

No. 717,013.

P. E. MONNERAT.
GROUND SCRAPER.

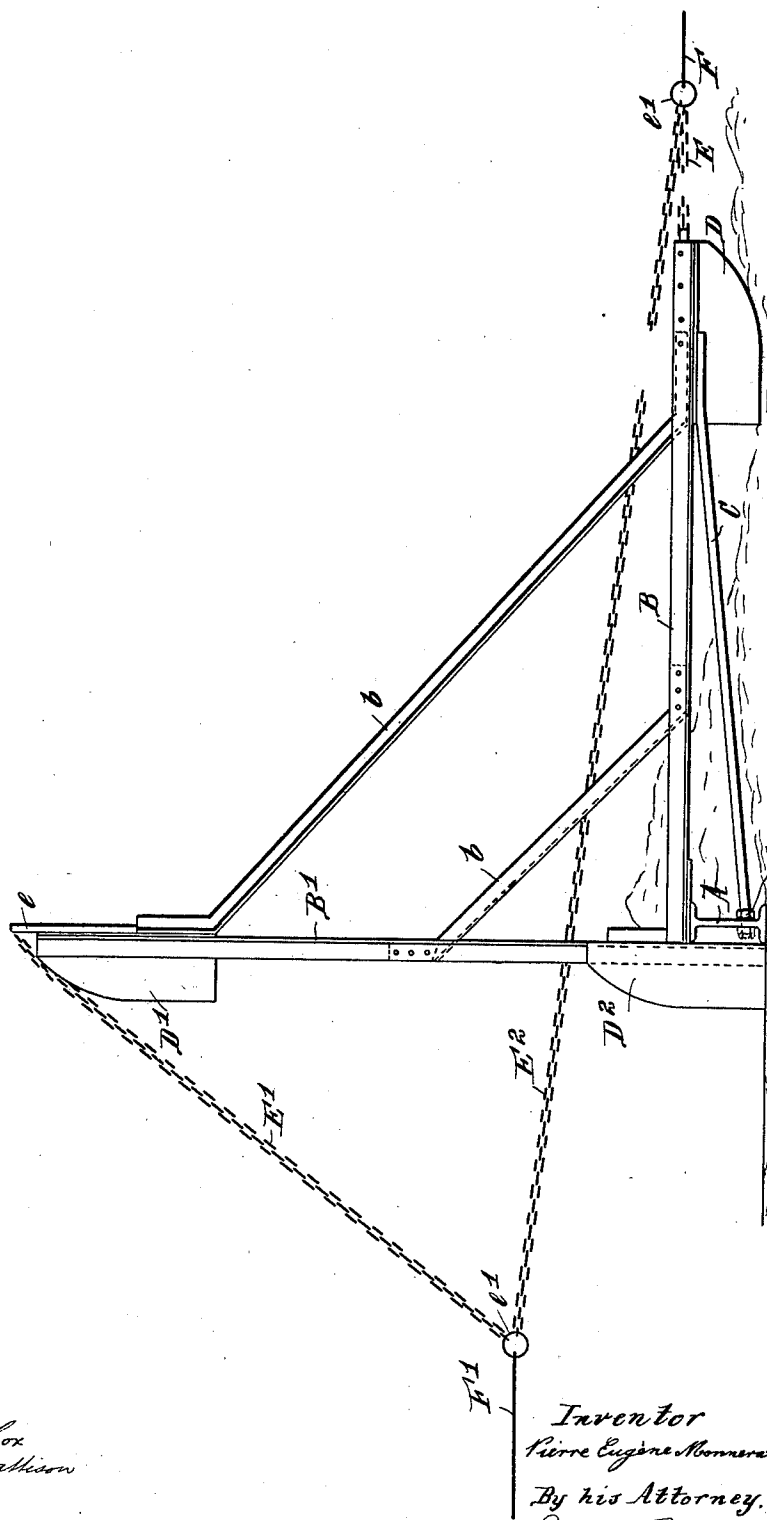
(Application filed June 2, 1902.)

Patented Dec. 30, 1902.

(No Model.)

4 Sheets—Sheet 2.

Fig. 2.



