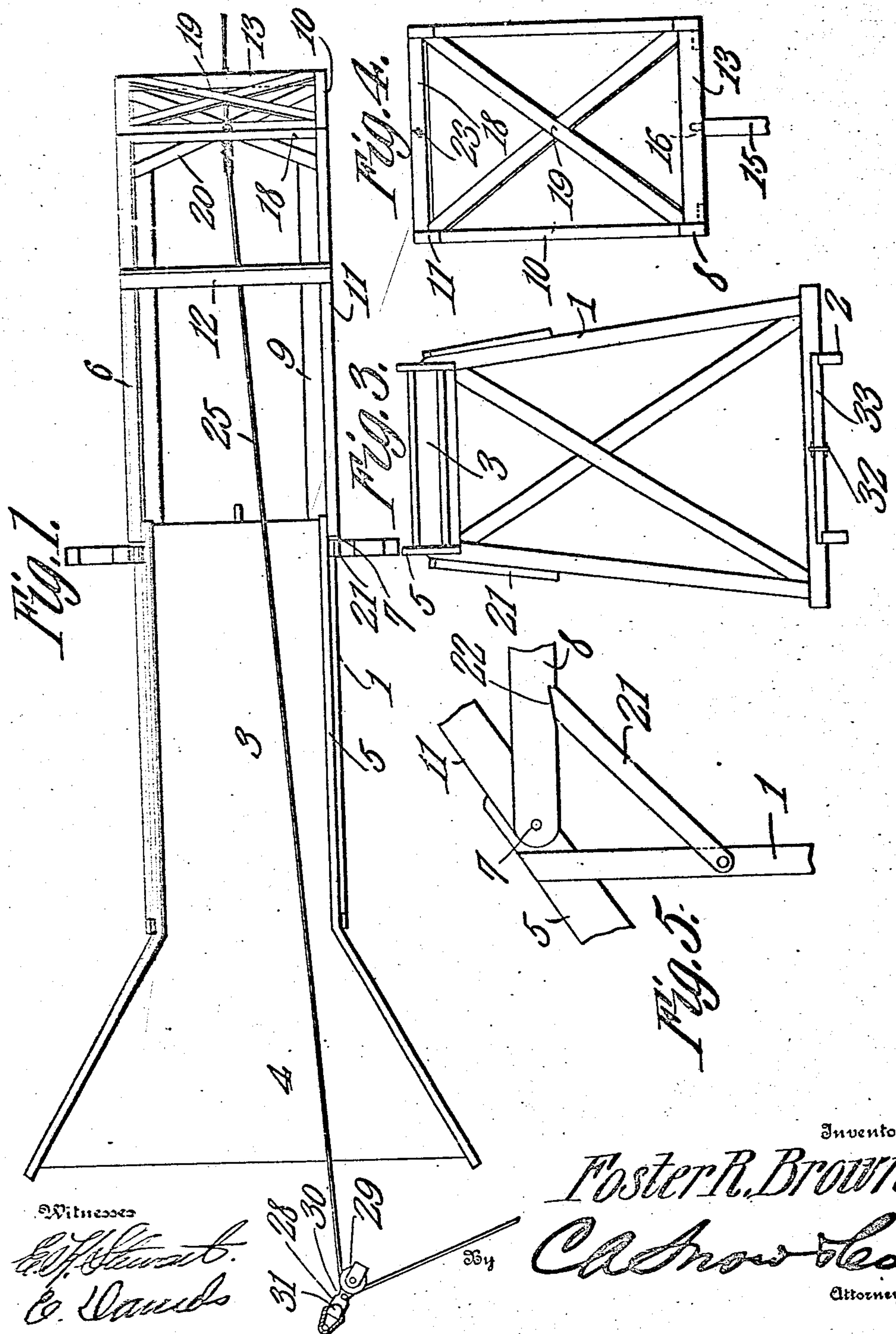


F. R. BROWN.  
 MANURE LOADER.  
 APPLICATION FILED MAY 5, 1908.

Patented Sept. 15, 1908.  
 2 SHEETS—SHEET 1.

898,960.



