

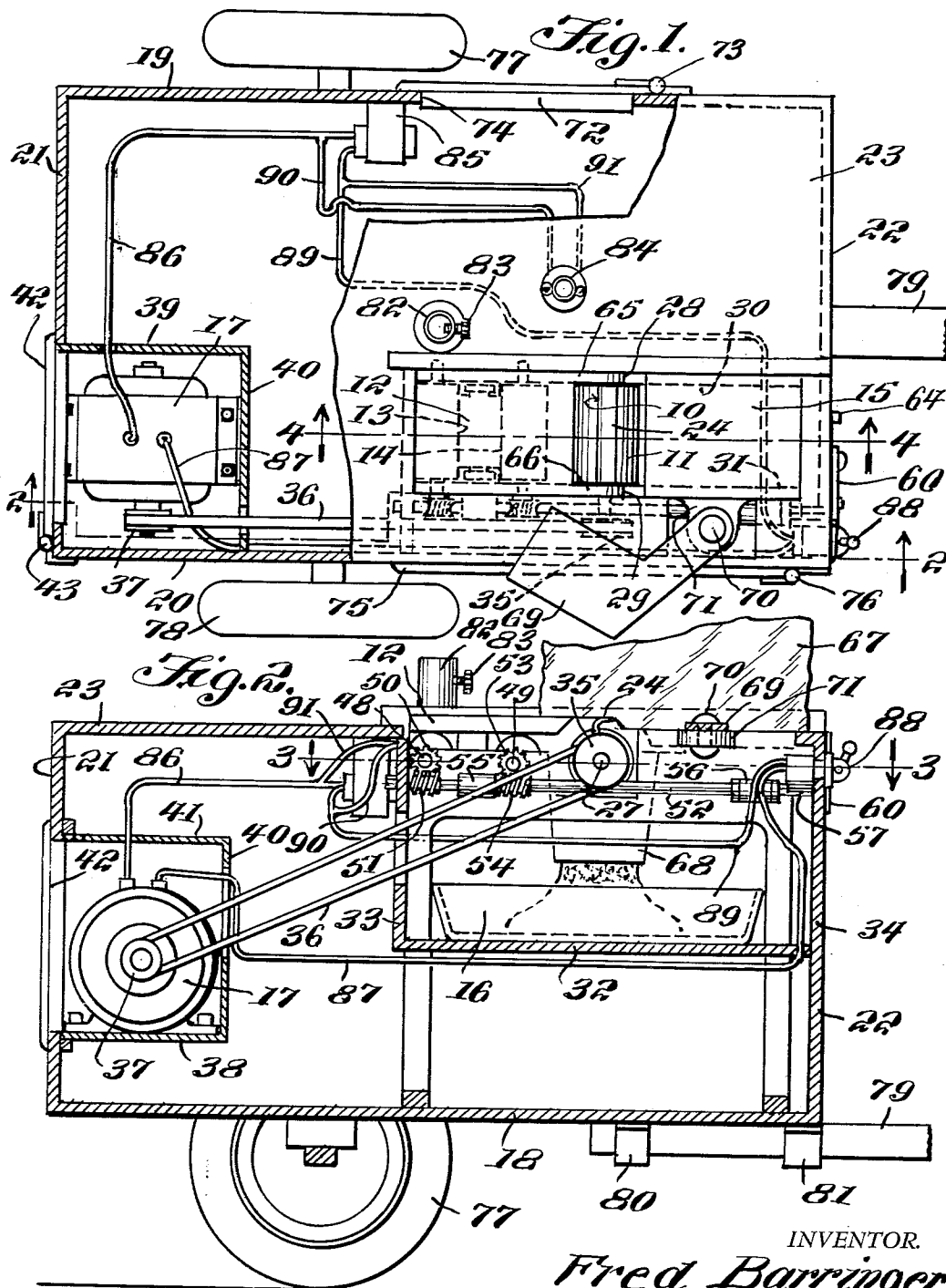
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F. BARRINGER
ICE SHAVING MACHINE

