No. 685,193. Patented Oct. 22, 1901.

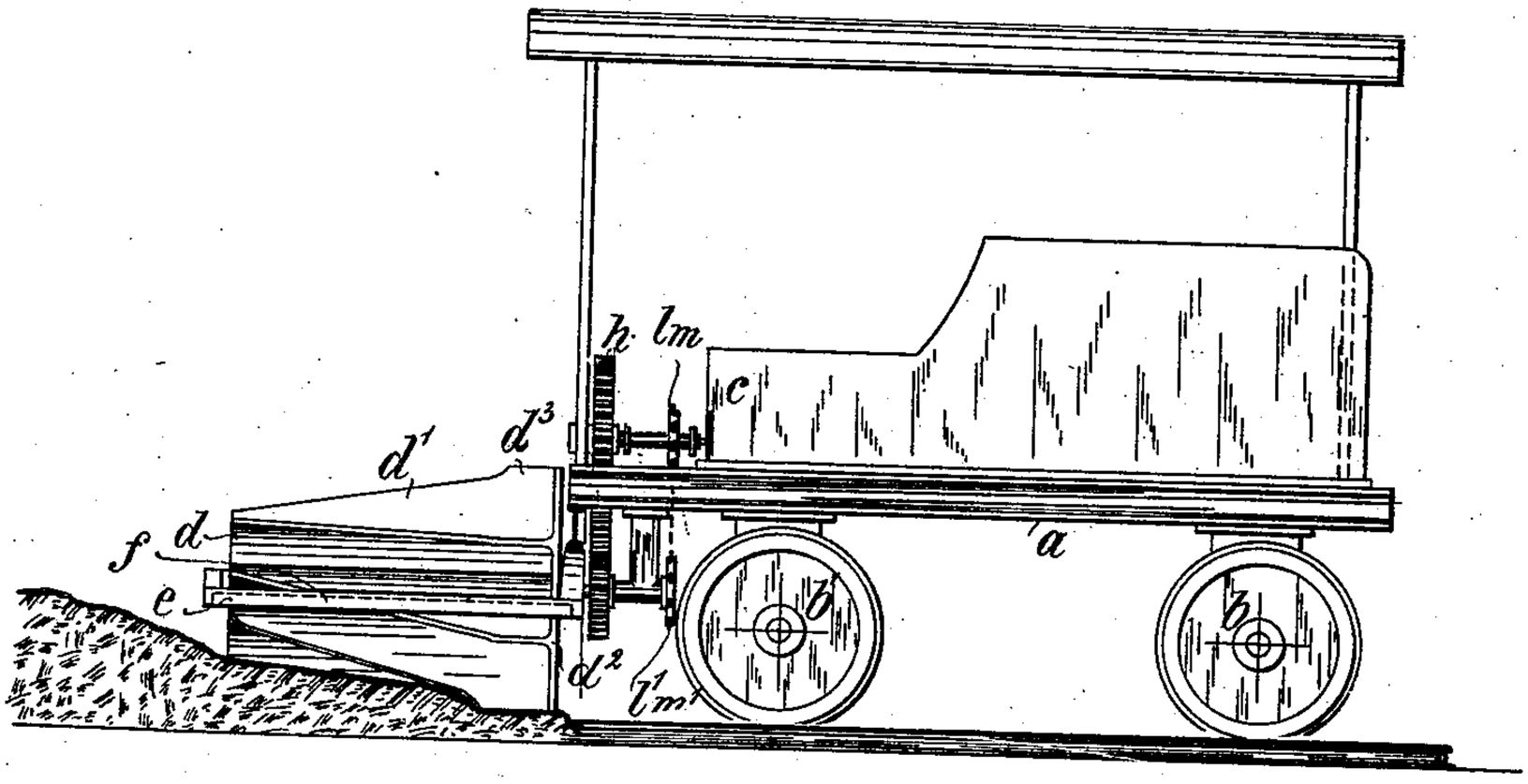
J. G. WENIGER.

SNOW PLOW FOR CARS.

(Application filed Aug. 7, 1899.)

(No Model.)

Fig. 1.



