

T. S. HANSON.
LOADER.

APPLICATION FILED MAY 12, 1910.

1,007,563.

Patented Oct. 31, 1911.

3 SHEETS-SHEET 1.

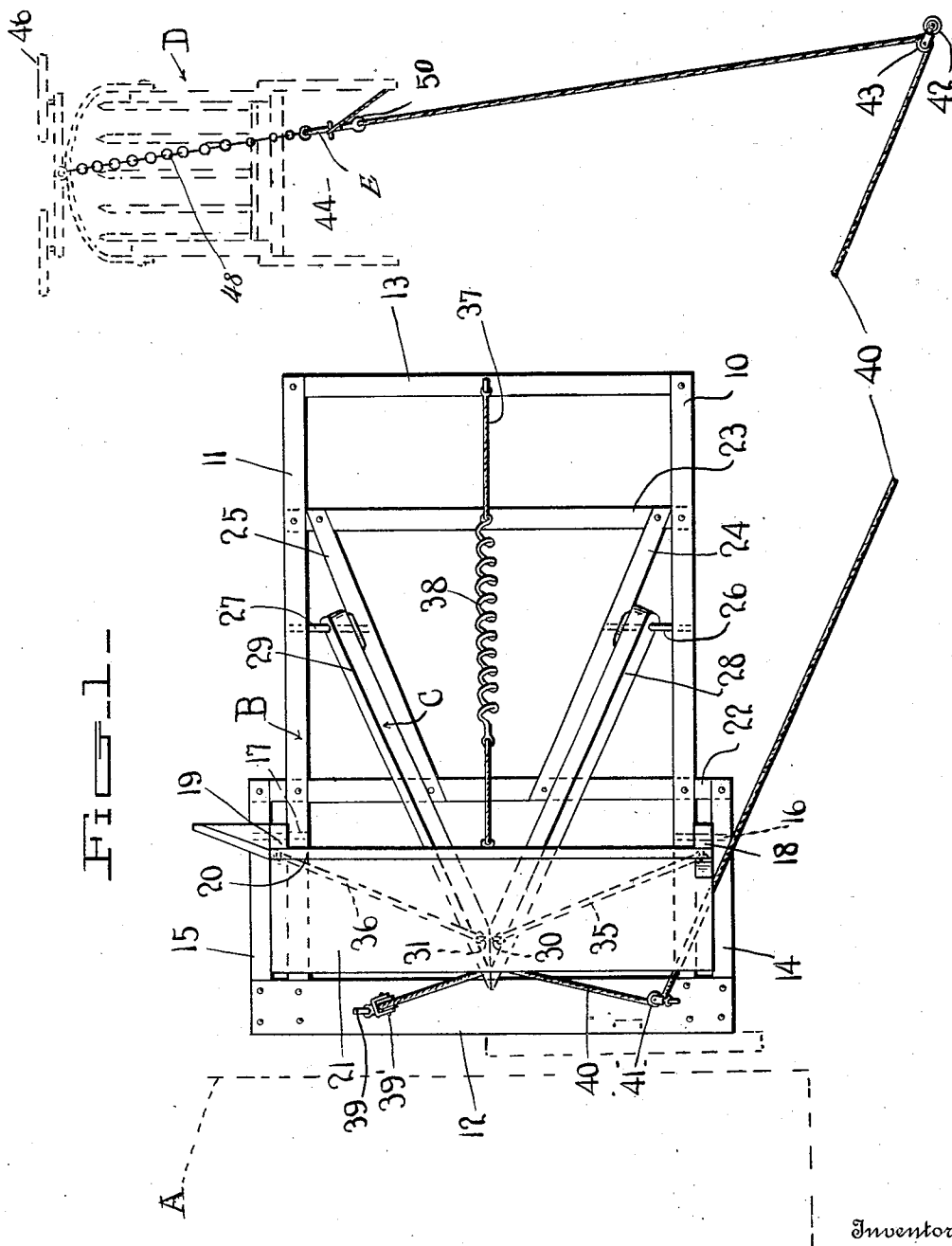


FIG. 1

Witnesses

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By