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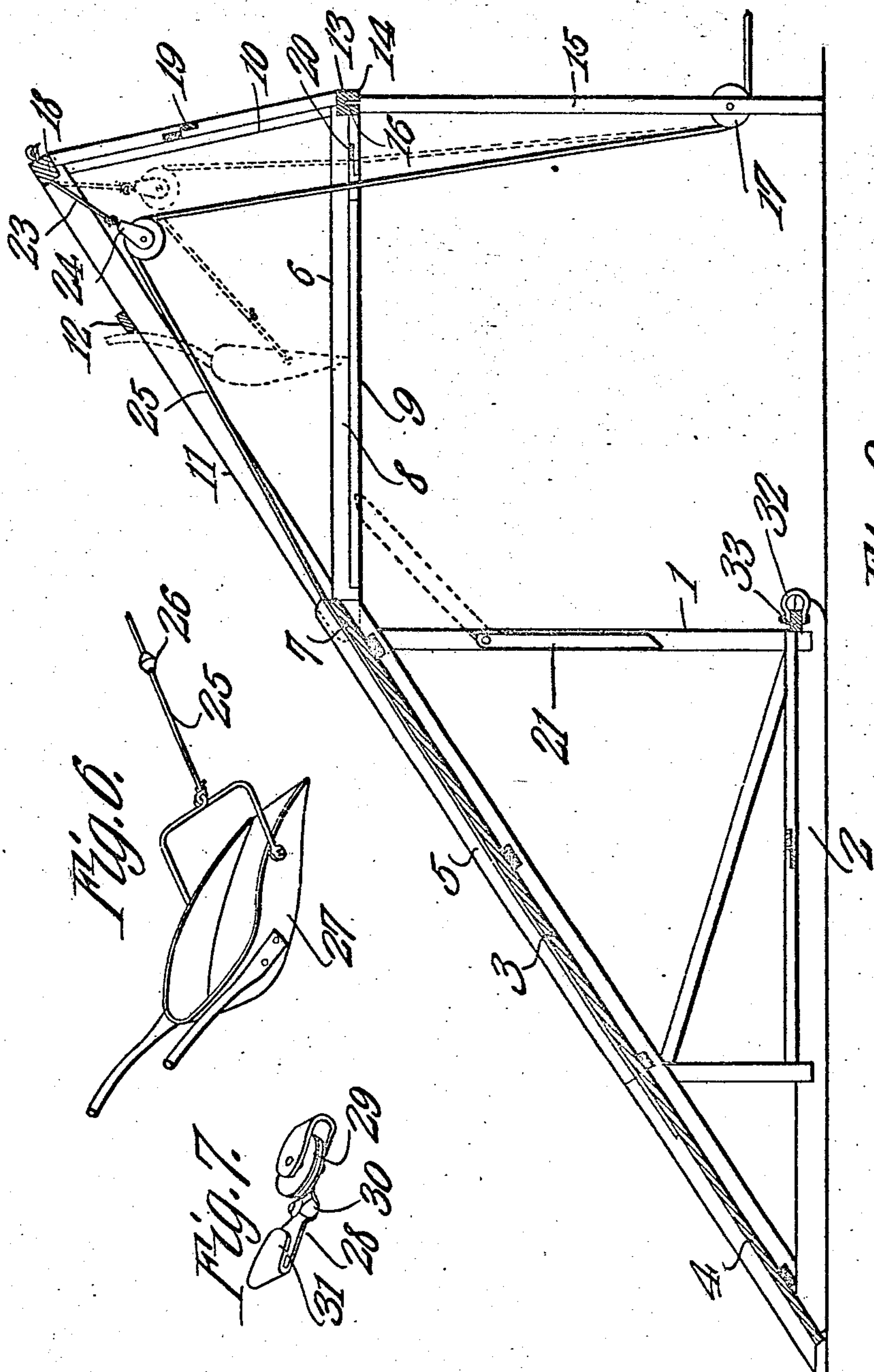


Fig. 1.

Fig. 2.

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# UNITED STATES PATENT OFFICE.

FOSTER R. BROWN, OF PAWNEE CITY, NEBRASKA.

## MANURE-LOADER.

No. 898,960.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed May 5, 1908. Serial No. 431,019.

*To all whom it may concern:*

Be it known that I, FOSTER R. BROWN, a citizen of the United States, residing at Pawnee City, in the county of Pawnee and State of Nebraska, have invented a new and useful Manure-Loader, of which the following is a specification.

This invention has relation to manure loaders, and it consist in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a loader of the character indicated, the parts of which are so arranged that the material may be evenly and regularly deposited in the body of a spreader, thereby avoiding the necessity of distributing the material manually after it has been placed in the body of the spreader. The parts of the loader are also so arranged that the material may be drawn toward the loader from any quarter or direction without shifting the apparatus, thus making it possible to operate upon material covering an extensive area.

A further object is to provide means for affording a signal for announcing the approach of a scraper toward the point where it is to be dumped, thus notifying the driver of the proximity of the scraper to such a point, whereby he may check or otherwise govern the movement of the draft animal or team. The loader is so constructed that it may be set up and operated without using guy ropes or stakes, and is mounted upon runners whereby it may be readily transported from point to point, as occasion or necessity may require, by simply hitching a team of draft animals thereto.

