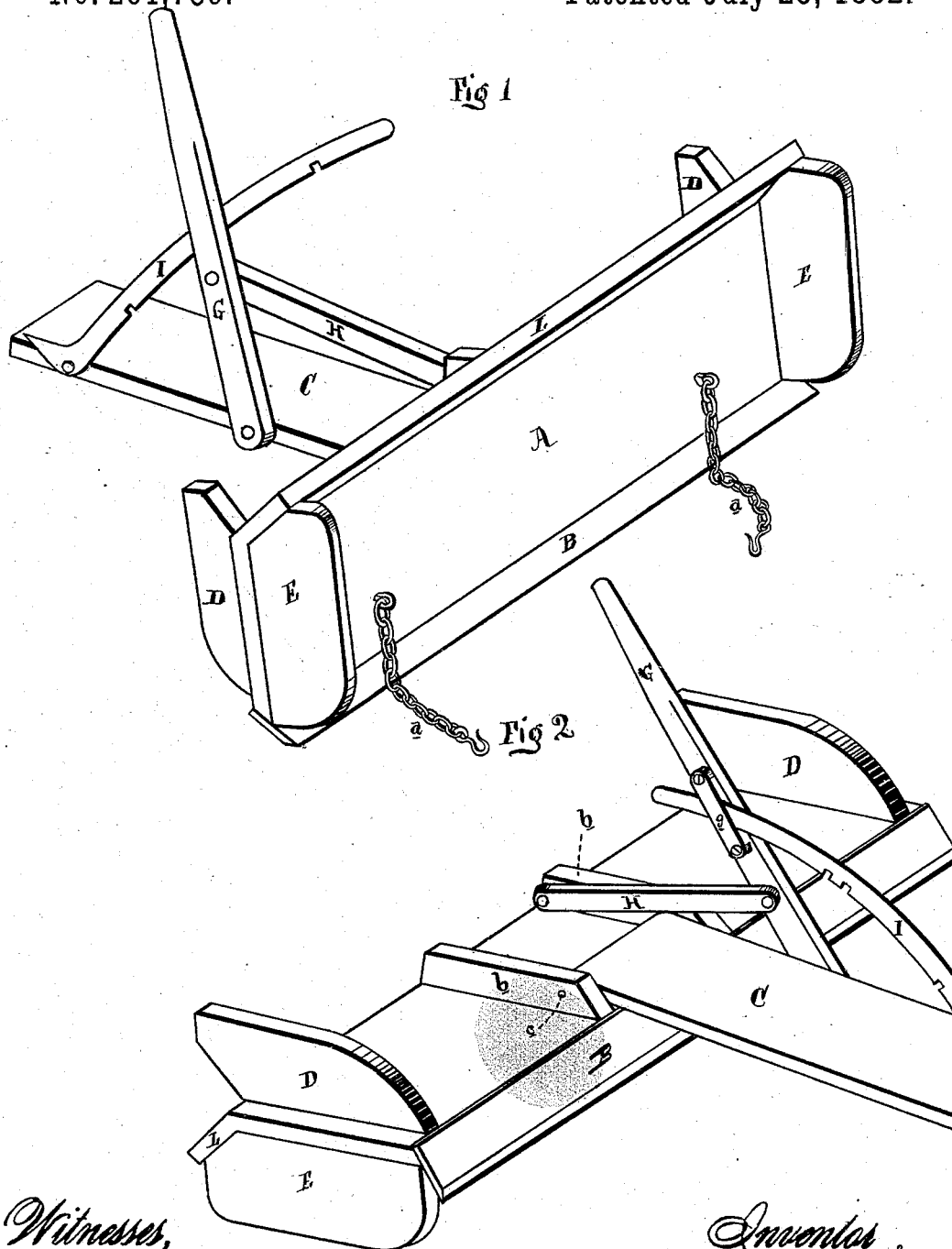


(No Model.)

J. PORTEOUS.
DIRT SCRAPER.

No. 261,759.

Patented July 25, 1882.



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UNITED STATES PATENT OFFICE.

JAMES PORTEOUS, OF FRESNO CITY, CALIFORNIA.

DIRT-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 261,759, dated July 25, 1882.

Application filed March 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES PORTEOUS, of Fresno City, county of Fresno, State of California, have invented an Improved Dirt-Scraper; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of dirt-scrapers, and more particularly to certain improvements in those commonly known as "buck-scrapers," in which the power of horses is applied to drag along the ground a vertical or slightly-inclined board, which scrapes the dirt and carries it before it to any required place, said boards being usually provided with a tail-board, upon which the driver stands.

