

(No Model.)

H. T. WALSHE & M. SALLENGER.
STREET SPRINKLER.

No. 487,804.

Patented Dec. 13, 1892.

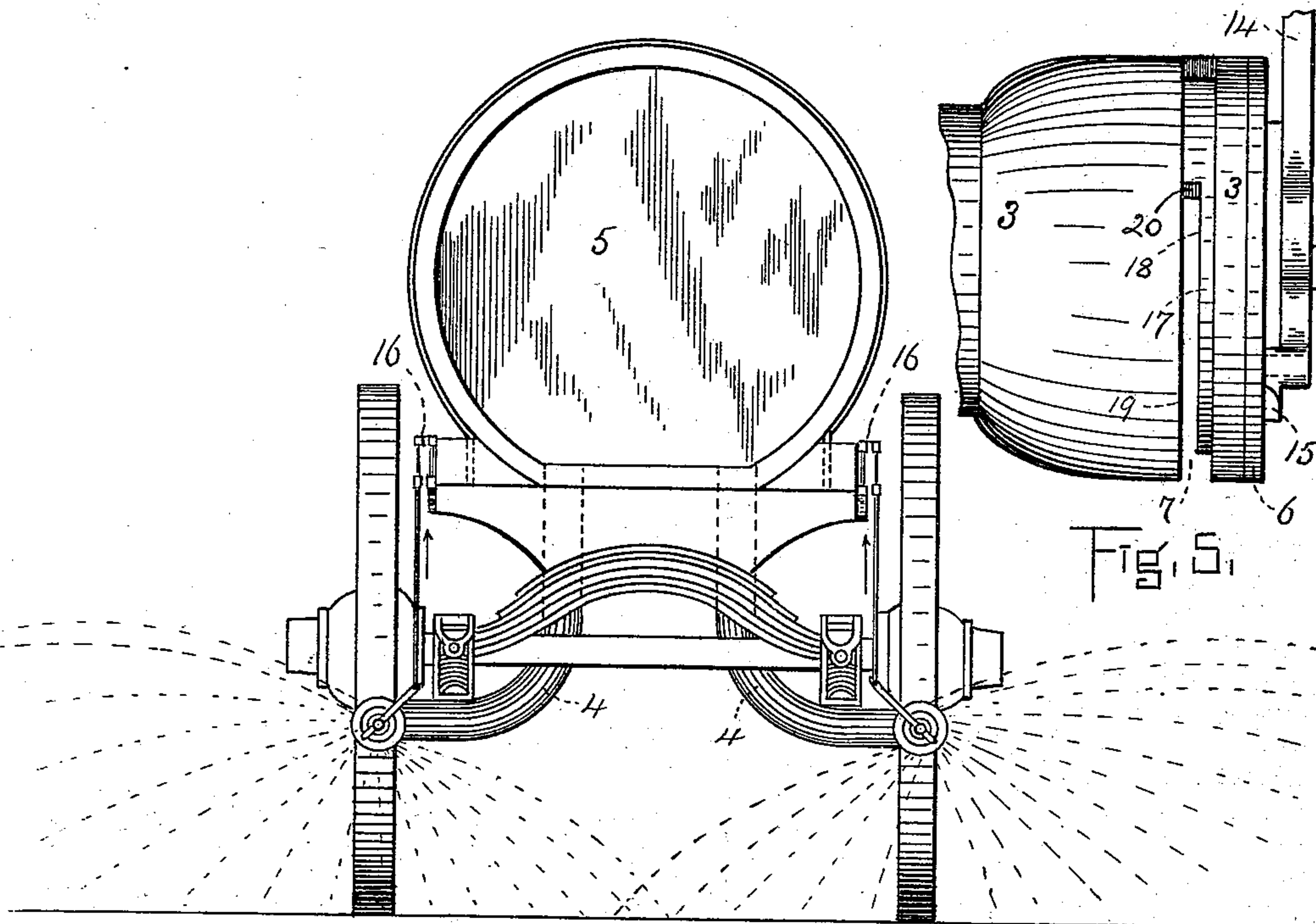


Fig. 1.

