

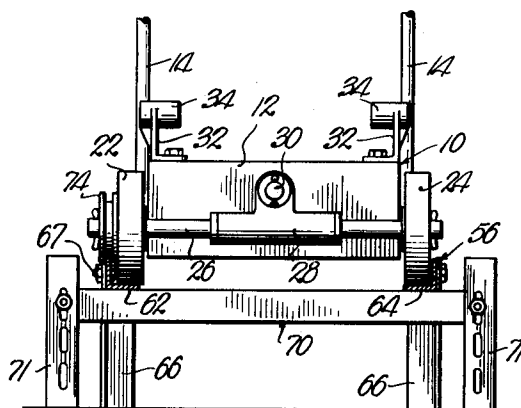
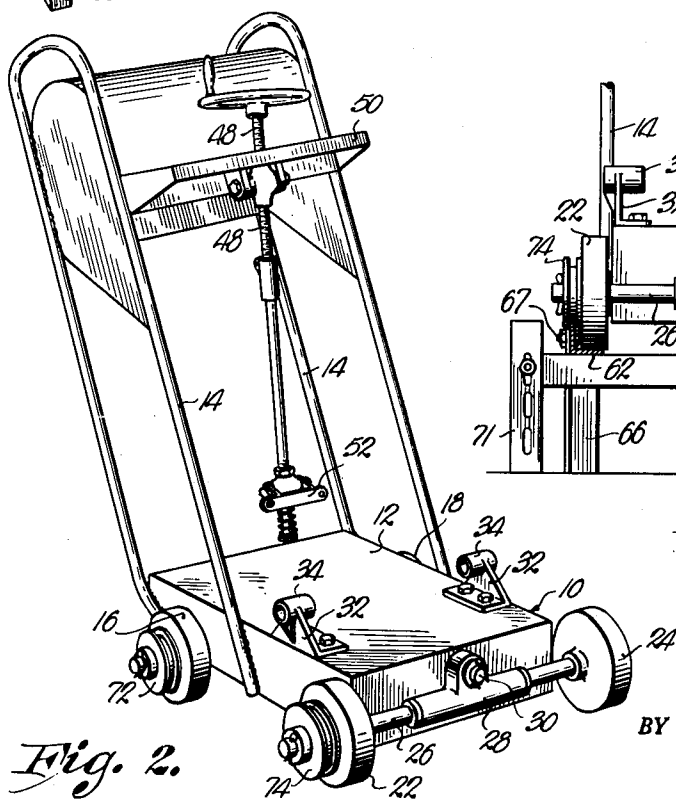
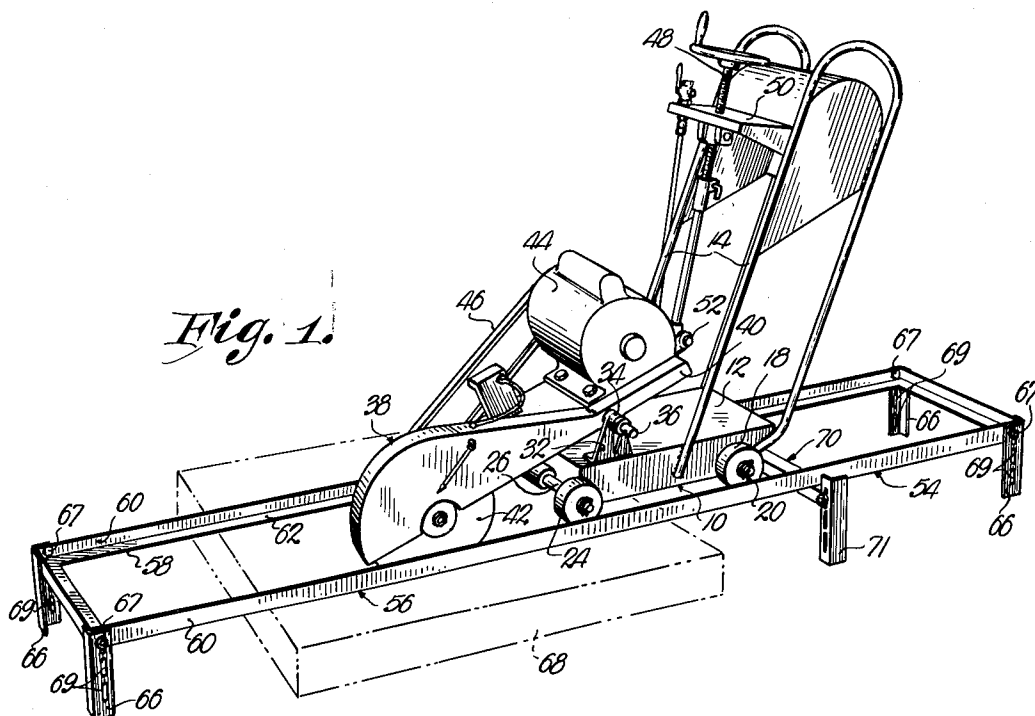
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2,736,311

