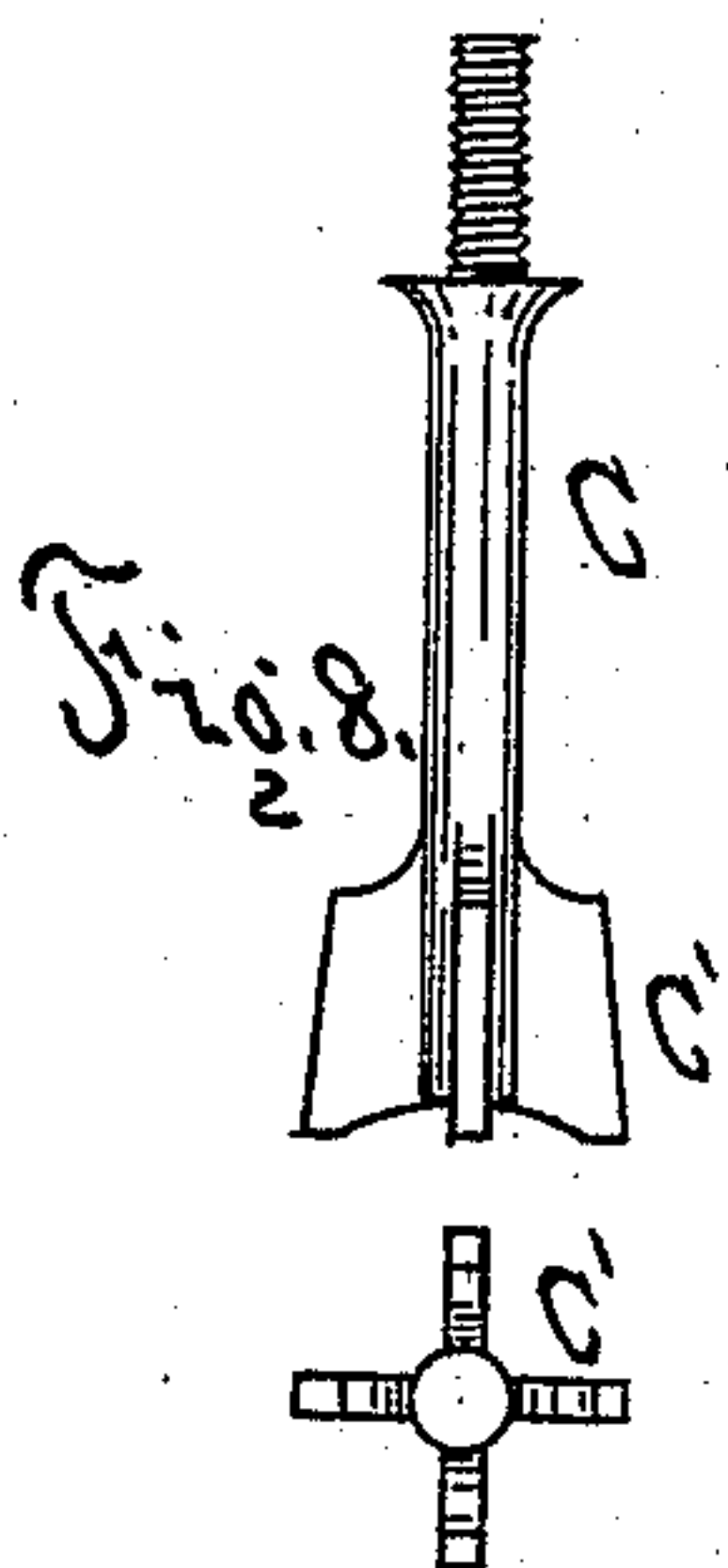
