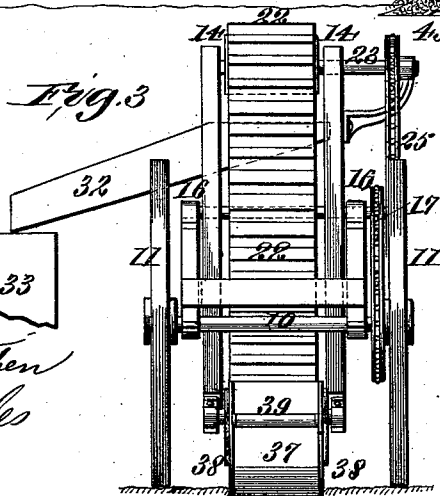
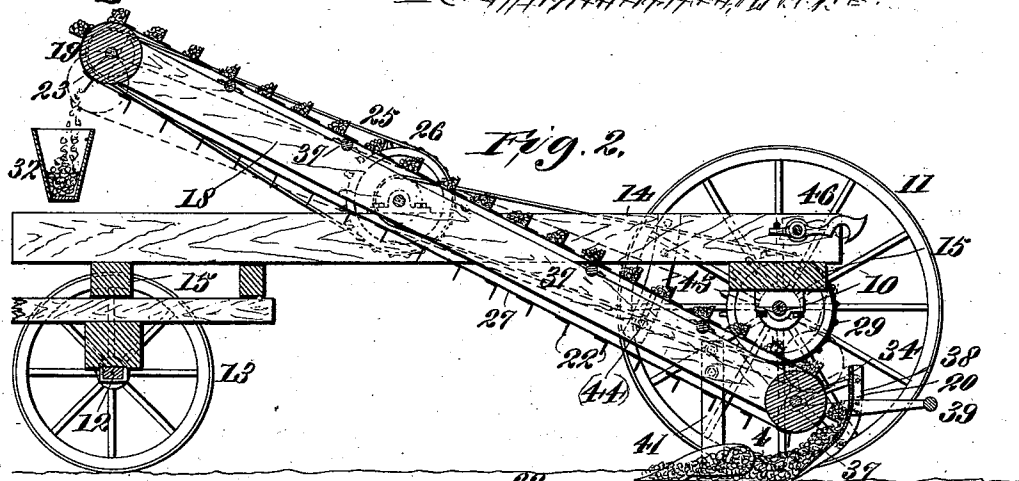
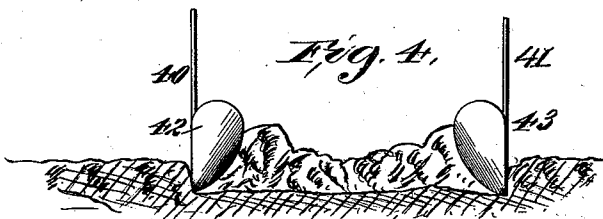
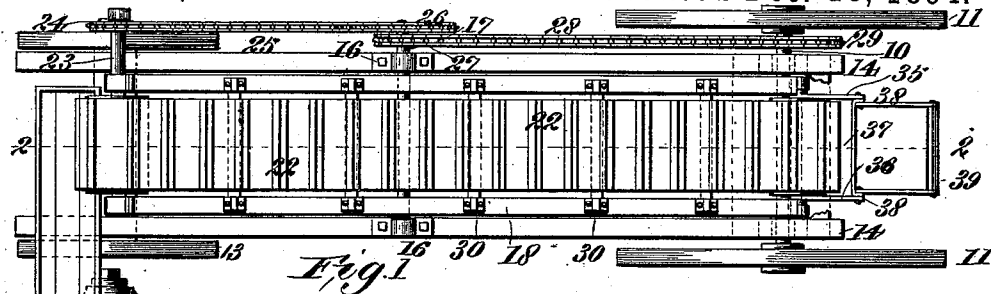


(No Model.)

J. MAES.
EARTH SCRAPER.

No. 531,128.

Patented Dec. 18, 1894.



Attest:
Valentine Tien
Charles Pickles

Inventor:
Jacob Maes

UNITED STATES PATENT OFFICE.

JACOB MAES, OF ST. LOUIS, MISSOURI.

EARTH-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 531,128, dated December 18, 1894.

Application filed July 3, 1894. Serial No. 516,445. (No model.)

To all whom it may concern:

Be it known that I, JACOB MAES, a citizen of the United States of America, and a resident of St. Louis, in the State of Missouri, have invented a new and useful Earth-Scraper, of which the following is a specification.

The object of my invention is to provide means for scraping, elevating and conveying clay, to be employed in the manufacture of brick and tile, from the field or yard to the tempering machine.

With this object in view, my invention consists in combining with a suitable truck, a frame upon which is mounted a conveyor belt, upon the rear end of which frame is pivotally mounted a scraper blade which gathers the earth for the conveyer belt, and upon which scraper blade is arranged a handle to regulate the depth of its cut.

My invention consists further in the construction, arrangement, and combination of parts, hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a plan view of the complete apparatus. Fig. 2 is a sectional elevation on the line 2—2 of Fig. 1. Fig. 3 is a rear end elevation of the apparatus. Fig. 4 is a detail sectional view on the line 4—4 of Fig. 2.

In the construction of the apparatus as shown, the numeral 10 designates the rear axle, having the wheel 11; and 12 the front axle, having the wheels 13.