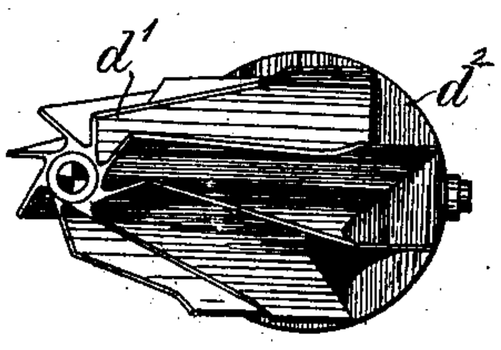


Fig. 4.

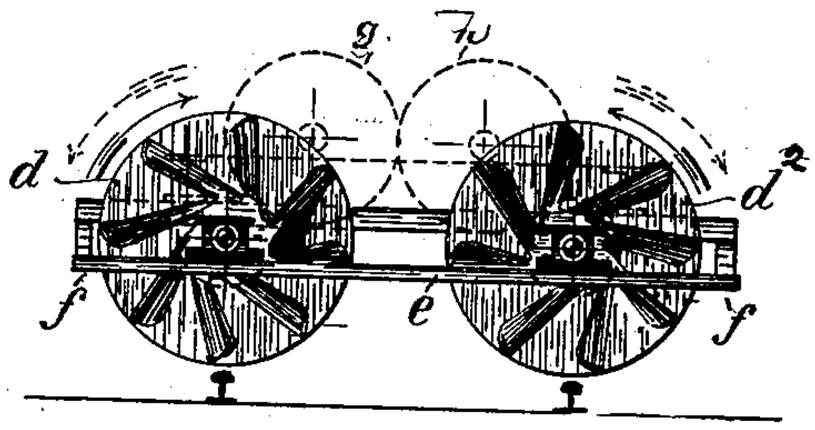


Fig. 2.

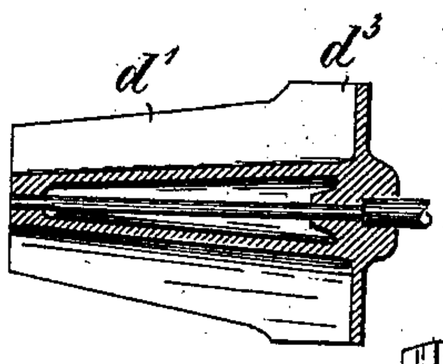


Fig. 5.

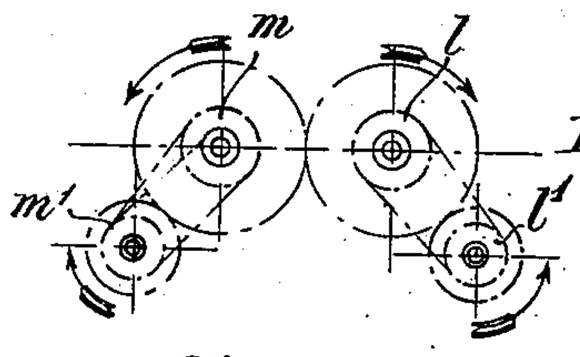


Fig. 3.

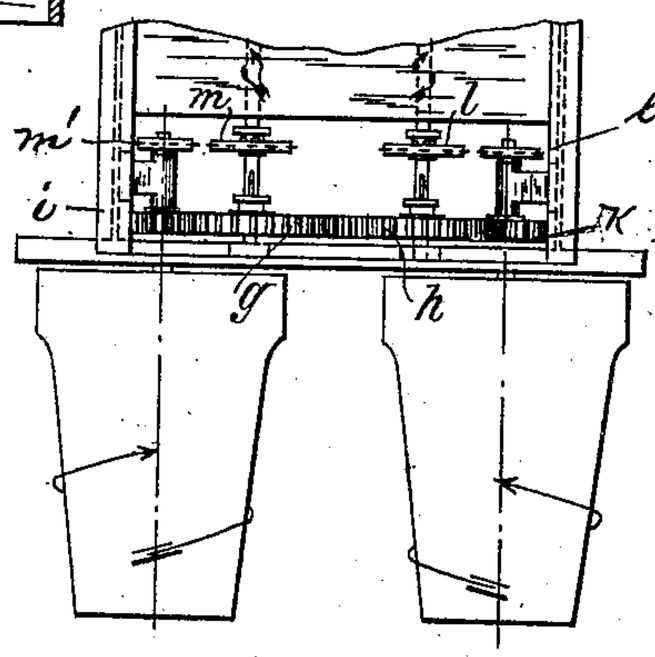


Fig. 6.

