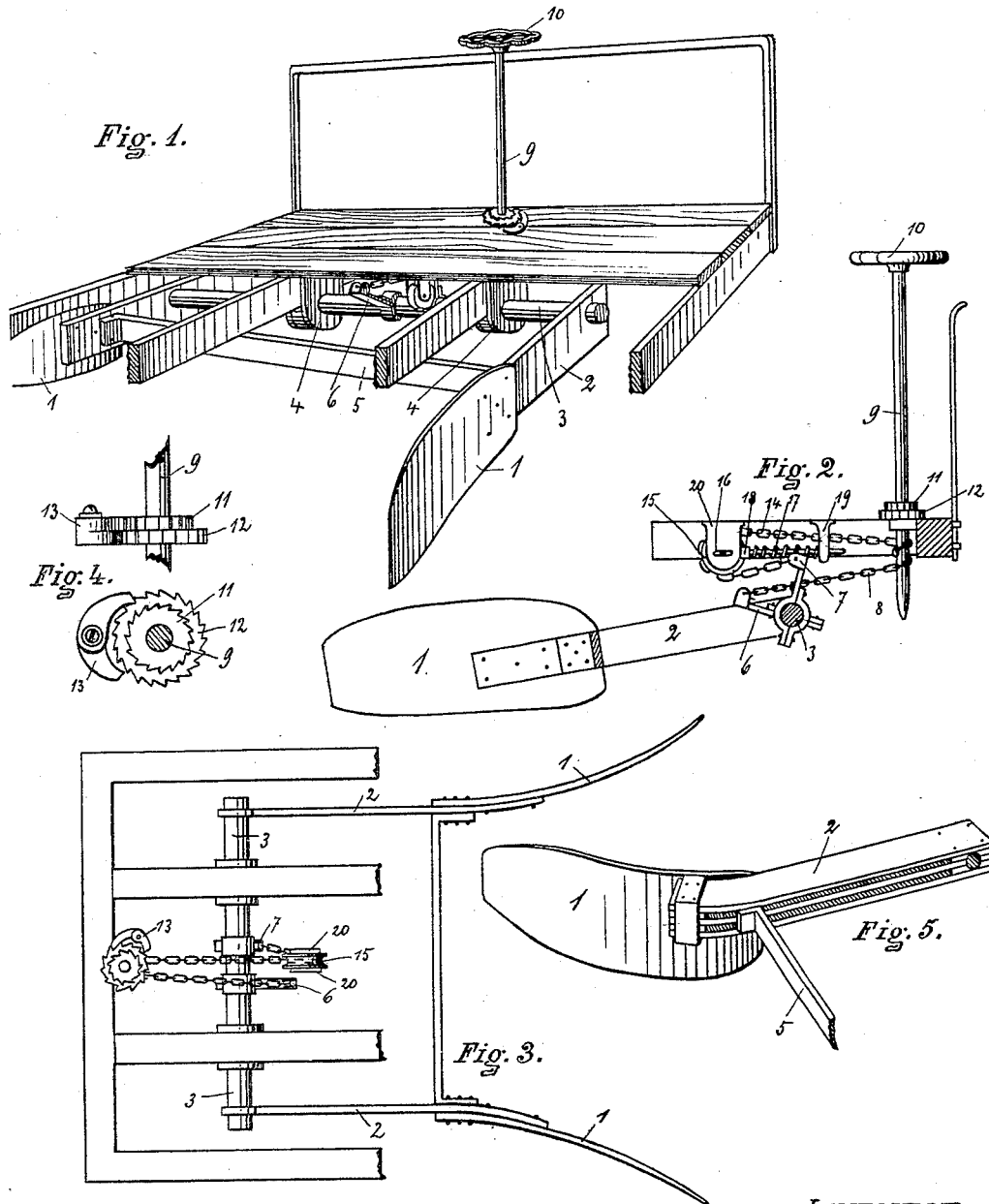


(No Model.)

M. LEARY.
TRACK CLEARER.

No. 454,484.

Patented June 23, 1891.



WITNESSES.
Rich. A. George.
M. Robinson

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UNITED STATES PATENT OFFICE.

MICHAEL LEARY, OF UTICA, NEW YORK, ASSIGNOR OF ONE-HALF TO JAMES F. MANN, OF SAME PLACE.

TRACK-CLEARER.

SPECIFICATION forming part of Letters Patent No. 454,484, dated June 23, 1891.

Application filed November 24, 1890. Serial No. 372,456. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL LEARY, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Track-Clearers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 figures of reference marked thereon, which form part of this specification.

My invention relates to an improvement in rail-clearers for cars, and is more especially applicable for use in street-cars.

In the drawings which accompany and form part of this specification, and in which similar figures of reference refer to corresponding parts in the several figures, Figure 1 shows a perspective view of a portion of the frame of a car and my improved track-clearers mounted thereon. Fig. 2 is a detail view showing the details of the construction and arrangement of the operating devices for the track-clearer. Fig. 3 is a plan view of the same. Fig. 4 shows a side and top elevation of the double ratchet used in connection with the shaft for operating the clearer. Fig. 5 shows a yielding or spring arm on which the scraper is mounted.