Witnesses

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Frank William Rathbone

Inventor
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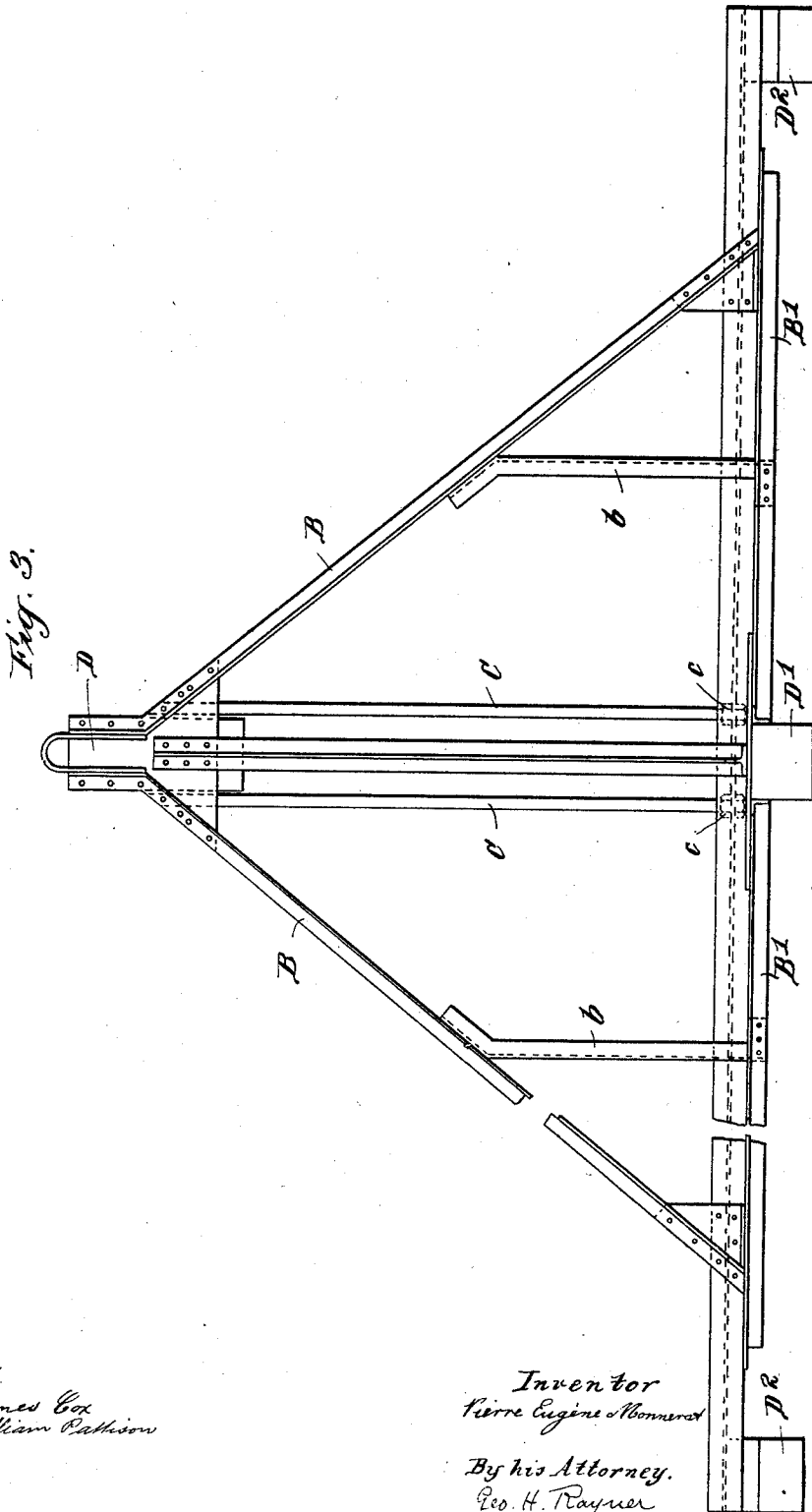
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4 Sheets—Sheet 3.



