

No. 780,447.

PATENTED JAN. 17, 1905.

R. RUSSELL.
SPRING LATCH FOR WHEELED SCRAPERS.
APPLICATION FILED OCT. 28, 1904.

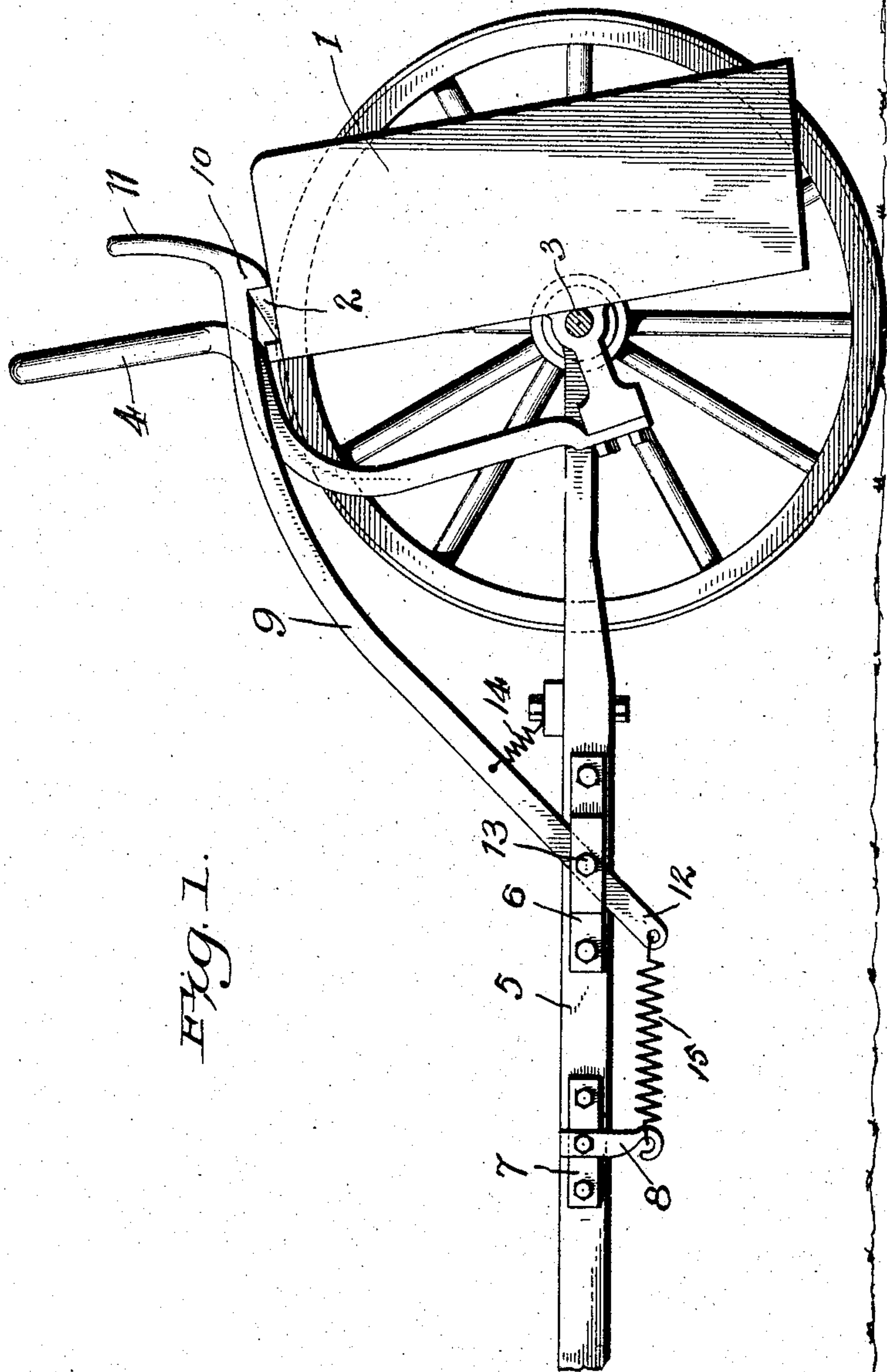


Fig. 1.