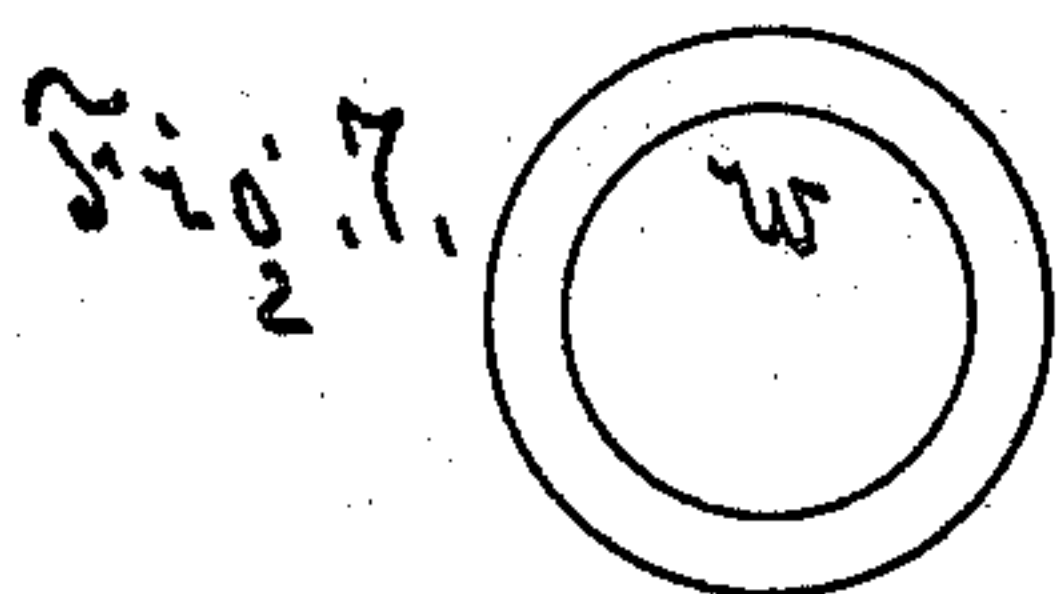
