C. ORGAARD.

SCRAPER.

APPLICATION FILED MAR. 5, 1918.

1,404,474.

Patented Jan. 24, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

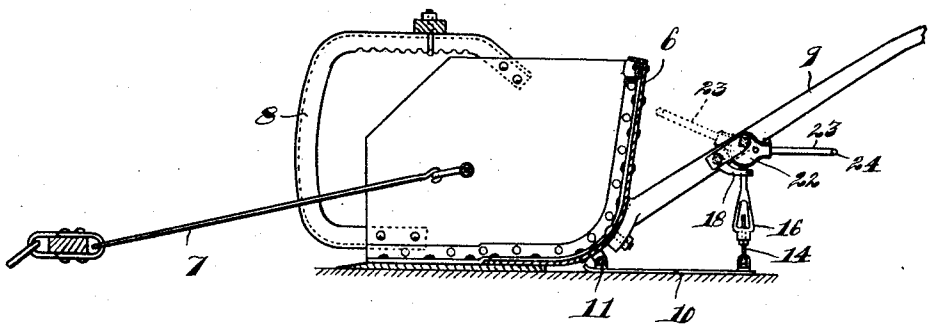
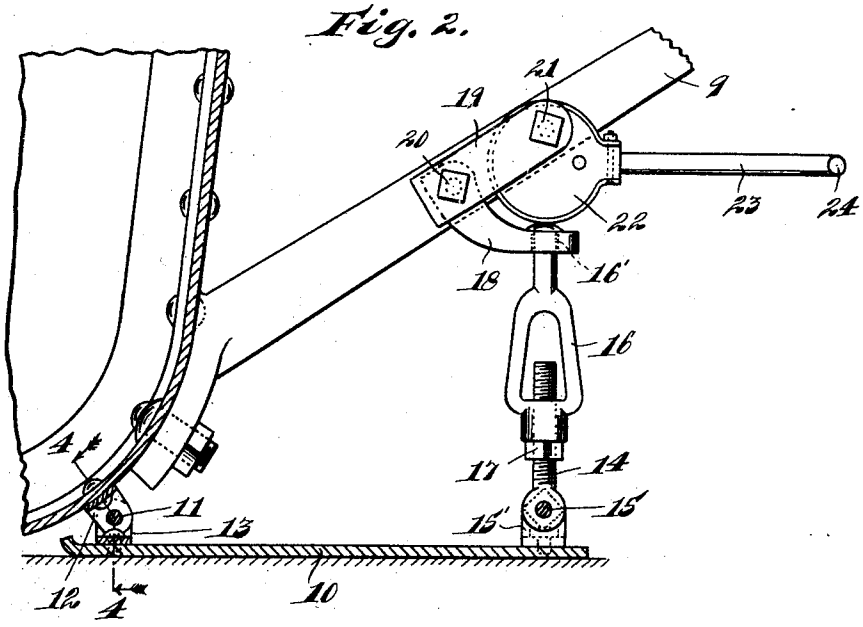


Fig. 2.



Witnesses:

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A. A. Olson

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2 SHEETS—SHEET 2.

Fig. 3.

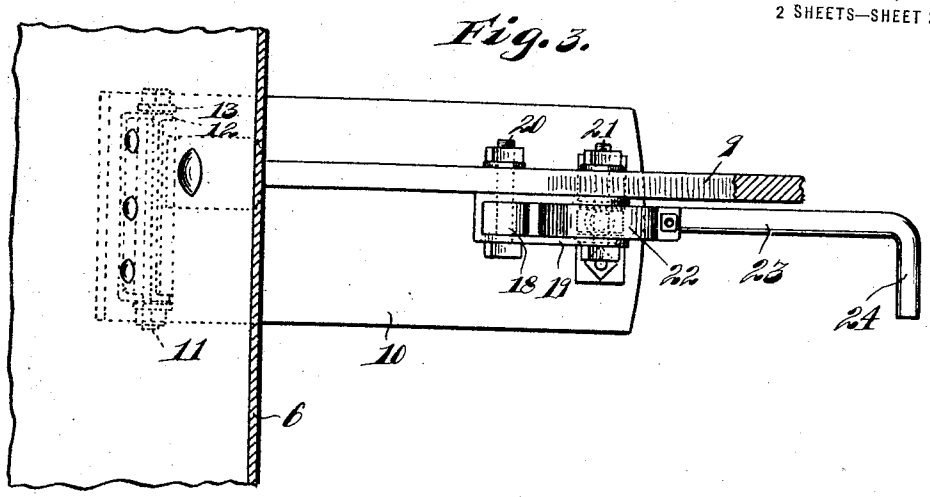
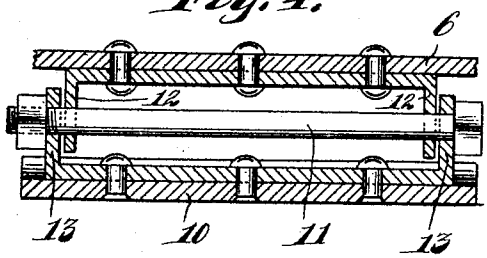


