2 Sheets—Sheet 1.

J. H. EDMONDSON.

Earth-Scraper.

No. 209,964. **Patented Nov. 19, 1878.**

Fig. 1.

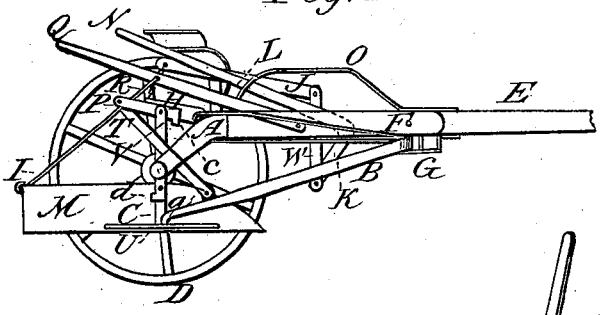


Fig. 4.

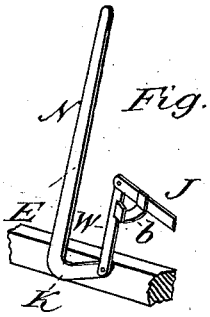


Fig. 2.

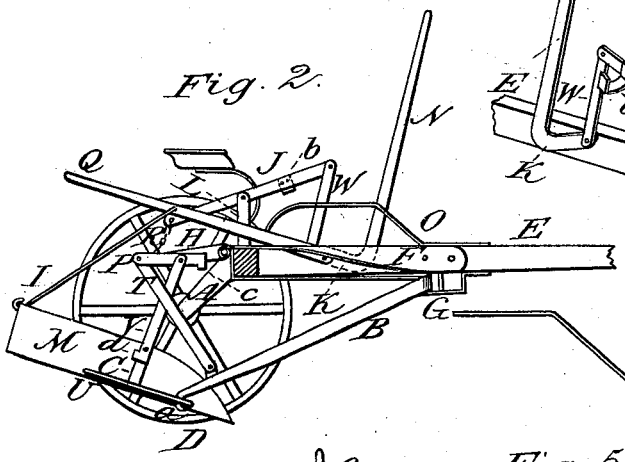
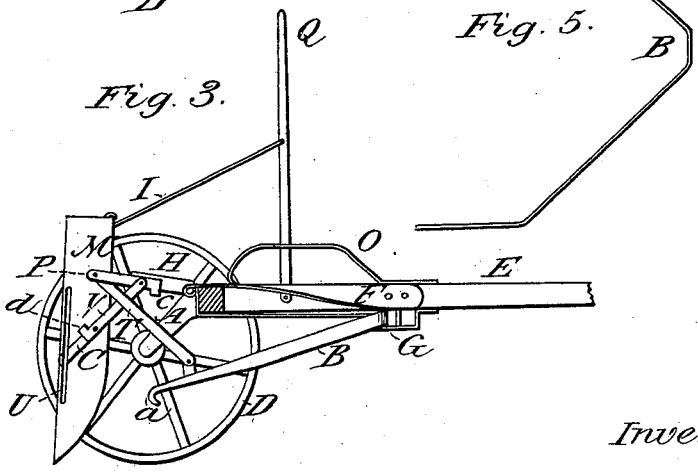


Fig. 5.

Fig. 3.



Attest:

A. G. Morey
F. N. Fowler

Inventor.

James H. Edmondson by
G. L. Chapin
Atty.

2 Sheets—Sheet 2.

J. H. EDMONDSON.

Earth-Scraper.

No. 209,964. **Patented Nov. 19, 1878.**

Fig. 7.

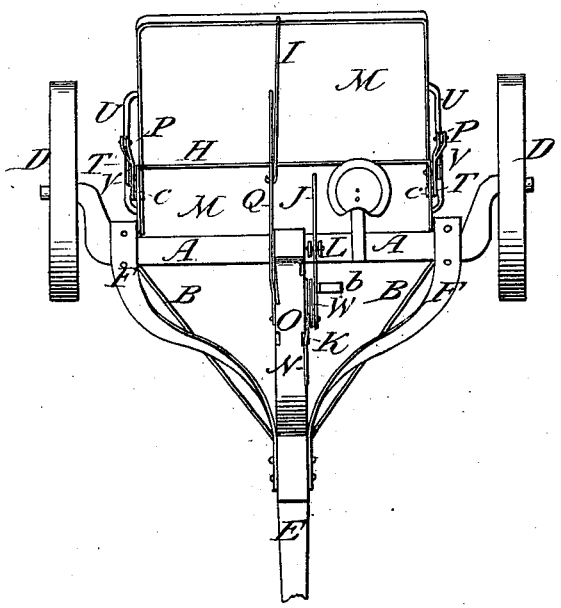
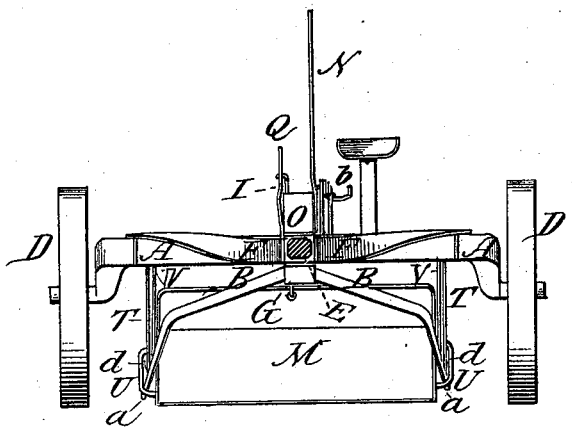


Fig. 6.



