

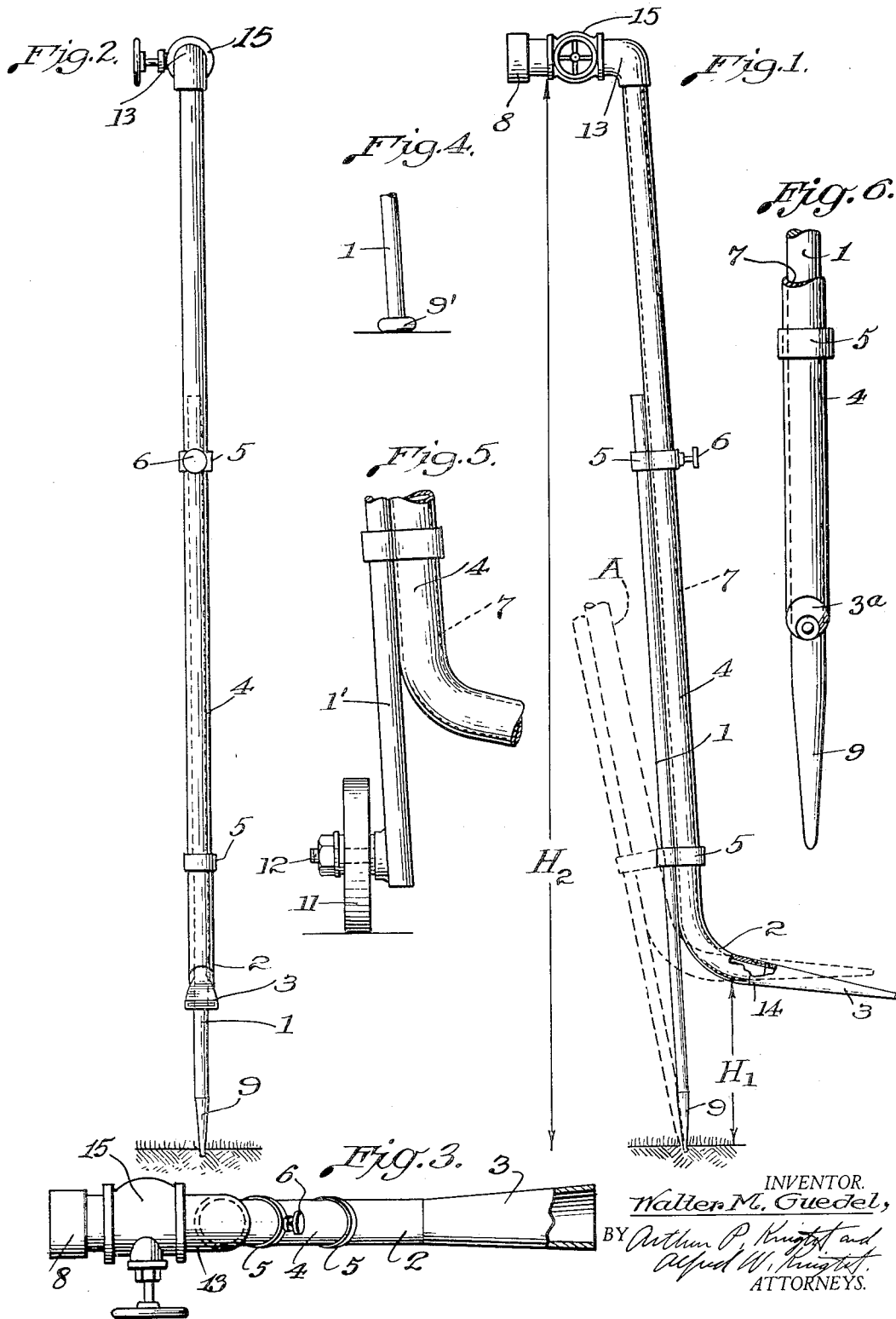
March 6, 1934.

W. M. GUEDEL

1,949,904

DEVICE FOR CLEANING LAWN, YARDS, AND THE LIKE

Filed Sept. 19, 1931



UNITED STATES PATENT OFFICE

1,949,904

DEVICE FOR CLEANING LAWNS, YARDS, AND
THE LIKE

Walter M. Guedel, Los Angeles, Calif.

Application September 19, 1931, Serial No. 563,764

3 Claims. (Cl. 299—111)

This invention relates to a device for use in cleaning leaves, papers and other light debris from lawns, hard dirt or gravel yards, concrete walks, driveways and the like, the present application being a continuation-in-part of my pending application Serial No. 548,589, filed July 3, 1931.

The principal objects of the invention are to provide a device capable of removing such debris from an area to be cleaned, quickly and effectively, with a minimum expenditure of time and effort and water, and which will, at the same time, not only eliminate the raising of dust such as is occasioned by raking or other similar means usually employed for the purpose, but will actually settle the dust.