For the purpose of facilitating the feature of drawing the material toward the loader from any direction, a cast-off pulley block is used in combination with the loader, and a button attached to the main cable. When the said button comes in contact with the cast-off pulley block the said block is moved laterally, whereby the main cable becomes disconnected from the pulley block and the scraper is drawn directly toward the loader. The pulley block is mounted at a fixed point and the material in the first instance is drawn toward the said block, and when the cable is cast off from the block the scraper is changed in its course of movement toward the loader.

A further object of the invention is to provide a device of the character indicated

which is simple in construction and is of a durable nature and the parts of which are so arranged that the material cannot bank or clog about the apparatus, thereby interfering with the proper operation of the parts of the same.

Figure 1 is a top plan view of the loader. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an end view of the lower portion of the loader. Fig. 4 is an end view of the superstructure of the loader. Fig. 5 is a side elevation of the upper and lower portions of the loader at the point where they join together. Fig. 6 is a perspective view of a scoop used with the loader, and Fig. 7 is a perspective view of a cast-off block used with the loader.

The loader consists of a frame 1 which is mounted upon the runners 2. Said frame supports the skid 3, which is flared laterally at its lower end, as at 4. The flanges 5 are mounted at the sides of the skid 3, and the flared portion 4 thereof. The upper portions of the flanges are parallel. The superstructure 6 is hinged at the points 7 to the upper part of the frame 1 or the sides of the skid 3. Said superstructure 6 is triangular in side elevation and consists of the horizontal beams 8 which are spaced apart and which are provided at their inner sides with the inwardly-disposed ledges 9. The uprights 10 are mounted upon the outer portions of the beams 8 and the inclined rafters 11 are connected at their upper ends with the uprights 10 and at their lower ends with the beams 8. The cross bar 12 is mounted upon the rafters 11 at points intermediate of the ends thereof. The outer ends of the beams 8 are connected together by a cross bar 13, which is provided at its middle with a circular mortise 14. The post 15 is provided at its upper end with a circular tenon 16 adapted to enter and rotate in the mortise 14. The pulley 17 is journaled for rotation upon the lower portion of the post 15. The cross bar 18 connects the upper ends of the rafters 11 together, and the cruciform braces 19 are interposed between the bars 13 and 18 and the parts with which they connect. The cruciform braces 19 connect the outer portions of the beams 8 together, while the frame 1 is provided with suitable braces at any desired points. The braces 21 are pivotally connected to the sides of the frame 1 and are adapted to enter the notches 22 provided in the lower sides of the beams 8. The chain



23 depends from the cross bar 18, and the pulley block 24 is supported at the lower end of the said chain. The cable 25 passes over the pulley of the block 24 and under the pulley 17 journaled upon the post 15. The draft animal or animals are attached to one end of the said cable while the said cable is provided at its opposite end portion with a button 26 which surrounds the said cable. 10 The scraper or scoop 27 is attached to that end of the cable 25 in the vicinity of the button 26.

As above stated, a cast-off block of peculiar construction is adapted to be used in 15 combination with applicant's form of loader. Such cast-off block consists of the body 28 upon which is journaled the pulley 29 and which is provided at its edges and in the vicinity of the periphery of the pulley 29 with the beveled portions 30. Said body is provided at its end opposite to that upon which the pulley 29 is mounted, with a hook 31 which affords means whereby the said body may be engaged with a chain attached to a 25 fixed object.

Preparatory to the operation, the parts of the apparatus are set up as follows: The frame 1 is drawn to any desired point by attaching draft animals to the clevis 32 mounted upon the bar 33 which connects the ends of the runners 2 together. During the movement of the apparatus the post 15 is removed from under the bar 13 and the beams 8 are held in horizontal positions by the pivoted 35 braces 21 which engage the notches 22 thereof. After the apparatus has been positioned the braces 21 are swung down out of engagement with the beams 8 and lie along the sides of the frame 1, and the tenon 16 of the post 15 is inserted in the guards 14 of the bar 13 and the lower end of the post rests directly upon the ground. Thus, a supporting means is provided for the outer free ends of the beams 8. A draft team is then hitched or 45 connected with the cable 25, and, by reason of the fact that the post 15 is journaled or pivoted with relation to the bar 13, the said team may move away from the body of the apparatus in any desired or convenient direction. As the team moves away from the 50 apparatus the cable 25 is drawn and the scraper 27 engages the material upon the ground and approaches the lower end of the skid 3. As the movement of the cable continues the scraper 27 is drawn up along the skid 3 and crowds and pushes the material in front of the same. As the bottom of the said skid is closed the material cannot follow through and bank up or obstruct the free 55 manipulation of the apparatus. When the scraper 27 arrives at the upper end of the skid and just before it assumes a dumping position, the button 26 comes in contact with the edge of the block 24 and the cable ceases 65 to pass through the said block. Thus, there

