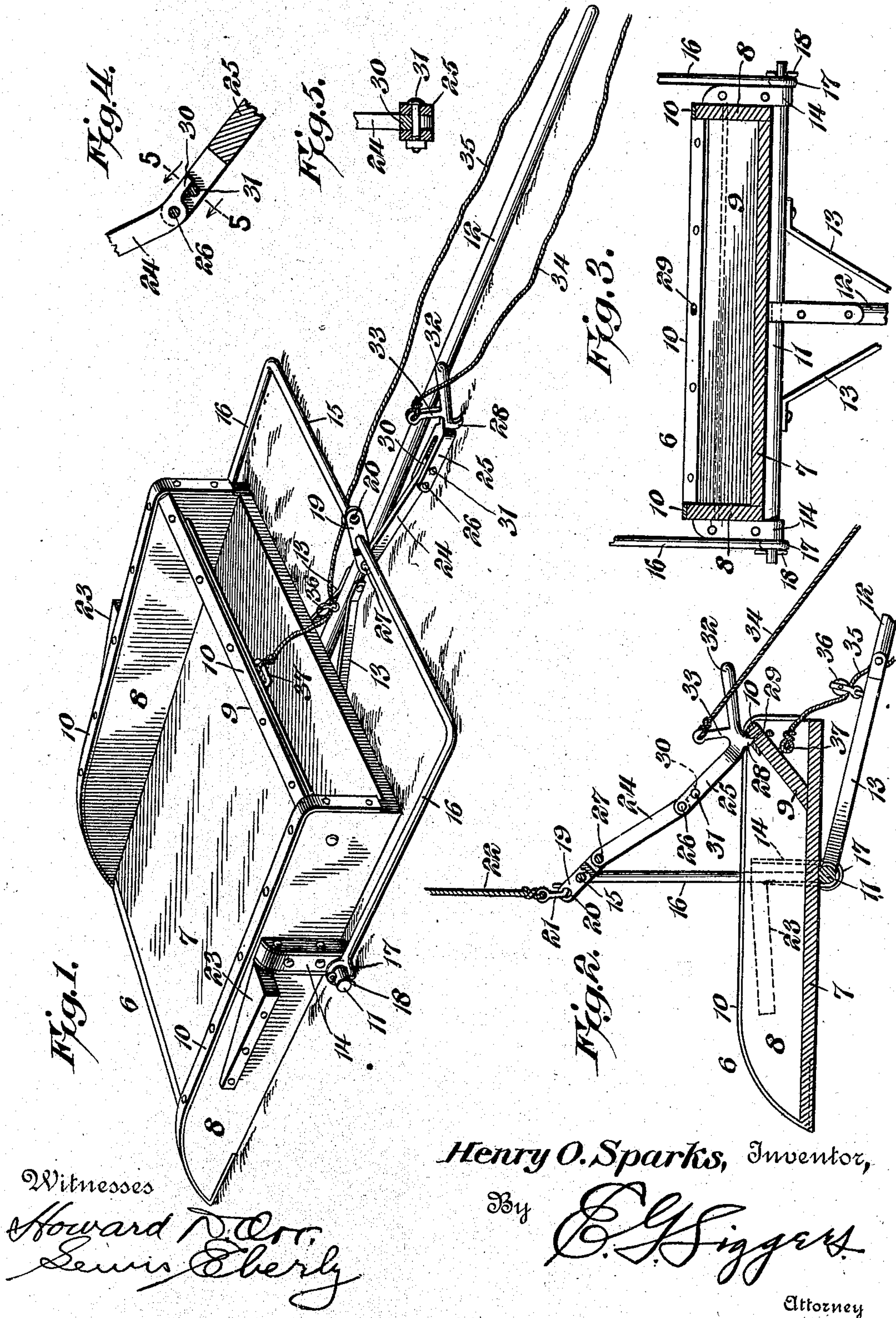


H. O. SPARKS.
LOADING OR UNLOADING MEANS.
APPLICATION FILED DEC. 7, 1907.

900,225.