A further object of the invention is to provide a device which may be used with facility and to proper advantage without requiring stooping or bending.

According to this invention the above objects are attained by utilizing the sweeping action of a stream or jet of fluid, such as water, delivered laterally over the surface to be cleaned and close to such surface, and providing means whereby the operator may rotate the stream or jet about a substantially vertical axis so as to cover a considerable area with such sweeping action, and may also tilt the stream or jet about a substantially horizontal axis so as to vary the angle between the stream or jet and the ground or other surface to be cleaned, without having to stoop and while remaining substantially erect.

A further object of the invention is to provide a device adapted to deliver a stream or jet of fluid in the above described manner and having means for adjusting the height of said stream or jet with respect to the ground level, adjacent the point such stream or jet is discharged from the device.

The device of this invention comprises essentially a vertically elongated supporting member adapted to pivotally engage or rest upon the ground, fluid discharge means rigidly connected to said supporting member and projecting laterally therefrom a short distance above the point of engagement thereof with the ground and in a direction approximately horizontal or slightly inclined from the horizontal and preferably provided with nozzle means at the outer end thereof, operating handle means rigidly secured to said vertically elongated supporting member and disposed at a suitable height to be conveniently grasped by the hand of a person standing substantially erect, and a fluid conduit connected to said fluid discharge means. The device is further

preferably provided with means for vertical adjustment of said fluid discharge means with respect to the ground level and the device preferably further comprises means for detachable connection to a suitable fluid supply means, such as a hose.

The detachable connecting means for connection of the fluid conduit to the supply means may be provided adjacent the upper portion of the supporting member, in which case the fluid conduit may extend downwardly within the supporting member itself, from said detachable connecting means to the fluid discharge means. In an alternative construction, the detachable connecting means may be provided adjacent the lower part of the device, for example adjacent the point of connection of the fluid discharge means to the supporting member, and in this case the fluid conduit may comprise only a short lateral tubular portion connecting said detachable connecting means to said fluid discharge means.

The supporting member may be of any one of a number of shapes, and any one of a number of shapes or types of nozzle means may also be employed. The essential features of the apparatus and the modifications which may be made therein without departing from the spirit of this invention may be better understood by reference to the accompanying drawing.

Referring to the drawing:

Fig. 1 is a side elevation of one form of the invention;

Fig. 2 is a front view of the same;

Fig. 3 is a top view of the same;

Fig. 4 is a view of the lower end of a modified form of supporting member;

Fig. 5 is a similar view of an alternative form of supporting member;

Fig. 6 is a front view of the lower end of one form of the invention, provided with an alternative form of nozzle means;

The apparatus shown in Figs. 1 to 3 inclusive, comprises a supporting member 1, fluid discharge means 2 provided with outlet nozzle 3 at the outer end thereof, upwardly extending tubular handle means 4, lying alongside the supporting member 1 and slidably secured thereto in any suitable manner as, for example, by means of loops 5 secured to or formed integrally with the supporting member 1 and slidably engaging the handle means 4, one of said loops 5 being provided with a set screw or thumb screw 6 whereby said handle may be positioned at any desired elevation with respect to the supporting member. The apparatus further comprises a fluid conduit 7

within said handle means, and detachable connecting means 8 at the upper end of said handle means.

The supporting member is shown as comprising a somewhat pointed elongated rod whose pointed lower end 9 is adapted to rest upon or be inserted in the ground. Various modifications, however, may be made in the shape of the lower end of this supporting member. For example, as shown in Fig. 4, the lower end may be provided with a blunt enlargement 9' adapted to rest upon the ground, or as shown in Fig. 5, the lower end of the supporting member may be provided with a wheel 11 of small diameter, rotatably mounted on a shaft or pivot stud 12 secured to the member 1', the axis of said shaft or stud preferably lying substantially parallel to the direction of discharge of liquid from the nozzle (not shown) so that the wheel may properly resist the thrust resulting from the change in direction of the flow of liquid through the conduit 7 out the discharge opening.

The fluid discharge means 2 may be as shown, formed as the lower end of the tubular handle means bent outwardly somewhat sharply, as shown, the outlet nozzle 3 being threadedly secured to the outer end thereof as shown at 14. The tubular discharge means 2 may extend in a direction approximately perpendicular to the length of the tubular handle means 4, although I have found that good results are obtained by inclining said discharge means slightly downwardly, say from 5° to 15°, from this perpendicular position, so that when the handle means and the supporting member are in vertical position the discharge tube is inclined slightly downward toward its outer end. The length of said discharge tube may be varied as desired but may, for example, be from 2 to 6 inches, dependent upon the particular type of nozzle used, though such length may be varied considerably from these dimensions.

