J. HUGHES.
ROAD SCRAPER.
APPLICATION FILED JUNE 15, 1914.

1,237,783.

Patented Aug. 21, 1917.
3 SHEETS—SHEET 1.

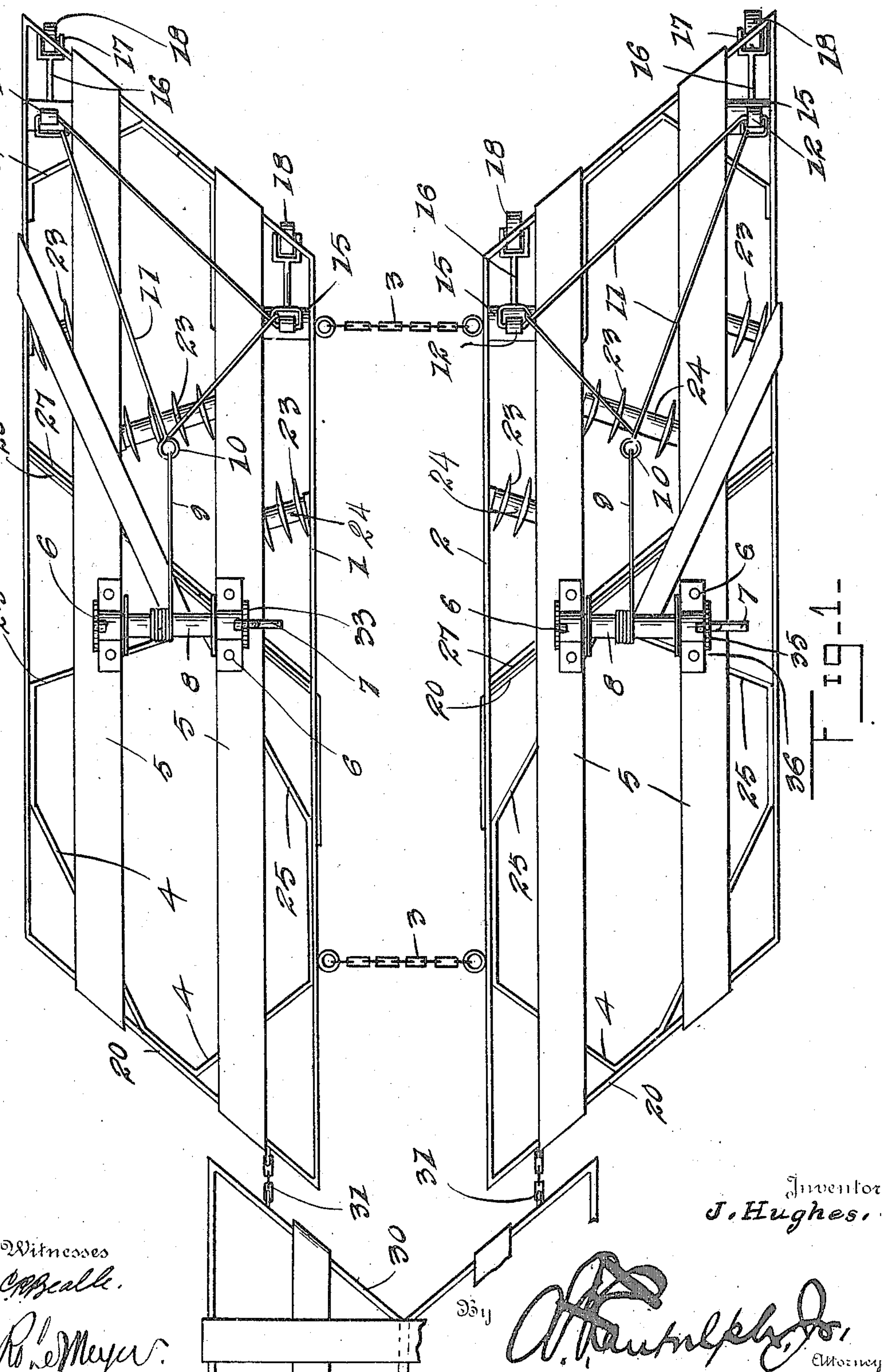

Fig-1

Witnesses
C.R. Beall.
Ro. e. Meyer.

Inventor
J. Hughes.

By A. Randolph, Jr.
Attorney

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3 SHEETS—SHEET 2.

