

E. J. LASHER.  
NOZZLE DIRECTING DEVICE.  
APPLICATION FILED MAY 19, 1903.

NO MODEL.

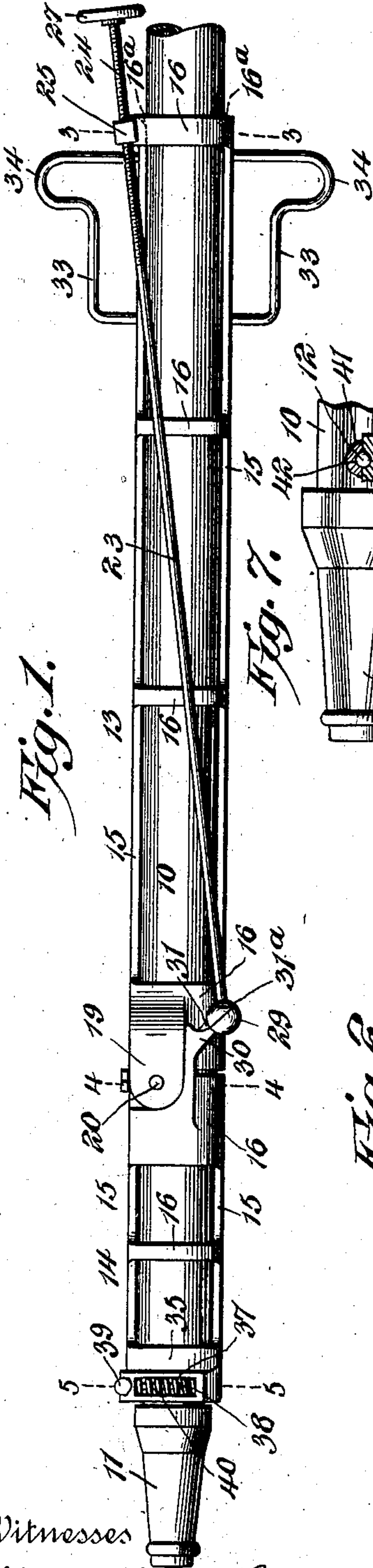


Fig. 1.

