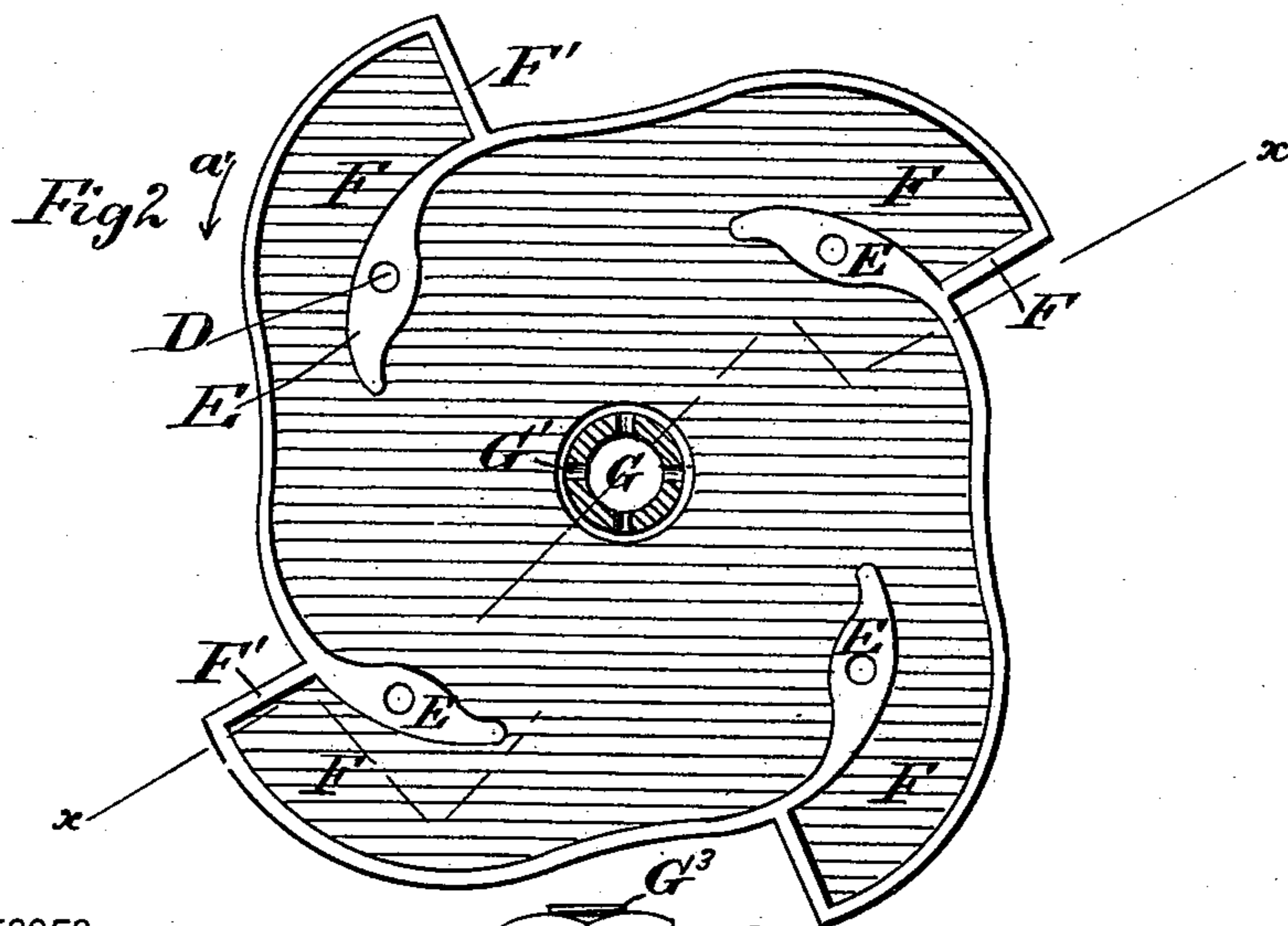
