

S. ROBINSON & J. A. SAFFER.

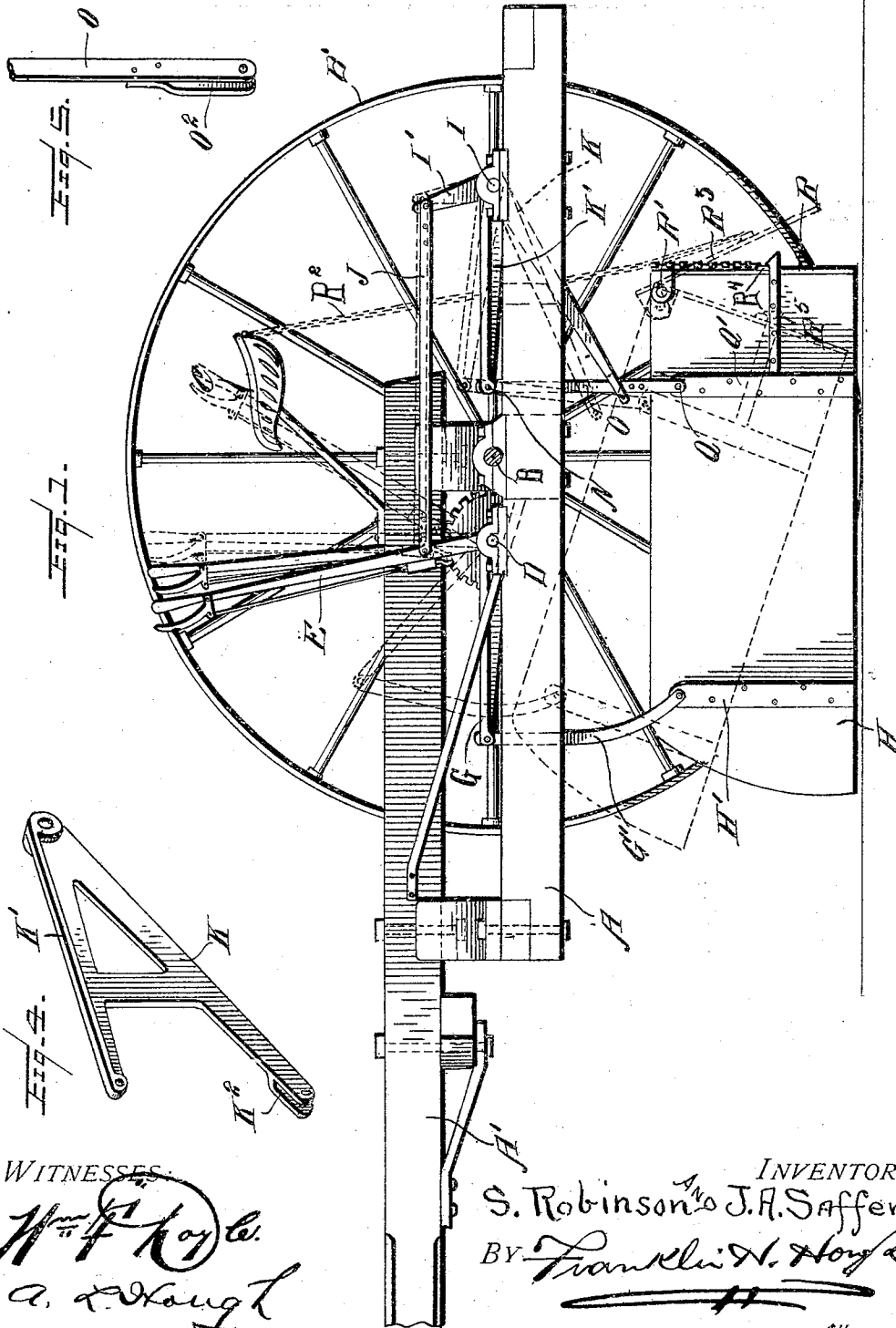
RIDING WHEEL ROAD SCRAPER.

APPLICATION FILED JULY 15, 1908.

909,228.

Patented Jan. 12, 1909.

