

Scrapers.

Patented July 15, 1873.

Fig. 1

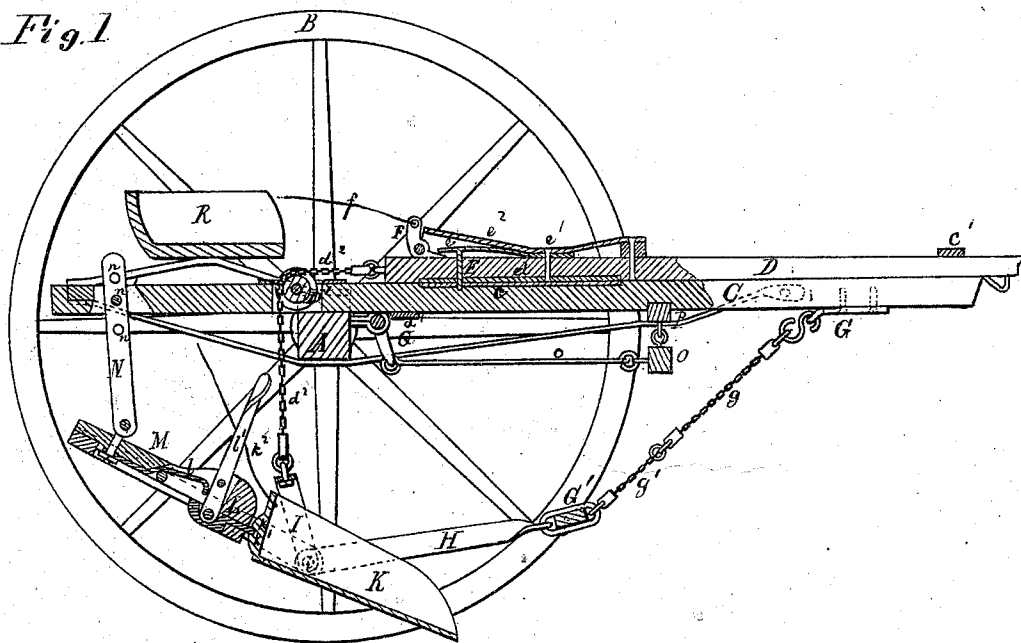
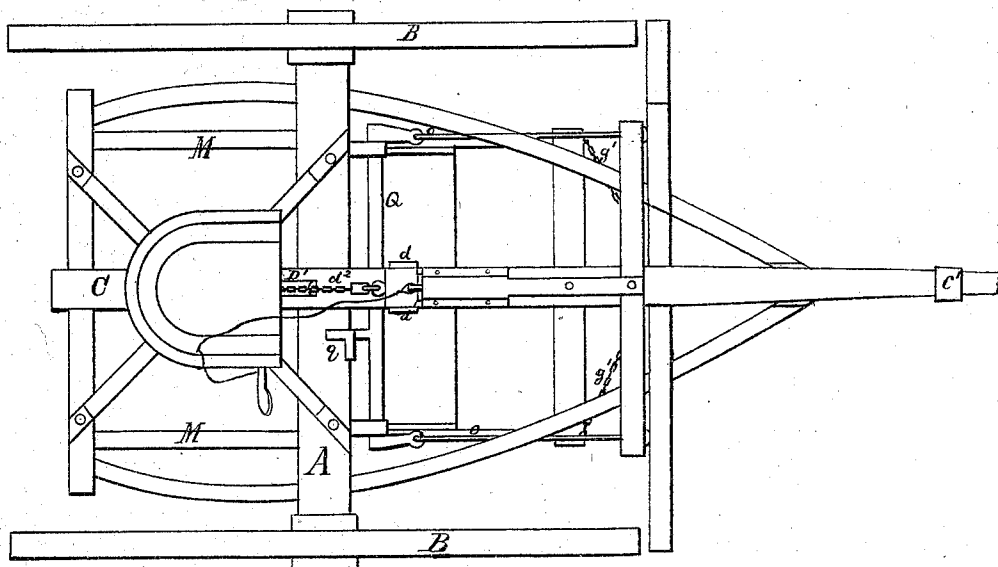


Fig. 2.



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IMPROVEMENT IN SCRAPERS.

Specification forming part of Letters Patent No. **140,935**, dated July 15, 1873; application filed May 24, 1873.

To all whom it may concern:

Be it known that we, WILLIAM D. MAYFIELD and JOSEPH M. PAYNE, of Fort Worth, in the county of Tarrant and State of Texas, have invented a new and valuable Improvement in Road-Scrapers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of our improved road-scraper by a vertical central section. Fig. 2 is a top view of the same.

