

H. V. GUERTIN.  
SNOW PLOW.

No. 590,932.

Patented Sept. 28, 1897.

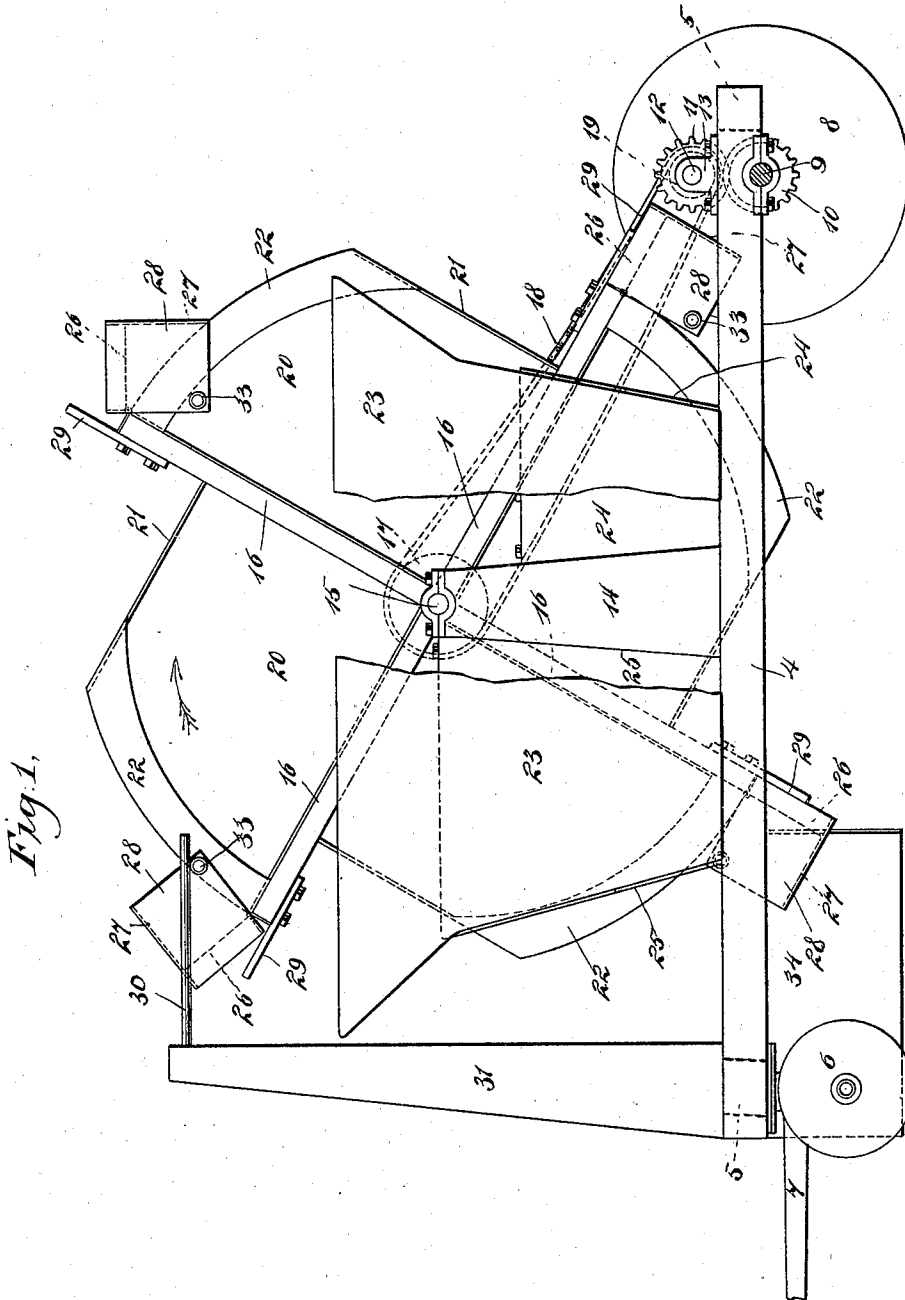


Fig. 1.

WITNESSES:

*Edward Thorpe*  
*Isaac B. Oxendy*

INVENTOR

*H. V. Guertin*

BY

*Munn & Co.*

ATTORNEYS.