3 SHEETS—SHEET 1.



WITNESSES

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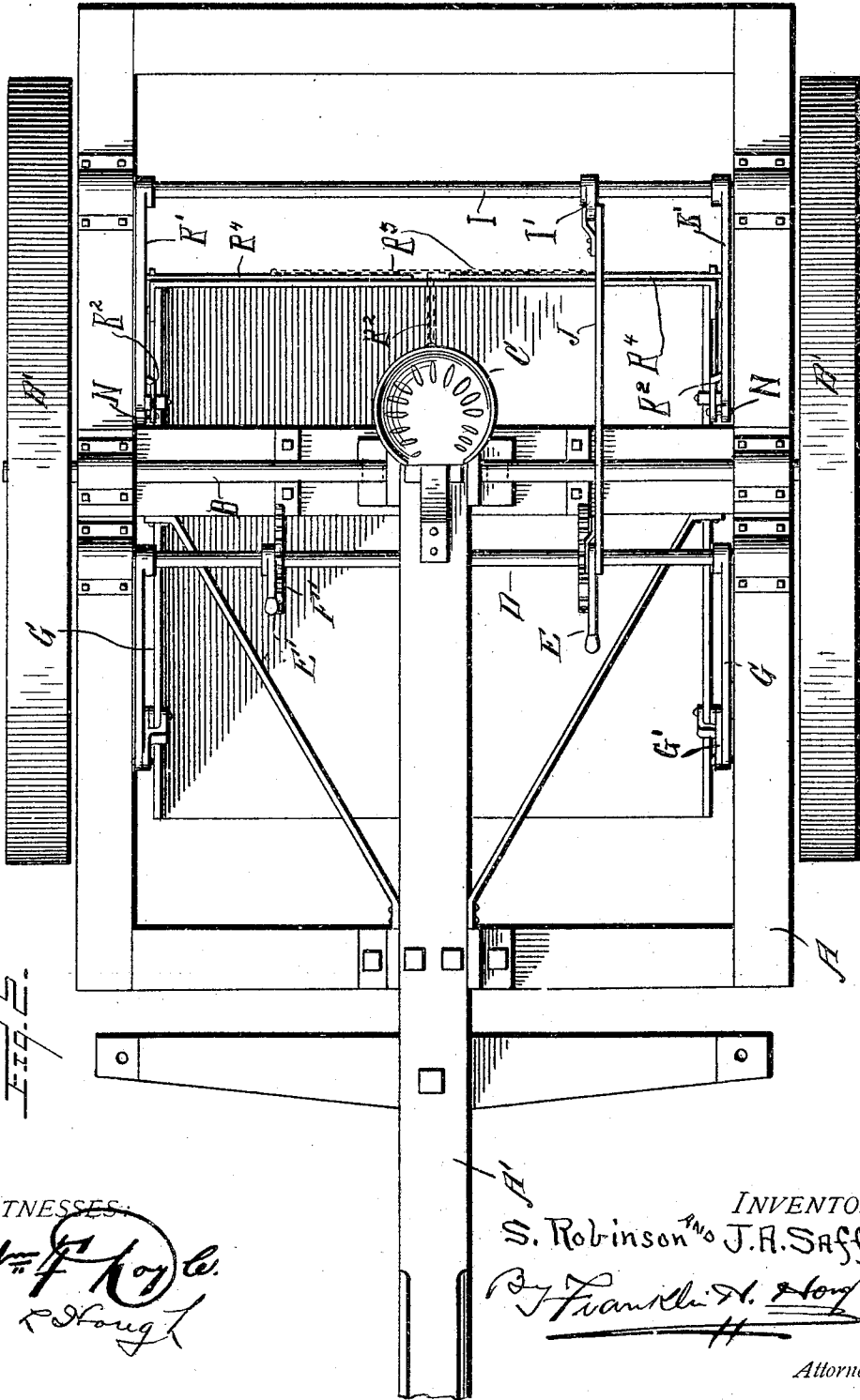


Fig. 2.

