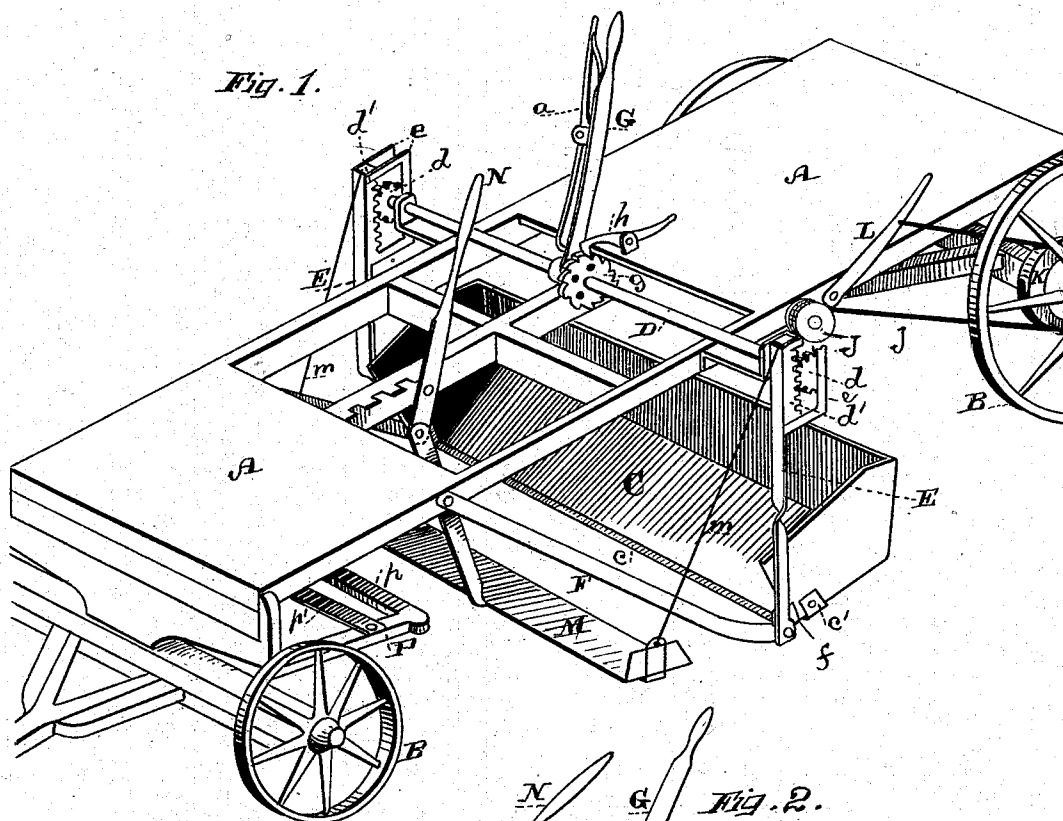
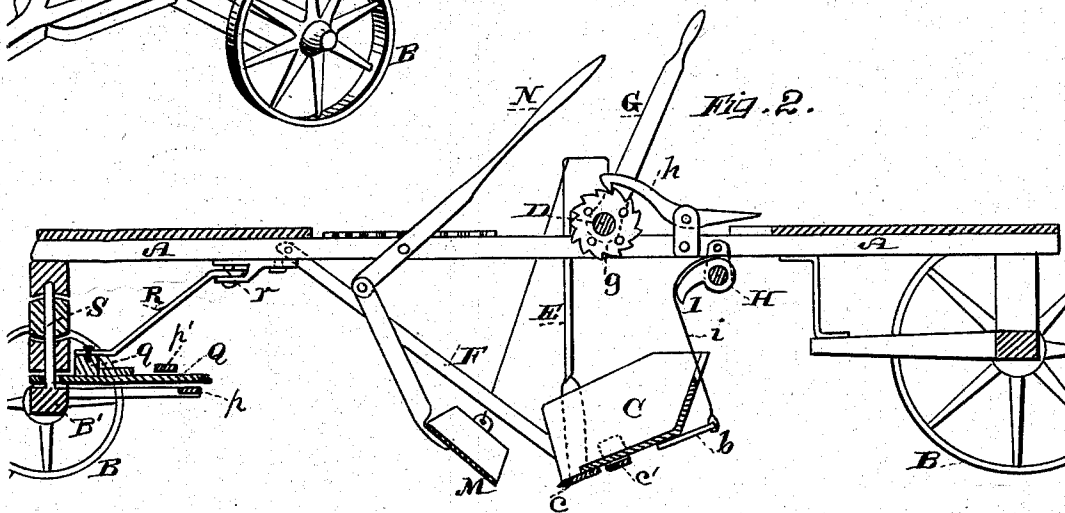


(No Model.)