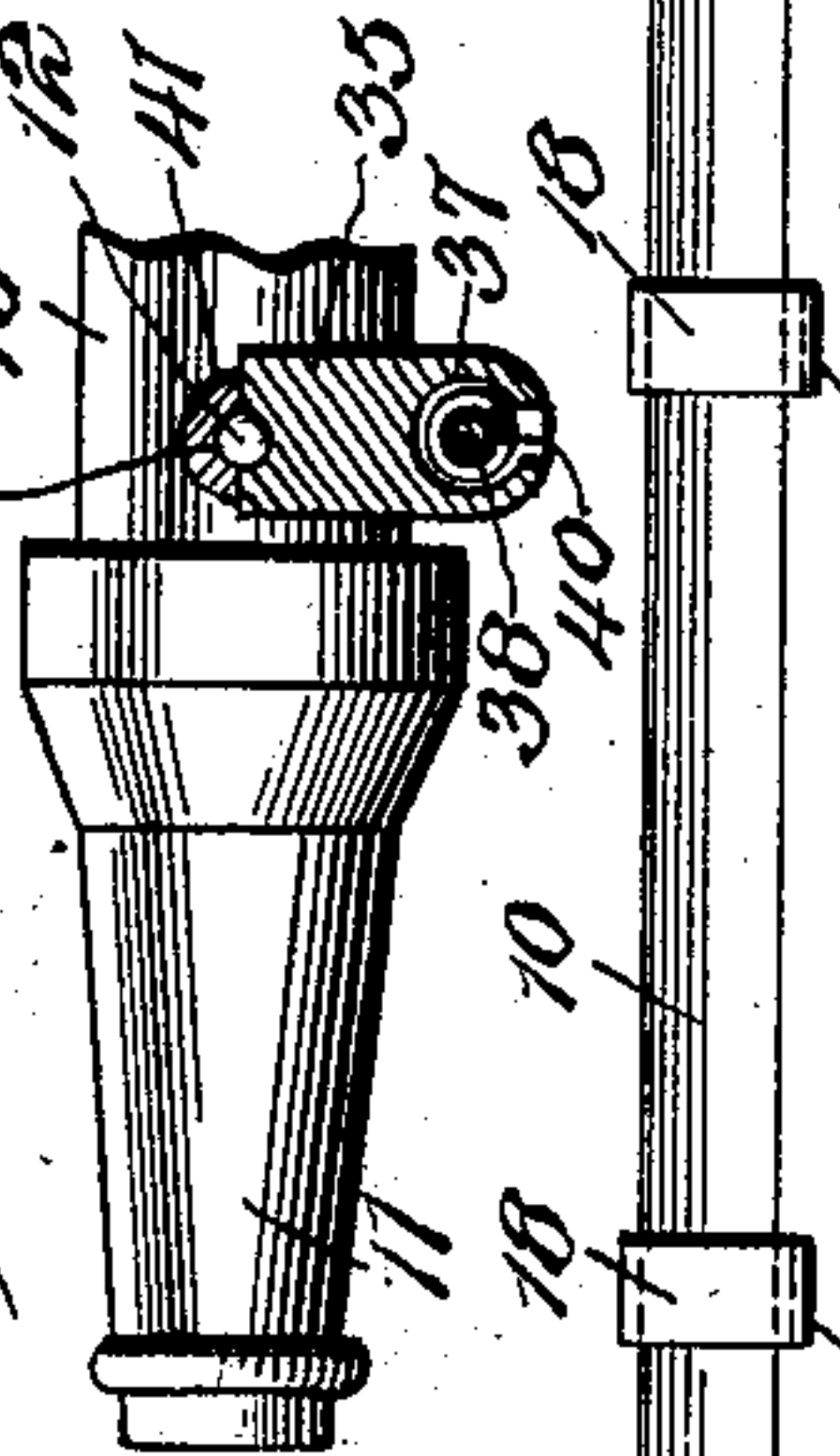


Fig. 2.