Referring more specifically to the reference-numerals marked on the drawings, 1 1 indicate the scrapers, which are mounted upon arms 2, which arms are secured upon shaft 3. Shaft 3 is mounted in bearings 4 4 upon the under side of the car-frame. Between the arms 2, and substantially in line with the front end of the scrapers, is a cross or stay bar 5. Rigidly secured upon the shaft 3 are projecting arms 6 and 7. From arm 6, which projects from the shaft on the side toward the scraper, extends a chain 8, which is secured at its opposite end to upright operating-shaft 9, which shaft 9 has a bearing secured to the frame and is provided at its upper end with a hand-wheel 10 for operating the same. On the shaft is also mounted a pair of ratchet-wheels 11 and 12, with teeth inclining in opposite directions and adapted to be engaged by compound dog or pawl 13, capable of se-

curing the shaft from rotation in either direction. From arms 7, which project on the opposite side of the shaft from scraper 1, extends a chain 14, which, passing around pulley 15, is connected with upright shaft 9 on the opposite side from that to which chain 8 connects. The pulley 15 is mounted in the forked end of pulley-carrying sliding piece 18, the opposite end of which piece 18 passes through and is adapted to slide in an eye in fixed stud-piece 19. The pin on which the pulley 15 is mounted extends through and works in the slotted openings 16 on either side thereof in the pulley-supporting piece 20, also secured to the frame. The pulley 15 is provided with a spring 17, which acts as a backing for the pulley and is strained to force the pulley toward the left, as shown in Fig. 2.

Referring to Fig. 5, the arm 2, on which the scraper-blade is mounted, is formed of a number of thin elastic or spring-strips, which makes the arm 2 an elastic or yielding arm.

The operation of the device is substantially as follows: When it is desired to bring the scraper into operation upon the track, the pawl or dog 13 is disengaged from the ratchet 11 and the shaft 9 allowed to revolve as it will until the scraper 1 has descended onto the rail. If it is then desired to force the scraper onto the track with greater pressure, the shaft 9 is still rotated in the same direction by means of hand-wheel 10, which draws chain 14 and forces the scraper down onto the track by reason of the tension of spring 17, and the desired tension is secured by rotating the shaft 9 with greater power and securing it in this position by means of dog 13, engaging in ratchet-wheel 12. In case of the scraper meeting an obstruction or unevenness in the rail which it is not capable of overcoming, the elasticity of spring 17 will allow the scraper to yield sufficiently to pass the obstruction, and in case of the use of elastic arm 2 (shown in Fig. 5) the elasticity of the arm also facilitates in passing such an obstruction. When it is desired to throw the track-clearers out of operation, the dog 13 is disengaged from ratchet 12 and brought into engagement with ratchet 11. The shaft 9 is then rotated by means of hand-wheel 10, so as to draw on the

chain 8, which will bring the scrapers and arms upward toward or under the car and clear of the tracks.

5 It is evident that numerous changes and modifications in and from the construction described may be made without departing from the spirit of my invention.

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

10 1. In a track-clearer, the combination of a scraper for each rail, arms having the scrapers mounted thereon, a rocking shaft to which the scraper-arms are secured, mounted in bearings on the frame, lever-arms secured to
15 the rocking shaft and projecting to each side of a vertical line through the rocking shaft, an operating-shaft provided with hand wheel or crank, and chains connecting the lever-arms and shaft, one of which chains passes
20 around a yielding pulley, substantially as set forth.

2. The combination, in a track-clearer, of the scraper, the scraper-arm, the rocking shaft, the lever-arms projecting to each side of a
25 vertical line through the shaft, the operating-shaft and securing-ratchets, the chain connecting the lever-arms on the side of the scraper and operating-shaft, the chain connecting the other lever-arm and operating-
30 shaft, and the yielding pulley around which the latter chain passes, substantially as set forth.

3. In a track-clearer, the combination of the scraper, the scraper-arm, the rocking shaft, the lever-arms for raising and lowering the
35 scraper, the operating-shaft, the connections between the raising-lever arms, and the yielding connection between the lowering-lever arm and operating-shaft, respectively, substantially as set forth.

4. The combination, in a track-clearer, of the scraper, the scraper-arm, the rocking shaft, the lever-arms, the operating-shaft, the yielding pulley and backing-spring, the direct connection between one lever-arm and operating-
45 shaft, and the connection between the other lever-arm and the opposite side of operating-shaft passing around pulley, substantially as set forth.

5. In a track-clearer, the combination of a
50 scraper, an elastic vertically-yielding spring-arm, on which the scraper is mounted, composed of leaves or layers, a rocking shaft on which the arm is mounted, and mechanism for rocking the shaft in raising the scraper or
55 forcing it downward, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

MICHAEL LEARY.

Witnesses:

M. E. ROBINSON,
L. S. CLARKE.