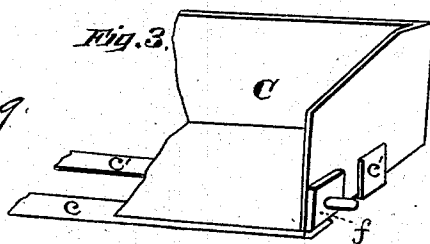
L. A. SWEATT.
WHEELED SCRAPER.

No. 276,303.

Patented Apr. 24, 1883.



Witnesses,
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UNITED STATES PATENT OFFICE.

LEROY A. SWEATT, OF SANTA CLARA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOHN FATJO, OF SAME PLACE.

WHEELED SCRAPER.

SPECIFICATION forming part of Letters Patent No. 276,303, dated April 24, 1883.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEROY A. SWEATT, of Santa Clara, county of Santa Clara, State of California, have invented an Improved Wheeled Scraper; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of wheeled scrapers used for grading, and to certain new and useful improvements therein.

These improvements consist in a means for holding it at any inclination for dumping it, in a novel adjustable guard for the front of the scoop, in a means for turning the entire device in a small space, and in certain other and minor details of construction, all of which will hereinafter fully appear.

The object of my invention is to provide a device for leveling or grading the ground, the scoop of which may easily be raised to transport the earth or held at any inclination, or turned to dump it, and one which, on account of the length of its frame, will reach effectively the small elevations; and at the same time may be easily turned in a small space.

Referring to the accompanying drawings, Figure 1 is a perspective view of my scraper. Fig. 2 is a longitudinal vertical section. Fig. 3 is a detail of construction.

Let A represent the frame or body of the device, supported upon wheels B.

C is the scraper or scoop. This consists of an ordinary open front and top sheet-iron box with a blade or knife, *c*, across its front. This scoop is wider than the frame, and in order to brace it to prevent yielding at its center, by reason of the immense load it is adapted to carry, I rivet under its bottom lengthwise the strip *c'*.

Across the frame A, in brackets extending from its sides, is journaled a shaft, D, the ends of which are provided with pinions *d*. These mesh with vertical racks *d'* upon the tops of hangers E, which extend down to and are pivoted to the scoop C at the lower front ends thereof. Upon the same pivot-pins are loosely fitted inclined braces F, extending upward, and forward, and pivoted to the sides of the frame A. Between the ends of these braces F and the scoop are interposed strengthening plates *f*.

The center of shaft D carries a lever, G, loosely fitted, and a ratchet, *g*, firmly fixed, which latter is engaged by a pawl, *h*, upon frame A. The ratchet-wheel *g* is provided with holes, into which the end of a spring-pawl, *a*, pivoted to the side of lever G, is adapted to extend to throw the said lever into engagement with the ratchet-wheel to operate it. By this construction the lever may be released from the ratchet-wheel at the extent of its stroke, and may be returned for a new engagement.

The racks *d'* are provided with a frame or casing, *e*, which holds the pinions in engagement with said racks.

By operating lever G the scoop C may be raised when for any reason it is necessary to transmit its load of earth any distance.

Under the frame A, a little in the rear of a vertical line with the back of the scoop, is journaled a shaft, H, extending half-way across the frame, the inner end of which carries a grooved face-cam, I, and its outer end a pulley, J.

The hub of one of the rear wheels, upon its inner side, has rigidly secured upon it a pulley, K.

Pivoted to the side of frame A is a lever, L.

Under the scoop C, at the rear center, is an arm, *b*, to the end of which is secured a chain, *i*, which passes up and is secured to the head of cam I.