My invention consists in the combination and arrangement of parts, substantially as hereinafter more fully set forth and claimed.

For a more particular explanation of my invention, together with its advantages, reference is hereby made to the following description, and to the accompanying drawings, in which—

Figure 1 is a perspective view of the scraper in position. Fig. 2 is a view of same when turned over to dump its load.

Let A represent a board, to the lower edge of which, at any suitable angle, is secured a block or knife, B.

C represents the tail-board, extending from behind the front board, A, and dragging upon the ground.

Scrapers constructed in this manner are usually called "buck-scrapers," the horses being harnessed to chains *a a*, secured to the front of board A.

The tail-board is ordinarily rigidly secured to the front board, and the only means for dumping the dirt is to turn over the front board and allow the tail-board to swing up into the air—an operation found to be inconvenient, as it requires power, and also the removal of the driver from his position. A more serious objection to this form is that the front board cannot turn backward at all, because of the tail-board, and the dirt must therefore be carried along by the scraper in front of it, requiring considerable power to transport it to any distance.

To obviate these difficulties I hinge or journal the tail-board to the front board in any appropriate manner. I show here two side bear-

ings, *b b*, in which is journaled a shaft, *c*, upon which the end of the tail-board is rigidly secured. By this means the tail-board may extend from the front board at right angles or any intermediate angle, or may lie parallel with it where it is turned back or forward completely, the outer end of the tail-board remaining upon the ground all the time.

Under the pivot-board or behind it, according to its position, I place runners *D D*, which, when the said board is thrown back, lie upon the ground and form bearings upon which it may conveniently be dragged.

Upon the top or forward side of the front board I place at the ends pieces *E E*, which form bearings for it when turned downward, and also serve to partially inclose the board, which, together with the back strip, *L*, make a kind of box of the front board, thereby better adapting it for carrying dirt.

If in scraping a field I find it necessary to transport considerable dirt from one portion to another, I drive the scraper with its front board set in position until it banks up the dirt in front of it. Now, instead of pushing the dirt along to the other side of the field, I let the front board turn back to lie horizontally upon its runners *D D*, in which position it carries the dirt upon its top, and it is easy for the horses to drag it. Again, suppose I wish to dump it or relieve it of the dirt at some point, I turn the front board forward until it is completely upset. During both of these operations I maintain my position upon the end of the tail-board. In order to accomplish this movement of the front board, I have the following: Pivoted to one edge of the tail-board is a long lever, *G*, to which is pivoted a connecting-link, *H*, the other end of which is pivoted to one of the bearing-blocks *b b*. Pivoted to the side of the tail-board, near its rear end, is a rack-bar, *I*, having a series of notches, as shown. This extends upward through a guide, *g*, upon the side of lever *G*, and its notches are adapted to engage with said guide. Thus the lever and rack are mutually supported.

In order to control the rack and disengage it from the lever, I form its end as shown—that is, turn it at an angle and extend it beyond its pivot-point, so that the foot, when pressed upon the short end, will throw the long end up.

When ready to let the front board fall back I throw the rack up, and thus release the lever, when it may be pulled down to turn the board, or the strain upon it may turn it back. To
5 turn it forward again and over in front, the lever released from the rack has to be pushed up far enough for the purpose.

These operating devices are simple and convenient.

10 It is obvious that, instead of runners D D, I could employ wheels journaled in the ends of the front board. These may be preferable when dirt is to be carried long distances.

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

20 1. A dirt scraper consisting of the front or scraping board, A, having the runners D D, or their equivalent, and the tail-board C, hinged to or journaled upon the rear of the front board, substantially as and for the purpose herein described.

2. In a dirt-scraper, the front or scraping board, A, and the tail-board C, hinged or journaled upon the rear of the front board, in combination with a mechanism for turning said
25 front board back to a vertical position, and turning it forward to upset it, substantially as set forth.

3. The dirt-scraper consisting of the front
30 board or scraper, A, with its runners D D, tail-board C, hinged or journaled to the rear of the front board, and the means for turning said front board back or forward, consisting of the lever G, link H, and rack I, substan-
35 tially as herein described.

In witness whereof I have hereunto set my hand.

JAMES PORTEOUS.

Witnesses:

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