Witnesses:

1. Gerhard Kiters.

2. Hans Kramer.

Inventor:

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by

Apel & Lauenroth

his Attorney.

UNITED STATES PATENT OFFICE.

JOHANN GEORG WENIGER, OF MAMBACH, GERMANY.

SNOW-PLOW FOR CARS.

SPECIFICATION forming part of Letters Patent No. 685,193, dated October 22, 1901.

Application filed August 7, 1899. Serial No. 726,447. (No model.)

To all whom it may concern:

Be it known that I, JOHANN GEORG WENIGER, a citizen of the Empire of Germany, residing at Mambach, near Zell, in the Grand Duchy of Baden, Germany, have invented Improvements in Snow-Plows for Cars with Two Rotating Scoop-Wheels, of which the following is a clear specification.

The object of this invention is to clear the trackway from snow masses according to a new and improved method.

Referring to the drawings, Figure 1 shows a side view of the track-cleaner attached to a vehicle. Fig. 2 shows a front view of the revolving cleaners. Fig. 3 shows a diagrammatic view of the gearing and sprocket-chains which operate the revolving cleaners. Fig. 4 shows a perspective view of one of said cleaners. Fig. 5 is a sectional view of one of said cleaners. Fig. 6 is a top view both of the cleaners and of the gearing connected with the same.

The device is attached in the usual way to the front of a car, consisting of the frame *a* and the wheels *b*. *c* is an engine for operating the snow-plow, driven by steam, gas, hydrocarbon, or the like. Two scoop-wheels *d*, which will be more particularly described, are secured to a frame *e* in such a way that their shafts *f* lie vertically above each rail and at the same time parallel to each other.

The construction of the scoop-wheels is as follows: The scoops seen from the front are arranged tangentially around a certain circle lying concentrically to the shaft, Fig. 2, and are slightly curved in their length, Figs. 1 and 4. They are of such shape that only their front ends d' give the wheel a conical shape, while the back ends d^3 have their upper edges running parallel to the rails, so that this latter part of the wheel is of cylindrical shape. The scoops are facing the car and terminate in an upright wall d^2, with which they can be firmly connected. As there is very little space at the rear end of the upright wall d^2, the quickly-rotating scoops penetrate with their cutting edges into the snow masses without finding much resistance. In consequence of the conical shape of the wheels the scoops will first produce a boring effect, performing their work gradually, finally causing the cylindrical back end of the scoop-wheels to completely clear the rails of the snow. The tangential position of the scoops permits of quickly throwing off the caught snow masses.

If snow-clearers are known which rotate against each other of different construction than here described, by means of which the snow lying upon the rails is thrown off into two different directions, being of great advantage upon flat land, this method of operation will prove unsatisfactory and insufficient in all cases where the snow masses have to be thrown off in one direction only—viz., where the rails run along a slope or a mountain.

The wheels, which fulfil both tasks, operate as follows: The driving arrangement for the scoop-wheels is such that the direction of rotation can vary. In Figs. 3 and 4, for instance, the scoop-wheels *d* rotate against each other by means of the gear *g i h k*, the shafts of the wheels *g* and *h* being driven by a motor. Besides the wheels *g h* being so arranged that they can be disengaged by displacement of the shaft a second driving arrangement—for instance, by means of sprocket-wheels *l m l' m'* with couplings—is also provided. If the wheels *g h* be disengaged and the pairs of sprocket-wheels engaged, the scoop-wheels will rotate in the same direction. In this case one of the scoop-wheels will carry the snow masses toward the other, which will then throw off the snow from the rails.

It is desirable to give the scoop-wheels a speed which is two and one-half up to four times as great as that of the car-wheels.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a snow-plow, the combination with a shaft of a scoop carried by the same, having a part d', composed of blades arranged spirally, and so arranged also as to give it a conical shape in front, and a part d^3 having a cylindrical shape, for the purpose described.

2. In snow-plows, the combination of two rotating scoop-wheels lying parallel to the rails, rotating in the same direction, for the purpose as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHANN GEORG WENIGER.

Witnesses:

MAX RIESCBRODT,

GEORGE GIFFORD.