Secured to the pulley J and wound around it is a chain, *j*, which passes back around pulley K upon the wheel-hub, and thence forward again to the lever L, to which it is secured. The object of this construction is to elevate the rear of the scoop, to hold it at any inclination, or to dump its load. By operating the lever L, which may be controlled by a rack, the shaft H is turned by unwinding chain *j*, thus turning cam I and drawing up and forward the chain *i* to incline or dump the scoop. By passing chain *j* about the wheel-hub the momentum of the vehicle is made to assist the operation, so that very little power need be applied to the lever L. By securing chain *i* at different points over the face of cam I the inclination of the scoop may be adjusted and the dump regulated.

In front of the scoop is a guard-plate, M.

This consists of a strip slightly inclined and turned up at its ends. It extends across the front of the scoop and is sustained by chains *m*, secured to its ends, and thence passing up to and secured to the tops of racks *d'*.

N is a lever pivoted to the frame A, and having its lower end pivoted to an arm secured to the center of the guard M. By operating lever N the guard M may be drawn forward and upward, away from the scoop, to allow it to do its work; but when loaded and carrying earth, to prevent spilling and wastage of the load, the guard may be returned across the front of the scoop, and thus partially inclose it. By being attached to the racks *d'* the guard is raised and lowered with the scoop, and is always in position.

My frame A is a long one, as I prefer to couple it long. My object is this: The frame is on wheels. If the wheels are close together, there are many elevations and depressions which would take all the wheels and cause the device to conform to the particular spot, irrespective of the general level; but by having the wheels far apart I cover more ground and better keep to the general level, while the uneven portions may be more effectively worked between the wheels. Having thus so long a vehicle, it would ordinarily take up too large a space in which to turn. This would be because the brace, which usually extends back from the front axle between the hounds, would limit the turning of the front axle.

The following is the device I use upon my scraper to overcome this difficulty: Let B' represent the forward axle, secured to the bolster by the usual king-bolt, S. P are the hounds extending back from the axle. They are connected by a piece, *p*, as shown. Q is a brace extending rearwardly under the piece *p'*, and above piece *p*. It is pivoted at its forward end upon the main king-bolt S. Upon its top, just behind the bolster, is a bearing, *q*, to the top of which strap R is pivoted. This strap extends back and up, and is pivoted to the frame A at *r*. The effect of this construction is as follows: When either side of the hound-frame has turned and has come in contact with the cross-brace *q*, this turns on its pivoted end and allows the hound-frame to turn farther. The strap R preserves the necessary connection between the cross-brace *q* and the body, and by being pivoted at both ends, as

shown, allows the operation of the brace. By this means the forward axle may turn far enough to allow me to turn the whole vehicle in very small spaces.

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

1. In a wheeled scraper having a frame or body, A, the scoop C, in combination with the means for inclining and dumping it, consisting of the chain *i*, attached under said scoop at its back center, grooved cam I, shaft H, pulley J, lever L, and chain *j*, connecting said pulley and lever, substantially as herein described.

2. In a wheeled scraper, as shown, the scoop C, in combination with the means for inclining and dumping it, consisting of the chain *i*, cam I, shaft H, pulley J, pulley K, upon the rear wheel-hub, lever L, and chain *j*, all arranged and operating substantially as herein described.

3. In a wheeled scraper, the scoop C, made of sheet-iron, in combination with the blade *e* and the strengthening-brace *e'*, substantially as herein described.

4. In a wheeled scraper, the vertically-adjustable scoop C, in combination with the adjustable guard M, supported from and by the frame for the scraper, substantially as and for the purpose herein described.

5. In a wheeled scraper, the vertically-adjustable scoop C, in combination with the guard M, supported from and by the supports of the scoop by chains *m*, moved to or from the scoop by means of the lever N and arm O, substantially as and for the purpose herein described.

6. In a scraper, the frame of which is set on four wheels and is coupled long, as described, and in combination with said scraper, the means for allowing the turn of the front axle, consisting of the main king-bolt S, the hound-frame P, the brace *q*, pivoted on the main king-bolt, and the strap R, pivoted at one end to the brace *q* and at the other end to the frame of the scraper, all arranged and operating substantially as herein described.

In witness whereof I have hereunto set my hand.

LEROY A. SWEATT.

Witnesses:

S. H. NOURSE,
G. W. EMERSON.