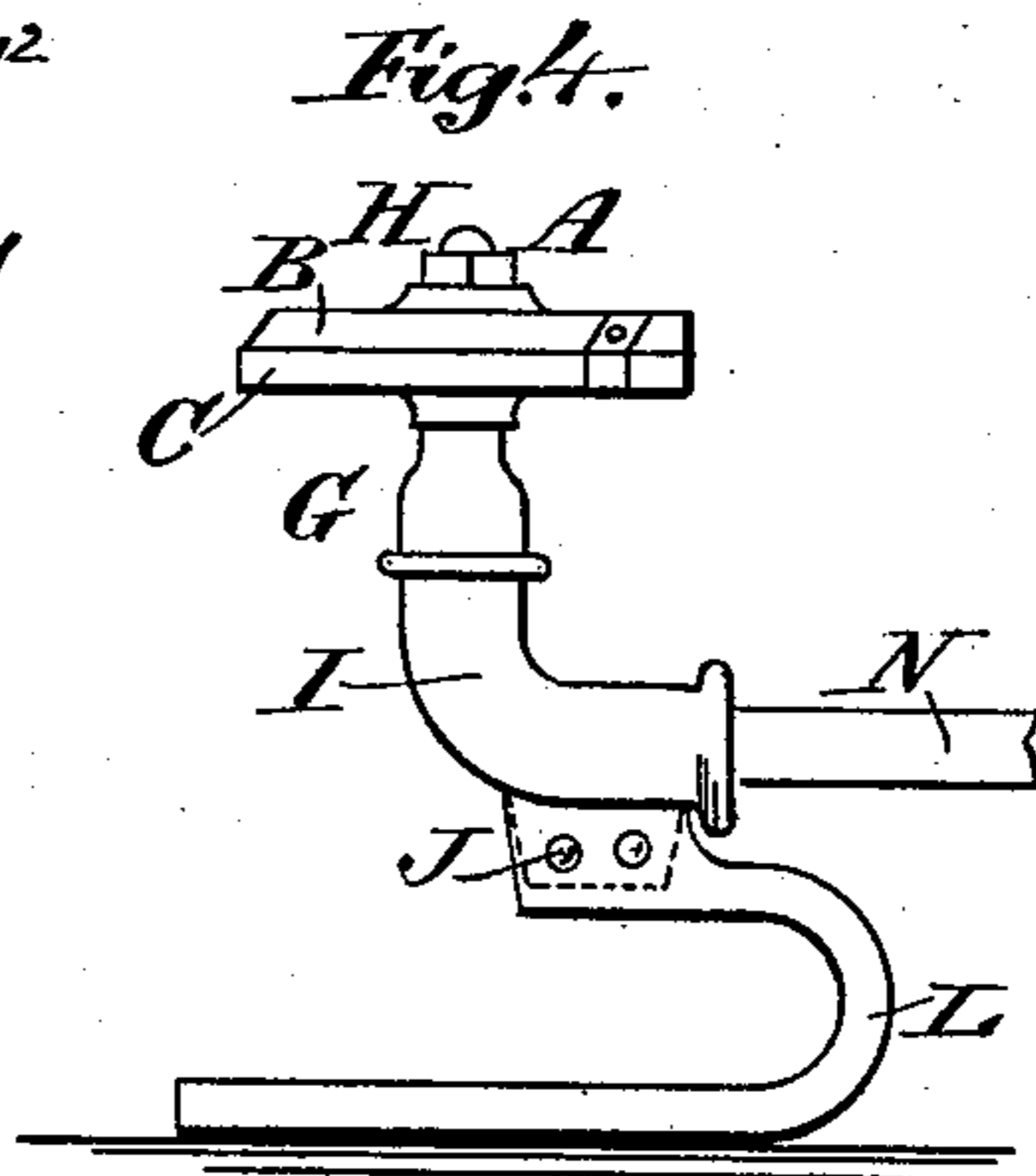
