point to a cable A′, which extends over the sheave I on the boom and the sheave *s* on the mast and then extends downwardly, as clearly shown in Fig. 1, for a purpose presently set forth.

B′ is the shaft of my novel loader. This shaft is journaled in suitable bearings C′, fixed on the platform E, and has fixed on one of its ends a driving-drum D′, which is arranged to be engaged by the usual friction-band E′, connected to a pedal-lever F′, whereby the operator is enabled to brake the drum by pressing with his foot on the lever F′. The drum D′ may be rotated to elevate the load by any suitable power, although I prefer to employ a mule or horse for the purpose, the mule or horse being connected with the drum through the medium of the cable G′. (Shown in Fig. 1.)

In addition to the drum D′ the shaft B′ is equipped with a hoisting-drum H′, which is loosely mounted thereon and is provided with a clutch member I′, a trip-drum K′, which is keyed on the shaft so as to turn therewith, and a clutch member L′, which is keyed on the shaft so as to enable it to turn therewith and move laterally thereon and is designed to be moved by a hand-lever M′ into and out of engagement with the clutch member I′. The trip-drum K′ is designed to wind the cable A′, while the drum H′ is designed to wind the cable W. In this connection it will be apparent that after passing around the sheave V and between said sheave and the sheave U the cable W passes to the drum H′, which operates to turn the boom and the load of cane to a position over the cart.

In the practical operation of my novel loader it will be seen that the grab takes its load in front of the wheels and that the operator stands facing the mule for drawing the loader and also facing the grab. After the grab takes its load, as stated, the grab and the load therein are raised by rotation of the drum H′, and by the same means the boom is swung toward the left. Then when the grab is positioned over the cart the clutch member L′ is disengaged from the complementary member I′, when, as will be readily understood, the grab will be opened, so as to drop its load into the cart.

In addition to the practical advantages which I have hereinbefore ascribed to my novel loader it will be noticed that the loader is quick and efficient in operation, requires but a minimum amount of attention during operation, and is well adapted to withstand the rough usage to which cane-loaders are ordinarily subjected.

I have specifically described the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention with a view of imparting a definite understanding of the said embodiment. I do not desire, however, to be understood as confining myself to the said specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claimed invention.

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

1. The combination in a cane-loader, of a frame, an axle comprising a main section connected to the frame and provided at one end with a wheel and having its opposite end extended beyond the frame, and an auxiliary section detachably connected to the main section, a wheel capable of use interchange-

ably on the auxiliary section and the extended portion of the main section, and removable means for detachably securing said wheel on either the auxiliary section or the extended portion of the main section.

2. The combination in a cane-loader, of a platform, a mast rising therefrom, couplings loosely mounted on the mast; one of said couplings having a rearwardly-extending hand-lever, an upright connecting the two upper couplings, a boom connected to the lower coupling, a brace interposed between and connecting the next upper coupling and the boom, and a brace interposed between and connecting the upright and the boom.

3. The combination in a cane-loader, of a platform, a mast rising therefrom, couplings loosely mounted and supported on the mast, a boom connected to the lower coupling, an upright connecting the intermediate couplings together, a brace interposed between and connecting the lower of the intermediate couplings and the boom, a brace interposed between and connecting the upright and the boom, and a brace interposed between and connecting the uppermost coupling and the upper end of the boom and having means whereby it may be increased or diminished in length.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH B. CASTAGNOS.

Witnesses:
P. A. LORIO,
G. G. GRIFFON.