

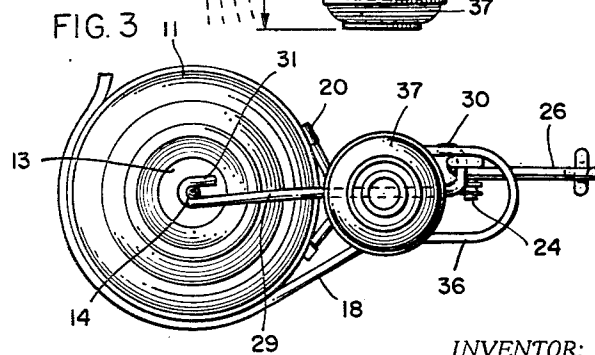
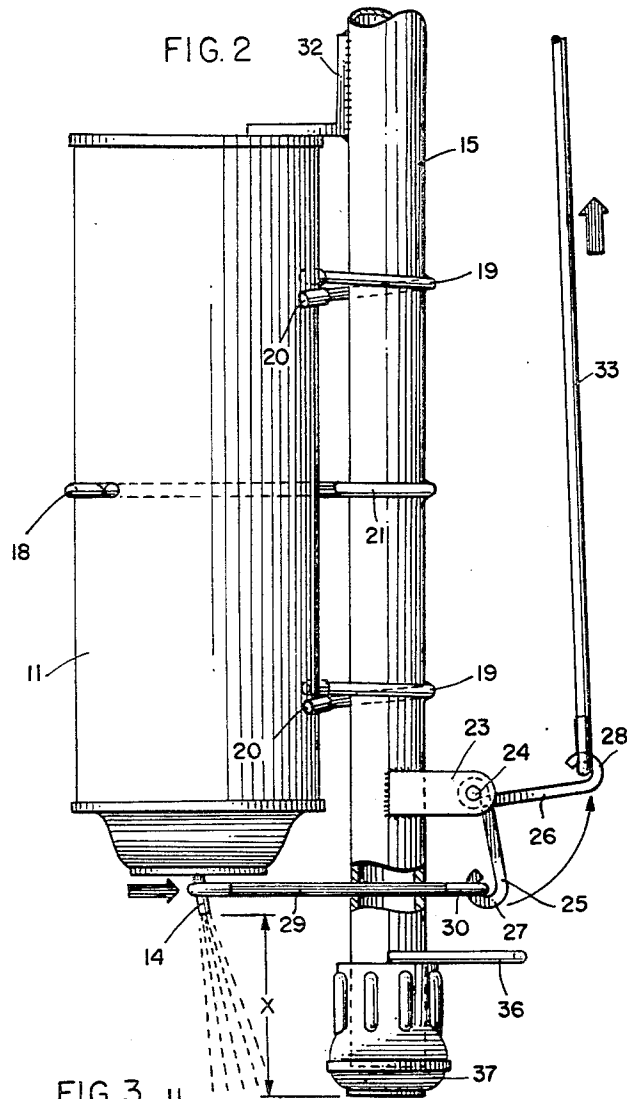
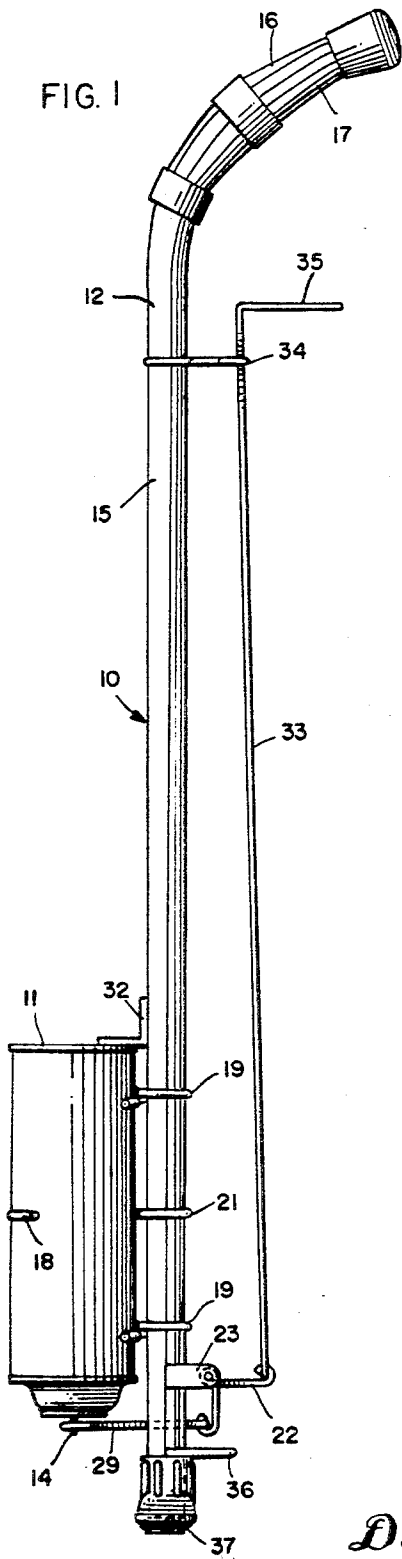
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MARKING DEVICE