Charles Chandler

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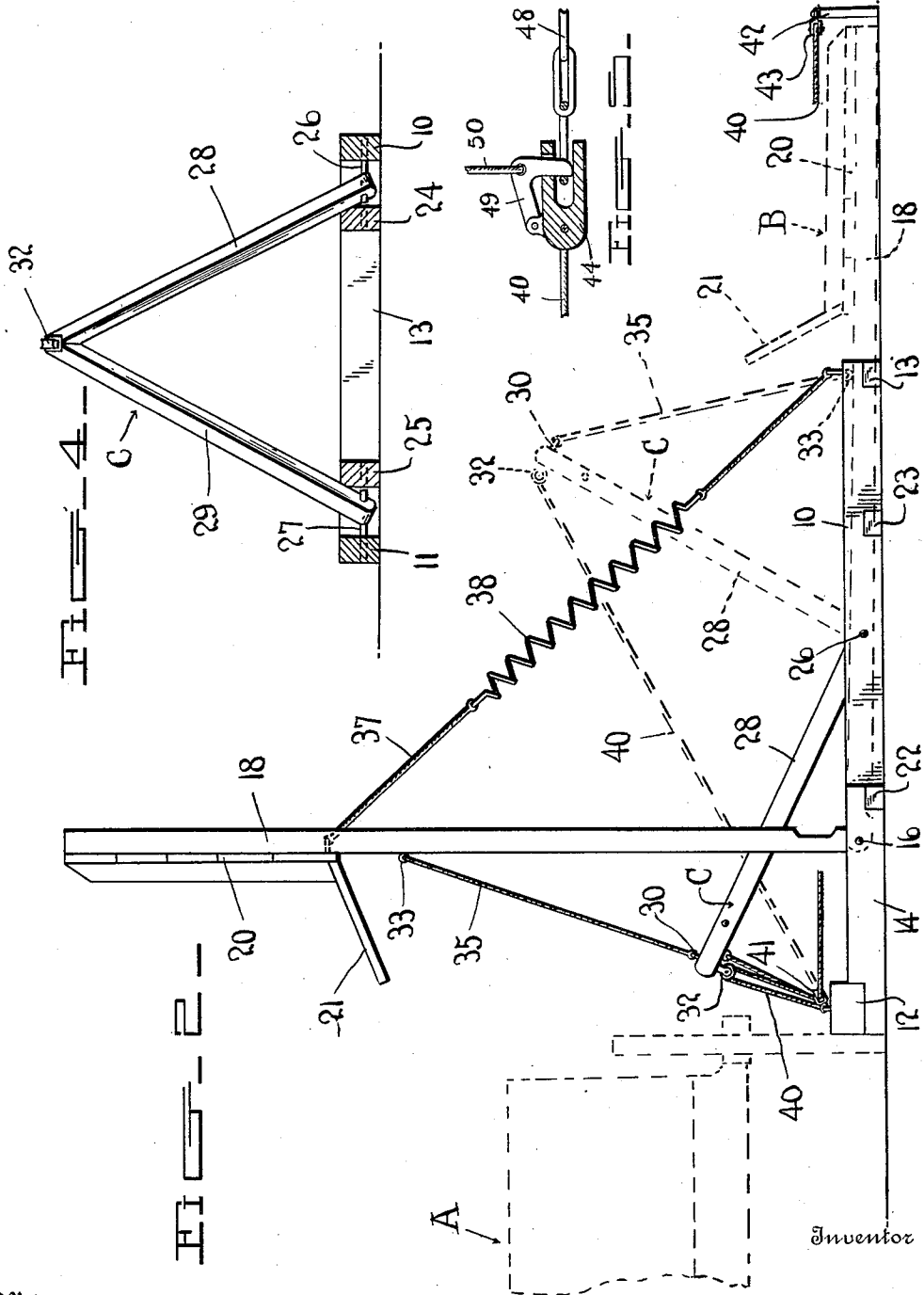
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Attorney S