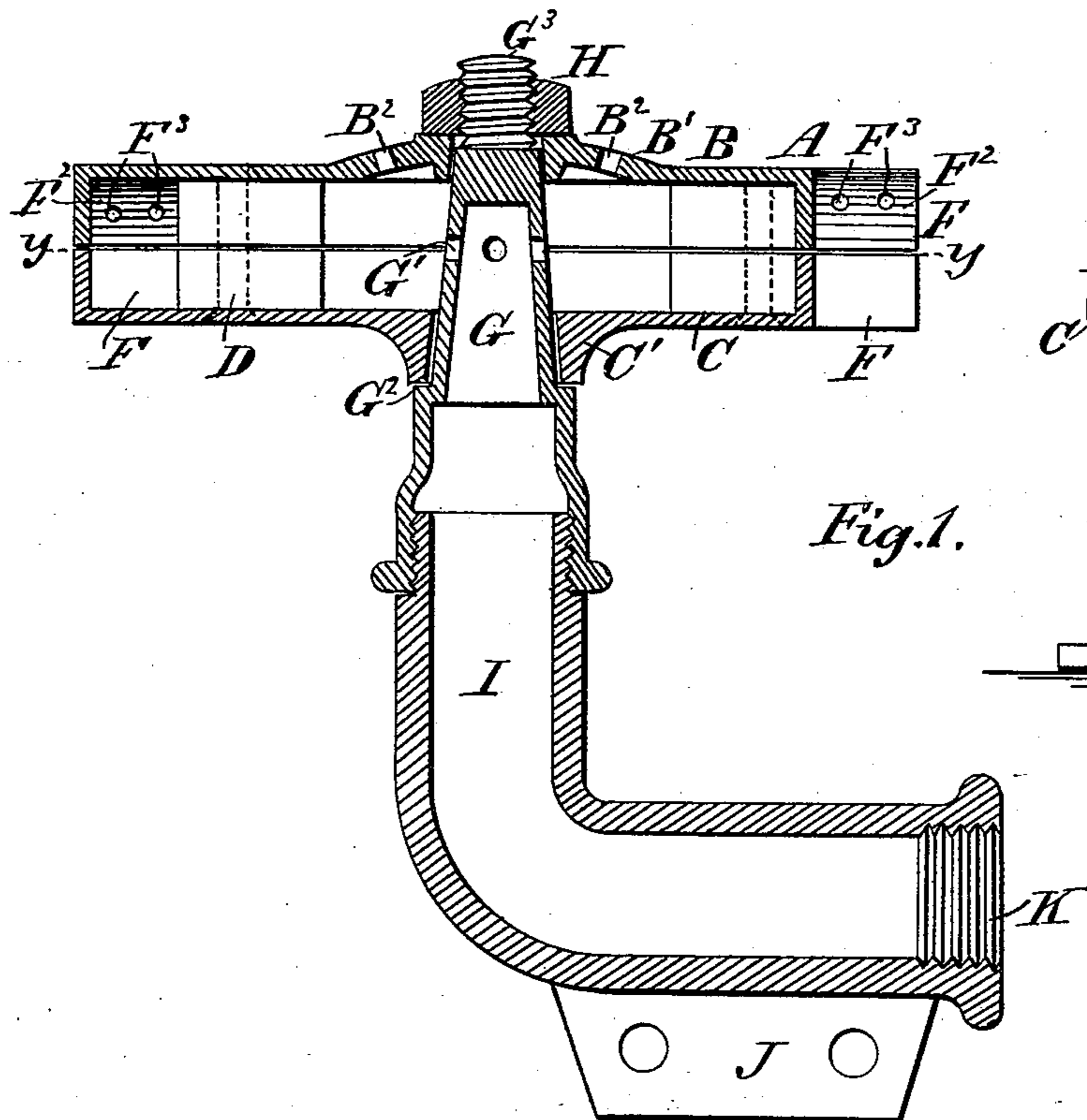