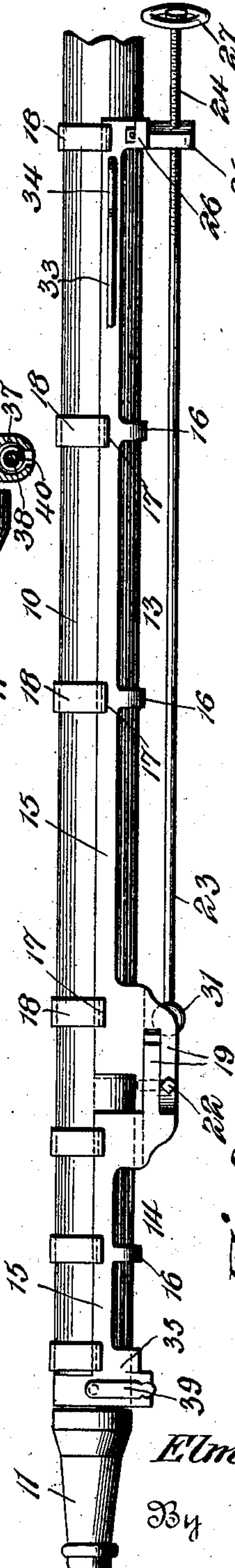
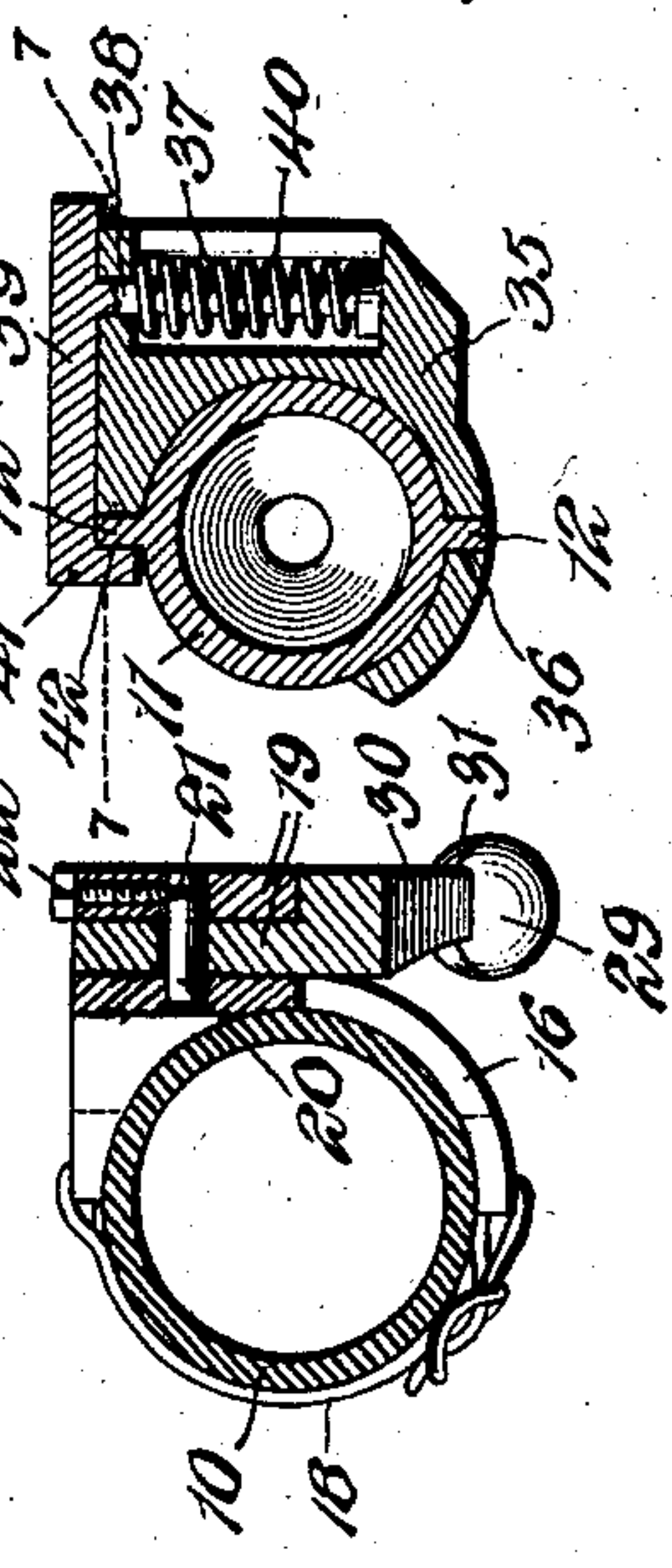
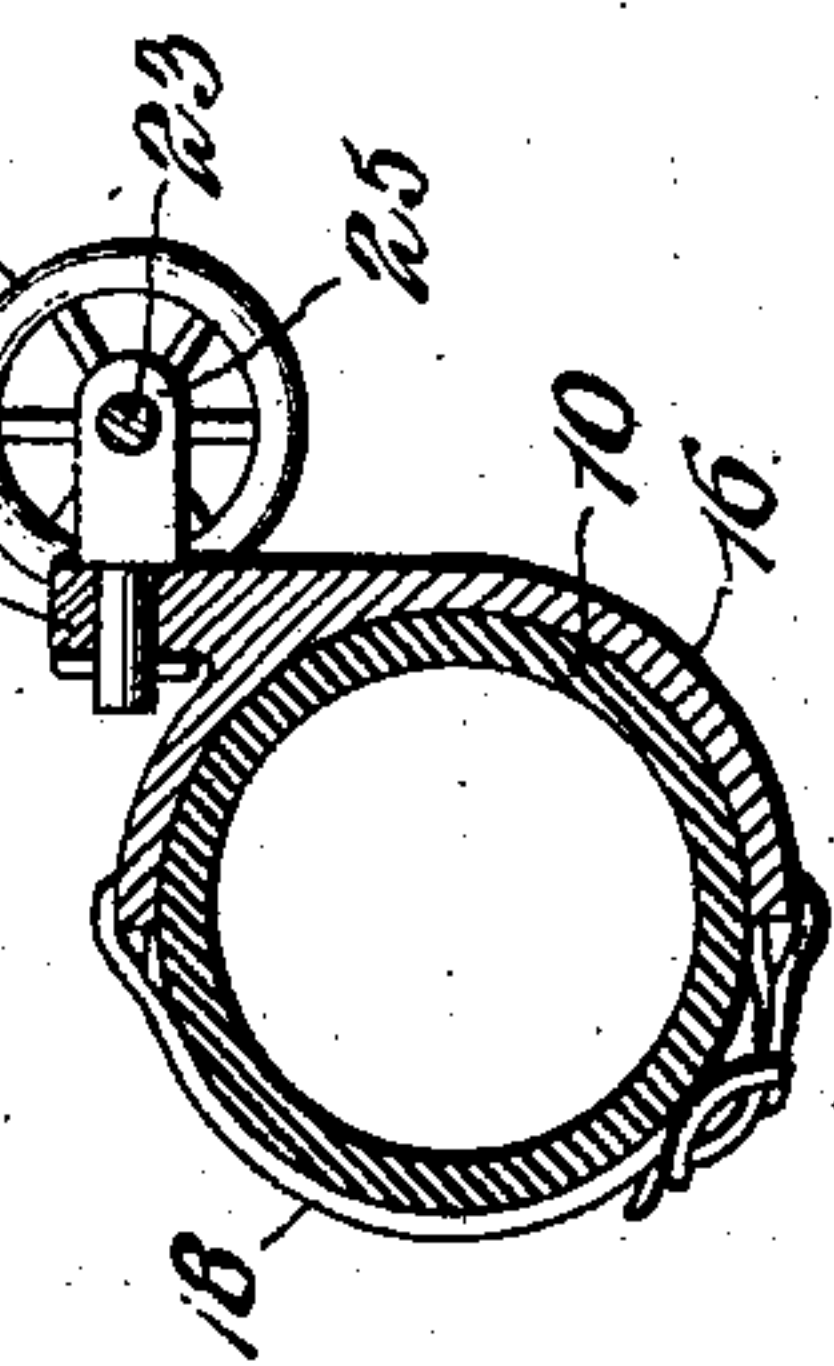