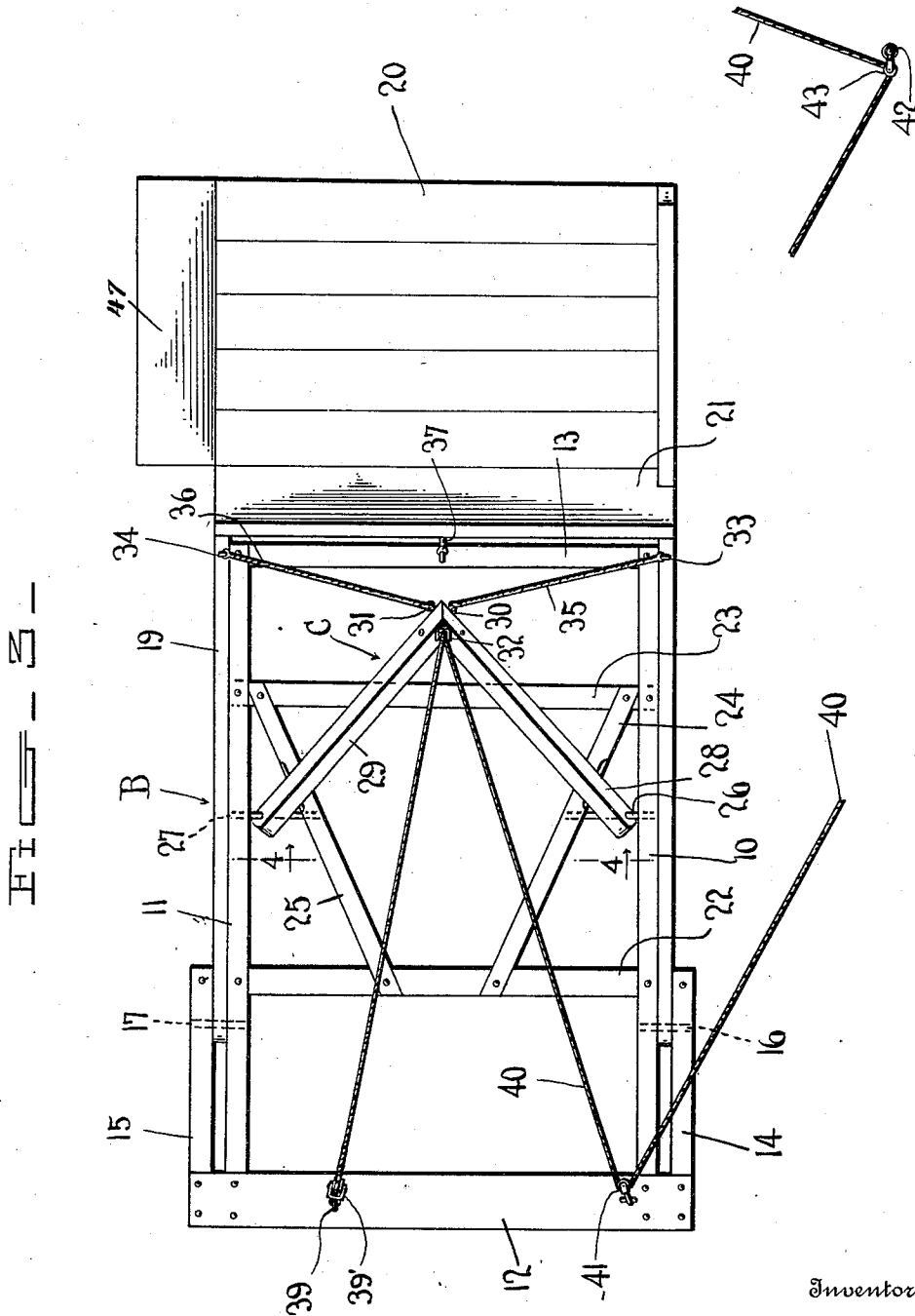
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UNITED STATES PATENT OFFICE.

TURNER S. HANSON, OF WHITE SULPHUR SPRINGS, MONTANA.

LOADER.

1,007,563.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed May 12, 1910. Serial No. 560,829.

To all whom it may concern:

Be it known that I, TURNER S. HANSON, a citizen of the United States, residing at White Sulphur Springs, in the county of Meagher, State of Montana, 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 loaders.

The object of the invention is to provide an improved construction of loader particularly designed for use in loading material that will admit of handling with a drag or other scraper.

A further object of the invention resides in connecting the operating cable of the loader with a scraper through the instrumentality of a trip coupling whereby the cable may be easily disconnected from the scraper when the latter has been moved by the draft animal so as to shift the platform of the loader to dumping position and thus permit the latter to automatically return to normal position under the influence of gravity.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a plan view showing the loader in delivering position and a wagon disposed in receiving relation thereto, and also illustrating the manner of connecting a scraper to the operating cable of the loader; Fig. 2, a side elevation of the loader with the platform thereof shown in full lines in dumping position and in dotted lines in normal position; Fig. 3, a plan view of the loader with the platform thereof in normal position; Fig. 4, a section on the line 4-4 of Fig. 3, and Fig. 5 is an enlarged longitudinal section of the trip coupling.