(No Model.)

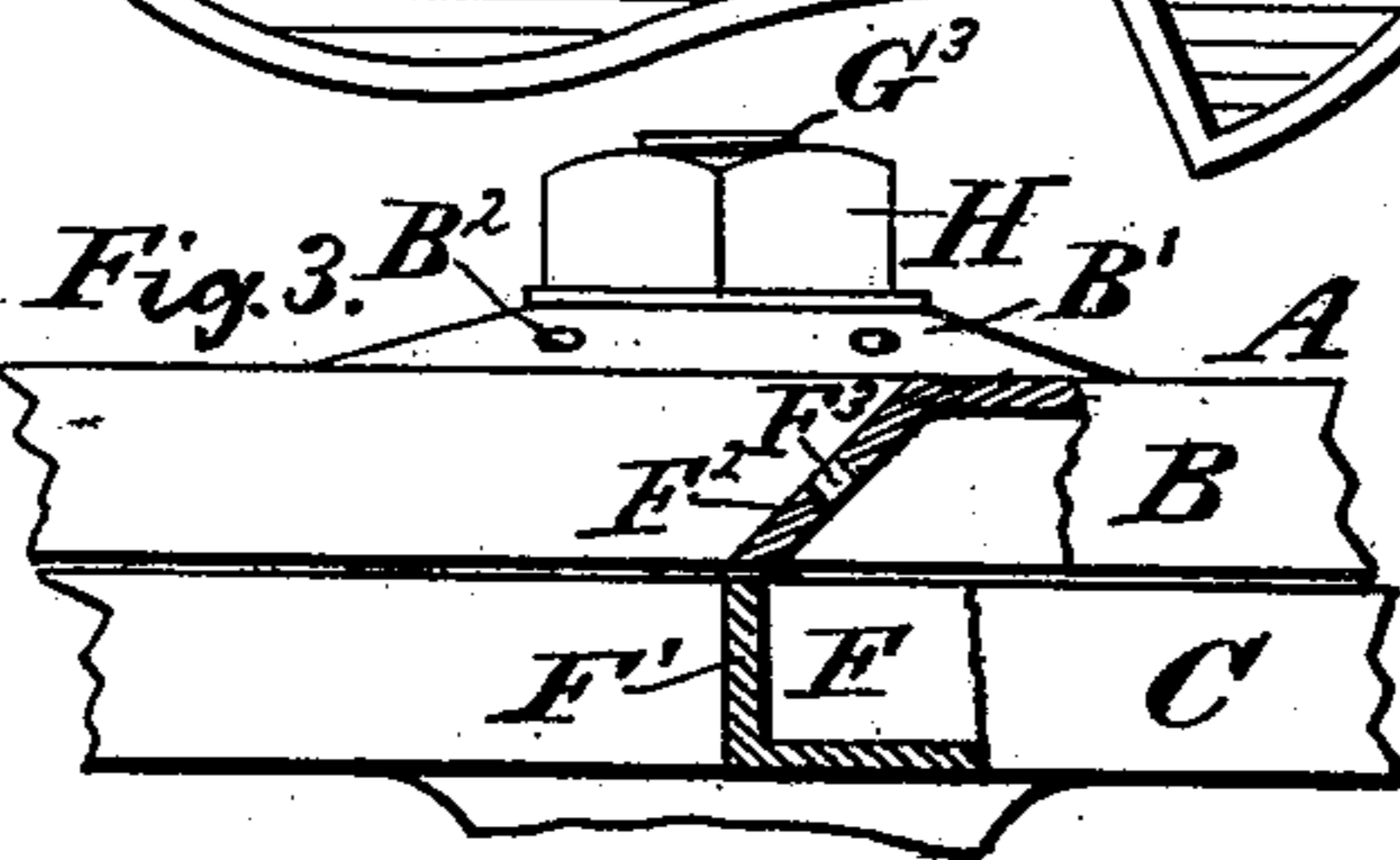
W. A. RUSSELL.  
LAWN OR ORCHARD IRRIGATOR.