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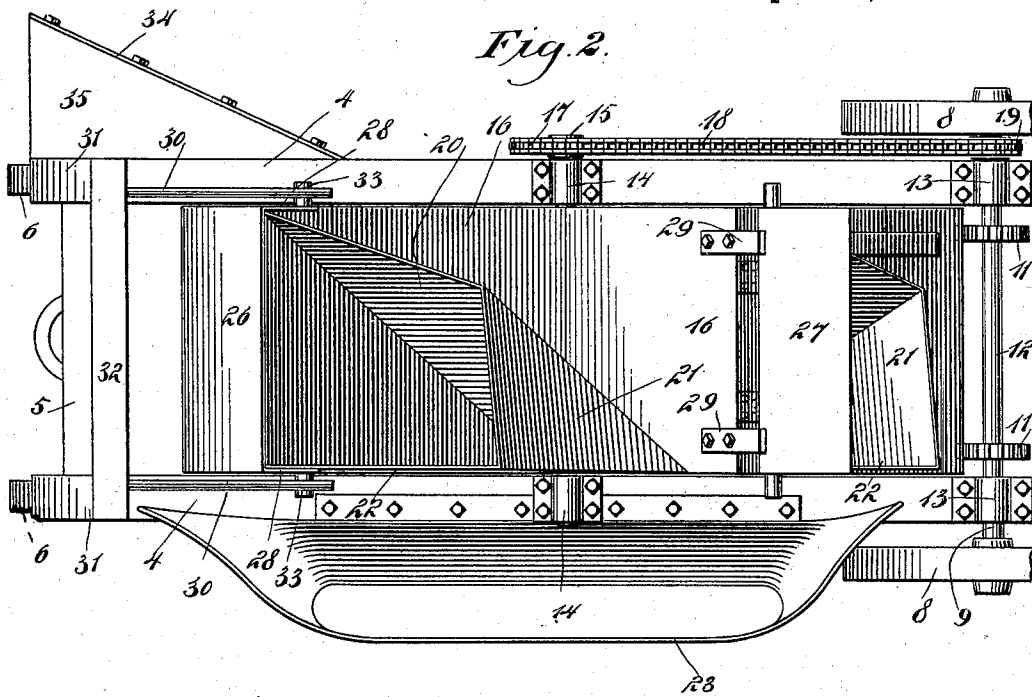
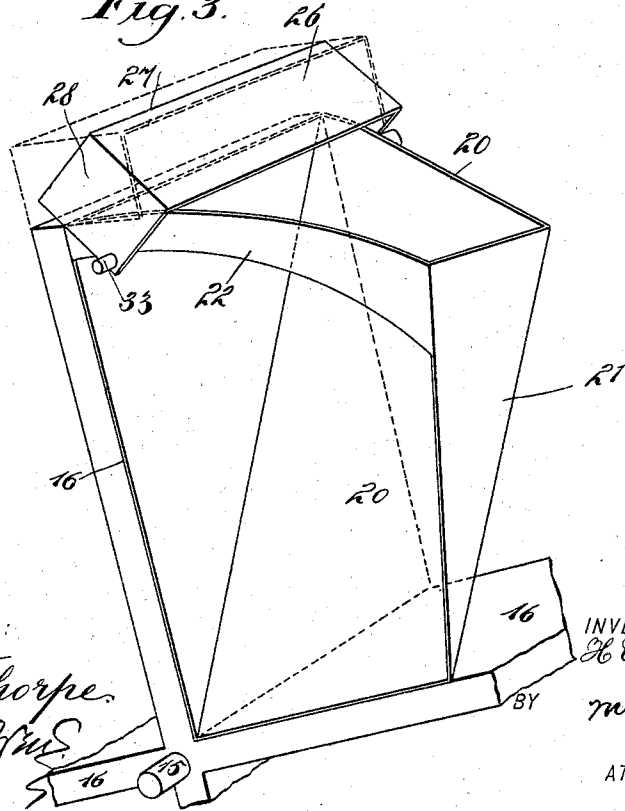


Fig. 3.



WITNESSES:

*Edward Thorpe*  
*Isaac A. Mue*

INVENTOR  
*H. V. Guertin*

BY *[Signature]*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY VILLA GUERTIN, OF WORCESTER, MASSACHUSETTS.

## SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 590,932, dated September 28, 1897.

Application filed March 22, 1897. Serial No. 628,590. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY VILLA GUERTIN, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and Improved Snow-Plow, of which the following is a full, clear, and exact description.

This invention is a snow-plow characterized by a carriage whereon is mounted a revoluble structure having buckets and radial chutes in which the buckets respectively deliver the snow and by which the snow is cast laterally into a funnel and then delivered in a windrow at the side of the machine.

This specification is the disclosure of one form of my invention, while the claims define the actual scope of the conception.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my invention with parts broken away. Fig. 2 is a plan view of the invention, and Fig. 3 is a fragmentary perspective of one of the buckets and chute therefor.