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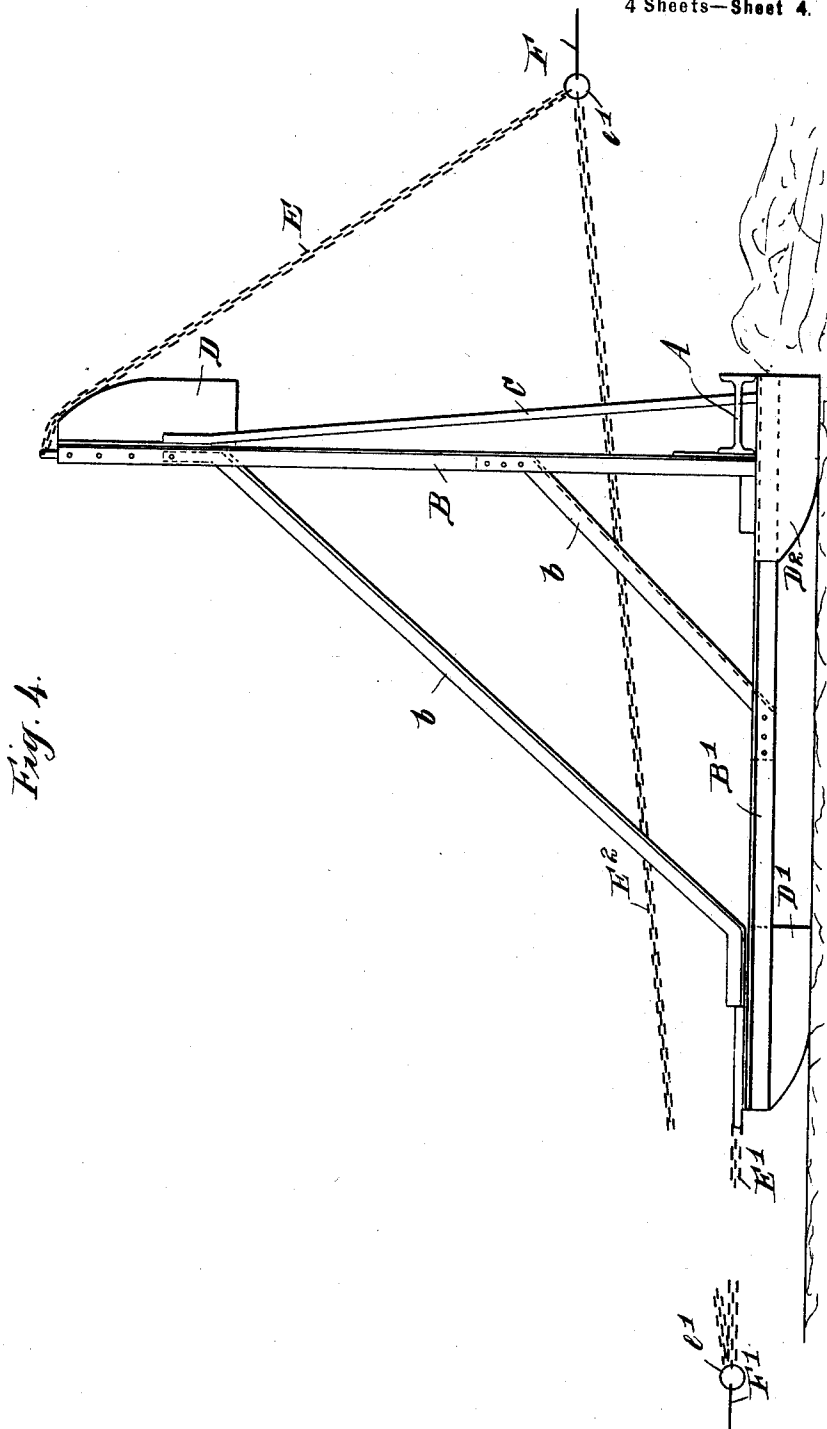
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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

PIERRE EUGÈNE MONNERAT, OF ALEXANDRIA, EGYPT.

GROUND-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 717,013, dated December 30, 1902.

Application filed June 2, 1902. Serial No. 109,953. (No model.)

To all whom it may concern:

Be it known that I, PIERRE EUGÈNE MONNERAT, a citizen of the French Republic, sub-director of the Société Anonyme du Béhéra, of Alexandria, Egypt, have invented certain new and useful Improvements in Ground-Scrapers, of which the following is a specification.