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3,485,206

MARKING DEVICE

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1 Claim

ABSTRACT OF THE DISCLOSURE

A marking device for use with pressurized spray cans. The spray can is filled with a marking material and is equipped with a transversely movable valve which is operable to release the marking material when the valve is pointed in a generally downward direction. The spray can is releasably mounted adjacent one end of an elongated holder, and a bell crank is pivotally mounted on the holder adjacent the valve. A link connects one of the lever arms of the bell crank to the valve, and a valve actuator extends from the other lever arm toward the other end of the holder. The other end of the holder may be equipped with a handle, and longitudinal movement of the valve actuator produces transverse movement of the link and operates the valve.

BACKGROUND OF THE INVENTION

This invention relates to a marking device, and, more particularly, to a marking device for marking sidewalks, streets, soil, grass, and the like.

It is frequently desirable to produce a mark on sidewalks, soil, and other walking surfaces. For example, one may wish to mark the location of property lines, underground pipes or cables, planting areas for nursery stock, etc. While marking devices for such purposes have been provided in the past, these devices have generally required the operator to bend over in order to properly position and apply the mark. It will be appreciated that such a procedure can be very time consuming and tedious if a large area is to be marked.

Another problem of many prior art devices is that the marking material frequently comes into contact with the operator's hands. Since the marking material is often relatively indelible to provide a somewhat lasting record, difficulties in removing the material from the skin or clothing of the operator can be appreciable.

SUMMARY OF THE INVENTION

The inventive marking device can be operated by a person in a standing position. The elongated holder permits the spray can to be held away from the operator's hands and clothing, and the spray can is automatically and accurately positioned a selected distance from the surface to be marked.

DESCRIPTION OF THE DRAWING

FIG. 1 is an elevational side view of the inventive marking device.

FIG. 2 is an enlarged fragmentary view of FIG. 1 showing the valve in the actuated position; and

FIG. 3 is a bottom plan view of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, the numeral 10 designates generally a marking device which includes a pressurized spray can 11 and a holder 12.

The spray can 11 is a conventional generally cylindrical pressurized aerosol-type can which is filled with a paint, dye, powder, or other marking material. The spray can 11 is provided with a valve assembly 13 (FIG.

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3) which includes a tubular nozzle 14. The valve assembly 13 is of the type that is operable by tilting the nozzle 14 sideways or transversely of the can, and the can does not include the conventional dip tube usually connected with the valve so that fluid marking material contained within the can 11 is discharged only when the can is pointed in a generally downward direction.

The holder 12 includes an elongated tubular pole 15 which is advantageously curved or bent at one end to form an angularly extending handle 16, which may be provided with a rubber grip 17. The can 11 is releasably secured near the lower end of the pole 15 by means of a resilient C-shaped hook 18 which presses the can against a pair of can supports 19. Each can support 19 is looped about the pole 15, and the ends thereof are crossed to form a generally V-shaped trough which receives the can. Preferably, the ends of the can supports 19 are provided with rubber caps 20 which firmly grip the sides of the can and prevent scratching thereof. The hook 18 is similarly attached to the pole 15 by looping one end thereof about the pole as at 21. However, while the can supports are preferably firmly clamped or welded into place, the hook 18 is advantageously rotatable about the pole 15.

A bell crank 22 is pivotally mounted on the bar 23 by means of a pin 24. The bar 23 may be welded to the pole 15 and extends tangentially from the pole 15 to position the bell crank approximately diametrically opposite the valve 13 with respect to the pole. Bell crank 22 is seen to provide a pair of lever arms 25 and 26 provided with hooked ends 27 and 28, respectively. Link 29 passes through aligned openings in the wall of the pole 15 (see FIG. 2) and is provided with hooked end 30, which engages the hooked end 27 of lever arm 25, and hooked end 31 which engages nozzle 14.

