Dec. 1, 1931. H. RICKS 1,834,110

SCRAPER

Filed May 21, 1929

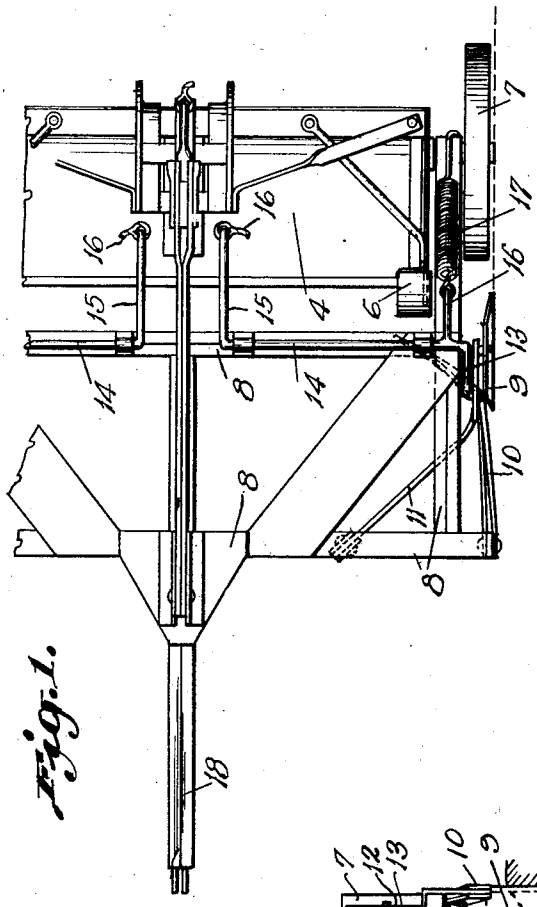


Fig. 1.

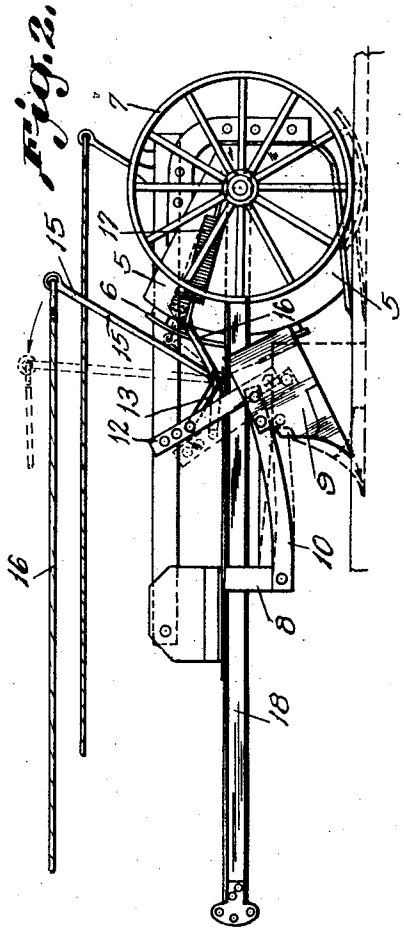


Fig. 2.

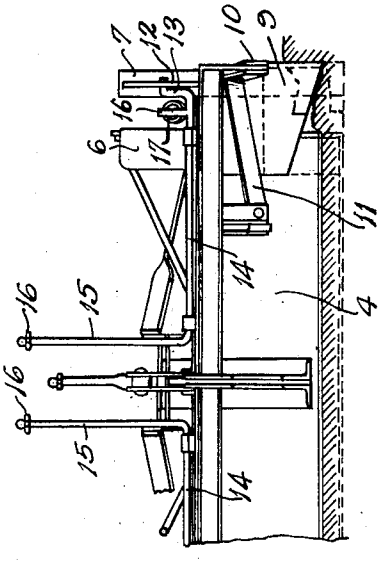


Fig. 3.

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Patented Dec. 1, 1931 1,834,110

UNITED STATES PATENT OFFICE

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SCRAPER

Application filed May 21, 1929. Serial No. 364,763.

My invention relates to scrapers, and more particularly to a dirt handling scraper adapted for use in picking up and transporting from one place to another the dirt which must be moved in grading for streets, or in excavations of various kinds, or for any other purpose whatsoever.