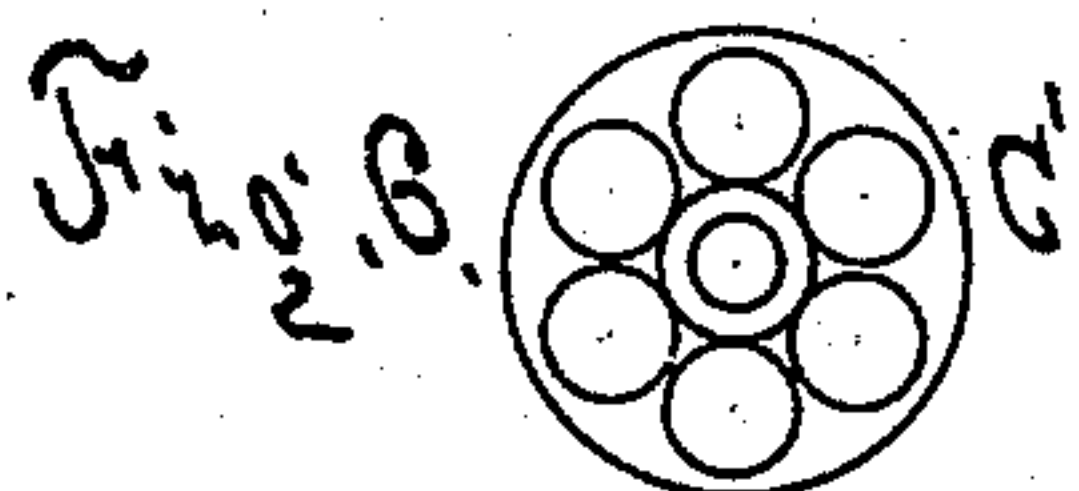
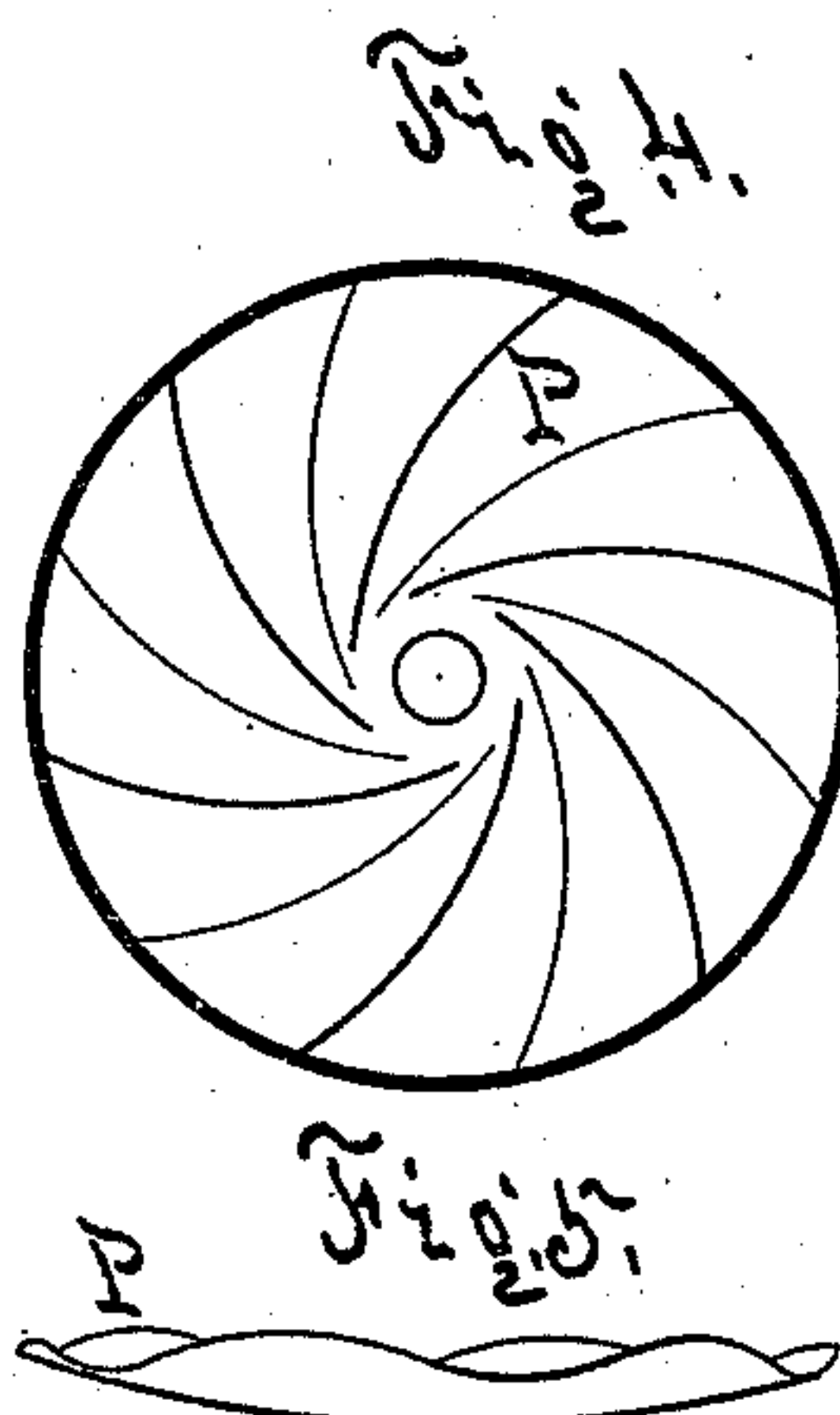