This invention relates to improvements in machines for leveling and cultivating land and excavating, embanking, and carrying earth, and provides an apparatus of this kind working by the aid of traction or plowing engines or other motive power which will level fields, make and level down banks, excavate canals and drains, change the position of dikes, and construct earthworks in an efficient manner.

The apparatus consists of a girder or box, which may be plain or provided with cutters carried by a frame consisting of two members at right angles to each other, the frame and the girder being provided with shoes or runners at their extremities and adapted when drawn in one direction by a suitable engine to scrape up the ground in front of the girder and when drawn by a second engine in the reverse direction to upset upon the second member of the frame, dumping the soil which has been scraped up and returning upon the runners to the point at which the next operation is to begin. The angle of the girder or scraper with relation to the frame can be adjusted according to the nature of the work and the amount of soil to be scraped up by each operation.

In order that this invention may be more readily understood, reference is had to the accompanying sheet of drawings, in which—

Figure 1 is a rear elevation of the apparatus in scraping position. Fig. 2 is a side view, and Fig. 3 a plan in the same position, and Fig. 4 shows the apparatus turned over to return after dumping the soil.

A is the girder or scraper, the precise form of which may of course be varied according to the requirements, and this is carried by a frame consisting of two triangular members B and B', which are shown at right angles to each other. The two members are connected together by strengthening-struts b, so as to form a rigid frame.

The girder or scraper A is adjusted by means

of rods C, having the adjusting-nuts c upon their screwed ends, the rods being riveted at their other extremities to the member B of the frame. The girder A can by adjusting the nuts be tilted to any desired angle, as it is not rigidly bolted to the frame.

At the extremities of the triangular members B and B' of the frame are provided the shoes or runners D and D', and similar runners D² are fitted to the ends of the girder A, the runners being of any suitable form, such as wheels or rounded blocks, as shown in the drawings.

To the extremities of both members of the triangular frame are connected the chains E and E', attached to the metal loops e, fixed on the frame, and these chains pass to the coupling e', to which are also secured the cables F and F', passing to the drawing-engines at front and rear. A third chain E² also connects the couplings e' directly together.

The operation of the apparatus is as follows: The scraper (plow or cultivator) starts in the position shown in the first three figures, the engine to which the cable F is connected drawing the scraper forward in the direction of the arrow in Fig. 2. The ground is thus scraped up, as shown, in front of the girder A, the frame running upon the shoe D at the front. When the scraper reaches the end of its stroke, the first engine is stopped and the second, pulling upon the cable F', is started. By means of the chain E² the cable F is first tightened, and on further pulling the cable F' through the chain E' causes the scraper-frame to be upset and to take up the position shown in Fig. 4, the apparatus then resting upon the runners D' and D², leaving the ground which has been scraped up clear of the scraper. The scraper can then be drawn back upon the runners D' and D² into position ready for the next operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A ground scraping or cultivating apparatus, consisting of a scraper, a frame carrying the scraper having two members at right angles to each other and runners upon each member, and connections from the extremities of the frame to drawing-engines at front and rear, the frame being adapted to travel in either direction and to be upset at the end

of each travel, substantially as and for the purposes herein described.

2. In a ground scraping or cultivating apparatus, a frame carrying the scraper, consisting of two triangular members having runners at its extremities, chains connected to each extremity passing to cables from drawing-engines at front and rear, and a third chain directly connecting the cable-couplings substantially as herein described and shown.

3. A ground scraping or cultivating apparatus, consisting of a scraper A, a frame carrying the scraper composed of the triangular members B and B' at right angles to each other, the runners D, D' and D² on the frame and scraper, the chains E and E' attached to the ends of the frame and to engine-cables

and the chain E² connecting the engine-cables, substantially as herein described and shown.

4. In a ground scraping or cultivating apparatus, having a frame adapted to be upset into either of two positions, a girder or scraper adjustable relatively to the frame by screwed rods and nuts attached to the frame and girder, substantially as herein described and shown.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

PIERRE EUGÈNE MONNERAT.

Witnesses:

D. R. B. BRISCOE,
ALF. A. PACE.