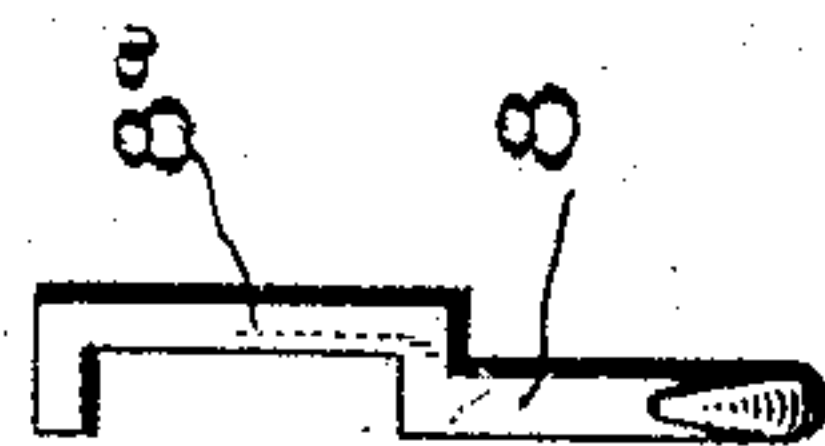


Fig. 3.

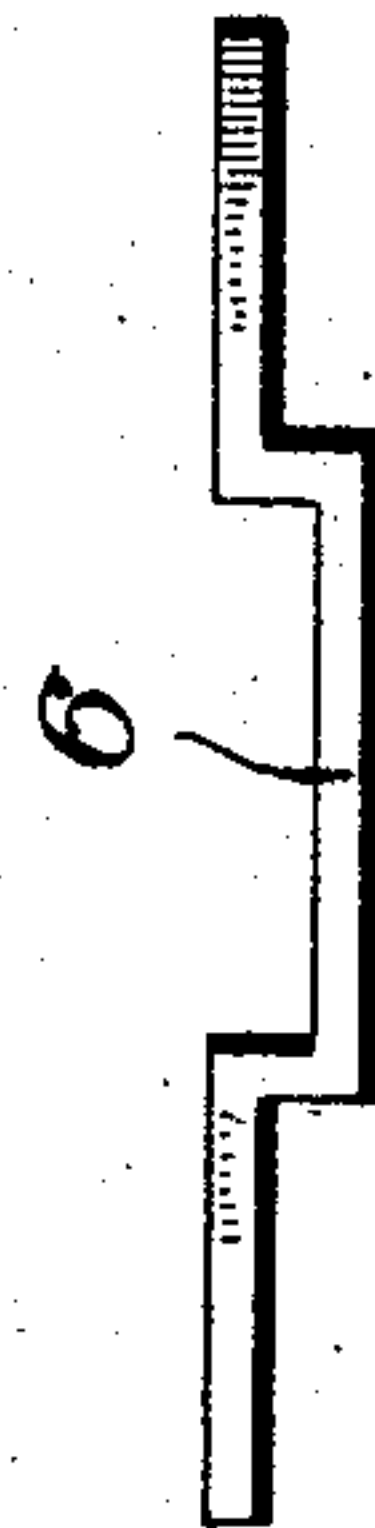


Fig. 2.

Witnesses

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SPRING-LATCH FOR WHEELED SCRAPERS.

SPECIFICATION forming part of Letters Patent No. 780,447, dated January 17, 1905.

Application filed October 28, 1904. Serial No. 230,404.

To all whom it may concern:

Be it known that I, ROBERT RUSSELL, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented certain new and useful Improvements in Spring-Latches for Wheeled Scrapers; and I 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.

This invention relates to improvements in wheeled scrapers, and is especially designed to provide a spring-latch positive in its operations for locking the scoop in its inoperative position. It has been found in practice that latches for this class of devices, of the type known as "gravity-latches," are entirely unsatisfactory, owing to the fact that their action is not positive, which oftentimes results in considerable loss of time in locking the scoop in its inoperative position after the contents of the scraper have been discharged at the dump. In an attempt to overcome this objection springs of various kinds have been applied to a latch; but these springs have heretofore been of such a nature that if they become broken for any reason it has been necessary to send the scraper to the blacksmith's shop for repairs at a great loss of time and at no inconsiderable cost for replacing the broken spring. By the present construction, however, this latter objection is avoided by the particular mounting of the springs, which are readily accessible and can be replaced in a moment if out of order, and at the same time their position with reference to the latch is such that the latch is made much more simple and positive in its operation than heretofore. To more fully describe the invention, with these objects in view, reference is had to the accompanying drawings, illustrating the same, and the following description, the particular features of novelty being more succinctly pointed out in the claims.