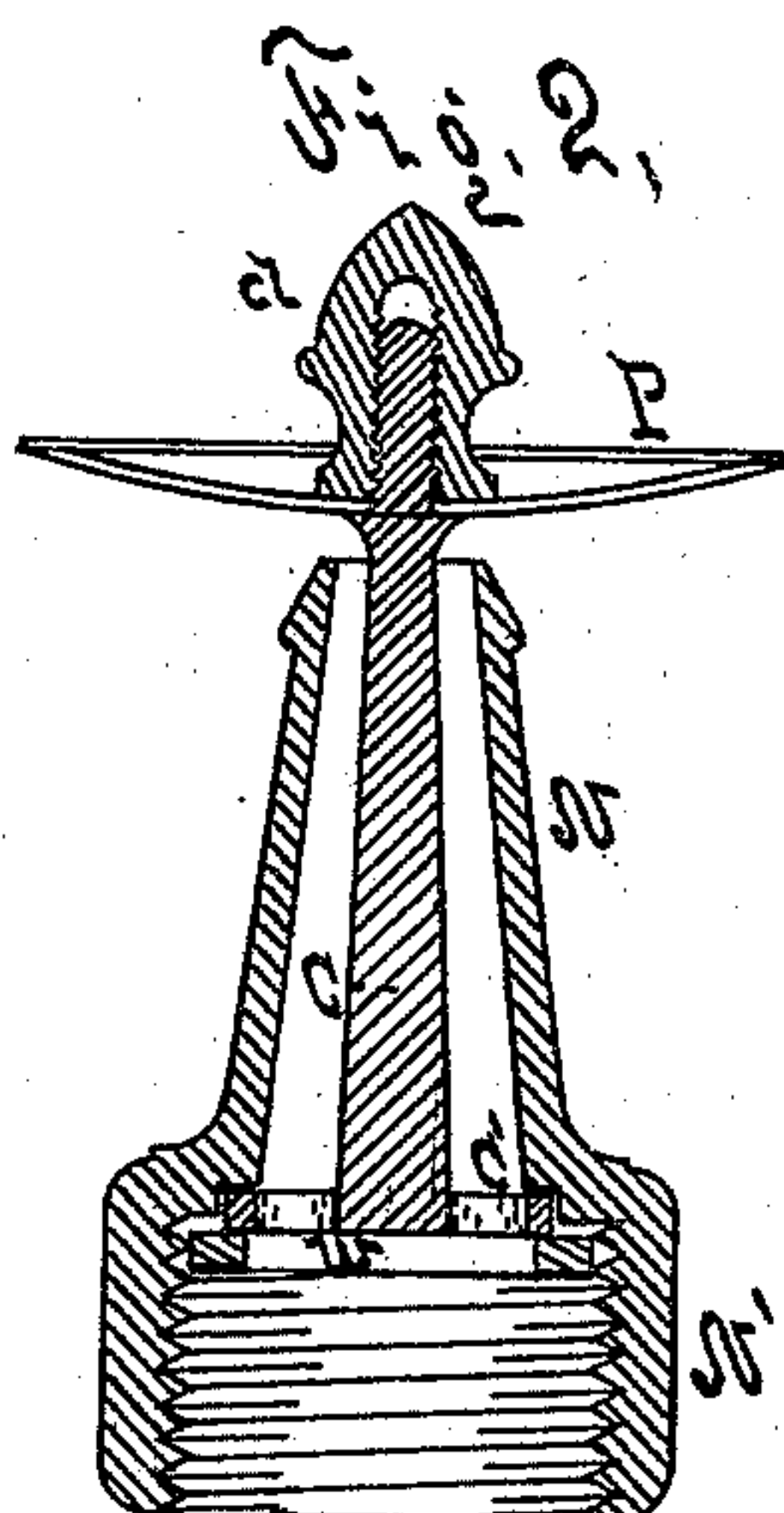