Patented Oct. 6, 1908.



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HENRY O. SPARKS, OF NEAR SHELBYNA, MISSOURI.

LOADING OR UNLOADING MEANS.

No. 900,225.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed December 7, 1907. Serial No. 405,573.

To all whom it may concern:

Be it known that I, HENRY O. SPARKS, a citizen of the United States, residing near Shelbyna, in the county of Monroe and State of Missouri, have invented a new and useful Loading or Unloading Means, of which the following is a specification.

The primary object of the present invention is to provide means whereby material of any character can be loaded upon or unloaded from vehicles, cars or the like or carried from place to place. It can also be advantageously employed for excavating or for other analogous purposes.

The preferred form of construction is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the scoop, showing the same in a position to receive a load. Fig. 2 is a longitudinal sectional view therethrough, showing the scoop elevated. Fig. 3 is a cross sectional view. Fig. 4 is a detail sectional view through the holding device. Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a holder or receptacle is employed that is preferably in the form of a scoop 6. This scoop has a bottom 7, side walls 8, and a rearwardly inclined rear wall 9. The front of the scoop is open. Said scoop may be constructed of any material desired, that is to say, it may be of sheet metal or of wood. In the embodiment illustrated, it is of the latter material, and therefore the edges of the various walls are shod with metal straps 10. A pivot bar or rod 11 extends transversely beneath the bottom 7 and nearer the rear than the front edge thereof. This rod is fastened centrally and transversely to the end of a directing handle 12. Braces 13 are preferably employed for rigidly holding the handle and rod against relative movement. The ends of the pivot bar or rod 11 project beyond the opposite sides 8 of the scoop, and said sides have depending journal ears 14 secured thereto that receive the ends 11. It will be evident that the scoop can turn freely upon the bar or rod 11.

For the purpose of elevating the scoop, a bail is employed comprising a cross bar 15 having side arms 16 that terminate in eyes 17. These eyes rotatably receive the ends

11 of the pivot bar or rod, and are held against detachment therefrom by suitable split keys 18 or other devices. The cross bar has a centrally disposed ear 19 fastened thereto, and said ear has an opening 20 to receive a hook 21 secured to the end of an elevating cable 22. It will be understood that this cable is movably suspended from any elevated support, such as a derrick. Thus, the scoop can be raised or lowered, as desired, but inasmuch as said scoop can rotate freely with respect to the bail, means must be employed for holding it against tilting during its elevation, while loaded. To this end, abutment blocks 23 are secured to the side walls 8 of the scoop, and are located in the paths of movement of the side arms 16 of the bail. Thus the scoop cannot swing rearwardly beyond a substantially horizontal position, and for preventing its movement in an opposite direction, a holding device is employed comprising links 24 and 25 pivotally connected, as shown at 26. The link 24, has a pivotal connection 27 with the lower end of the ear 19, and the link 25 is provided with a spur 28 detachably engaging in a socket 29 formed in the upper portion of the rear wall 9. The link 24 has a finger 30 at the pivotal connection 26 and this finger is arranged to engage a stop pin 31 carried by the link 25. The finger and stop pin are so arranged that the links can swing slightly beyond alinement in one direction, and are then stopped by the engagement of the finger with the pin. They can be swung freely in an opposite direction, and to this end, the link 25 may be provided with a handle 32 or an upstanding stem 33 to which is connected a cable 34. With this construction, when the links are disposed, as illustrated in Fig. 2 and the spur 28 is engaged in the socket 29, the side arms 16 of the bail will be held against the abutments 23, and the scoop will thus be maintained in substantially horizontal position. If, however, the links are swung outwardly, the spur 28 will disengage from the rear wall 9 and the scoop being overbalanced, because of the arrangement of the pivot bar or rod off from the center line, said scoop will readily dump. In order to return it, a cable 35 is employed passing under a guide pulley 36 secured to the handle, said cable being fastened to the rear wall, as illustrated at 37.

