

(No Model.)

C. F. RODIN.

GUIDING DEVICE FOR DISCHARGE NOZZLES.

No. 520,222.

Patented May 22, 1894.

Fig. 1

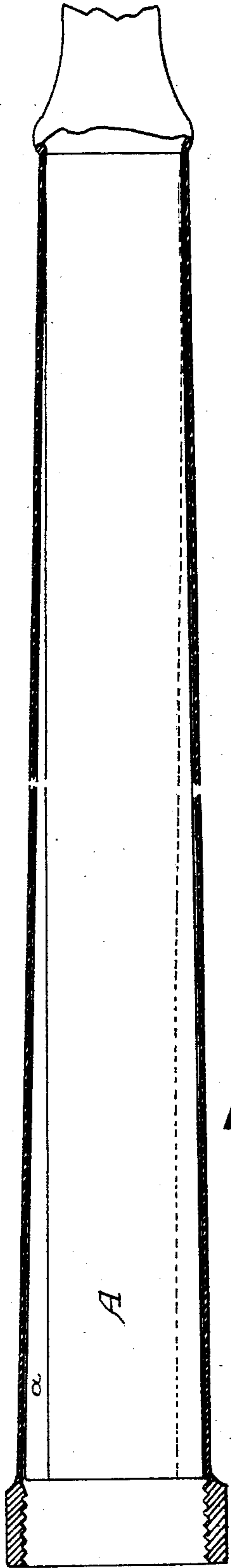