TRACK MOUNTED CUTTER FOR CONCRETE SLABS AND THE LIKE

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TRACK MOUNTED CUTTER FOR CONCRETE SLABS AND THE LIKE

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1 Claim. (Cl. 125—14)

This invention relates to masonry equipment and particularly to cutting structure for use with relatively heavy, bulky slabs not easily moved about, the primary object being therefore, to provide cutting apparatus adapted to be easily positioned in cutting relationship to the rock-like cementitious slab, thereby avoiding the necessity of handling or otherwise manipulating the latter.

This is a continuation in part of my co-pending application Serial No. 180,592, filed August 21, 1950, now U. S. Patent No. 2,673,725, and relating to Power Driven Cutting Machine for Pavement and the Like, and has for its most important object the provision of means to support and guide the machine therein set forth, thereby adapting the same for cutting slab-like articles not easily moved about.

Another important object of this invention is to provide a slab cutter in the nature of a mobile vehicle having a rotating cutter disc thereon, together with a guide track therefor adapted not only to receive the wheels of the vehicle, but to receive and therefore guide the vehicle by means of complementary sheave and guide rail structure.

Another important object hereof is the provision of a track-mounted vehicular slab cutter including a pair of spaced, parallel, elongated members, each being L-shaped in cross-section whereby to present tracks for receiving the wheels of the vehicle and to also present a guide rail for receiving one or more grooved sheaves that are rotatably mounted on the vehicle.

Other objects will be made clear or become apparent as the following specification progresses, reference being had to the accompanying drawing, wherein:

Figure 1 is a perspective view of a track-mounted cutter for concrete slabs and the like made pursuant to the present invention.

Fig. 2 is a perspective view of the vehicle entirely removed from its supporting track and having the demountable cutter assembly thereof, together with the prime mover, entirely removed; and

Fig. 3 is a vertical, cross-sectional view through the track and guide means showing the vehicle fragmentarily in front elevation with the cutter assembly therefor, removed as in the case of Fig. 2.

As in my co-pending application above mentioned, the cutter hereof includes a mobile vehicle broadly designated by the numeral 10, including a box-like frame 12 having a pair of spaced U-shaped handle bars 14 extending upwardly and rearwardly therefrom.

The vehicle 10 is rendered mobile through the medium of a pair of rear wheels 16 and 18 provided with a common axle 20, and a pair of front wheels 22 and 24 having a common axle 26 secured to the frame 12 by means of a tubular bearing 28 having pivotal connection with the frame 12 by means of a pin 30.

A pair of spaced, upstanding brackets 32 on the frame 12, are each provided with bearing means 34 for receiving an elongated shaft 36. A cutter assembly, broadly

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designated by the numeral 38, is swingably secured to the frame 12 through the medium of the shaft 36. The assembly 38 per se forms no part of the present invention and may take much the same form as that forming the subject matter of my United States Letters Patent No. 2,338,318, of January 4, 1944. Accordingly, assembly 38 includes a platform 40 having shaft 36 secured thereto, a rotatable cutter disc 42 on the platform 40, and a prime mover 44 carried by the platform 40 and operably couples with the disc 42 through the medium of a continuous belt or the like 46. It is therefore, seen that the entire unit 38 may be rendered interchangeable between the cutter of my patent aforementioned and the slab cutter of the present invention.