The holder or receptacle 7 may be loaded in various ways. For instance, the material

may be shoveled directly into it, but it may also be loaded by scrapers. Thus, if earth is to be moved, the holder or receptacle 7 is placed on the ground, and the loaded scrapers 5 are driven freely into the same, the horses or draft animals passing on either side. These scrapers are dumped, and then passed freely over the rearwardly inclined wall. When a load has been placed therein, the bail is 10 elevated, and locked as shown in Fig. 2. The hoisting cable is then connected, and the loaded scoop is elevated and swung to the position of discharge. The material may be discharged upon a vehicle, a car or any ordi- 15 nary dump pile. Having properly positioned the scoop or holder 7 by means of a handle, the operator has only to draw upon the cable 35, whereupon the scoop will be unlocked, as already described and automatic- 20 ally dumped. It is then returned for another load. It is particularly useful in excavating ditches, basements, cellars and the like, inasmuch as it eliminates the necessity of the draft animals drawing loaded scoops 25 out of the excavation each time. It may be likewise employed in unloading coal from cars to wagons, as it may be swung into the car and filled, afterwards being elevated and swung over the wagon where it is dumped. 30 As already described, any suitable elevating means may be employed.

No broad claims are herein made to the locking means, inasmuch as broad claims thereto are made in co-pending application 35 filed simultaneously herewith, Serial No. 405,574.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will 40 be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from 45 the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

50 1. In a device of the character set forth, the combination with a holder or receptacle, of a pivot bar extending transversely beneath the same between its ends and projecting beyond its opposite sides, elevating means con- 55 nected to the projecting ends of the pivot bar, and a handle extending beneath the receptacle or holder between the sides thereof and connected to the pivot bar.

60 2. In a device of the character set forth, the combination with a holder or receptacle, of a pivot bar extending transversely beneath the same, pivotal connections between the pivot bar and holder or receptacle, a handle bar extending beneath the holder or recep-

tacle between the sides thereof and being 65 fixed to the pivot bar between its ends, and means for elevating the holder or receptacle.

3. In a device of the character set forth, the combination with a holder or receptacle, 70 of a pivot bar extending transversely beneath the same between its ends and projecting beyond its opposite sides, of pivotal connections between said pivot bar and holder or receptacle, an elevating bail connected to the projecting ends of the pivot bar, a handle bar 75 extending beneath the holder or receptacle and having its inner end fixed to the central portion of the pivot bar, and braces connecting the handle and pivot bars.

4. In a device of the character set forth, 80 the combination with a scoop having an open front end and a rear wall provided with a socket, of a bail pivotally connected to the scoop, and a device for holding the scoop and bail against relative movement, said device 85 comprising hingedly connected links, one of which is pivoted to the bail, the other having a spur that engages in the socket of said rear wall, one of said links having a finger that detachably engages the other link to hold said 90 links in a predetermined position.

5. In a device of the character set forth, the combination with a scoop having an open front end and a rear wall, of a bail having side 95 arms pivotally connected to the scoop, abutments carried by the scoop and located in the paths of movement of the side arms, and a device for holding the side arms against the abutments, said device comprising pivotally 100 connected links, one of which is pivoted to the bail, the other having a spur that detachably engages the rear wall of the scoop.

6. In a device of the character set forth, the combination with a directing handle hav- 105 ing a transversely disposed pivot bar secured to one end of the same, of a scoop having a rear wall, said scoop resting on the pivot bar, journal bearings secured to the scoop and engaging the pivot bar, a bail having side 110 arms terminating in eyes that rotatably receive the ends of the pivot bar, said bail embracing the scoop, abutments carried by the sides of the scoop and located in the paths of movements of the side arms, and a device for 115 holding the side arms against the abutments, said device comprising pivotally connected links, one of which is pivoted to the bail, the other detachably engaging the rear wall of the scoop, said bail and device being arranged 120 to lie in rear of the scoop.

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

HENRY O. SPARKS.

Witnesses:

JOHN H. SIGGERS,
LEWIS EBERLY.