L-shaped stop 32 is secured to pole 15 and is spaced from link 29 so that when the spray can 11 is engaged by hook 18 and is pushed against the stop, the nozzle 14 will be properly positioned for engagement with the link 29.

The hooked end 28 of the other lever arm 26 of the bell crank engages the hooked end of actuator rod 33 which passes through eye hook 34 secured to the pole adjacent the handle 16 of the holder. The upper end of the actuator arm 33 may be provided with a hook or trigger 35 so that it may be pulled by the operator. It is thus seen that the bell crank 22 and the link 29 serve as connecting means between the actuator and the valve.

C-shaped loop 36 is attached to the pole 15 near the lower end and enables a circle or arc to be readily marked. A cord, string, or the like is merely tied to the loop 36 and is held stationary a fixed distance from the pole to provide the radius of the circle or arc. The end of the pole may be fitted with a rubber cap 37 to protect the surface to be marked from scratches and to permit the marking device to be used in the manner of a cane while the device is being carried. The rubber cap 37 also provides a frictional engagement between the pole and the surface and decreases the likelihood that the pole may inadvertently be moved from the desired position. It will be observed from FIG. 2 that the lower end of the pole or cane is located a selected distance x below the end of nozzle 14, such distance being predetermined by the manufacturer to achieve the most suitable application of marking material to a ground or floor surface, depending upon the composition of the marking agent, the pressurization of the can, the dimensions and construction of the nozzle, etc. In use of the device, the operator simply holds the cane in generally vertical position with the bottom end cap 37 upon a flat surface to be marked and he is assured that the nozzle will be spaced accurately from the surface for proper application of marking material.

The spray can 11 is readily secured to the holder 12 by inserting the nozzle 14 through the hooked end 31 of

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the link 29 and positioning the side of the can against the crossed ends of the can supports 19 and the bottom of the can against the stop 32. The resilient hook 18 is then pulled outwardly and around the can to hold the can firmly against the can supports 19. Since the usual dip tube provided with spray cans is not present, the can is preferably secured while the valve 14 and the rubber cap 37 are pointed upwardly. Inadvertent opening of the valve while the nozzle is pointed upwardly will release only the propellant and not the marking material, thereby avoiding unpleasant accidents.

The marking device 10 may then be carried by the handle 16 in the manner of a cane to the location that is to be marked. The nozzle 14 is pointed at the surface to be marked, and the trigger 35 is pulled by the forefinger of the hand that is grasping the handle 16. As illustrated by the arrows in FIG. 2, a longitudinal upward movement of the actuator 33 rotates the bell crank 22 about the pin 24 and pulls the link 29 transversely to the right. The nozzle 14 is thereby moved sideways or transversely to open the valve assembly 13 and discharge the marking material. It is to be understood that the degree to which the nozzle 14 has been pulled to the right in FIG. 2, has been exaggerated for the purpose of illustration. Only slight transverse movement of the nozzle is necessary to open the valve, so the marking material will discharge in a direction generally parallel to the axis of the can.

I claim:

1. A marking device comprising an elongated pressurized spray can filled with a marking material, said can having a transversely movable valve operable to release said marking material generally downwardly when said valve is pointed generally downwardly, an elongated holder, first hook means on said holder adjacent one end thereof for releasably securing said can in general alignment with the holder and with said valve pointed away

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from the other end of the holder, said hook means extending generally transversely outwardly from said holder, a bell crank pivotally mounted on said holder adjacent said one holder end, said bell crank and said hook means extending from said holder in generally opposite directions, said bell crank providing a pair of lever arms, an elongated rigid actuator rod connected to one of said bell crank arms and extending longitudinally adjacent said holder toward the other holder end, second hook means on said holder adjacent the other holder end for slidably supporting said actuator rod, a rigid link connected to the other bell crank arm and extending through said holder, said link releasably engaging said valve whereby said valve is movable transversely by longitudinal movement of said actuator rod, a stop secured to said holder and engaging said can whereby said valve is positioned for engagement with said link, said one holder end extending beyond said valve to position said valve a predetermined distance above the surface to be marked when said one holder end rests on the surface, said other holder end terminating in a handle adjacent an end of said actuator rod whereby said handle may be grasped and said actuator rod may be moved longitudinally by one hand.

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