Aug. 16, 1932. C. A. MILHON 1,872,484

HIGHWAY SNOWPLOW

Filed April 11, 1930 2 Sheets-Sheet 1

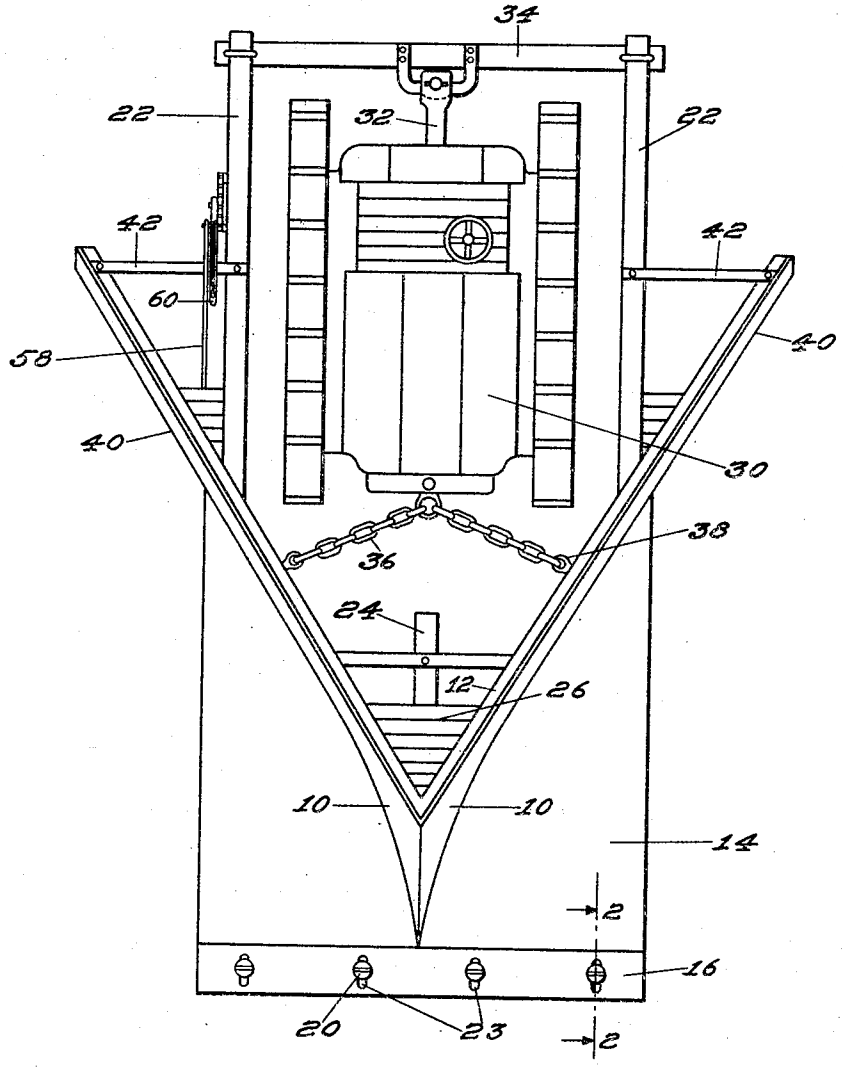


FIG. 1

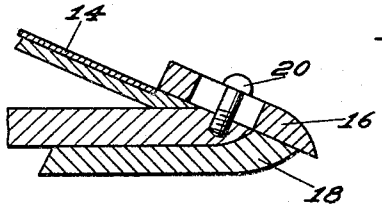


FIG. 2

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HIGHWAY SNOWPLOW

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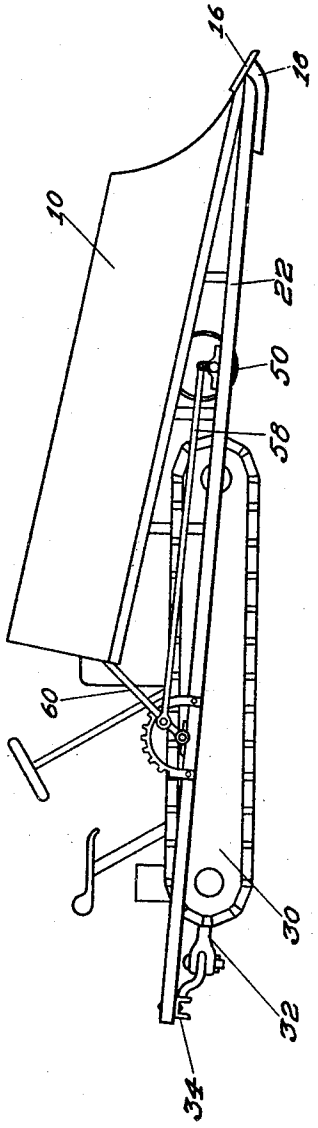