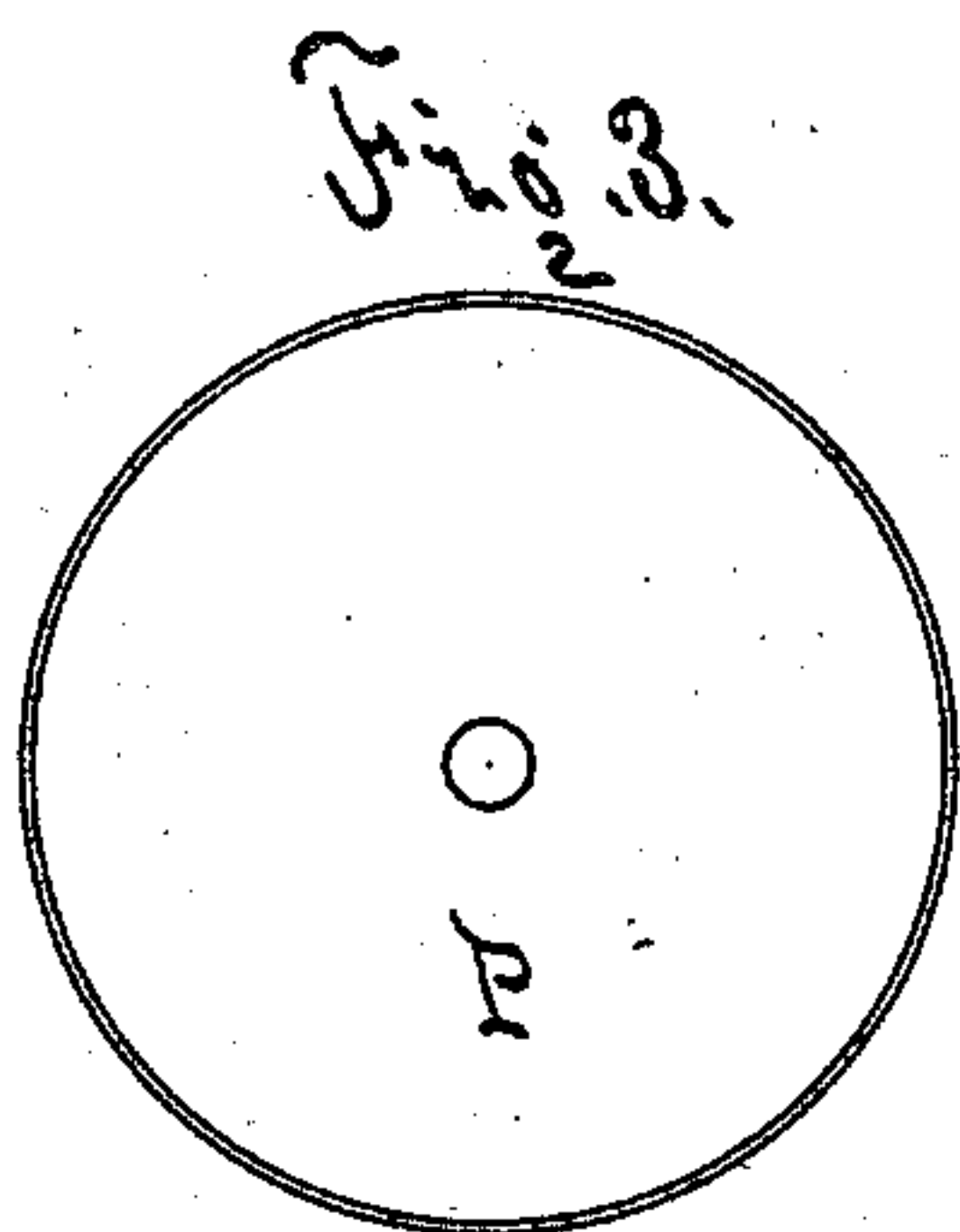