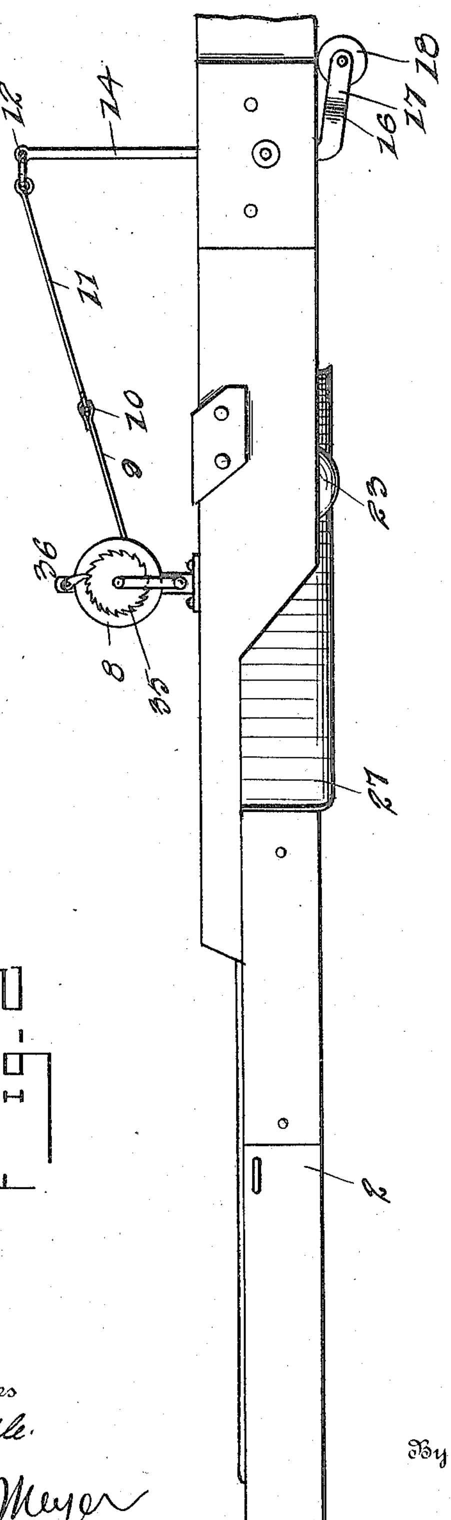

Fig-2.

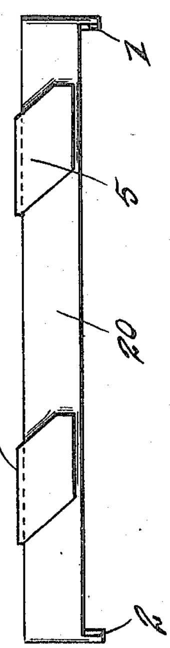

Fig-3.

Inventor

J. Hughes.

Witnesses

C. B. Bealle.

Rohe Meyer

By A. Randolph Jr.

Attorney

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3 SHEETS—SHEET 3.

Fig. 4.