FIG. 3

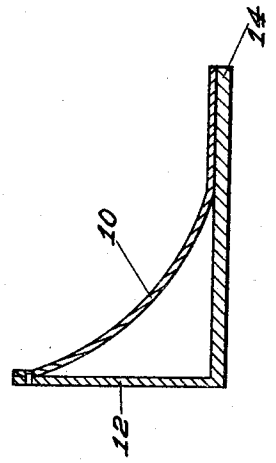


FIG. 5

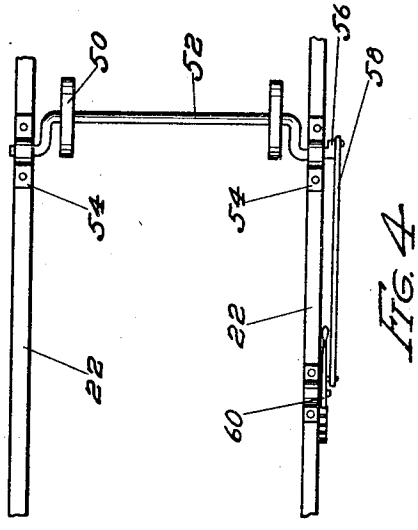


FIG. 4

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UNITED STATES PATENT OFFICE

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HIGHWAY SNOWPLOW

Application filed April 11, 1930. Serial No. 443,355.

This invention relates to an improved highway snow plow and has for one of its principal objects the provision of such a plow particularly adapted to be propelled by or operated with a tractor or the like, and wherein the tractor operates inside the plow.

On of the important objects of this invention is to provide a tractor operated highway snow plow which can be readily and economically driven or propelled by means of an ordinary tractor and so constructed that the plow itself hitches to the tractor draw bar and has guide chains to be attached to the front of the tractor at about the middle of the plow, thereby rendering guiding easy.

Another and further important object of the invention is to provide in a snow plow a mold board fashioned with an angular curving surface so as to eliminate friction to a great extent, the mold board itself having in co-operation therewith a pick-up or scraper blade which is adjustable within certain desired heights from the roadway or street level.

Another and still further important object of the invention is the provision in a highway snow plow which is tractor operated of transporting wheels which may be manually set to remove the weight from the plow runners, these transporting wheels adapted particularly for use when the plow is not in actual snow clearing operation.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a top plan view of the improved tractor snow plow of this invention.

Figure 2 is a detail sectional view of the adjustable scraper blade.

Figure 3 is a side elevation of the plow while in operation.

Figure 4 is a detail view illustrating the construction and operation of the transporting wheels.

Figure 5 is a section of the friction reducing mold board.

As shown in the drawings:

The reference numerals 10 indicate generally the mold boards of the improved snow plow of this invention, the same being preferably of metal and fashioned in an angular curve as best shown in Figures 1 and 5, and joined at the front to form a sharp penetrating point or apex. The mold boards themselves are reinforced and separated by solid upright backs 12 of planking or the like, these backs being angularly positioned upon the rear V-shaped edges of a scraper board or the like 14 which extends completely across the width of the plow, this width being variable within certain desirable limits. The forward edge of the scraper board is fitted with a scraper blade 16 having a relatively sharp penetrating edge and mounted on the metal runners 18, the blade itself being adjustable by means of the fact that its securing screws 20 are positioned in the slots 23 formed in the blade as best shown in Figures 1 and 2. Therefore, when the edge of the blade becomes worn down, it may be moved forwardly, and likewise the effective edge of the blade may be raised or lowered with respect to the road level as desired.

The mold boards, scraper boards, and the like are positioned upon two main push-bars 22 which extend the complete length of the plow, and there is also a third or middle reinforcing push-bar 24 as best shown in Figure 1. Around this push-bar and across the two main push-bars 22 is built a platform or the like 26 as best shown in Figure 1, which extends for a certain distance back of the prow of the plow.

As best shown in Figures 1 and 3, a tractor or the like 30 is adapted to be placed inside the plow between the main push-bars 22, and the draw-bar 32 of the tractor may be hitched by suitable or convenient means to a rear cross-bar 34 which forms part of the plow and connects the rear ends of the two main push-bars 22. For the purpose of proper guidance, the front of the tractor is connected by means of guide chains 36 to staples or the like 38 fastened in proper position be-

hind the mold boards 10 and at about the middle of the plow's length so as to afford proper guidance.