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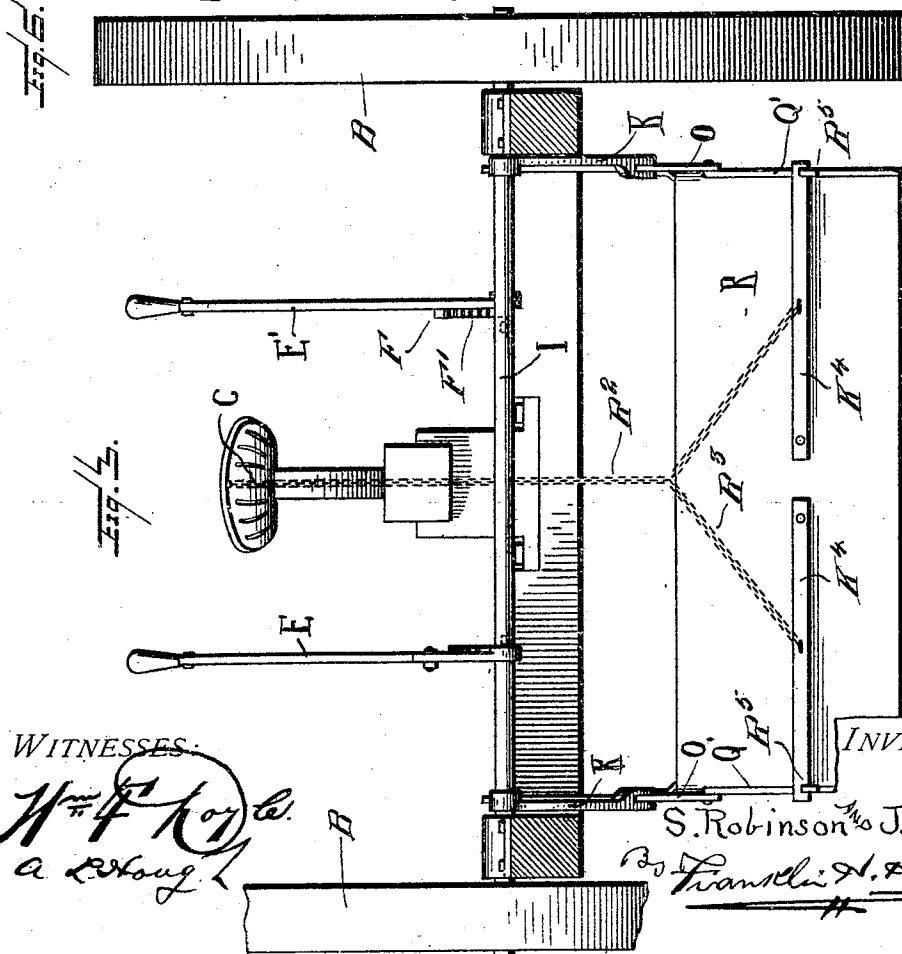
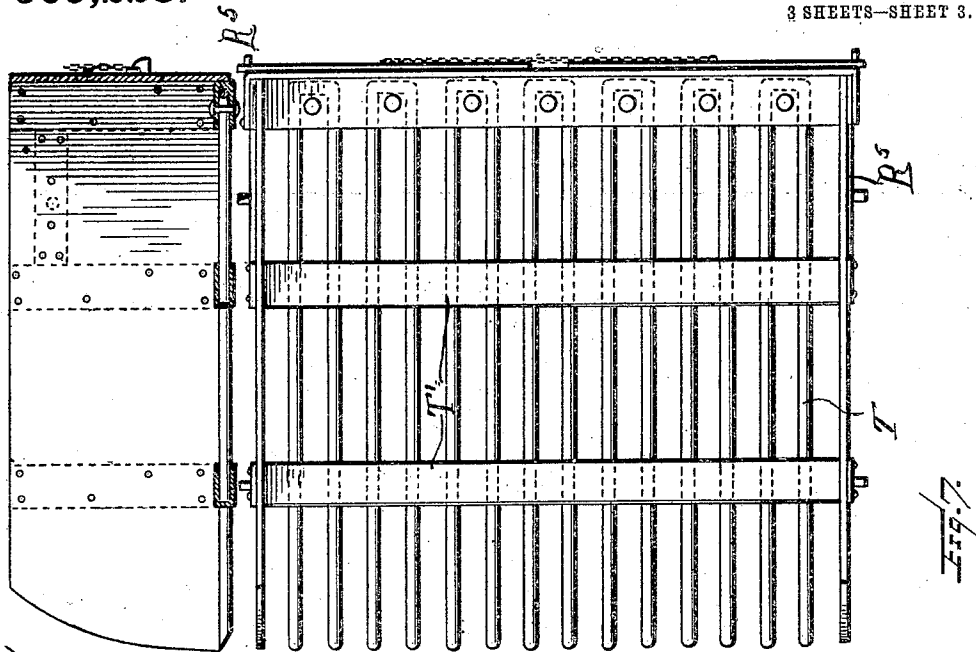
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3 SHEETS—SHEET 3.