The framing or carriage portion of the apparatus has two longitudinal side beams 4, rigidly joined to each other by cross-beams 5, arranged, respectively, at the front and rear of the machine. The front of the frame is supported by wheels 6, connected with a tongue 7, by which the apparatus may be drawn, and the rear of the machine is supported by wheels 8, fixed to an axle 9, on which are fixed two pinions 10. Only one of the pinions 10 is shown. The pinions 10 respectively mesh with pinions 11, carried on a shaft 12, held by boxes 13 to the top of the beams 4 and at the rear thereof. Standing, respectively, on the beams 4 are pedestals 14, in the upper end of which a shaft 15 is revolubly mounted. The shaft 15 carries four radial blades 16, which are located between the pedestals 14 and the beams 4 and are capable of turning revolubly in their bearings. The shaft 15 carries a sprocket-wheel 17, over which a chain 18 passes. The chain 18 also passes over a sprocket-wheel 19, fixed on the shaft 12. By these means the structure composed of the shaft 15 and the blades 16 is turned continuously as the machine is in motion. Each blade 16 is provided with a chute formed of

sheet metal and having a diagonal bottom 20 running throughout the length of the blade. One edge of each bottom 20 is bounded by the corresponding blade 16, and the second edge of each bottom 20 is bounded by a side wall 21, braced by a plate 22, running to the corresponding blades 16. These chutes receive the snow and deflect the same laterally to a funnel 23 at one side of the wheel. At the left-hand side of the machine are walls 24 and 25. The walls 24 and 25 stand vertically on the left-hand beam 4 and have downwardly and outwardly inclined outer faces, so as to correspondingly slant the funnel 23, as indicated by the shaded lines in Fig. 2. The arrow in Fig. 1 indicates the direction in which the wheel revolves, and as this revolution is carried on the funnel 23 receives the snow from the chutes and dumps the same in a windrow at the side of the apparatus.

The outer end of each blade 16 carries a bucket. The buckets are each composed of a heavy bottom 26 with an outer side wall 27 and end walls 28. Fixed to each blade 16 are two cleats 29, against which the buckets bear when the buckets are in position to lift the snow. As the buckets turn with the wheel and when the buckets reach the upper portion of the wheel the buckets are dumped so as to throw the snow into the chutes. This is done by means of two rearwardly-extending horizontal arms 30, respectively carried at the upper end of standards 31, rested, respectively, on the front ends of the beams 4 and braced at their upper ends by a cross-bar 32. The end plate 28 of each bucket carries an antifriction-roller 33, with which the arms 30 respectively engage. The arms 30 serve to throw the buckets downwardly toward the chutes, as Figs. 1 and 3 show, whereupon the snow gathered by the buckets when the buckets are at the lower side of the wheel is thrown into the chutes and next into the funnel 23. The buckets have a transverse extent equal to the width of the blades 16.

In order to increase the area covered by the machine, I provide a diagonal scoop-blade 34, rigidly secured to the right-hand side of the machine at the front thereof by a horizontal plate 35. This scoop-blade 34 draws the snow inward beneath the machine, whereupon it is taken up by the buckets.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A snow-plow having a vehicle-frame, a wheel mounted on the frame, a diagonal chute carried by the wheel, and a bucket pivotally mounted at the outer end of the chute and receiving the snow and delivering the same into the chute.
2. A snow-plow having a vehicle-frame, a wheel revolubly mounted on the frame, the wheel having a blade running radially, a diagonal chute carried on the blade, and a bucket pivoted to the blade at the outer end of the chute and lifting the snow into the chute, which in turn discharges the snow at one side of the machine.
3. A snow-plow having a vehicle-frame, a wheel mounted on the frame, the wheel having a blade running radially, a chute carried diagonally on the blade, a bucket pivotally mounted at the outer end of the blade and lifting the snow and delivering the same into the chute, and a funnel carried at one side of the machine and in which the chute delivers the snow.
4. The combination of a revolubly-mounted wheel, a chute on the wheel, a bucket pivoted at the outer end of the chute and receiving the snow, and means for tilting the bucket as the bucket rises, whereby to dump the bucket into the chute.
5. The combination of a vehicle-frame, a wheel revolubly mounted on the frame, a chute carried by the wheel, a bucket pivotally

carried at the outer end of the chute, and a stationary arm with which the bucket engages, whereby to dump the bucket into the chute.

6. The combination of a frame, a wheel revolubly mounted therein and having a diagonal chute, a bucket pivotally mounted on the wheel at the outer end of the chute, and a member held stationary by the frame and engaged by the bucket as the same rises with the wheel whereby to dump the contents of the bucket into the chute.

7. The combination with a frame, of a wheel mounted thereon and having a chute, a bucket pivoted on the wheel at the outer end of the chute, and a member carried by the frame and engaged by the bucket whereby to dump the contents of the bucket into the chute as the bucket rises with the wheel.

8. The combination of a vehicle, a wheel mounted thereon, a chute carried by the wheel, the chute running inward on the wheel and being disposed diagonally, and having its discharge end at the center of the wheel, and a bucket at the outer end of the wheel, the bucket serving to lift the snow into the chute, and the chute serving to convey the snow inward to the center of the wheel and then discharge the snow from one side of the wheel.

HENRY VILLA GUERTIN.

Witnesses:

GEO. A. REED,  
SAMUEL CLARKE.