2,716,003

Filed Oct. 2, 1951

2 Sheets-Sheet 1



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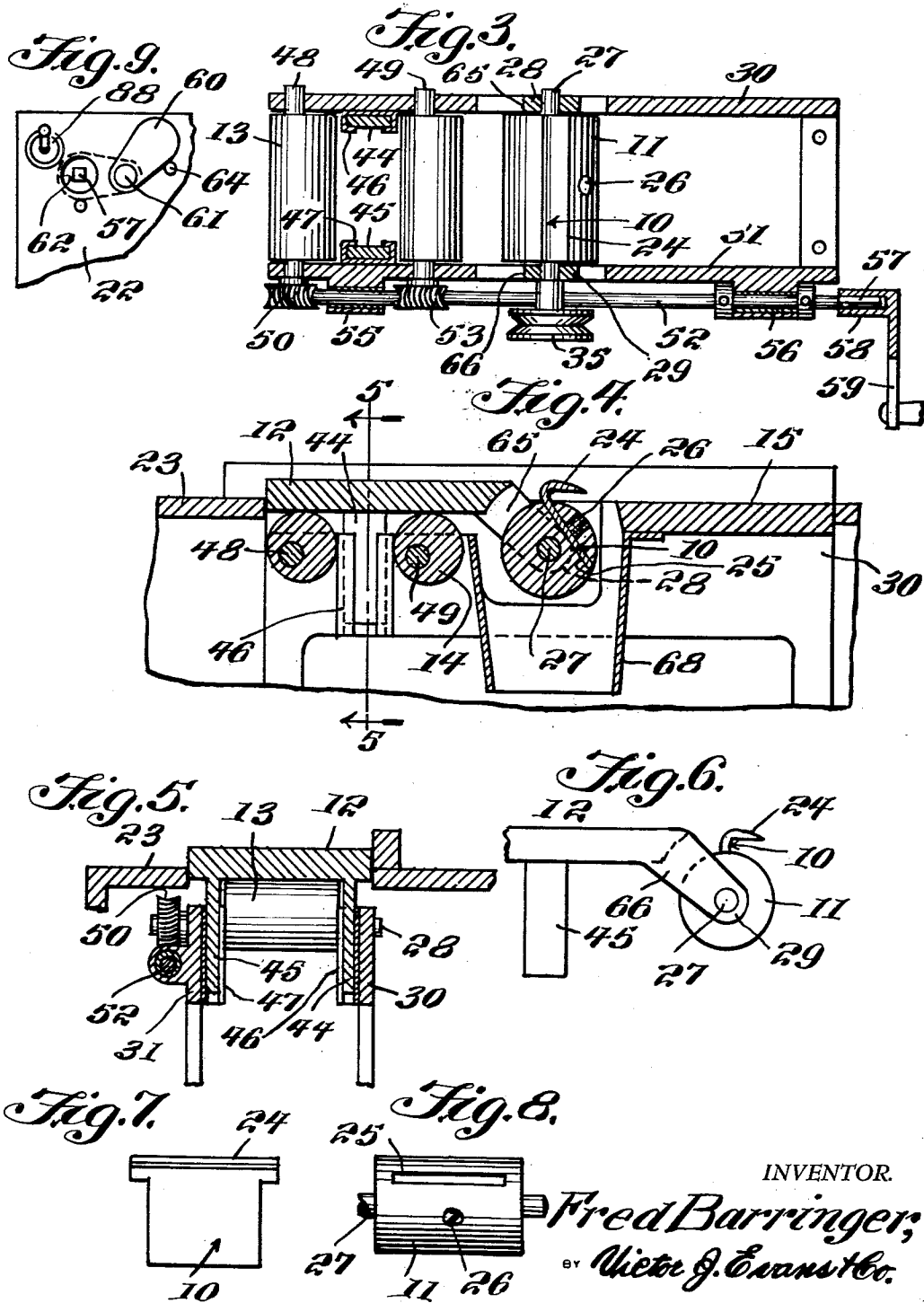
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ICE SHAVING MACHINE

Fred Barringer, Mooresville, N. C.

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1 Claim. (Cl. 241—100)

This invention relates to machines for shaving ice, and in particular a machine having a motor driven rotary cutter with means for adjusting the position of the cutter in relation to a block of ice whereby the machine is adapted to produce a fine snow-like product or a coarse product as may be desired.

The purpose of this invention is to provide a portable snow ball making machine that may be towed in the form of a trailer with a motor vehicle and that may readily be set up for use for making fine ice for snowballs and the like.

Various types of ice shaving machines have been provided for use in ice plants and the like, however, as finely shaved ice melts together in a comparatively short time it is desirable to provide portable ice shaving machines whereby ice may be shaved as desired and at a location where the ice is required. With this thought in mind this invention contemplates a box like housing mounted on wheels having an adjustable and a stationary ice holding platform with a rotary shaver positioned in a gap between the platforms and with the rotary shaver driven by a motor mounted in the housing.

The object of this invention is, therefore, to provide means for forming a portable ice shaver whereby ice may be shaved rapidly and may be shaved in a location where the ice is required.

Another object of the invention is to provide a portable ice shaving machine in which means is provided for adjusting the machine for fine or coarse ice as may be desired.

A further object of the invention is to provide a portable ice shaving machine which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a housing having a stationary platform and a vertically movable platform, with means for adjusting the elevation of the movable platform and with a motor driven rotary cutter positioned between the platforms and adapted to shave ice carried by the platforms.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a plan view illustrating the portable ice shaving machine with parts broken away and with the motor mounted in the housing.

Figure 2 is a longitudinal section through the ice shaving machine taken on line 2—2 of Figure 1.

Figure 3 is a sectional plan through the machine taken on line 3—3 of Figure 2.

Figure 4 is a longitudinal section through the machine taken on line 4—4 of Figure 1, showing the parts on an enlarged scale.

Figure 5 is a cross section through part of the machine taken on line 5—5 of Figure 4.

Figure 6 is a detail showing one of the arms for connecting the movable platform to a shaft of a rotary cutter.