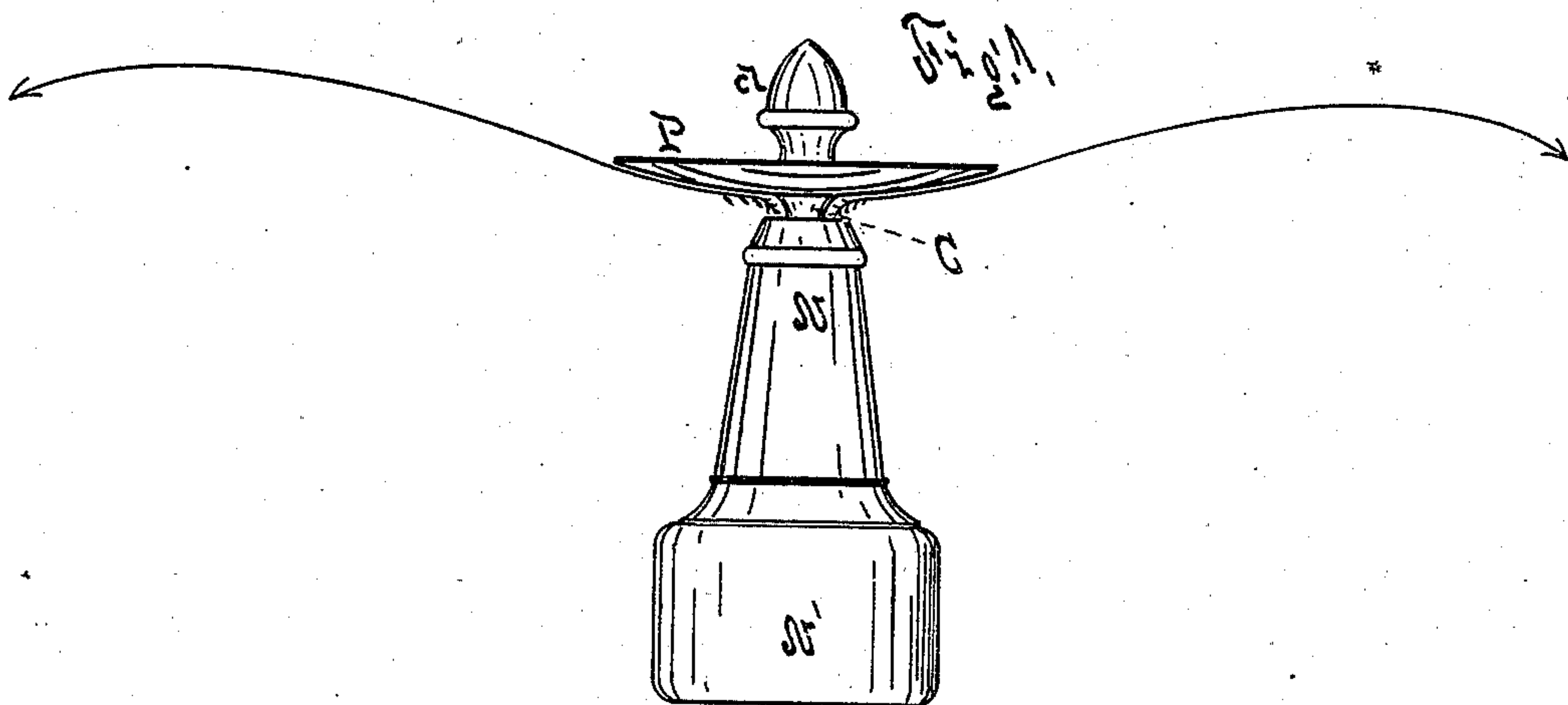