Referring to the drawings, A indicates generally a wagon to be loaded, B the loader and D the scraper which is detachably connected to the end of the operating cable of

the loader. Said loader B comprises a frame formed of the side sills 10 and 11 and end sills 12 and 13, said end sill 12 being of sufficient size and strength to serve the office of an abutment for the wagon A. Projecting rearwardly from respective ends of the sill 12 are corresponding bars 14 and 15 disposed in parallel spaced relation to the side sills 10 and 11 respectively. Connecting the bar 14 and the side sill 10 is a rod 16 while a corresponding rod 17 connects the bar 15 and the side sill 11. Pivoted for vertical oscillation on the rod 16 is an arm 18 while a corresponding arm 19 is pivoted on the rod 17 for a similar movement. Connecting the free ends of the arms 18 and 19 is a platform 20 provided with a forwardly and upwardly inclined end member 21. Connecting the side sills 10 and 11 intermediate their ends is a pair of spaced cross beams 22 and 23 which are in turn connected by forwardly converging beams 24 and 25. Supported between the forwardly converging beam 24 and the side sill 10 is a rod 26 while a corresponding rod 27 is supported between the forwardly converging beam 25 and the side sill 11. Pivotally mounted on the rods 26 and 27 for oscillation in a vertical plane is a V-shaped member C. It will of course be understood that the free end of the arms 28 and 29 of said member are pivotally connected to the rods 26 and 27 respectively. The position of the forwardly converging beams 24 and 25 with respect to the arms 28 and 29, respectively, of the V-shaped member is such that when said member is oscillated rearwardly with respect to the frame of the loader said arms and forwardly converging beams will engage each other and the V-shaped member thereby supported in rearward and upward inclination without the necessity of utilizing rigid connection between the upper end of said V-shaped member and the side arms 18 and 19.

Secured to the V-shaped member C and disposed on the side thereof adjacent the platform 20 are eye bolts 30 and 31 while on the opposite side of said member is hung a pulley 32. Secured in the upper side of the arms 18 and 19 just forward of the platform 20 are staples 33 and 34 respectively. A flexible connection 35 has its terminals detachably connected with the staple 33 and the eye bolt 30 respectively, while another flexible connection 36 has its terminals detachably connected to the staple 34 and the

eye bolt 31 respectively. By this construction it will be apparent that as the V-shaped member C is oscillated in a forward direction the platform 20 will be raised and ultimately moved to dumping position; said position being determined by means of a connection 37 having one end secured to the platform 20 and the other end secured to the end sill 13. Disposed longitudinally in the connection 37 and forming a part thereof is a spiral spring 38 which serves to impart a rebound to the platform 20 when the latter has reached dumping position in order to bring same positively under the influence of gravity to effect its return to normal position.

Secured to the end sill 12 is an eye bolt 39 to which is attached a pulley 39' over which travels a cable 40; said cable having one end secured to the member C and the other end passed over the pulley 32 and then over another pulley 41 secured to the end sill 12. Disposed adjacent the platform 20 when the latter is in normal position is a stake 42 to which is attached a pulley 43 and over which latter the cable 40 is also passed.

Secured to the end of the cable 40 is a trip coupling E which is connected to the scraper D by means of a chain 48. This coupling E comprises a forked body portion 44, one end of which is connected to the cable 40. Pivoted upon the forked body portion 44 is a keeper member 49 which is adapted to pass through an opening in one of the arms of the forked body portion 44 and engage the inner face of the outer arm of said portion. This coupling is attached to the chain 48 by passing one of the links of the chain between the arms of the portion 44 and then inserting the keeper member 49 through one of the arms of the forked body portion so as to lie within said link. A pull when exerted on the chain 48 will cause the link to engage the keeper and thus the connection between the cable 40 and the scraper is complete. A draw string 50 is attached to the keeper member 49 which when pulled is adapted to swing the keeper member on its pivot so as

to disconnect the same with the chain 48 and result in the detachment of the cable 40 from the scraper. Secured to the bail of the scraper B is the usual doubletree which carries the swingletrees 46 for attachment to the necessary draft animals.

Removably located at one side of the platform 20 is a beam 47 the upper face of which is inclined downwardly and outwardly so as to afford a proper rise to permit of easy elevation of the scraper onto the platform 20.

Assuming a load to be deposited upon the platform 20 it is only necessary in order to transfer same to the wagon A to attach the trip coupling on the end of the cable 40 to the scraper D and move said scraper through the instrumentality of suitable draft animals. This movement of the scraper will serve simultaneously to load the latter and actuate the cable 40 to raise the platform 20 to dumping position. When this position of the platform is reached the trip coupling E is actuated to release the engagement between the scraper and cable when the platform 20 will descend under the influence of gravity to normal position. The complete loading of the wagon A is effected by repeating this operation.

What is claimed is:

The combination with a loader including a movable platform adapted to be returned from dumping to normal position by the influence of gravity, a scraper having a draft appliance secured thereto, connections between the platform and the scraper whereby the movements of the latter may be utilized to raise said platform to dumping position, and a trip coupling disposed in said connections whereby the platform may be released from the influence of the movement of said scraper when said platform is in dumping position and the connection under tension.

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

TURNER S. HANSON.

Witnesses:

JESSE HARRY,
CHARLIE ZEHNTNER.