The mold boards 10 are themselves extended into projecting wings or the like 40 which extend for a suitable distance beyond the side edges of the plow and are reinforced and maintained in position by means of brackets or braces 42. This acts to throw the snow completely out of the path of the tractor, thereby leaving a clear space for operation of the tractor treads.

In order that the push-bars of the plow may be elevated from a road surface when the same is not in actual snow clearing use but is being transferred from place to place, a set of wheels 50 is provided, these wheels being mounted upon an axle 52 which is offset as best shown in Figure 4, the offset ends being positioned in suitable bearings 54 or the like mounted on the push-bars, and one end of the axle projects outwardly beyond the push-bar 22, and is bent into a crank shape as illustrated at 56, the end of the crank being pivotally connected to a link 58, the other end of which is mounted on an operating lever 60 whereby the wheels may be dropped down into contact with the ground, thereby raising the forward end of the plow from the road.

It will be evident that herein is provided a tractor driven highway snow plow which embodies many improvements over the types now in use. The plow itself can be powered by any make of tractor, as it is readily adaptable for suitable connections therewith, and the angular curvature or shaping of the mold board results in the least possible frictional contact between the snow and the surface of the board itself, while at the same time effectively removing the same to the side of the road and without any danger of the snow becoming piled up on the mold board itself or underneath the same.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

1. A snow plow, including a pair of angularly positioned concavely curved mold boards, the mold boards being joined at their forward ends and separated at their rear ends to form a snow penetrating and dividing prow, and a scraper board mounted beneath the mold board assembly and extending transversely across the forward end of same to a width of approximately two-thirds of the total distance separating the rear ends of the mold boards, together with an adjustable scraper blade mounted on the forward end of the scraper board, runners for the scraper board, and push-bars supporting the assembled mold boards, scraper board and scraper blade, and a hitch bar connecting the rear ends of the push-bars, together with guide chains mounted on the mold boards adjacent their middles.

2. A snow plow, including a pair of angularly positioned concavely curved mold boards, the mold boards being joined at their forward ends and separated at their rear ends to form a snow penerating and dividing prow, and a scraper board mounted beneath the mold board assembly and extending transversely across the forward end of same to a width of approximately two-thirds of the total distance separating the rear ends of the mold boards, together with an adjustable scraper blade mounted on the forward end of the scraper board, runners for the scraper board, and push-bars supporting the assembled mold boards, scraper board and scraper blade, and a hitch bar connecting the rear ends of the push-bars, together with guide chains mounted on the mold-boards adjacent their middles, the hitch bar including means for connection to the draw bar of a tractor, and the guide chains including means for connection to the central front end of the tractor.

3. A snow plow, including a pair of angularly positioned concavely curved mold boards, the mold boards being joined at their forward ends and separated at their rear ends to form a snow penerating and dividing prow, and a scraper board mounted beneath the mold board assembly and extending transversely across the forward end of same to a width of approximately two-thirds of the total distance separating the rear ends of the mold boards, together with an adjustable scraper blade mounted on the forward end of the scraper board, runners for the scraper board, and push-bars supporting the assembled mold boards, scraper board and scraper blade, and a hitch bar connecting the rear ends of the push-bars, together with guide chains mounted on the mold boards adjacent their middles, the hitch bar including means for connection to the draw bar of a tractor, and the guide chains including means for connection to the central front end of the tractor, and a set of supporting wheels for transporting the plow when not in snow clearing operation.

4. A snow plow, including a pair of angularly positioned concavely curved mold boards, the mold boards being joined at their forward ends and separated at their rear ends to form a snow penetrating and dividing prow, and a scraper board mounted beneath the mold board assembly and extending transversely across the forward end of same to a width of approximately two-thirds of the total distance separating the rear ends of the mold boards, together with an adjust-

able scraper blade mounted on the forward end of the scraper board, runners for the scraper board, and push-bars supporting the assembled mold boards, scraper board and scraper blade, and a hitch bar connecting the rear ends of the push-bars, together with guide chains mounted on the mold boards adjacent their middles, the hitch bar including means for connection to the draw bar of a tractor, and the guide chains including means for connection to the central front end of the tractor, and a set of supporting wheels for transporting the plow when not in snow clearing operation, and means for manually shifting said wheels into and out of plow supporting position.

In testimony whereof I affix my signature.

CHARLES A. MILHON.