No. 465,207.

Patented Dec. 15, 1891.



WITNESSES:  
F. McArthur,  
C. Sedgewick



INVENTOR:  
W. A. Russell  
BY Munn & Co.  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIAM A. RUSSELL, OF LOS ANGELES, CALIFORNIA.

## LAWN OR ORCHARD IRRIGATOR.

SPECIFICATION forming part of Letters Patent No. 465,207, dated December 15, 1891.

Application filed April 7, 1891. Serial No. 387,926. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. RUSSELL, of Los Angeles, in the county of Los Angeles and State of California, have invented a new and Improved Lawn or Orchard Irrigator, of which the following is a full, clear, and exact description.

The invention relates to lawn-sprinklers having a revoluble discharge-head actuated by the pressure of the water.

The object of the invention is to provide a new and improved lawn-sprinkler which is simple and durable in construction, not liable to get out of order, requires no high pressure for revolving the head, and is arranged to distribute the water quickly over the entire area covered by the sprinkler.

The invention consists of a head made in two sections fastened together and mounted to turn on a fixed tapering discharge-pipe opening into the head, the latter being provided with discharge-chambers having an inclined end formed with openings.

The invention also consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement on the line *x x* of Fig. 2. Fig. 2 is a sectional plan view of the same on the line *y y* of Fig. 1. Fig. 3 is a side elevation of the head, with parts in section, and Fig. 4 is a reduced side elevation of the improvement.

The improved lawn-sprinkler is provided with a head A, made hollow and preferably formed of two sections B and C, fitted with their open ends one upon the other, and fastened together by screws D, passing through tongues E, projecting at the inside of the case, so that the water contained in the casing does not come in contact with the said screws to corrode the same. From each tongue E extends outward on the casing A a chamber F, having its end F' in the lower section C radial to the head, while the end F<sup>2</sup> of the

upper section is inclined rearwardly, as is plainly illustrated in Fig. 3, the said end being formed with openings F<sup>3</sup>, leading upwardly and through which the water is discharged. The top of the upper section B is formed near its center with the curved part B', in which are arranged a series of openings B<sup>2</sup>, through which water is also discharged, the said water passing upwardly and outwardly to fall within a short distance from the periphery of the head A. The casing A is formed in its center with tapering openings fitted upon a tapering stationary discharge-pipe G, formed with a series of openings G', opening into the interior of the head A. On the under side of the section C is formed a flange C', resting on a shoulder G<sup>2</sup>, formed on the stationary discharge-pipe G, and serving to hold the head in place. The upper closed end of the discharge-pipe G is formed with a screw-thread G<sup>3</sup>, extending above the top of the upper section B, and engaged by a nut H, abutting against the top of the section B, so as to hold the casing in place on the tapering stationary pipe G. The nut H is screwed sufficiently tight to prevent leakage of the water between the head and the tapering discharge-pipe G; but the nut is not screwed tight enough to prevent an easy or free revolving of the head on its discharge-pipe. The discharge-pipe G is screwed or otherwise fastened on the upper end of an elbow I, provided with a flange J, secured between the front ends of two runners L, adapted to be moved about on the lawn to be sprinkled. The lower end of the elbow I is formed with a screw-thread K, adapted to be engaged by a coupling held on the hose N, connected with the water-supply. By pulling on the hose N the runners are readily moved over the grass of the lawn.

The device is used as follows: Water is forced through the elbow I into the discharge-pipe G, from which the water passes through the openings G' into the interior of the head A. The water is forced past the tongues E into the several chambers F, from which the water passes to the outside through the openings F<sup>3</sup> in the inclined end F<sup>2</sup> of the chamber F of the uppermost section B. The water

passing out through the openings  $F^3$  exerts a tangential back-pressure on the head A, so that the latter is revolved on the tapering discharge-pipe G in the direction of the arrow  $a'$ . The water discharged through the openings  $F^3$  is thrown a suitable distance from the sprinkler, according to the pressure of the water entering the head A. The water discharged through the openings  $B^2$  in the top of the upper section B falls within the water discharged through the openings  $F^3$  and the periphery of the head A, so that the entire area covered by the sprinkler receives an equal spraying of water.

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

1. In a lawn-sprinkler, a centrally-apertured head formed with a series of internal chambers F, having the upper portions of their end walls inclined upward and rearward, as

shown at  $F^2$ , and provided with apertures  $F^3$ , substantially as set forth.

2. In a lawn-sprinkler, a centrally-apertured horizontally-divided head A, formed of two sections B C, each having a series of chambers F, the inner walls of which are formed by tongues E, having registering apertures, the end walls F of the lower chambers being vertical and the end walls  $F^2$  of the upper chambers being inclined upward and rearward and provided with apertures  $F^3$ , and the screws D, entering the apertures in said tongues and securing the two head-sections together, and the outwardly-inclined apertures  $B^2$  in the central portion of the upper section, substantially as set forth.

WILLIAM A. RUSSELL.

Witnesses:

R. D. LIST,

M. HUGHES.