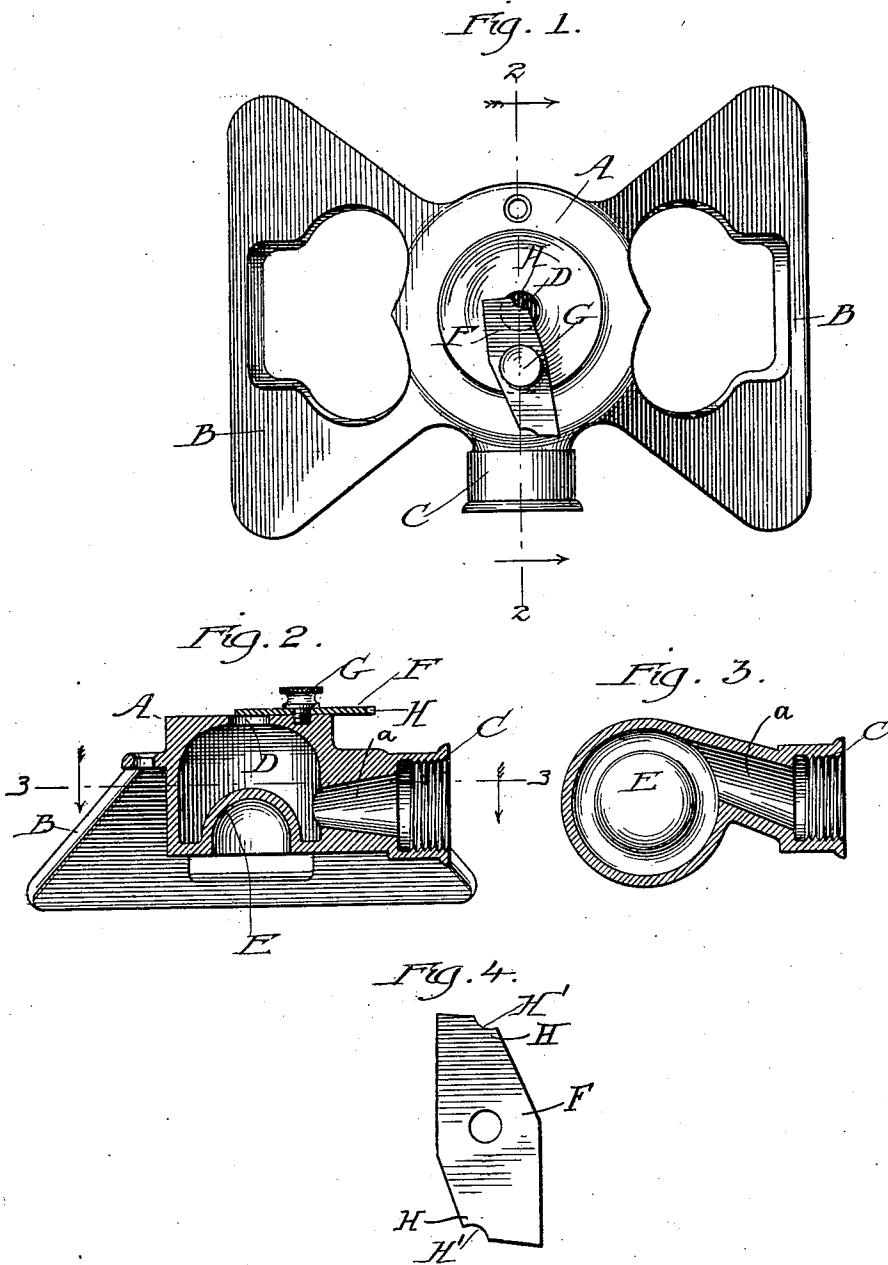


No. 683,646.

Patented Oct. 1, 1901.

H. GIBBS.  
LAWN SPRINKLER.  
(Application filed June 24, 1901.)

(No Model.)



Witnesses:  
Frank Blanchard  
Alberta Adamick.

Inventor:  
Henry Gibbs  
By Percel & Fischer,  
Attorneys.

# UNITED STATES PATENT OFFICE.

HENRY GIBBS, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. D. ALLEN  
MANUFACTURING COMPANY, OF SAME PLACE.

## LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 683,646, dated October 1, 1901.

Application filed June 24, 1901. Serial No. 65,752. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY GIBBS, a resident of Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Lawn-Sprinklers, of which the following is a full, clear, and exact description.

This invention has for its object to provide a lawn-sprinkler with an improved deflector-plate adapted to more effectively distribute the spray of water issuing from the sprinkler, so that the size, shape, and direction of the spray may be regulated as desired.