is an additional draft added to the cable 25, and this may be taken by the driver of the team as a signal that the scraper is just about to assume a dumping position. Consequently, he can check his team or otherwise 70 govern its movements. As the upper end of the skid 3 is slightly elevated with relation to the ledges 9 when the scraper 27 is tilted so that its forward edge comes upon the ledges 9, some of the material contained 75 within the scraper is deposited in the body of the scraper, which has previously been positioned under the beams 8. As the scraper 27 moves along the ledges 9 an operator may shift the material either to the 80 front or rear of the spreader or let it be deposited at either side. This can be accomplished by manipulating the scraper upon the ledges. When the button 26 upon the cable 25 sticks in the pulley 24 the movement of the 85 scraper 27 along the ledges 9 is slackened or reduced, thus giving the operator time to dump the scraper at the desired point and also giving the driver of the team a cushioned stop signal as described above. 90

When it is desired to draw material to the flared end of the skid 3 from any quarter, the block 31 is connected with a fixed support, as above indicated, and the cable 25 is passed around the pulley 29 of the said block. 95 Thus when the scraper approaches the said block the button 26 comes in contact with one of the beveled portions 30 of the body 28 of the block, and pushes the said body laterally, whereby the cable is disengaged 100 from the periphery of the pulley 29, and the cable and scraper 27 are then free to approach directly the flared portion 4 of the skid 3, when the operation, as above described, is limited. 105

By reason of the fact that when the apparatus is set up, the superstructure mounted upon the beams 8 is supported at three points, namely at the upper end of the post 15 and upon the hinge pivots 17, the weight of the 110 load sustained by the said points is evenly distributed and the said superstructure is not liable to be strained by reason of an uneven application of weight, should any of the supporting points be placed upon weak foundations, that is to say, should the lower end of the post 15 sink into the ground in consequence of the weight sustained thereby, the entire superstructure may swing upon its 115 pivots 7 whereby the distribution of weight between the supporting points will be evenly divided. Also it will be observed that in moving the apparatus from point to point the superstructure supported by the beams 8 is not lowered but is held in extended position by the pivoted braces 21 and with the 120 draft animals are attached to the frame 1 and are located under the said superstructure 6. Thus, the weight of the said superstructure is disposed in advance of the frame 1 130



and in a measure assists in the ready movement of the said frame along the surface of the ground upon the runners 2. Thus in order to shift the machine from point to point, it is not necessary to take down or swing any cumbersome parts or structure, and thereby the apparatus is relieved from dangerous elements incident to its being shifted.

10 What is claimed:

1. A loader comprising a frame, an inclined skid supported thereby, a superstructure pivotally connected with the skid and having inwardly-disposed ledges located below the upper end of the skid, and a post pivotally connected with that end of the superstructure remote from the skid and being located in the vertical plane lying between the pivotal connections between the superstructure and the skid.

2. A loader comprising a frame mounted upon runners, an inclined skid supported thereby, a superstructure pivotally connected with the skid, and braces pivotally mounted upon the frame and adapted to engage the superstructure to support the same in fixed position with relation to the skid.

3. A loader comprising a skid supported in an inclined position, a superstructure mounted at one end upon the skid and being suitably supported at its opposite end, a flexible member mounted upon the superstructure, a pulley block attached to the flexible member, a draft cable passing over the pulley of said block, a scraper attached to said cable, and a button fixed to the cable.

4. A loader comprising a skid supported in an inclined position, a superstructure at-

tached at one end to the skid, a post supporting the opposite end of the superstructure, a pulley journaled to said post, a pendent flexible member supported upon the superstructure, a pulley block attached to said flexible member, a draft cable operatively engaging the pulley of the block and the pulley upon the post, a scraper attached to said cable, and a button mounted upon the cable.

5. A loader comprising a skid supported in an inclined position, a superstructure connected therewith, a flexible pendent member supported by the superstructure, a pulley block attached to the flexible member, a draft cable engaging the pulley of the block, a scraper attached to the cable, said cable having at a point in advance of said scraper means for increasing its transverse diameter.

6. A loader comprising a skid supported in an inclined position, a superstructure connected with the skid, a pulley block supported by the superstructure, a cast-off pulley block adapted to be fixed to a stationary point and having at the sides of its body beveled portions, a cable adapted to engage the pulleys of said blocks, a scraper attached to said cable, and a button mounted upon the cable and adapted to release the cable from the cast-off block when it comes in contact with the same.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FOSTER R. BROWN.

Witnesses:

D. C. STRATTON,  
C. E. PIERCE.