Platform 40 is tilted through the medium of a screw 48 pivotally mounted on a shelf 50 carried by the handle bars 14 and pivotally connected with the platform 40 by means of a bracket 52. A combination supporting track and guide rail assembly is shown in Figs. 1 and 3 of the drawing, and broadly designated by the numeral 54.

Assembly 54 may be conveniently and inexpensively produced entirely from angle iron presenting a rectangular support 56 having a rectangular opening 58 in the bottom wall thereof and provided with a continuous, rectangular, vertical flange 60 at the periphery thereof. Thus, the longitudinal members of the support 56 are L-shaped in cross-section in the manner illustrated in Fig. 3 of the drawing, presenting a pair of spaced, parallel, horizontal tracks 62 and 64 for receiving the wheels 16—22 and 18—24 respectively. Four legs 66, rendered adjustable by nut and bolt means 67 and slots 69, hold the support 56 in an elevated condition relative to a slab 68 to be cut by rotating disc 42. A U-shaped brace 70 having adjustable legs 71 disposed to clear shaft 36 at all times, may be provided intermediate the ends of the support 56.

The wheels 16 and 22 are provided with a grooved sheave 72 and 74 respectively, mounted thereon for rotation therewith or for free rotation on the respective corresponding axles 20 and 26. The two sheaves 72 and 74 are adapted to overlie the uppermost edge of that portion of the flange 60 on the track 62 in looped relationship thereto as illustrated in Fig. 3 of the drawing. While it is preferred that the sheaves 72 and 74 do not act as supports for the machine, they may engage the uppermost edge of the flange 60 is desired.

It is now seen that the entire unit may be moved about freely as desired and positioned in the manner illustrated by Fig. 1 of the drawing, above a slab 68 to be cut without the necessity of moving the latter. As soon as the operator determines the line of cut to be made in the slab 68, motor 44 may be energized, the disc 42 positioned to the correct depth by manipulating the screw 48 and the vehicle 10 moved along the tracks 62 and 64 as the disc 42 cuts a kerf or completely severs the slab 68 into a pair of sections. During the advancement of the vehicle 10 by the operator through grasping of the handle bars 14, the two sheaves 72 and 74 accurately and effectively guide the machine along a truly rectilinear path of travel.

The way in which the front axle 26 swings on the pin 30 is fully covered by my co-pending application above identified, and it is now further seen that through such construction, the disc 42 will never become misaligned and, therefore, bind within the kerf or groove being cut in the slab 68, all because of the self-aligning feature presented by the front end mounting.

Details of construction may vary within the spirit of this invention and, therefore, it is desired to be limited only by the scope of the appended claim.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

For a pavement cutting machine having a frame, a pair of spaced axles attached to the frame, a pair of wheels on each axle respectively, and a rotatable cutter disc operably carried by the frame, an assembly adapting said machine for use as a slab cutter comprising a continuous, rectangular support including a pair of elongated, longitudinal members having an L-shaped, cross-sectional contour, presenting an upstanding flange and an inwardly- 10 extending track adapted to receive said wheels between the flanges, and cross elements joining the members at the ends thereof; a plurality of legs; structure joining the legs to the support for holding the same elevated above a slab to be cut; and a sheave on one end of each axle. 15 respectively, the diameters of the sheaves being less than the diameters of the wheels and said sheaves being provided with peripheral grooves receiving the uppermost

edge of one of said flanges when the wheels are riding on the tracks, said structure including bolt and nut means and a plurality of bolt-receiving slots in the legs whereby the height of the support may be varied to accommodate slabs of differing thicknesses.

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