Fig. 3

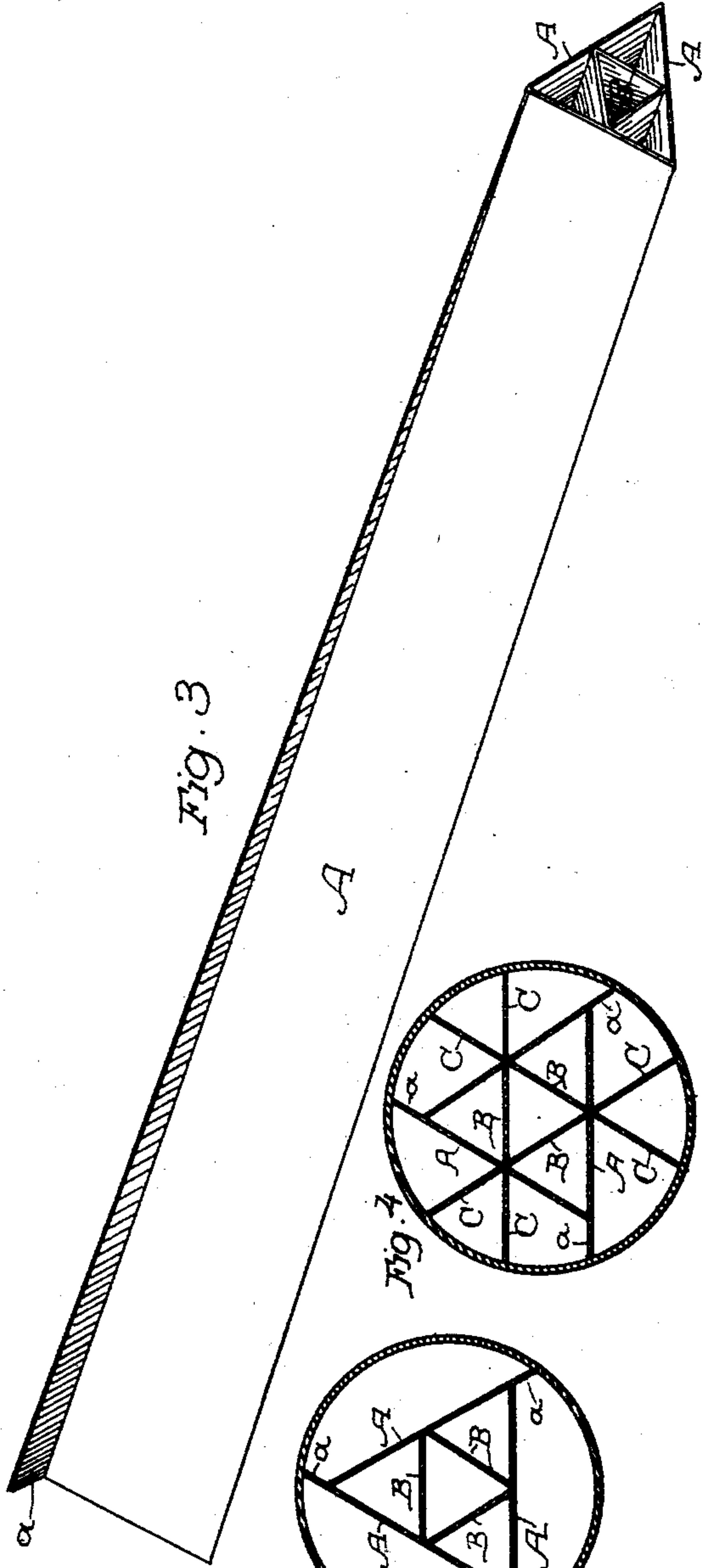


Fig. 4

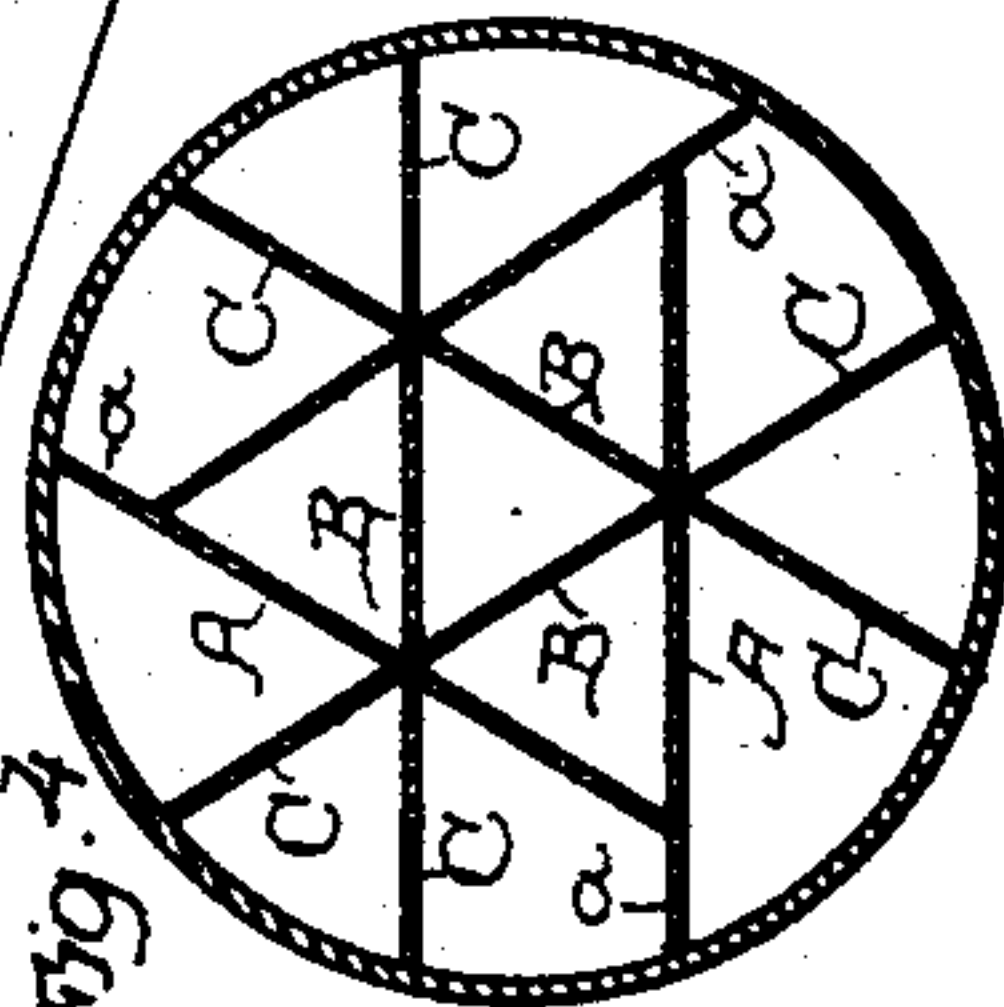
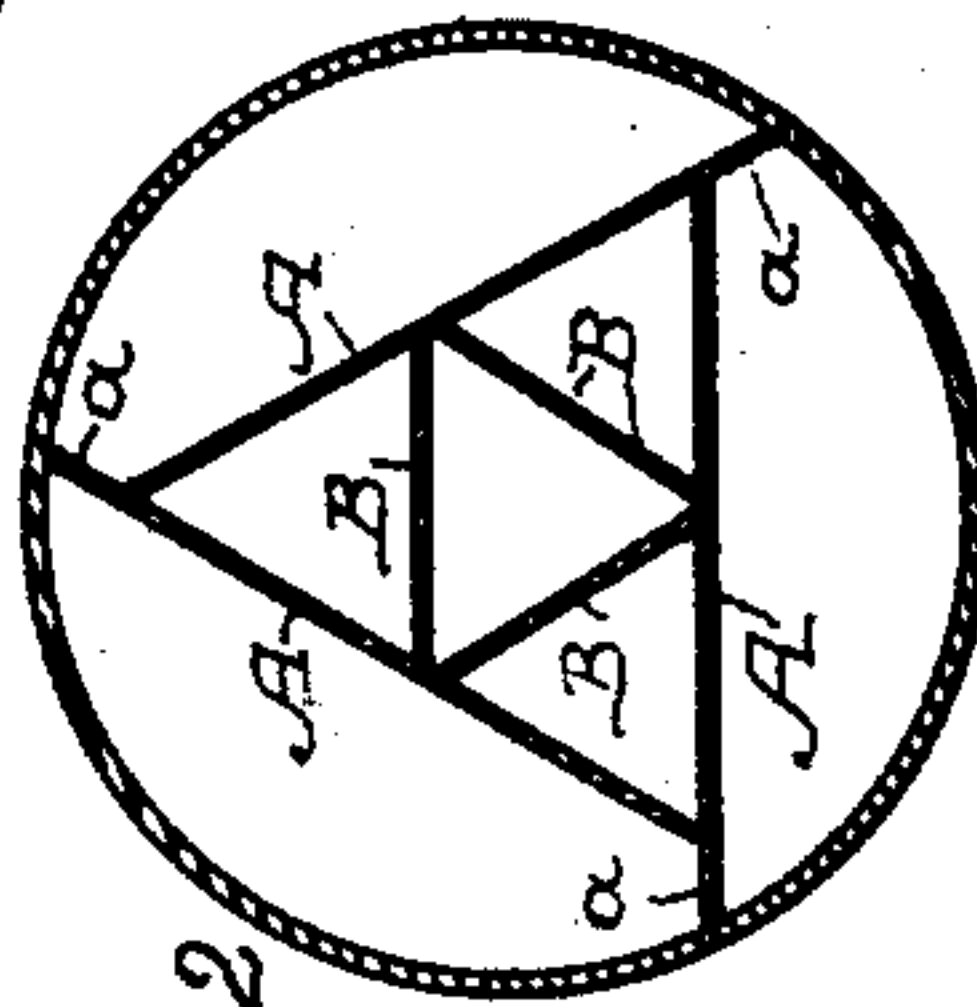