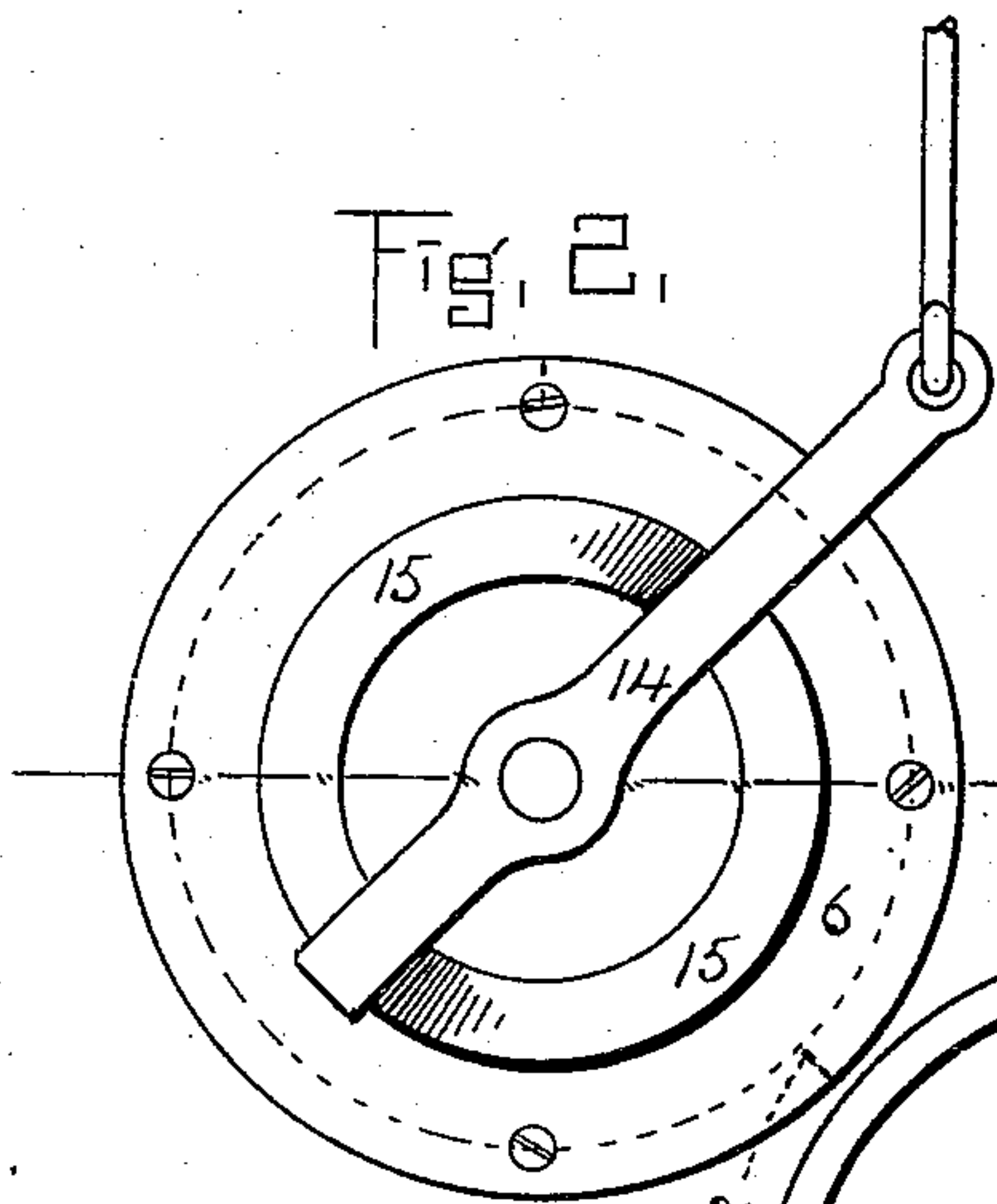


Fig. 2.