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Figure 7 is a detail illustrating the cutter blade.

Figure 8 is a detail showing the blade mounting cylinder with the blade removed from the blade holding slot therein.

Figure 9 is a detail illustrating a cover for the outer end of the platform adjusting shaft.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved ice shaving machine of this invention includes a cutter blade 10 mounted in a cylindrical hub 11, a vertically movable platform 12, cams 13 and 14 for adjusting the elevation of the platform 12, a stationary platform 15, a tray 16 for receiving shaved ice, a motor 17 for rotating the cutter, and a box like housing having a base 18 with side walls 19 and 20, end walls 21 and 22, and a top 23.

The cutter is formed as illustrated in Figures 4 and 7 with an arcuate cutting edge 24, and the blade is positioned to be inserted in a slot 25 in the hub 11 in which the blade is secured by a set screw 26. The cylinder or hub 11 is mounted on a shaft 27 which is journaled in bearings 28 and 29, positioned in panels 30 and 31 of an ice receiving compartment having a base 32 and end walls 33 and 34.

The shaft 27 is provided with a pulley 35 over which a belt 36 extends from a pulley 37 on the motor 17.

The motor is enclosed in a compartment having a base 38, side and end walls 39 and 40, respectively, an upper panel 41, and a door 42 which is hinged to the housing by hinges 43.

The stationary platform 15 is mounted on the upper edges of the side walls 30 and 31 and the movable platform or table 12 is slidably mounted by guides 44 and 45, that are mounted to slide vertically in vertically positioned sockets 46 and 47 on the walls 30 and 31.

The cams 13 and 14 are mounted on shafts 48 and 49, respectively and the shaft 48 is provided with a worm gear 50 that meshes with a worm 51 on a shaft 52, and the shaft 49 is provided with a similar worm gear 53 that meshes with a worm 54 also on the shaft 52. The shaft 52 is journaled in bearings 55 and 56 and an extended square end 57 is positioned to receive a hub 58 of a hand crank 59.

A cover plate 60, pivotally mounted on the housing with a pin 61, is positioned to cover the opening in the housing as indicated by the numeral 62 and through which the hub 58 extends, when the hub is removed, thereby providing means for closing the opening. Stop pins 63 and 64 are provided on the housing limiting the movement of the cover plate 60.

The movable platform or table 12 is provided with arms 65 and 66 in the ends of which the bearings 28 and 29 of the cutter shaft 27 are positioned and with the cutter carried by the movable platform in this manner the knife is adjustable to make a thin or a thick cut from a block of ice as indicated by the numeral 67, positioned on the stationary platform 15.

The shaved ice drops downwardly through a spout 68 positioned below the cutter and when, not in use, the cutter is covered by a plate 69 that is pivotally mounted by a pin 70 on a lug 71 on the side wall 31 of the inner housing positioned around the cutting knife.

The side wall 19 of the housing is provided with a door 72 that is mounted on the housing with hinges 73 and which provides a closure for an opening 74.

The opposite side of the housing is provided with a door 75 that is mounted on the housing with hinges 26 and the door 75 is positioned to form a closure for an opening through which the tray 16 may be removed when it is desired to use the fine ice shaved by the machine.

The housing is provided with wheels 77 and 78 and a tongue 79 is removably mounted in sockets 80 and 81 on the bottom or lower side of the housing.

It will be understood that the housing may be of any suitable design and may be provided with accessories to facilitate using and particularly flavoring snow balls produced by the machine, and in the design, particularly as illustrated in Figures 1 and 2, the housing is provided with a socket 82 in which an umbrella, for covering the machine, may be held. The socket is provided with a set screw 83, light socket 84 is also positioned at a convenient point on or in the housing.

With the parts as shown in Figure 1 an electric socket 85 is provided in the housing, into which a light cord plug may be inserted for supplying current to the machine, and a motor may be connected to the socket by wires 86 and 87. The wire 87 extends to a switch 88, one side of which is connected to the socket 85 by a wire 89. The light 84 is connected to the wires 86 and 89 by the wires 90 and 91 respectively.

With the parts arranged in this manner a block of ice positioned on the stationary platform 15 is readily shaved to produce very fine ice, such as snow in the tray 16 and by adjusting the table or platform very fine or coarse ice may be produced as desired.

It will be understood that modification may be made in the design or arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

An ice shaving machine comprising a housing 30

mounted on wheels, a stationary platform positioned in said housing, a vertically movable platform positioned in said housing and spaced from the stationary platform providing a space between said platforms, a rotary cutter positioned in the space between the platforms, an ice receiving tray positioned below the cutter, means for adjusting the elevation of the movable platform, and means for actuating the cutter, cam rollers mounted in said housing and supporting said vertically movable platform, said cam rollers being adjustable by hand cranks through worms and gears whereby the elevation of said platform is adjusted, arms extended from the vertically movable platform and said rotary cutter being journaled in said arms whereby the movable platform and rotary cutter are adjustable in relation to the stationary platform.

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