Fig. 2



Witnesses,
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UNITED STATES PATENT OFFICE.

CHARLES F. RODIN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO ADRIAN MERLE AND ANDREW RUDGEAR, OF SAME PLACE.

GUIDING DEVICE FOR DISCHARGE-NOZZLES.

SPECIFICATION forming part of Letters Patent No. 520,222, dated May 22, 1894.

Application filed December 27, 1893. Serial No. 494,896. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. RODIN, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Guiding Devices for Discharge-Nozzles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for guiding the stream from discharge nozzles to prevent a rotary motion thereof, and to maintain the body of water in a solid condition after it leaves the nozzle.

It consists essentially of interior prismatic tubes formed by rectilinear plates extending longitudinally through the pipe, to the end of which the discharge tip is connected, said plates being arranged to form inclosed triangular or rectangular spaces, as will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section taken through a discharge pipe and its nozzle. Fig. 2 is a transverse section showing the arrangement of the plates. Fig. 3 is a perspective view of the prismatic tube. Fig. 4 is a transverse section of a modified form of the plates.

The object of my invention is to provide a device which will correct the tendency of water to rotate and break into spray when it leaves a discharge nozzle under pressure. It is especially applicable to hydraulic nozzles of all descriptions which are used to wash down banks of earth and to the nozzles of fire engines, and in cases where it is desired to throw a solid stream of water to the greatest possible distance before it breaks. In the present case I have shown a series of plates A the edges of which are united together to form tubes having a triangular cross section.

As the pipes to which nozzles are connected are usually made tapering, I make the exterior plates A of greater width at one end than the other. These plates are then joined together, as shown, with the edges *a* projecting beyond the corresponding edges of the next adjacent plates with which they are united, so that while the interior of the space inclosed by the plates A is approximately of the same diameter from end to end, the di-

ameter of the circle inclosing the rear end at the point where the edges *a* project the farthest, will be larger than the diameter at the opposite end toward which the plates taper, and at which point they merge into each other at the angles, so that the shape of the device will correspond with the interior taper of the pipe to which it is fitted. By making these projections *a* of sufficient extent it is easy to fit the device into any pipe to the size of which it approximates, by simply filing these projecting edges until the device will enter the pipe.

Within the exterior plates A are arranged the rectangular plates B which also unite to form prismatic channels within themselves, and between themselves and the outer plates A.

This device may be introduced into the pipe extending approximately from the rear end which is attached to the hose or other point of supply to a point just at the base of the discharge nozzle.

It will be manifest that if desired other plates C may be connected with these herein described, so as to further divide the segmental spaces exterior to the plates A into similar prismatic channels. These plates are made of thin sheet metal, the ends being drawn to a feather edge so as to present as little obstruction as possible of the passage of the water through these channels. By reason of this subdivision, and the peculiar form of the channels, tests have shown that a stream of water which ordinarily breaks into spray before reaching one hundred feet from the nozzle, can be thrown with this device over three hundred feet without breaking into spray at all.

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

1. A device for correcting the tendency of water to spray when discharged from the pipe or nozzle under pressure, consisting of plates whose edges are united to form a tube having a triangular cross section, and having one edge *a* of each plate projecting beyond the corresponding edge of the next adjacent plate said tube being removably seated in a dis-

charge pipe, substantially as herein described.

2. A device consisting of an inner and outer tube each having a prismatic form in cross
5 section forming channels for the water, one edge of the plates of the outer tube projecting beyond the corresponding edge of the next adjacent plate of the same tube, where-

by the device may be fitted to conform to the interior of a tapering discharge pipe. 10

In witness whereof I have hereunto set my hand.

CHARLES F. RODIN.

Witnesses:

S. H. NOURSE,

J. A. BAYLESS.