Fig. 3.

Fig. 4.

Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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TO PETER M. VANDENBURG, OF JOHNSTOWN, NEW YORK.

## NOZZLE-DIRECTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 746,110, dated December 8, 1903.

Application filed May 19, 1903. Serial No. 157,869. (No model.)

*To all whom it may concern:*

Be it known that I, ELMER JAY LASHER, a citizen of the United States, residing at Johnstown, in the county of Fulton and State of New York, have invented a new and useful Nozzle-Directing Device, of which the following is a specification.

In many conflagrations it is very desirable to deflect streams of water in confined places when it is impossible or impracticable for an operator to change his position. For instance, where a fire occurs in a cellar it may be impossible to enter, and the one way of fighting the same is to introduce the hose downwardly through an opening of some nature; but this operation is very disadvantageous, as there is no way of directing the stream of water after the introduction of the nozzle. In like manner when working through a window from a ladder it may be of the utmost importance to change the stream quickly to enter the adjoining window. Heretofore this has generally necessitated the dismounting and changing of the ladder, requiring valuable time and the cutting off of the stream.

The object of this invention is to provide an extremely simple structure which may be readily applied to an ordinary hose line and nozzle and will permit an operator located at some distance from the nozzle to deflect the same to any desired angle, and thus throw the stream in practically any direction without such operator changing his position or the arrangement of the main line of hose.

The form of construction which at present is considered preferable is illustrated in the accompanying drawings; but this structure may be modified in various ways without departing from the invention.

In the drawings, Figure 1 is a plan view of the structure applied to a hose. Fig. 2 is an elevation of the same. Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 1. Fig. 4 is a similar view taken on the line 4-4 of Fig. 1. Fig. 5 is a cross-sectional view taken on the line 5-5 of Fig. 1. Fig. 6 is

a detail section through the ball-and-socket joint of the actuating-rod and front section, and Fig. 7 is a detail sectional view on the line 7-7 of Fig. 5.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

In the drawings an ordinary flexible hose is shown and designated by the reference-numeral 10, said hose being provided on its front end with a nozzle 11, the coupling between the nozzle and the hose having the usual oppositely-projecting studs 12.

The present embodiment of the invention comprises in its make-up a skeleton frame comprising sections 13 and 14. The sections each consist of longitudinally-disposed bars 15, connected by semicircular web-pieces 16, the rear web being beveled, as indicated at 16<sup>a</sup>. The bars have suitable eyes 17, designed to receive fastening-straps 18, though these straps may be attached in any other manner desired. The adjacent end webs of the sections are considerably larger than the intermediate webs and carry overlapping hinge-ears 19, through which is passed a pivot-pin 20, having an annular groove 21, that receives the inner end of a holding-screw 22, located in one of the ears 19. The two sections are thus hinged together and can be moved into alignment or in angular relation with respect to each other. To accomplish these movements and hold the sections, an actuating-rod 23 is employed, said rod having its rear end threaded, as shown at 24, and passed through a stud 25, swiveled in the rear end of the rear section, said section having an offset lug 26 for this purpose. The rear end of the rod 23 is provided with a suitable hand-wheel 27, while its opposite end has a ball-enlargement 28 engaging in a socket 29, forming part of an offset arm 30, carried by the rear end of the front section and located contiguous to the hinge. The socket is formed of two parts, one being integral with the arm 30, the other consisting of a cap 31, secured by a suitable



fastener 32 to the arm and having a slot 31<sup>a</sup>, in which the rod operates.