Attest:

A. G. Morey.

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G. L. Chapin Atty

UNITED STATES PATENT OFFICE.

JAMES H. EDMONDSON, OF VALPARAISO, INDIANA.

IMPROVEMENT IN EARTH-SCRAPERS.

Specification forming part of Letters Patent No. **209,964**, dated November 19, 1878; application filed July 12, 1878.

To all whom it may concern:

Be it known that I, JAMES H. EDMONDSON, of Valparaiso, in the county of Porter and State of Indiana, have invented a new and useful Improvement in Earth-Scrapers, of which the following is a specification:

This invention relates to an improvement in earth-scrapers which are mounted on wheels; and the particular improvements for which a patent is prayed is, first, a draft-bail which automatically grasps suitable attachments on the ends of the scraper, and holds the scraper to its work when it is loading with earth, and releases itself when the scraper is to transport its load or to dump it. By this means the scraper may be disconnected from the draft attachment, to be used for grading. Second, in a compound elbow-lever attachment for elevating or depressing the scraper; third, in the novel construction of the means for hanging the scraper to the rear tilting frame, as the whole is to be hereinafter fully set forth.

In the drawings, Figure 1 is a side elevation of the scraper embodying my improvements with one wheel removed, the scraper being in position for transporting earth; Fig. 2, a side elevation, with a section of the axle-tree and wheel removed, the scraper being in position to be filled; Fig. 3, same view, with scraper in position as when the earth is dumped or when grading is done; Fig. 4, a perspective view of lever J and stirrup; Fig. 5, a plan view of bail B, removed. Fig. 6 is a front view, with scraper in position for filling; Fig. 7, a top or plan view, with scraper in same position.

A is the axle-tree, H the tilting frame, E the tongue, F the braces shown in Letters Patent to me dated October 16, 1877, No. 196,143, and also Letters Patent to me dated May 28, 1878, No. 204,142, and are therefore not claimed in this application.

The scraper M is old. B is a draft-bail, whose central part has a free movement in a stirrup, G, secured to the under side of the tongue E. The ends of the bail extend down past and closely to the ends of the scraper, and are provided with hooks *a*, which, when the scraper is to be loaded, lock on the catches U automatically, and are automatically disengaged from the catches when the scraper is to carry its load to dump it or to grade. In order that this bail may always engage the catches U, it is made of heavy bar-iron, about three-fourths by one and one-half inch, which gives the requisite strength not to buckle by a heavy draft thereon.

The means for elevating the tilting frame H consists of an elbow-lever, N, pivoted to the tongue E, and jointed to a connecting-rod, W. The opposite end of the rod W is pivoted to a lever, J, which has a fulcrum in a stud, L, set on the axle A, and its rear end connects with the tilting frame H by means of a short chain, R; and to the lever J, Fig. 4, is attached a stirrup, *b*, as a foot-support for the operator, and to enable him, by pressure of the foot thereon, to assist in elevating the scraper, and for this purpose it is important, as the lever N is grasped by the hand and drawn back, while the foot is thrust forward, thereby enabling the operator to raise a loaded scraper with ease.

The means for hanging the scraper to the tilting frame consists, at each end thereof, of a lock-lever, P, which has an inwardly-projecting nib, *c*, catching under the end piece of the frame H. The outer end of P is jointed to connecting-rod T, the lower end of which is jointed to the draft-bail B; and, further, consists, at each end of the scraper, of a jointed suspensory rod, V C, pivoted to the frame H and to the scraper M. There is also on the rod V a nib, *d*, which holds said rods rigid when the scraper is being dumped or is grading.

Lever Q and rod I are used to dip the scraper by elevating its rear end, the lever N at such time being in the position shown at Fig. 2 on the notched catch O. The other figures show the positions of the levers when the scraper is to be otherwise manipulated.

The bail-hooks *a a* lock to and disengage from the catches U automatically, inasmuch as the raising of the scraper M, by bringing levers N Q back for transporting earth, as shown in Fig. 1, will bring the scraper forward, so that the hooks will come to about the middle of said catches, and permit the scraper to be dumped, and pass back of the hooks, as in Fig. 3. Bringing the lever N forward to

lower the scraper will, through the tilting frame and connecting rods or bars described, lower the bail B and lock the hooks *a a* on the catches U.

I claim and desire to secure by Letters Patent—

1. In earth-scrapers mounted on wheels, the draft-bail B, secured by a loose connection to the tongue E, provided with hooks on its ends, and, in its relation with the other mechanism, arranged to automatically engage with the catches U and hold the scraper to its work in the loading process, and to automatically disengage from the catches when the scraper is to have other positions, as set forth.

2. The combination of the levers N J, connecting-rod W, stirrup *b*, and tilting frame H, as and for the purpose specified.

3. The combination of the tilting frame H, lock-levers P, connecting-rods T, and draft-bail B, as specified.

JAMES H. EDMONDSON, D. D. S.

Witnesses:
G. L. CHAPIN,
A. G. MOREY.