The invention consists in the features of improvement hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

Figure 1 is a plan view of a lawn-sprinkler embodying my invention. Fig. 2 is a view in vertical section on line 2 2 of Fig. 1. Fig. 3 is a detail view in section of the spray-box, taken on the line 3 3 of Fig. 2. Fig. 4 is a detail plan view of the deflector-plate.

The chambered body or cylindrical spray-box A of the lawn-sprinkler is preferably sustained by the downwardly-inclined supports B. The spray-box is furnished with an interiorly-threaded neck C, to which the hose or water-pipe will be connected, and the top or upper face of the spray-box is provided with a central circular orifice D, through which the water will be discharged. Preferably the water is delivered into the interior of the box by a tangentially-arranged inlet  $\alpha$  in its side opening into a circular channel around the raised bottom E, so that the stream of water within the channel has a swirling motion, which in practice is found to more effectively break up or distribute the stream as it issues through the central opening D. A sprinkler of this form will effectively distribute the water over a large circular area; but it is often found desirable to limit the area covered by the spray to a half-circle or to modify the spray in other ways. For this purpose I provide a deflector-plate F, which is preferably attached to the upper face of the spray-box adjacent the neck C. The plate F is horizontally movable in a plane parallel to the top or upper face of the spray-

box A, so that it may be projected over and partially close the central circular discharge-orifice D. The deflector-plate is preferably arranged to swing about a thumb-screw G, which passes through a central hole therein and into a threaded opening in the top of the spray-box. By this thumb-screw the plate is also adjustably held in place. In the preferred form of the invention the deflector-plate has one or both of its ends formed with an offset or shoulder H, one side of which is preferably formed with a curved notch or recess H'. I have found in practice that by this construction of the deflector-plate I am enabled to effectively distribute the spray over a half-circle and to otherwise modify the same as it issues from the discharge-orifice, and although the following theory of the action of the deflector-plate may not be entirely correct it is the one whereby the peculiar operation of the plate seems most readily explainable. In practice, if a plate having a straight edge be placed, say, one-half way across the discharge-orifice D of the sprinkler, it will be found that the sheet of spray will be much heavier at the edges than in the center, whereas when a deflector-plate having a shoulder or projection H is placed in the position shown in Fig. 1 of the drawings the result is to equalize the spray from end to end—that is to say, to cause the center of the spray to be substantially the same in volume as the edges. I assume that this is due to the fact that the projection H has a tendency to draw the water toward the center of the spray, although whether this assumption be correct or not the fact is found to be in practice as above stated. By shifting the deflector-plate F so as to close the discharge-opening D to a greater or less extent the spray may be modified in various ways.

I am aware that it has been heretofore proposed to provide a lawn-sprinkler having a plurality of small discharge-openings with a sliding plate whereby more or less of these openings may be inclosed; but manifestly such construction is foreign in its purpose to that of the present invention.

It is obvious that the details of structure may be varied without departure from the essentials of the invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lawn-sprinkler, the combination  
5 with a spray-box having an inlet in the side thereof and a single central discharge-orifice in its upper face, of a flat horizontally-movable deflector-plate arranged to be projected over and partially close said discharge-orifice  
10 to modify the spray, substantially as described.

2. In a lawn-sprinkler, the combination with a cylindrical spray-box having a tangentially-arranged inlet in its side and a central,  
15 circular discharge-orifice in its upper face, of a flat horizontally-movable deflector-plate adjustably secured to the upper face of said spray-box and arranged to be projected over and partially close said circular discharge-  
20 orifice to modify the spray, substantially as described.

3. In a lawn-sprinkler, the combination with a chambered spray-box having an inlet and a discharge-orifice, of an adjustable flat  
25 deflector-plate, the edge whereof is provided with a shoulder arranged to be projected

over said discharge-orifice to modify the spray issuing therefrom.

4. In a lawn-sprinkler, the combination with a chambered spray-box having an inlet  
30 and a discharge-orifice, of an adjustable flat deflector-plate, the edge whereof is provided with a shoulder having a curve or notch on one side and arranged to be moved over and partially close said discharge-orifice to mod-  
35 ify the spray issuing therefrom.

5. In a lawn-sprinkler, the combination with a chambered cylindrical spray-box having a tangentially-arranged inlet in its side and a central, circular discharge-orifice in its  
40 upper face, of a flat horizontally-movable deflector-plate adjustably secured to the upper face of said spray-box, the edge whereof is provided with a shoulder arranged to be projected over and partially close said discharge-  
45 orifice to modify the spray issuing therefrom, substantially as described.

HENRY GIBBS.

Witnesses:

THOMAS FLACK,  
ALBERTA ADAMICK.