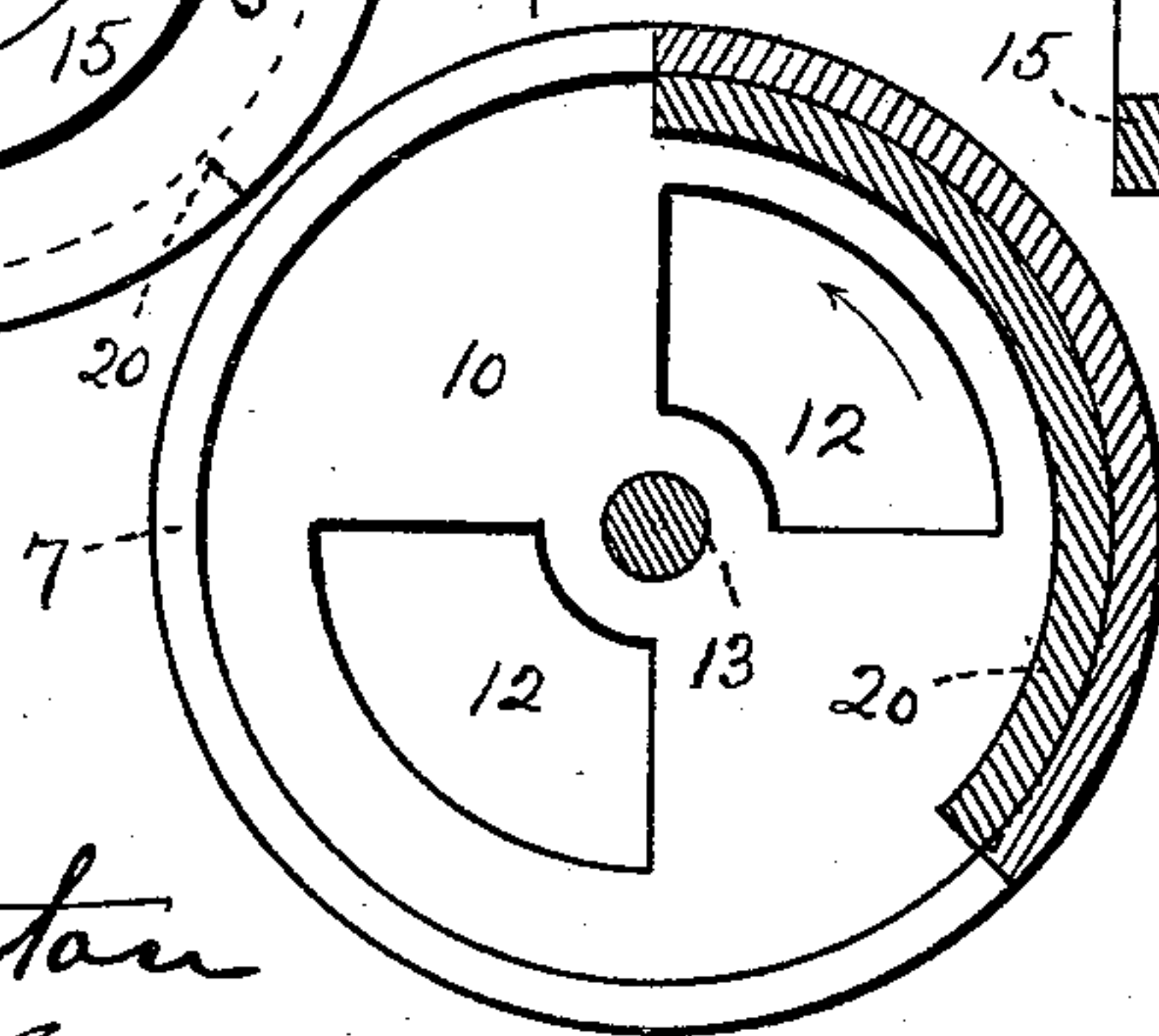


Fig. 4.