909,228.



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UNITED STATES PATENT OFFICE.

SYLVESTER ROBINSON AND JAMES A. SAFFER, OF EMPORIA, KANSAS.

RIDING-WHEEL ROAD-SCRAPER.

No. 909,228.

Specification of Letters Patent.

Patented Jan. 12, 1909.

Application filed July 15, 1908. Serial No. 443,665.

To all whom it may concern:

Be it known that we, SYLVESTER ROBINSON and JAMES A. SAFFER, citizens of the United States, residing at Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Riding-Wheel Road-Scrapers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in riding wheel road scrapers and rock gathering apparatus and comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

We illustrate our invention in the accompanying drawings, in which:—

Figure 1 is a side elevation of the apparatus with one wheel removed. Fig. 2 is a top plan view. Fig. 3 is a sectional view through the frame of the apparatus showing parts in rear elevation. Fig. 4 is an enlarged detail in perspective of one of the braces of the apparatus. Fig. 5 is a detail view of a scoop supporting bar. Fig. 6 is a sectional view through the rock gathering pan, and Fig. 7 is a top plan view of the rock gathering pan.

Reference now being had to the details of the drawings by letter, A designates the frame of the apparatus to which the tongue A' is connected and B is the axle upon which the wheels B' are mounted and C is a seat mounted upon the rear end of said tongue or pole.

D designates a shaft which is journaled in suitable bearings upon the frame, and E and E' designate two operating levers mounted upon the shaft D. One of said levers E' is fixed to the shaft D and carries a pawl F adapted to engage the teeth of the segment F' which is mounted upon the frame of the apparatus. By swinging the lever E' forward or backward, the shaft

D may be rocked. Crank arms G are fixed to the ends of said shaft D and links G' pivotally connected at their upper ends to said arms and at their lower ends to the strap H' which is fastened to the scoop H.

Mounted upon the frame of the apparatus and in the rear of the axle is a rock shaft I having a crank arm I' fixed thereto, and J designates a bar having adjustable pivotal connections between the arm I' and the lever E affording means whereby the shaft I may be rocked. Fixed to the shaft I are the forked members having the arms K and K', the latter of which carries a pivotal pin N connected to the bar O, the lower end of which bar is pivotally connected at Q to the strap Q' near the rear end of the scoop. The arm K, a detail of which is shown in Fig. 4 of the drawings, has a slot K² at one end in which the bar O has a slight play.

R designates a hinged back to said scoop mounted upon the pivot pin R', and R² designates a chain having branching ends R³, as shown clearly in Fig. 3 of the drawings, each of which is pivotally connected to a latch lever K⁴. Catches R⁵ are mounted upon the sides of the scoop, as shown in Fig. 1 of the drawings, and each is adapted to be engaged by a latch bar K⁴. The chain R² is preferably fastened to the seat of the apparatus as shown, whereby it will be within convenient reach when it is desired to tilt the scoop.

It will be noted that the lower end of the bar O has an elongated slot O² in the end thereof which engages the strap Q' upon the scoop, thus allowing a slight play in providing means whereby the scoop may be conveniently tilted forward or rearward.

Referring to Figs. 6 and 7 of the drawings will be seen a slight modification of the scoop in which a device is arranged for carrying rock in which, instead of having a closed bottom as shown in Fig. 2 of the drawings, a series of bars T is provided, said bars being arranged in pairs and each pair made from a single piece of metal, and T' designate cross-pieces, preferably of metal, which are bent upon themselves and provided with apertures through which the bars pass.