Fig. 4.



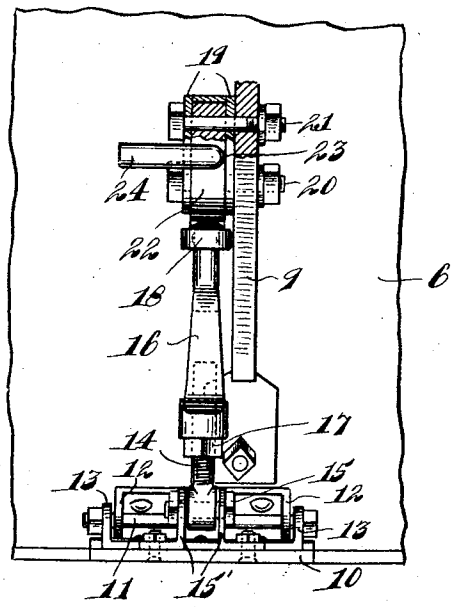


Fig. 5.

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UNITED STATES PATENT OFFICE.

CARL ORGAARD, OF WHEELOCK, NORTH DAKOTA, ASSIGNOR OF ONE-HALF TO JOSEPH M. DONAHUE, OF WILLISTON, NORTH DAKOTA.

SCRAPER.

1,404,474. Specification of Letters Patent. Patented Jan. 24, 1922.

Application filed March 5, 1918. Serial No. 220,452.

To all whom it may concern:

Be it known that I, CARL ORGAARD, a citizen of the United States, and a resident of the city of Wheelock, county of Williams, and State of North Dakota, have invented certain new and useful Improvements in Scrapers, of which the following is a specification.

My invention relates to improvements in scrapers of the type used in road leveling or for excavation purposes, and has for its object the production of an attachment for scrapers of this character, which will render the same steady and stable when loaded, without the necessity of the same being so held by he operator as is necessary with scrapers of this character now in use.

A further object is the production of a device as mentioned, which will be of durable and economical construction, one which may be readily and easily operated and which will be highly efficient in use.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a vertical section through a scraper equipped with mechanism embodying the invention,

Fig. 2, an enlarged detail section showing the portion of the construction to which the attachment is applied,

Fig. 3, a top plan view of Fig. 2,

Fig. 4, a section taken on line 4—4 of Fig. 2, and

Fig. 5, a partially sectional rear elevation of Fig. 2.

The preferred form of construction as illustrated in the drawings is employed in connection with a scraper of the type generally known as the Fresno scraper, which comprises a scraper body or bowl 6 which is adapted for connection through suitable draft elements 7 with horses or other suitable means, whereby the same may be drawn over the ground. Applied to the sides of the scraper body 6 are also the usual runners 8 which are adapted to support the scraper body in elevated position after the same has been dumped, as will be readily understood by those skilled in the art. Rigidly secured to and projecting rearwardly and upwardly from the scraper body 6 is a handle 9, through the medium of which the operator may guide the scraper body in filling or dumping the same.

With scrapers of the character described, it has been found that after loaded, the handle 9 must be constantly held by the operator in order to steady or stabilize the load so as to prevent accidental dumping especially rearwardly, and to hold the same against excessive jarring or vibration, since if the latter is not prevented, so much of the load is shaken off before the destination of dumping is reached, that the efficiency of the scraper is reduced in some cases to fifty per cent.

It is the object of this invention to overcome these objections by providing means for stabilizing or steadying the scraper body when loaded, as above mentioned. The mechanism for effecting this purpose, comprises a shoe or ground-engaging element 10, which is arranged centrally behind the scraper body 6 and having its front end pivotally connected therewith, through the medium of a pin 11 which engages with lugs 12 and 13 projecting from the parts 6 and 10 respectively, as clearly seen in Figs. 2 and 4.