In the drawings like numerals designate same parts in the several views.

Figure 1 is a side elevation of a wheeled scraper with one of the wheels removed and showing my invention applied to the tongue

of the vehicle; and Figs. 2 and 3 are detail views of the U-shaped iron and channeled hook member, respectively.

1 is the usual scoop, provided with the locking-lug 2 and suitably mounted to revolve on the axle 3 of the vehicle, the scoop being also provided with a suitable operating-handle 4.

5 designates the tongue of the vehicle, to which is bolted or otherwise secured the U-shaped iron 6, and on the tongue forward of this U-shaped iron is preferably provided a block 7, engaged by the channeled shank 8^a of the hook 8, whereby the hook may be the more rigidly secured in position.

9 represents the latch, comprising an elongated rearwardly-curved member provided at its rear upper end with a hooked portion or tooth 10 and operating-finger 11, the lower end 12 of the latch member projecting below the tongue and pivotally secured intermediate of its ends between the U-shaped iron and the vehicle-tongue, as at 13.

14 is a coiled spring connected at one end to the upper portion of the latch and at the other end to the vehicle-support, and 15 is a similar spring intermediate of the hook 8 and the lower end 12 of the latch, the said springs being adapted to exert forces in opposite directions, but owing to their positions with relation to the latch, on opposite sides of its pivotal point, conjointly operate to force the upper hooked end of the latch rearwardly and downwardly. By this construction it will be readily seen that the latch is very positively actuated, the peculiar mounting and disposition of the lower end of the latch and the forces acting thereon making the latch operate after the fashion of a lever both of the first and third classes, assuring almost perfect operation of the latch.

It is obvious that certain modifications might be made without departing from the spirit of the invention—for instance, the method of applying power to the latch on opposite sides of its fulcrum 13 being not necessarily limited to coiled springs tensioned to have a pulling force.

Having thus described the invention, what I claim is—

1. In a wheeled scraper, the combination

with a vehicle-support and scoop, of a locking-latch for said scoop, comprising an elongated hooked member pivoted, intermediate of its ends, to the tongue of said vehicle-support and extending rearwardly at its upper 5 end to engage said scoop, and means engaging the lower projecting end of said latch and exerting a forward force thereon.

2. In a wheeled scraper, the combination 10 with a vehicle-support and scoop, of a locking-latch for said scoop, comprising an elongated hooked member pivoted, intermediate of its ends, to the tongue of said vehicle-support and extending rearwardly at its upper 15 end to engage said scoop, and a coiled spring engaging the lower projecting end of said latch and exerting a forward force thereon.

3. In a wheeled scraper, the combination 20 with a vehicle-support and scoop, of a locking-latch for said scoop, comprising an elongated hooked member pivoted, intermediate of its ends, to the tongue of said vehicle-support and extending rearwardly at its upper end to engage said scoop, and a coiled spring 25 mounted forwardly of the lower projecting end of said latch and connected thereto for exerting a forward pull thereon.

4. In a wheeled scraper, the combination 30 with a vehicle-support and scoop, of a U-iron secured to the tongue of said vehicle, a locking-latch for said scoop comprising an elongated hooked member pivoted, intermediate of its ends, between said U-iron and the vehicle-tongue, a block on said vehicle-tongue for-

ward of said U-iron, a hook having a chan- 35 neled shank embracing said block and rigidly secured thereto, and a coiled spring intermediate of said hook and the lower projecting end of said latch for exerting a forward pulling force on the lower end of said latch and 40 operating the upper end of same rearwardly and downwardly.

5. In a wheeled scraper, the combination 45 with a vehicle-support and scoop, of a locking-latch for said scoop, comprising an elongated hooked member, pivoted, intermediate of its ends, to said vehicle-support, and means engaging said latch on opposite sides of its pivotal point and exerting forces on the latch 50 in opposed directions.

6. In a wheeled scraper, the combination 55 with a vehicle-support and scoop, of a locking-latch for said scoop, comprising an elongated hooked member, pivoted, intermediate of its ends, to said vehicle-support, and means engaging said latch on opposite sides of its pivotal point comprising coiled springs mounted forwardly of the lower projecting end of the latch and rearwardly of the upper portion 60 of the latch and exerting pulling forces on the latch in opposed directions.

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

ROBERT RUSSELL.

Witnesses:

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JAMES MUNRO.