Mounted on the axles 10, 12, and connecting the same is a truck frame comprising a pair of longitudinally extending beams 14, 14, and the cross beams 15, 15. The forward axle is provided with the customary fifth wheel whereby the same may be oscillated relative to the plane of the frame.

Mounted in boxes 16, located on the upper surface of the beams 14 midway of the length thereof and secured thereto, is a shaft 17, which shaft carries on its central portion an elevator frame 18.

Mounted in the opposite end portions of the elevator frame are drums 19, 20, on which drums is carried an endless carrier or elevator belt 21, which is provided with transversely positioned blades 22 on its circumferential surface. The drum 19 is provided with a shaft

23 in bearings on the elevator frame which carries on one end portion a sprocket wheel 24.

The sprocket wheel 24 is connected by a chain 25 to a sprocket wheel 26 of greater diameter on the shaft 17, and a sprocket wheel 27 of like diameter to the wheel 24 also mounted on the shaft 17, is connected by a chain 28 to a sprocket wheel 29 on the axle 10, the wheel 29 being of like diameter to the wheel 26.

A plurality of supporting rollers are rotatably mounted in boxes 30 located on the elevator frame, which rollers are designated as 31, and extend transversely of the elevator belt and beneath the upper stretch thereof.

The elevator frame occupies an inclined plane at all times, which plane may be varied by the oscillation of said frame on the shaft 17.

Mounted beneath the upper end of the elevator frame is a delivery spout 32, the lower or open end of which spout extends laterally from the machine as is required to permit the positioning of a cart 33 beneath the same to receive the clay from said spout.

The drum 20 is provided with a shaft 34 having its ends in boxes on the rear end of the elevator frame, which shaft has pivotally mounted thereon two angle arms 35, 36, said arms extending rearwardly from the said shaft and having a scraper blade 37 mounted thereon. The scraper blade 37 is concaved adjacent to the elevator frame and is located at such a distance from said frame as to approximate closely to the orbit of the blades 22. Flanges 38, 38, are formed on the ends of the blade 37, and fixed to and extending rearwardly from said flanges is a handle 39. The lower edge of the scraper blade 37 is sharpened and is adapted to pass beneath and lift the clay during the operation of the machine.

Fixed to and depending from the sides of the elevator frame in advance of the drum 20 are standards 40, 41, to the lower ends of which standards are fixed gathering shares 42, 43, respectively. The rear ends of the shares are in close proximity to the forward edge of the scraper blade 37, and the land-sides of said shares align with the respective ends of said blade, the mold-boards thereof being between the land-sides.

This machine is designed to be operated on

clay beds which have been recently plowed, the clay being permitted to remain in the plowed condition a sufficient time to become tempered in a degree by the action of natural influences, and in the practical use thereof the apparatus is advanced over the bed in company with the cart 33. During the advance of the machine the parts are in approximately the positions shown in solid lines in the drawings, and the scraper blade 37 is held in a position to engage beneath the loosened clay by the application of manual force to the handle 39, the degree of engagement, or depth of cut, being regulated by raising or lowering the said handle. Owing to the concaved form of the scraper blade the clay, in the advance of the machine will be carried upward and rearward along said blade into a position to be engaged by the blades 22 of the elevator, and, the elevator belt being driven by the drum 19, sprocket wheels 24, 26, 27, 29, and chains 25, 28, through the rotation of the axle 10 by the wheels 11, it is obvious that the said clay will be conveyed by the elevator belt and blades 22 longitudinally of the machine and deposited in the delivery spout 32, from whence it falls into the cart 33.

The functions of the gathering shares are to establish abrupt lines of demarcation between the clay removed and that remaining; and to converge the loosened clay to the center of the scraper blade in order that said blade may receive the load on its central portion and thereby more readily retain the same entire.

When it is desired to transport the machine without operating the same the elevator frame is oscillated on the shaft 17 and secured by the adjustment of a set screw 44 positioned in a slot in the standard 45, the upper end of which standard is fixed to the beam 14, this construction being clearly shown by dotted lines in Fig. 2. Two stand-

ards 45 are provided if desired, one fixed to each of the beams 14, and adapted for adjustable connection with the sides of the elevator frame, thereby also providing means for securely retaining said frame when in use.

When not in use the scraper blade is suspended by the engagement of the handle 39 with a hook 46 fixed to the rear end of one of the beams 14.

What I claim is—

1. In an earth scraper, the combination with a truck, of an elevator frame mounted thereon, a conveyer belt on said frame, a scraper blade pivotally mounted on said frame and adapted to gather the earth to be conveyed by the conveyer belt, and a handle on said scraper for regulating the depth of its cut, substantially as described.

2. In an earth scraper the combination of a wheeled truck and an elevator frame mounted for oscillation on said truck, a scraper blade mounted for oscillation on said frame, a handle fixed to said blade and adapted for manual actuation, and gathering shares depending from said frame in advance of said blade.

3. In an earth scraper, the combination with a suitable wheeled truck, of a frame pivoted thereon, drums mounted in the ends of said frame, a conveyer belt mounted on the drums, suitable means for driving said belt from the ground wheels of the truck, a scraper blade mounted on the rear end of the frame, said blade being provided with means for manual operation, and gathering shares for said blade mounted in standards depending from the elevator frame, substantially as described.

Signed at St. Louis, Missouri, this 28th day of June, 1894.

JACOB MAES.

In presence of—

PETER MAES,
VALENTINE THEN.