At the rearward end of shoe 10 is provided a bolt or threaded arm 14 pivotally connected at its lower end therewith by means of a pin 15 which engages with lugs 15′ provided upon said shoe. The upper end of the member 14 is threaded into an adjustable link or extension 16 which is adapted to be held in positions of adjustment by means of a lock nut 17 threaded on the member 14 and which is adapted to engage against the lower end of the member 16. The upper end of member 16 passes loosely through an opening 16′ formed in the rearward end of an arm 18 which is rigidly connected at its front end with the handle 9 of the scraper. This rigid connection of the member 18 with the handle 9 is effected through the medium of a U-shaped strap 19 which is secured to said handle by means of bolts 20 and 21 which pass through the opposite sides of said member 19, and into the handle as clearly seen in Figs. 2 and 3. The member 18 fits snugly the bight or closed portion of the member 19, being held in place by the bolt 20.

The upper end of the member 16 is formed

with a head which limits downward movement thereof, relative to the member 18, and cooperating with said upper end of the member 16 is a locking member 22 which is eccentrically fastened to the handle 9 by means of the bolt 21, around which said member 22 is free to rotate. Projecting from the member 22 is a suitable handle 23, the rearward end 24 of which is bent laterally to constitute a sort of grip.

The construction is such, as will be seen, that the members 14 and 16 constitute a connection between the rearward end of the shoe 10 and the handle 9, which connection will be made rigid when the locking member 22 is in the position seen in full lines in the various views, since in this position of the locking member, the same presses the member 16 downwardly to its lower terminal of movement or to a position in which the head at the upper end thereof rests against the upper side of arm 18. By rocking the member 22 to the dotted line position, as seen in Fig 1, the same unlocks the member 16, permitting of free vertical movement thereof, and hence of the rearward end of shoe 10.

In operating the scraper, during the loading or filling thereof, the locking member 22 will be adjusted to its inoperative position, as seen in dotted lines in Fig. 1, so as to permit of the operator uninterruptedly adjusting the scraper bowl or body as he may desire. After a load has been gathered in the scraper body, the operator will rock the locking member 22 rearwardly to its operative position, as seen in full lines in the several views, so as to rigidly connect the shoe 10 with the handle 9 and hence the entire scraper structure of which the handle 9 is a part. When said shoe 10 is thus held, the same will ride upon the ground, serving to positively prevent any rearward tilting of the scraper body and to prevent vibration or jarring thereof; it having been found that said shoe, when in operative position, will hold the scraper body steady and stable without the necessity of the operator at all holding the handle 9. In the dumping of the scraper, the handle 10 is tilted upwardly in the usual manner, and when the scraper body rocks to its dumping position, the shoe 10 and the mechanism cooperating therewith, will be simply carried with the scraper body.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. The combination with a scraper of the class described, of a ground-engaging element hinged at the rearward side thereof substantially coplanar with the bottom of the scraper body; and an adjustable connection between said scraper and said ground-engaging element whereby the latter may be made rigid with said scraper or allowed to travel along idly free for vertical movement; and means for slidably retaining said connection in engageable position; substantially as described.

2. The combination with a scraper of the class described, of a ground-engaging element hinged at the rearward side thereof, substantially coplanar with the bottom of the scraper body; an adjustable connection between said scraper and said ground-engaging element whereby the latter may be made rigid with said scraper or allowed to travel along idly free for vertical movement; means for slidably retaining said connection in engageable position; and means engaging said connection to render same operative or inoperative, substantially as described.

3. The combination with a scraper of the class described, of a ground-engaging element arranged at the rearward side thereof substantially coplanar with the bottom of the scraper body; means connecting said element with said scraper permitting of free vertical movement of said element; and means for holding said element rigid relative to said scraper, comprising a rotatable member manually operable by the operator of the scraper, substantially as described.

4. The combination with a scraper of the class described, of a ground-engaging element arranged at the rearward side thereof substantially coplanar with the bottom of the scraper body; means connecting said element with said scraper permitting of free vertical movement of said element; means for holding said element rigid relative to said scraper, comprising a vertically extending connecting member; and a rotatably mounted eccentric for locking said member against vertical movement, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL ORGAARD.

Witnesses:

JOSHUA R. H. POTTS,

HELEN F. LILLIS.