F. L. ALDERSON & T. LOFTUS.
Hose-Pipe Nozzle.

No. 225,092.

Patented Mar. 2, 1880.



Witnesses,
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Oliver J. Buckley

Inventors,
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per atty
A. S. Waterhouse

UNITED STATES PATENT OFFICE.

FREDERICK L. ALDERSON AND THOMAS LOFTUS, OF SACRAMENTO, CAL.;
SAID LOFTUS ASSIGNOR TO ALBERT GALLATIN, OF SAME PLACE.

HOSE-PIPE NOZZLE.

SPECIFICATION forming part of Letters Patent No. 225,092, dated March 2, 1880.

Application filed August 14, 1879.

To all whom it may concern:

Be it known that we, FREDERICK L. ALDERSON and THOMAS LOFTUS, both of the city of Sacramento, State of California, have
5 invented a new and useful Improvement in Hose-Pipe Nozzles, of which the following is a specification.

The invention relates to that class of hose-pipe nozzles used in gardens and for sprinkling; and it consists in providing the inside
10 of a taper nozzle of a hose with a stem, to which may be attached a disk or plate of various shapes used for the purpose of scattering the water or throwing it in a spray as it
15 passes out of the nozzle and around the central stem that holds the spraying-plate; and the invention further consists in having the spraying attachment so constructed as to be readily detached from the nozzle, so that the
20 nozzle can be used for the purpose of throwing a solid stream.

In the accompanying drawings, Figure 1 shows an elevation of a nozzle provided with spraying attachment embodying our invention. Fig. 2 is a sectional elevation of Fig. 1.
25 Fig. 3 is a detail of a spraying-plate, P. Figs. 4 and 5 show another form of spraying-plate. Fig. 6 is a plan of the stem C, fixed in the nozzle N. Fig. 7 is a washer used to prevent
30 leakage and keep the central stem, C, in its place. Fig. 8 shows another form of stem C.

Fig. 1 shows an elevation of a nozzle-pipe, N, provided with spraying-plate P, showing the effect of the plate in directing the course
35 of the water, as indicated by arrows.

Fig. 2 is a sectional view of Fig. 1, showing the nozzle-pipe N, the central stem, C, provided with perforated flange C', which permits the water to pass through and keeps the stem
40 C in position. The part of the stem C that extends just beyond the end of the nozzle N is provided with a step made cone-like, or flaring out on a curve. On said step is placed the spraying-plate P, secured in its place by
45 the nut *a*, which screws on the threaded end of the stem C, as shown. The lower part of the nozzle N is provided with an internal thread, which screws onto an externally-threaded coupling or pipe attached to a hose,

and said pipe, when screwed in the nozzle N, 50 presses against the flexible washer *w*, thus preventing any leakage, and also pressing the washer *w* against the flange C' of the stem C, thus holding the stem firmly in the center of nozzle N.

Figs. 3, 4, and 5 are details, showing different forms of plate P. These plates can be made flat, convexed, concaved, or in a circular, star, or other form, according to taste or
55 to suit the purpose required, or can be made, 60 as in Figs. 4 and 5, with convoluted corrugations, or in any equivalent form, so that the force of the water will have a rotating effect on the plate P. When the plates are made plain, as in Figs. 1 and 2, the nut *a* can be
65 screwed down, so as to tighten the plate P so that it cannot revolve, thus preventing the wear of friction, and still causing the water to be projected in a spray by reason of the
70 form of the plate P.

Fig. 8 shows another form of stem C, which is inserted in the nozzle-pipe from the large end, and is kept in position by the ribs C', fitting the inner taper of the nozzle-pipe N and holding it firmly in its place, while at the
75 same time the water is free to pass between the ribs C' and out of the nozzle, as shown.

We do not confine ourselves to any form of nozzle N, stem C, or plate P, for, if desired, the stem C can be rigidly secured in the nozzle N, the bore of which can be made cylindrical instead of conical, and the stem C be made straight and secured concentric with the bore of N, while the plate P can be screwed
80 directly on or otherwise connected to the 85 stem C.

What we claim as our invention is—

The stem C, provided with a flanged head or plate, P, the stem C to be secured concentric with and at the breech of the hose-pipe
90 and extend along its center and out of the nozzle, substantially as shown and described.

F. L. ALDERSON.
THOS. LOFTUS.

Witnesses:

BARTON B. WARD,
ELISON V. BUCKLEY.