The tubular handle means is provided at its upper end with a bent-over portion 13 on the outer end of which is disposed the detachable connecting means 8. The portion 13 is preferably so bent so as to extend laterally at the opposite side of said handle means from the discharge means 2, so that as a person grasps this laterally projecting portion 13 and holds the device in position in front of him, the general direction of the discharge tube 2 will be away from the person. The length, H_2 , of the handle means is preferably such that it may be conveniently grasped by a person standing erect, such length being, for example, from 2 to 3 feet. If desired, the portion 13 may be provided with valve means 15 for turning on and off, and regulating, the flow of fluid therethrough.

The nozzle 3 at the outer end of the discharge tube 2 may be any suitable size and shape in order to deliver the desired shape or type of fluid jet. For example, the nozzle may have an horizontally elongated opening as shown in Figs. 1, 2 and 3, or may be provided with an opening of substantially circular cross-section, such as that shown at 3a in Fig. 6.

In this form of invention the interior passage of the tubular handle 4 provides the main fluid conduit 7 which communicates at its lower end with the discharge means 2, and the detachable connecting means 8 is preferably adapted to provide connection of the apparatus to any desired fluid supply means such as a garden hose or the like whereby the apparatus may be moved from place to place in use.

In the operation of the above described form of device, the coupling means 8 is connected to a garden hose or other suitable fluid supply means and the operator grasps the device by the upper part of the handle means at the portion 13, and, if desired, the end portion of the hose connected thereto. The supporting member 1 is then placed with the lower end portion 9 in contact with the ground and a supply of fluid to the device is established, causing a jet of water or other fluid to be delivered through the outlet nozzle. The height of the jet above the ground may then be adjusted by loosening the thumb-screw 6 and sliding the handle means upwardly or downwardly along the supporting member 1, and then tightening said screw. This height, indicated at H_1 , is preferably variable from a point substantially level with the ground to a point 6 or 7 inches above the ground. The height of the jet may thus be adjusted to suit different conditions of operation, such as varying length of grass, when used for cleaning lawns.

The device may then be easily rotated about a substantially vertical axis passing through the point of pivotal engagement of the supporting member with the ground and substantially parallel with the handle means, so as to cause the fluid jet to swing through any desired horizontal angle. The vertical axis aforesaid lies substantially along or closely adjacent the tubular handle 4, providing a very easy manual turning motion of the device.

The device may also be tilted to any desired position about a substantially horizontal axis passing through the point of engagement of the supporting member with the ground, for example, to a position such as indicated in dotted lines at A in Fig. 1, so as to vary the inclination of the discharge tube 2 with respect to the surface of the ground.

The fluid jet thus delivered over the surface of the ground serves very effectively to remove or carry away any leaves, papers, dirt or other light debris accumulated thereon. The device may therefore be used to good advantage in place of a rake or the like for removing or gathering such debris, and forms a very efficient tool for cleaning lawns, yards, concrete driveways and the like. Particular advantages of the device are that it does not require continual stooping or kneeling of the operator in order to apply the fluid jet close to and substantially parallel with the surface of the ground as is desirable for most effective cleaning purposes, and that when water or other liquid is used in the operation thereof, it tends to settle any dust present on the accumulated debris or on the surface of the ground rather than raising such dust and causing the same to be distributed into the atmosphere as is the case when a rake is used for a similar purpose.

When the device is provided with a supporting member having a lower portion of the type illustrated in Fig. 5, operation of the device is in general similar to that above described, the wheel 11, however, having an added function. Said wheel permits the device to be rolled along the ground during operation thereof, for example, the device may be rolled along the ground or along one side of an area to be cleaned, while delivering a fluid jet over such area in a direction transverse to the direction of movement thereof so as to clean a longitudinal strip. The wheel 11 is preferably of sufficiently small diameter to permit relatively easy pivotal movement

of the device about its point of engagement with the ground to produce the sweeping action above described.

I claim:

- 5 1. A device for cleaning lawns, yards and the like, comprising a vertically elongated supporting member adapted to pivotally engage the ground, tubular handle means slidably secured to said supporting member and adapted for vertical movement with respect thereto, a tubular fluid discharge member secured to the lower end of said tubular handle and projecting laterally therefrom, said tubular handle extending upwards from said discharge member to approximately the height of a man's hand above the

ground when standing erect, said tubular handle being provided at its upper end with means for connection to fluid supply means and the interior of said tubular handle communicating at its lower end with said fluid discharge member. 80

2. A device as set forth in claim 1, said tubular handle being provided at its upper end with a portion projecting laterally therefrom in a direction opposite to the direction of lateral projection of said tubular discharge member. 85

3. A device as set forth in claim 1, said supporting means being adapted to engage the ground at a point lying substantially on the prolongation of the axis of said tubular handle means. 90

WALTER M. GUEDEL.

20	95
25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150