In operation, when it is desired to tilt the forward end of the scoop downward, the lever E' is thrown forward causing the arms G to lower the forward edge of the scoop. By the provision of the arm K which acts as a brace against the link O, the scoop will be held rigidly and withstand the pressure coming upon the forward end of the scoop as it scoops up the material. If it is desired to give a greater inclination to the scoop, the lever E may be thrown rearward which will cause the rear end of the scoop to be raised. If it is desired to tilt the forward end of the scoop upward in the event of dumping, the lever E' is swung rearward and, if it is desired to raise the scoop so that it will rest horizontally a distance from the ground, both levers may be simultaneously moved which will cause the scoop to be raised up so that its upper edge will be adjacent to the frame of the apparatus. As the lever E is thrown rearward, the forked member having the arms K and K' will cause the scoop to be given a slight forward movement incident to the fulcruming of the bar O over the end of the recess K² in the end of the arm K. When it is desired to dump the scoop, the operator by pulling upon the chain may release the latches and allow the inclined gate to swing upon its pivots. As the gate swings down, it will automatically lock in a closed relation. When it is desired to utilize the rock carrying pan, the scoop may be readily detached from the bars G and O and the form of pan shown in Figs. 6 and 7 substituted therefor.

What we claim to be new is:—

1. A riding wheel scraper comprising, in combination with a frame, an axle and wheels mounted thereon, a shaft journaled upon said frame, a lever fixed to said shaft, a scoop, crank arms fixed to the shaft and having pivotal link connections with the front end of said scoop, a second shaft journaled upon the frame, a forked member fixed to said second shaft, a link pivotally connected to one of the arms of said member and to said scoop, said link being fulcrumed in the recessed end of the other arm of the member, a second lever pivotally mounted upon said first mentioned shaft, a bar connecting said second shaft and lever upon the crank shaft, as set forth.

2. A riding wheel scraper comprising, in combination with a frame, an axle and wheels mounted thereon, a shaft journaled upon said frame, a lever fixed to said shaft, a scoop, crank arms fixed to the shaft and having pivotal link connections with the front end of said scoop, a second shaft journaled upon the frame, a forked member

fixed to said second shaft, a link pivotally connected to one of the arms of said member and to said scoop, said link being fulcrumed in the recessed end of the other arm of the member, a second lever pivotally mounted upon said first mentioned shaft, a bar connecting said second shaft and lever upon the crank shaft, a hinged rear gate to said scoop, a latch mounted upon said gate, and a chain connected to said latch, as set forth.

3. In combination with a frame, an axle thereon, wheels upon said axle, a shaft journaled in suitable bearings upon the frame, crank arms fixed to said shaft, a lever secured to the latter, a scoop, link connections between said scoop and crank arm, a toothed segment, a pawl carried by the lever and adapted to engage the teeth of the segment, a second lever loosely mounted upon said shaft, a second toothed segment, a pawl carried by said loosely mounted lever, a second shaft, adjustable link connections between the same and said loosely mounted lever, a forked member fixed to said second referred to shaft, a link pivotally connected at one end to one of the arms of said member and its other end having loose pivotal connection with the rear portion of the scoop, one of the arms of said member having a slot in its end and through which said link passes, as set forth.

4. In combination with a frame, an axle thereon, wheels upon said axle, a shaft journaled in suitable bearings upon the frame, crank arms fixed to said shaft, a lever secured to the latter, a scoop, link connections between said scoop and crank arm, a toothed segment, a pawl carried by the lever and adapted to engage the teeth of the segment, a second lever loosely mounted upon said shaft, a second toothed segment, a pawl carried by said loosely mounted lever, a second shaft, adjustable link connections between the same and said loosely mounted lever, a forked member fixed to said second referred to shaft, a link pivotally connected at one end to one of the arms of said member and its other end having loose pivotal connection with the rear portion of the scoop, one of the arms of said member having a slot in its end and through which said link passes, a swinging gate at the rear end of said scoop, a catch upon the latter, pivotal latches upon the gate adapted to engage said catches, and a chain connected to said latches, as set forth.

5. In combination with the frame of the apparatus, an axle and wheels mounted thereon, a shaft journaled upon the frame, arms fixed to said shaft, a scoop, bars connecting said arms and the forward ends of

the scoop, a second shaft journaled upon the frame, forked members secured to said second referred to shaft, a bar pivotally connected to one arm of said lever, its other end
5 pivotally connected to the scoop, the second arm of said member serving as a brace and having a slot at its free end through which said link passes, and lever mechanism for operating the shaft, as set forth.

In testimony whereof we hereunto affix 10
our signatures in the presence of two witnesses.

SYLVESTER ROBINSON.
JAMES A. SAFFER.

Witnesses:

HARRISON PARKMAN,
ELI FOWLER.