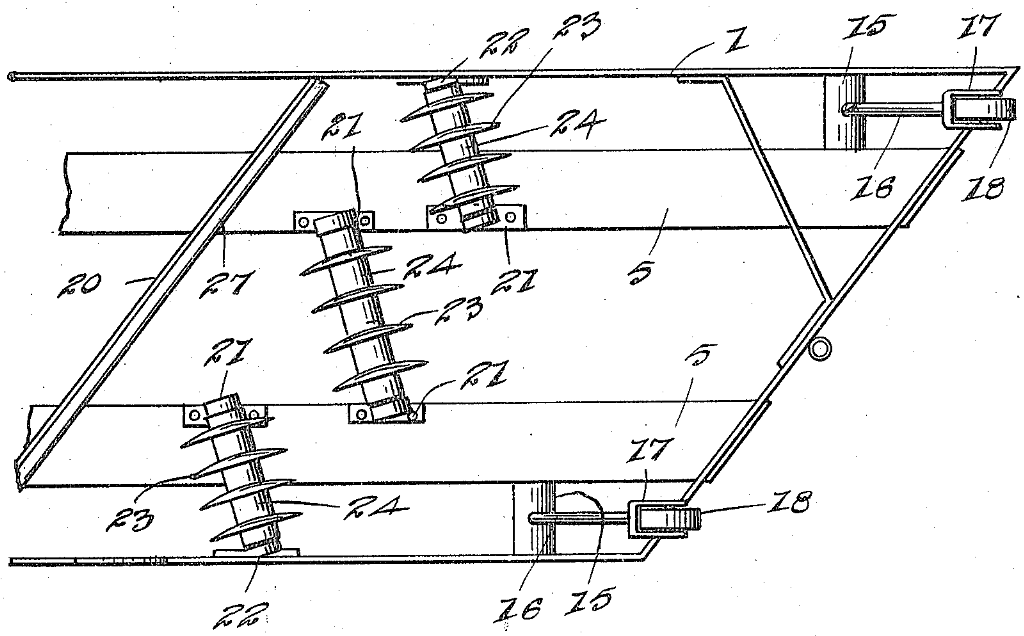


Fig. 5.

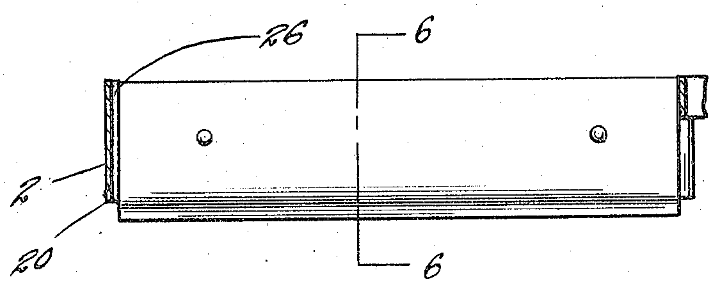
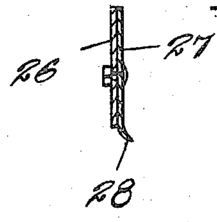


Fig. 6.



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Witnesses
C. A. Beall.
Rohe Meyer.

By A. Randolph Jr.,
Attorney

UNITED STATES PATENT OFFICE.

JAY HUGHES, OF ATKINSON, NEBRASKA.

ROAD-SCRAPER.

1,237,783. Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed June 15, 1914. Serial No. 845,286.

To all whom it may concern:

Be it known that I, JAY HUGHES, a citizen of the United States, residing at Atkinson, in the county of Holt and State of Nebraska, have invented certain new and useful Improvements in Road-Scrapers, of which the following is a specification.

This invention relates to road scrapers, and the primary object of the invention is the provision of a road scraper which has a plurality of rotary cutting disks positioned forwardly of the scraping blades, for efficiently preparing the surface of a highway.

Another object of this invention is the provision of a road scraper which has traction wheels adjustably supported upon the forward end thereof, so that the scraper body may be elevated when desired.

With the foregoing and other objects in view, this invention consists in such novel features of construction, combination, and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings, wherein like characters designate like or corresponding parts throughout the several views, and in which:—

Figure 1 is a top plan view of the improved road scraper,

Fig. 2 is a side elevation of the road scraper,

Fig. 3 is a rear elevation of the improved scraper,

Fig. 4 is a fragmentary bottom plan of the road scraper,

Fig. 5 is a detail view of the scraping blade, and

Fig. 6 is a cross sectional view on the line 6—6 of Fig. 5.

Referring more particularly to the drawings, 1 and 2 designate sections of which the road scraper is composed, which sections are connected by flexible members 3. The sections 1 and 2 are parallelograms, having their ends disposed obliquely to their sides, as is clearly shown in Fig. 1 of the drawings, and they have a plurality of braces 4 secured to the inner walls of their sides and extending diagonally across the corners thereof, for securely bracing and strengthening the frames 1 and 2. The frames 1 and 2 have longitudinally extending strips 5 mounted upon their upper edges, which strips form base supports for bearings 6. Shafts 7 are journaled in the bearings 6, and they have drums 8 mounted thereupon, which drums are adapted for rotation by the angled ends of the shaft, which form crank handles. Flexible members 9 are secured to the drums 8, and to eyelets 10, which eyelets are formed upon the substantially triangular shaped frame 11, and are formed at the apex of one angle of the triangle. The triangular frames 11 are connected to bearings 12, which bearings are formed upon the upper ends of brackets 14, and are secured in any suitable manner to blocks 15, which blocks are pivotally mounted in the forward end of the parallelogrammatical shaped frames 1 and 2.