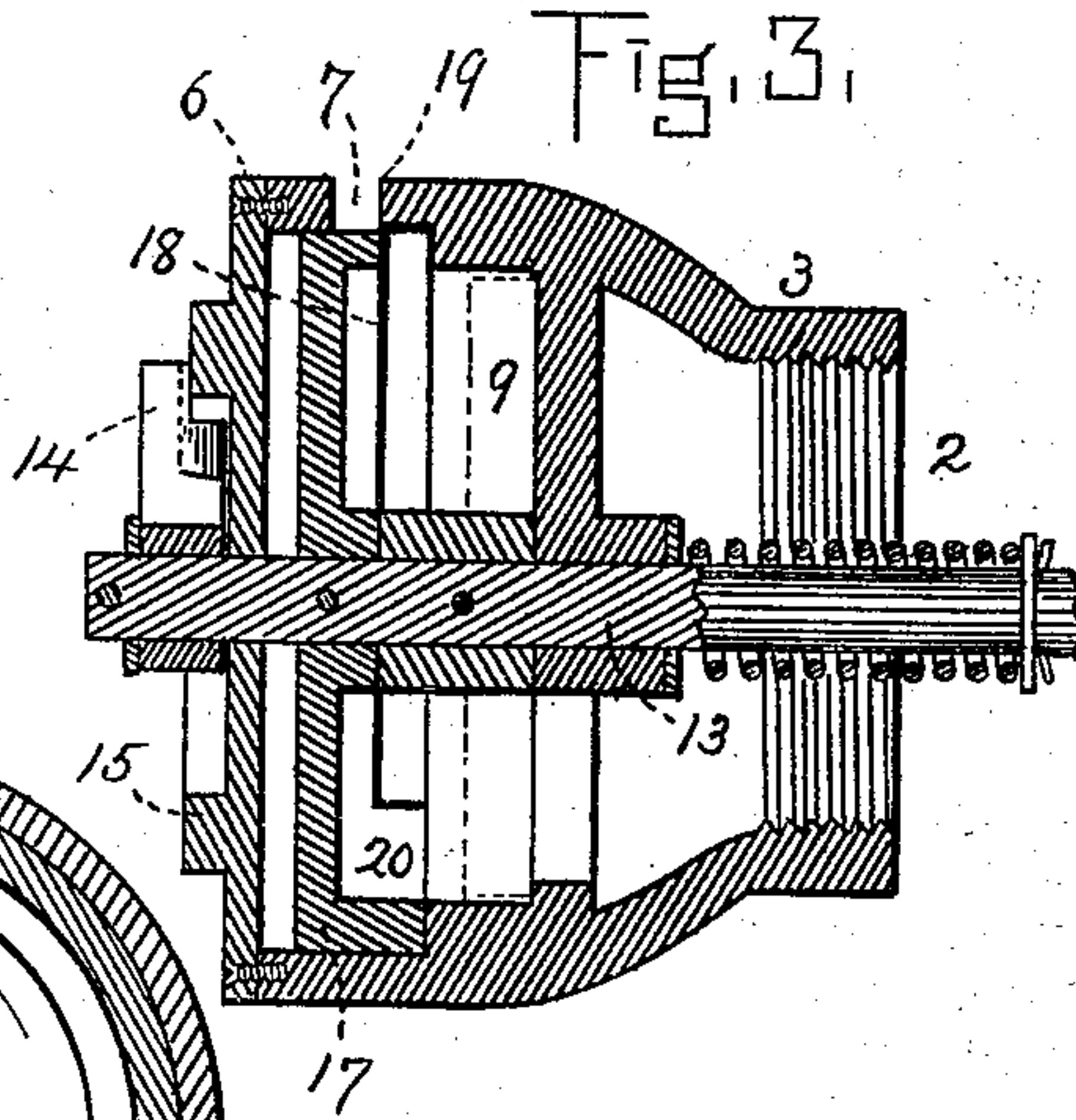


Fig. 3.

Witnesses.
E. R. Bagutan
Francis C. Howard

Inventors.
Henry T. Walshe.
Matthew Sallenger.
by *H. B. Long* Atty.

UNITED STATES PATENT OFFICE.

HENRY T. WALSHE AND MATTHEW SALLENGER, OF BOSTON, MASSACHUSETTS.

STREET-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 487,804, dated December 13, 1892.

Application filed March 19, 1892. Serial No. 425,587. (No model.)

To all whom it may concern:

Be it known that we, HENRY T. WALSHE and MATTHEW SALLENGER, citizens of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Street-Sprinklers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable

others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in sprinklers, particularly that class employed on watering-carts for street purposes. Our invention consists in the peculiar construction of the sprinkler proper, whereby the several changes required in the size and shape of the spray can be produced by the driver from the foot-board.

Briefly described, the sprinkler consists of a cylindrical shell in which are contained a valve and valve-seat, together with a gate. The valve admits water from the cart to the sprinkler, while the gate controls the discharge-orifice. By means of the gate and its peculiar construction and operation the width, as likewise the length, of the discharge-orifice may be readily adjusted, as circumstances require.

Other minor features of construction will hereinafter be fully described and explained.

The drawings represent in Figure 1 an end view of a watering-cart fitted with a sprinkler embodying our invention. Fig. 2 is a front view in elevation of a left-hand sprinkler. Fig. 3 is a longitudinal vertical section. Fig. 4 is a transverse section vertically, and Fig. 5 is a side elevation.

In the accompanying drawings, 2 represents the sprinkler as an entirety, composed of a cylindrical shell 3, adapted to be connected with a discharge-pipe 4 from a tank 5, suitably mounted upon a traveling cart. This shell is exteriorly fitted with a removable closing cap 6 and formed with a circumferential aperture 7, which serves as the discharge-orifice. Said aperture extends only in part about the circumference, and its inner limit is such that the spray is directed obliquely toward a second spray from a co-operating

sprinkler similarly mounted on the other side of the cart. These two sprays are to intermingle, in order to wet that part of the street directly beneath the center of the cart as it progresses. The outer upper limit of the orifice is to terminate at such point as to give the greatest trajectory to the spray.