The rear end of the rear section carries oppositely-extending handles 33, having out-  
5 standing portions 34, while the front end of the front section is arranged to be detachably secured to a nozzle. For this purpose said section is provided with a head 35, having a  
10 socket 36 to receive one of the studs 12 of the coupling. This head is, furthermore, provided on its outer side with a seat 37, in which is mounted a headed shank 38, carried by a  
15 jaw 39, movably mounted on the head, said jaw and shank constituting a locking-latch, as is hereinafter more fully described. The jaw is normally held down upon the head by means of a coiled spring 40 surrounding the  
20 shank, and said jaw is provided with a terminal finger 41, in which is formed a socket 42, that receives the stud 12 of the coupling opposite the stud engaged in the socket 36.

As shown in the drawings, the frame can be readily applied to a hose and is detachably held in place by the straps 18. Its longitudinal movement upon said hose is prevented by the locking of the head to the nozzle. When in place, therefore, a considerable portion of the hose in rear of the nozzle is inflexible. Upon turning the actuating-  
30 rod by means of the handle-wheel the front section can be swung to any angular position with respect to the rear section, carrying the nozzle with it, and thus deflecting a stream of water projected from said nozzle. At the  
35 same time the hose may be operated conveniently from the handles, and said handles may be used either vertically or horizontally. With this arrangement it will be apparent that the stream of water may be deflected in  
40 confined places. As an example, should a fire occur in a cellar the nozzle can be inserted through the floor above the same and deflected by the fireman standing upon said floor, so that the stream can be thrown hori-  
45 zontally in any direction desired, or if the nozzle is operated by firemen upon a ladder the nozzle may be changed to different windows and turned to throw a stream directly through the same without the necessity of  
50 changing the position of the ladder. At the same time when a direct stream is desired by moving the sections into alinement the effect is obtained. The structure does not interfere with the changing of nozzles and  
55 may be quickly attached to or detached from an ordinary line of hose. It may be made of different sizes and will constitute an important feature in fire-fighting equipments.

From the foregoing it is thought that the  
60 construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape,

proportion, and minor details of construction 65 may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters 70 Patent, is—

1. In a nozzle-directing device, the combination with sections, of means for separately securing the sections to a flexible hose, a hinge 75 connecting the sections, and means also connecting the sections for holding them in angular relation.

2. In a nozzle-directing device, the combination with inflexible sections, of means for securing the sections to a flexible hose, a hinge 80 connection between the sections, and a device secured to one section and having an adjustable connection with the other section to hold said sections in angular relation.

3. In a nozzle-directing device, the combination with a frame comprising hinged sections, of means for detachably securing the sections to a flexible hose, and an actuating-rod swiveled upon one of the sections and having a threaded engagement with the other 90 section.

4. In a nozzle-directing device, the combination with a frame comprising hinged sections, of means for securing the sections to a hose, a stud swiveled upon one section, and 95 an actuating-rod having a threaded engagement with the stud and a ball-and-socket connection with the other section.

5. In a manually-manipulated nozzle-directing device, the combination with sections, 100 of separate means for securing each section to a hose, a connection between the sections for holding them in different angular relations, and a handle carried by one of the sections. 105

6. In a manually-manipulated nozzle-directing device, the combination with sections, of means for securing one section to a hose-nozzle, means for securing the other section 110 to the hose in rear of the nozzle, mechanism for moving the front section with respect to the rear section to swing the nozzle, and handles attached to the rear section.

7. In a nozzle-directing device, the combination with a skeleton frame, semicircular in 115 cross-section and composed of hinged sections, said frame having an open side arranged to receive a hose, of straps for securing the frame to the hose, means for fastening one section to the hose-nozzle, and a connection 120 between the sections for holding them in different angular relations.

8. In a nozzle-directing device, the combination with a frame, of means for securing the frame to a nozzle, said means including a latch 125 movably mounted on the frame and arranged to engage the nozzle.

9. In a nozzle-directing device, the combi-



nation with a frame, of means for securing the frame to a nozzle, said means including a latch movably mounted on the frame and having a socket in which the nozzle-stud engages.

- 5 10. In a nozzle-directing device, the combination with a frame having a head provided with a socket in which one stud of the nozzle engages, of a sliding spring-pressed shank mounted transversely in the head and having

an overhanging jaw provided with a socket in which the other nozzle-stud engages.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELMER JAY LASHER.

Witnesses:

ISAAC SCOTT,  
ISABEL R. HOUGH.