The blocks 15 have arms 16 secured thereto, which arms have their lower terminal ends bifurcated to form axle supporting arms 17. Supporting wheels 18 are mounted within the bifurcated ends of the arms 16, and the supporting wheels 18 are provided for light bearing engagement with the surface of the ground over which the scraper is traveling when the flexible members 9 are wound about the drums 8, so as to raise the forward end of the frames 1 and 2 to permit trash or other undesirable material to fall out of the frame, should the same become clogged therein.

The rear ends 20 of the frames 1 and 2 are of decreased height with respect to the sides of the frame, as is clearly shown in Fig. 3 of the drawings. The frames 1 and 2 have bearing brackets 21 mounted upon the under surface of the longitudinally extending plates 5, and also bearing brackets 22 secured to the inner surfaces of the sides of the frame, a short distance rearwardly of the blocks 15, and the bearing brackets 21 and 22 have journaled therein shafts 24. The shafts have mounted thereupon a plurality of harrowing or cutting disks 23. The shafts 24 are positioned horizontally and obliquely of the line of travel of the frames 1 and 2, as is clearly shown in Fig. 4 of the drawings, and they are also positioned for opposite angled extension to the oblique ends of the frames.

The braces 25 which are positioned toward the center of the frames 1 and 2, have plates 26 secured thereto, which plates extend across the frame parallel with the oblique or angled ends of the frames, and the plates 26 have scraping blades 27 detachably secured thereto, which scraper

blades have their lower terminal cutting edges curved outwardly, as is shown at 28 in Fig. 6 of the drawings.

In the operation of the improved road scraper, the frames 1 and 2 are positioned for scraping the wheel tracks or sides of the highway, and are spaced slightly apart from each other, while a third frame 30 is connected to the rear ends of the frames 1 and 2 by flexible members 31, and the frame 30 has its forward end U-shaped, so as to efficiently encompass all of the road which is left between the two frames 1 and 2, and to receive the rear pointed ends of the frames 1 and 2 as is clearly shown in Fig. 1 of the drawings.

The traction of the frame over the road or highway will rotate the disks 23, which disks will cut the surface of the roadway into small particles, permitting the scraper blades 27 which are positioned rearwardly of the cutting disks and extend diagonally opposite to the cutting disks, to gather up or smooth over the road surface, and to carry the cut away high places of the road to various low places in the road or highway, where the two ends of the frames, resting upon the high portions of the road, will permit of the dirt or road surface being deposited in the low portions of the road, thereby efficiently scraping and leveling the road with one continuous operation.

In cases where the hollow frame becomes clogged with trash or the like, the drums 8 may be rotated for winding the flexible members 9 thereupon, which winding will position the traction wheels 18, through the operation of the triangular frames 11 and the brackets 14, for traction over the road surface, for elevating the forward ends of the frame. The elevating of the forward end of the frame will permit of the dirt, trash or the like which has become clogged therein, to fall out of the frame upon the surface of the road, where it will be left, owing to the decreased width of the rear ends 20 of the frames.

Ratchet wheels 35 are mounted upon the shaft 7, and the peripheral teeth of the ratchet are engaged by pawls 36, which pawls and ratchets prevent the accidental rotation of the drums 8.

What is claimed is:—

1. A road scraper comprising a frame, longitudinally extending strips secured to the frame, a brace secured to the frame, a scraper blade carried by said brace, shafts journaled to the frame, cutting disks mounted on the shafts, brackets secured to the strips, a drum journaled in said brackets, blocks pivoted to the frame, bearings carried by said blocks, arms secured to the blocks and having their lower ends bifurcated, wheels journaled to the bifurcated ends of the arms for engagement with the ground, a substantially triangular shaped frame connected to the bearings, a flexible element connected to the triangular shaped frame and to the drum, and means for rotating the drum to raise and lower the wheels for raising and lowering the first mentioned frame.

2. A road scraper comprising a parallelogrammatical frame having its ends disposed obliquely to its sides, braces secured to the inner wall of the sides of the frame and extending diagonally across the corners thereof, longitudinally extending strips secured to the ends of the frame, bearings secured to the sides of the frame and strips and arranged in diagonally disposed pairs, shafts journaled to the pairs of bearings and extending diagonally of the frame, cutters mounted on said shafts, a brace secured to the frame and extending diagonally thereof, and a scraper blade secured to the last mentioned brace.

In testimony whereof I affix my signature in presence of two witnesses.

JAY HUGHES.

Witnesses:
ROY SMITH,
E. L. MACK.