It may be observed that this sprinkler belongs to that class in which a vertical spray is used in contradistinction to a horizontal spray or such as are slightly inclined from the horizontal. There are several advantages to be obtained from this position in delivering the water, prominent among which is the fact that the point where the water is delivered is always a fixed one and not dependent on the head of water in the tank. Its advantages are apparent, since the driver in passing over foot-crossings can shut off the water at the proper moment. Moreover, the vertical spray laterally of the cart can be more readily controlled, particularly when the proximity of open cars, carriages, or the curb requires a diminution in the area and extent of the spray.

The water-controlling devices in this sprinkler comprise a valve 9, adapted to close upon a transverse partition or valve-seat 10 with fluid-openings 12. This valve is spring-actuated to hold it normally closed against the tank-pressure, while the valve-stem 13 extends through and beyond the cap, its projecting end having a cam-lever 14 mounted thereupon, which co-operates with a cam 15, affixed to the cap, and is operated through the medium of a bell-crank lever 16 and rods leading to the foot-board. This cam and cam-lever are intended to impart spiral or screw movement to the valve-stem. Hence the valve and gate 17 when given a partial rotation by axial movement of the valve-stem move longitudinally within the shell 3. In this manner the valve is opened simultaneously with the opening of the discharge-aperture 7.

There are to be three different positions in the spray—viz., light, medium, and full—and the obliquity of the cam corresponds to such variations in the thickness of the sheet of water.

The gate 17 is a circular plate adapted to fit the interior of the shell 3 closely and yet allow of rotation. The edge of the said gate fits closely against the edge of the flange 19

and prevents the escape of water, except when rotation of the valve-stem throws the gate from its seat and permits the water to escape through opening 7. In connection with said gate is a lip 20 or an elongation of the plate, and the function of this is to control the length of the discharge-aperture. This is effected as follows: After the cam-lever 14 has been operated to move the gate and open the discharge-aperture further rotation of the gate is permissible, the cam-lever wiping upon a level portion of the cam. This further rotation advances the lip across the aperture which now exists between the edge 18 of the gate and the side 19 of the shell 3, thus closing the same and diminishing the length of the aperture, according to the amount of rotation. This operation serves to cut off or reduce the outward lateral throw of the spray when in proximity to a passing object. Thus without any difficulty the driver from the foot-board can control the spray in any way whatever—that is, a full or partial gate can be maintained, and these several adjustments combined with a light, medium, or full spray. In other words, the thickness of the sheet of water can be varied, while at the same time the length of the aperture through which the water passes can be diminished or increased or remain constant, if so desired.

The operation is as follows: Rocking or upward lifting movement of the cam-lever 14, which wipes upon its cam, serves to axially rotate and at the same time imparts endwise travel to the valve-stem. Such action results in lifting the valve from its seat and at the same time slightly opens the discharge-aperture 7, hitherto closed, when a thin sheet of water under the pressure from the tank is impelled outwardly. If this is sufficient for the purpose, the lever is locked in position. On the contrary, if a greater body of water is required further axial movement of the lever upon the cam serves to increase the discharge-opening, while if the length of the discharge-aperture is to be reduced still further rotation is ef-

fectured. This advances the lip 20 across the discharge-orifice and closes the same in part along its upper portion, thereby cutting off the extreme outer lateral throw of the spray, and consequently the area or expanse of surface to be wet.

What we claim is—

1. The combination, in a sprinkling-cart, of a reservoir, a cylindrical sprinkling-shell suitably communicating therewith and provided with a circumferential discharge-opening, an oscillating valve within said shell to control the water-supply, an interior revoluble gate to regulate the length and width of said circumferential discharge-opening, and means for simultaneously operating said valve and gate, substantially as set forth.

2. A sprinkling or spraying nozzle having a semi-circumferential discharge-aperture, an axially-movable valve-stem with endwise movement, an internal valve thereupon to admit passage of liquid through the nozzle, and a revoluble gate likewise upon said valve-stem to regulate the width and length of the discharge-opening, substantially as described.

3. The combination, in a sprinkling-cart, of a reservoir, cylindrical sprinkler-heads suitably communicating therewith and provided with circumferential discharge-openings, spring-pressed endwise-movable rotary valve-stems within said shells, each of said valve-stems having mounted thereon a valve to control the water-supply to said head, and a gate to regulate the length and width of said circumferential discharge-openings, and thereby control the length of throw and the water-discharge of said sprinkler-head, and means for operating said valve-stem to actuate said valve and gate, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY T. WALSHE.

MATTHEW SALLENGER.

Witnesses:

H. E. LODGE,

FRANCIS C. STANWOOD.