My invention is particularly adapted to wheeled scrapers and it has among its salient objects to provide in combination with a scraper, at its opposite sides and running in front thereof, ploughing or digging means adapted to cut and level the surface at the opposite sides and in front of the scraper bowl and to throw the dirt in front of the scraper, at the same time leaving a smooth path at each end of the scraper for the wheels of the scraper, or other carrying means therefor, to move upon, thus providing a more even track or surface for the supporting elements of a scraper to move upon; to provide in combination with such ploughing or digging means, means for regulating its operation whereby it can be made to dip into the earth at varying depths and to excavate for the wheels or other carrying elements of a scraper and thereby determine the depth to which the scraper proper will dig and pick up the dirt in front of it as it is moved forward; to provide in such a combination, ploughing and digging means which will cut the earth and direct it inwardly from the extreme outer opposite sides, thus making it possible to square the sides, or to run close to a curb or wall and to dig away the earth and turn it inwardly in front of the scraper, at the same time leaving a smooth and uniform path for the carrying elements of the scraper to move upon; to provide such improved ploughing or digging means in combination with a scraper without in any way interfering with the dumping or tripping of the scraper in the usual manner for the purpose of leveling or transporting the load after it has been gathered, or for dumping it after it has reached the place of deposit; to provide in combination with a scraper such improved ploughing and digging means as can be readily controlled by the operator in the usual manner, either singly or together, thus making it possible to operate at one side of a scraper, or at both sides thereof, as may be desired and as may be made necessary by the conditions of the surface being graded or worked.

In order to fully explain my invention, I have illustrated the same in combination with a wheeled scraper, which I will now describe.

Figure 1 is a plan view of a wheeled scraper embodying my invention, one side thereof being broken away to reduce the size of the figure;

Figure 2 is a side elevation of said scraper, showing certain adjustments in light broken lines; and

Figure 3 is a front elevation of what is shown in Fig. 1, looking into the front of the scraper.

Referring now more in detail to the drawings, the scraper body is designated 4, having end walls, as 5, provided with the curved carrier elements 6, upwardly in front of the opposite ends, only one being shown, for the purpose of supporting and carrying the scraper when turned into dumping or leveling positions in the usual and well known manner. This invention is not particularly concerned with the turning or rolling, and dumping mechanism of a scraper and no reference will be made thereto.

In the scraper here shown for descriptive purposes, I have shown it supported and carried on wheels 7, 7, with a draft frame, designated as a whole 8, and which includes a tongue or coupling member 18, for connecting the scraper to the source of power for moving it, whether truck, tractor, or other motive power.

The invention is embodied in the provision of a plough or digging member, as 9, having the forward draft members, 10, 11, attached to the front of the draft frame 8, and vertical lifting means 12, adapted to have adjustably connected therewith the arm 13, or a rocker member 14, the other end of which is upturned into an operating lever 15, by means of which said rocker member 14 can be rocked for the purpose of lowering or lifting the plough or digging member 9. A second arm

16 is secured to or made a part of the rocker member 14, and this arm is connected by means of a spring 17 to the rear part of the draft frame, whereby said spring operates to normally hold said rocker member 14 in its raised position, as indicated in full lines, Fig. 2. It will be understood that both sides of said scraper are the same in construction and arrangement, and that the plough or digging members 9, can be operated together, or separately, as conditions may require. Operating cables, 16, 16, are attached to the upper ends of the lever portions 15, 15, of said rocker member 14.

In dotted or light broken lines in Fig. 2, I have illustrated the adjustment of the plough or digging means 9, and the path it cuts for the wheel 7, thus lowering the wheel and thereby lowering the scraper body and causing it to dig deeper than when running on the top of the ground before being cut away. Said plough or digging means 9 being pivotally connected to the draft frame by means of its draft members 10 and 11, can be readily raised and lowered through the operation of the rocker member 14, and its lever portions, 13 and 15, as before referred to, and when released, said plough or digging member 9 is raised by means of the spring 17, operating on the rocker member through the arm 16.

Thus I have provided a simple and practical means for cutting and preparing the surface over which the carrying members of a scraper are to move and by means of which the depth the scraper digs is also determined, and while I have shown one form or embodiment of the invention, I am aware that many changes in details of construction and arrangement can be made without departing from the spirit of the invention, and I do not, therefore limit the invention to the showing made for descriptive purposes, except as I may be limited by the hereto appended claims.

I claim:

1. In combination with a scraper having carrier wheels and draft frame for moving the same, of separate grading means pivotally connected to said draft frame at the opposite sides of said scraper and in front of said wheels for grading paths therefor, said grading means being independently adjustable for determining the level of the paths for said wheels.

2. In a scraper, a draft frame, carrier means at its opposite sides to move upon the surface, a scraper supported below said frame and between said carrier means, a plough element positioned in front of each of said carrier means to cut the surface smooth for said carrier means and to turn the cutting inwardly in front of said scraper, means upon the draft frame for independently adjusting said plough elements, and means pivotally connecting each plough element to the forward part of said draft frame for pulling it forwardly.

Signed at Los Angeles, Los Angeles County, California, this 16th day of May, 1929.

HYRUM RICKS.