Our invention relates to road scrapers; and it consists of a novel construction and arrangement of a two-wheel vehicle and scoop suspended by a chain, which is fastened to an extensible draw-bar, said scoop being pulled by a chain fastened to the tongue of the vehicle, and being kept in the right pitch by a detachable tilting frame, which is fastened to the scoop by pivots and to the back part of the vehicle by an adjustable bar. The object of our invention is to make a road-scraper which can be operated from the driver's seat for all its functions, as, for example, scraping the road, elevating the loaded scoop from the ground, discharging the scoop by revolving it on its pivots after disconnecting it from the tilting frame, raising and lowering the swinging part of the tilting frame, and reconnecting the scoop and the tilting frame.

In the drawings, A represents the axle-tree of a vehicle with two wheels, B, and a tongue, which extends some distance back of the axle-tree, and on top of which a draw-bar, D, is fastened by a spring-bolt, E. The draw-bar has a bearing-plate, d , at the bottom, near its end, and the tongue C has a bearing-plate, c , at its top, through both of which plates the bolt E passes, so that the wood is protected against the elongation of the holes for the said bolt, and also against wearing away too quick by sliding on each other. The end of the draw-bar D is provided with a clasp, d^1 , which embraces the tongue C, and the tongue is provided with a clasp, c^1 , which embraces the draw-bar D. The bolt E is fastened to a spring,

e , which has a downward tendency, and is fastened in a casing, c^2 , to the bar D. A small bell-crank lever, F, fastened to the draw-bar may be operated by a string, f , and does the lifting of the spring e and bolt E, whenever a disconnection of the bar D and tongue C is desirable. An eye-plate, G is fastened beneath the tongue C, and a chain, g , is fastened to it, which is connected, by means of two diagonal chains, g' , and a brace, G' , to a couple of bars, H. At the end of the draw-bar D a chain, d^2 , is fastened, which passes over a pulley, D' , on the tongue C, and from there down to a couple of bars, I, which are united by a horizontal bar, I' , and which, together with the bars H, are pivoted to a scoop, K. The back of the said scoop is provided with a swell or convexity, k , which has a notch, k^1 , for the reception of a spring-bolt, L, operated by a spring, l , and a foot-lever, l' . The pivots i on the scoop serve as fulcrums for a frame, M, to which the spring-bolt L is fastened, and which, at the back end, is supported on the tongue C by an adjustable rod, N, with holes n and a pin, n' . A brake, O, hung to a cross-bar, P, on the tongue C, and operated by two drawing-rods, o , and a crank-rod, Q, with a foot-lever, q , fastened to the axle-tree A. A string, k^2 , is fastened to the back of the scoop K, and serves to revolve it for the purpose of dumping. The scoop K in its working condition is, by means of the pivots i and the spring-lever L, rigidly coupled with the frame M, and thereby receives not only support, but also its pitch or inclination toward the ground, from the chain d^2 and the adjustable rod N. The chains g g' and bars H supply the working or pulling power by way of the connections above described.

The scoop works with a down pressure on the chain d^2 and with an upward pressure on the rod N, which is counterbalanced by the weight of the driver, who has his seat R on the same side of the axle-tree A. When the scoop is filled the driver, without stopping the horses, pulls the string f , and thereby releases the bar D from the tongue C. The bar D now begins to slide forward on the tongue, which remains stationary with the vehicle, and thereby draws the chain d^2 and the scoop K up from the ground until the length of the chain is

spent, when the vehicle will move again, and is taken to the place of unloading. There the driver puts his foot on the lever *l'* and withdraws the bolt *L* from the notch *k*¹ on the back of the scoop *K*, and finally pulls the string *k*², whereby the scoop is upset and unloaded. After this the horses are backed, with the brake *O* on the wheels, whereby the bar *D* is caused to slide back on the tongue *C* into its original position, in which it is secured by the spring-bolt *E* entering its seat in the plate *c*. The so-described backing causes the lowering of the scoop by the chain *d*² and the consequent tilting of the scoop as the front end of it touches the ground, whereby the swell *k* is made to slide past the bolt *L* until the notch *k*¹ receives the same, and thereby again secures the rigid coupling of the scoop *K* to the tilting frame *M*. The road-scraper is now ready to repeat the operation of scraping and unloading, as described.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a road-scraper, the combination of the movable draw-bar *D* secured to the tongue *C* by clasps *c*¹ *d*¹, and the spring-bolt *E* with the chain *d*², the pulley *D'*, the bail *I*, the scoop *K*, and the pivots *i*, substantially as specified.

2. In a road-scraper, the chains *g* *g'*, the brace *G'*, the bars *H*, the bail *I*, the chain *d*², and the adjustable bar *N*, in combination with the frame *M*, the spring-bolt *L*, and the scoop *K*, substantially as specified.

3. The combination of the bar *D*, the scoop *K*, and the frame *M* with the seat *R* and the brake *O*, substantially as described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

WILLIAM DUDLEY MAYFIELD.
JOSEPH MOTT PAYNE.

Witnesses:

C. LINDENBERGER,
J. F. COOPER.