

No. 683,312.

Patented Sept. 24, 1901.

J. MARQUARDT.
COUPLING DEVICE.

(Application filed Nov. 20, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

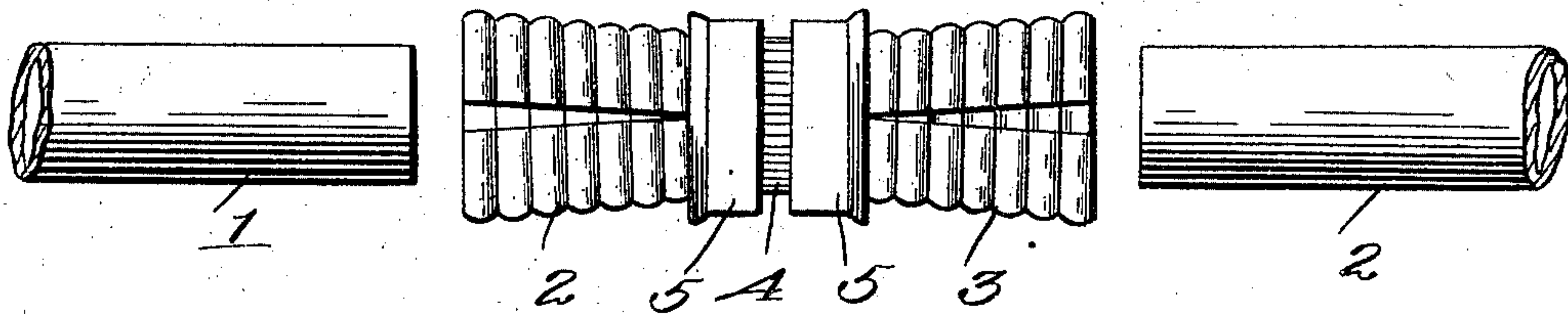


Fig. 2.

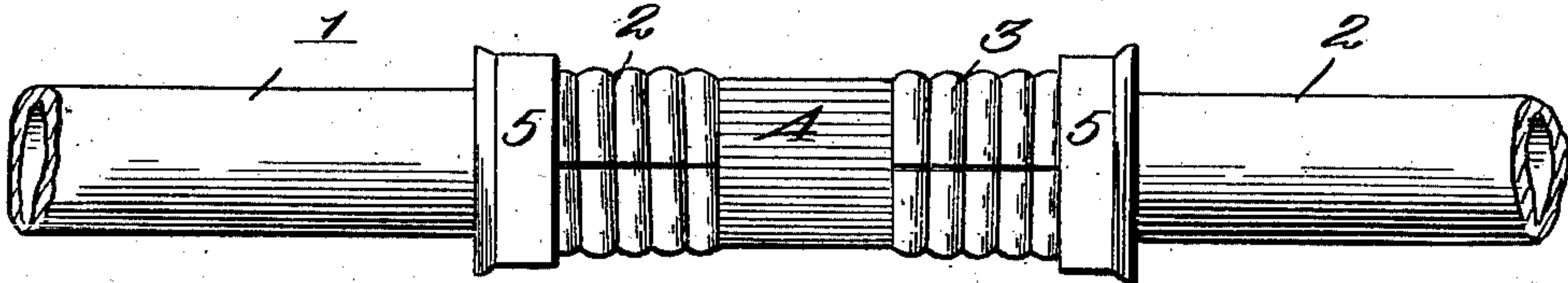


Fig. 3.



Fig. 4.

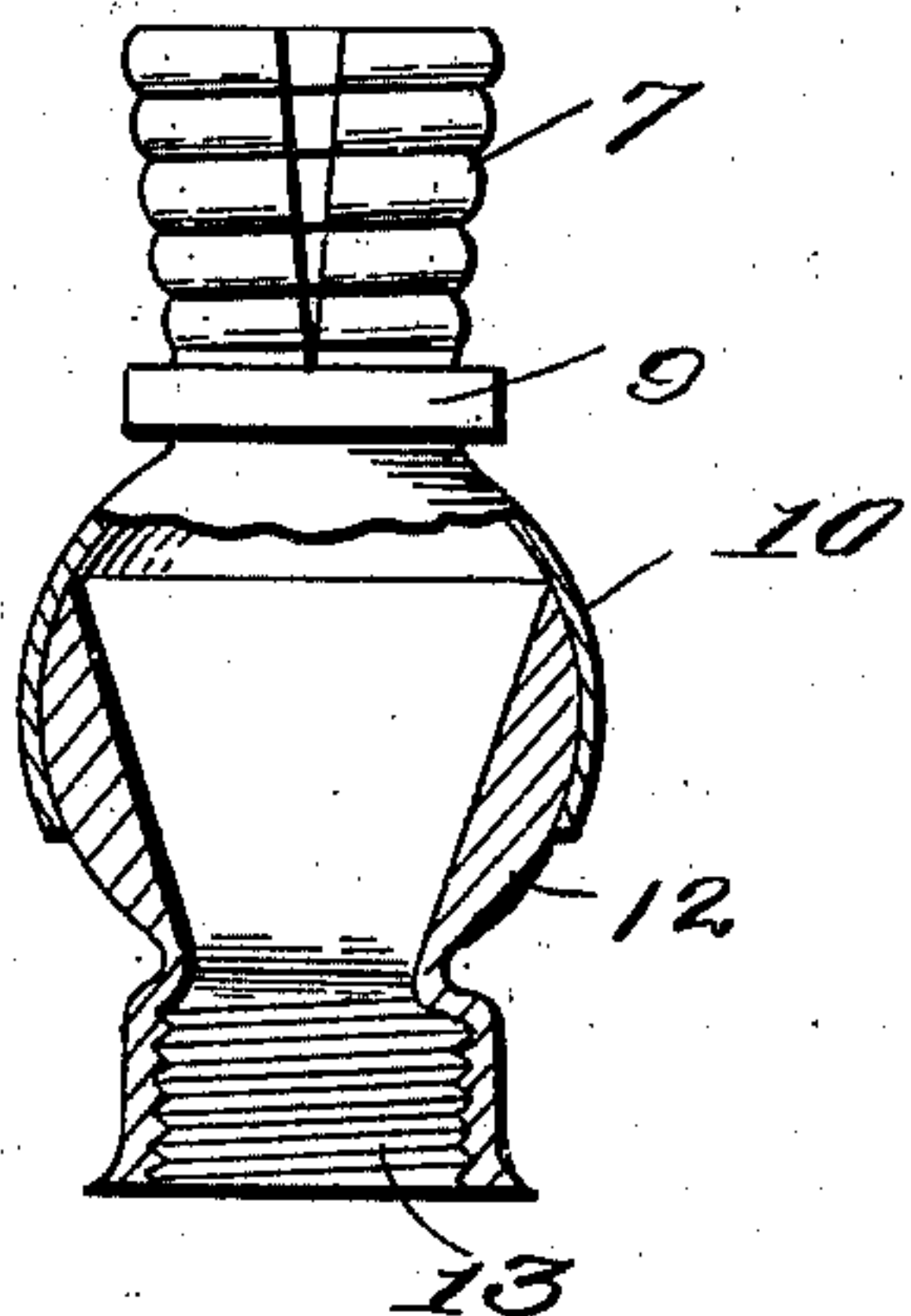
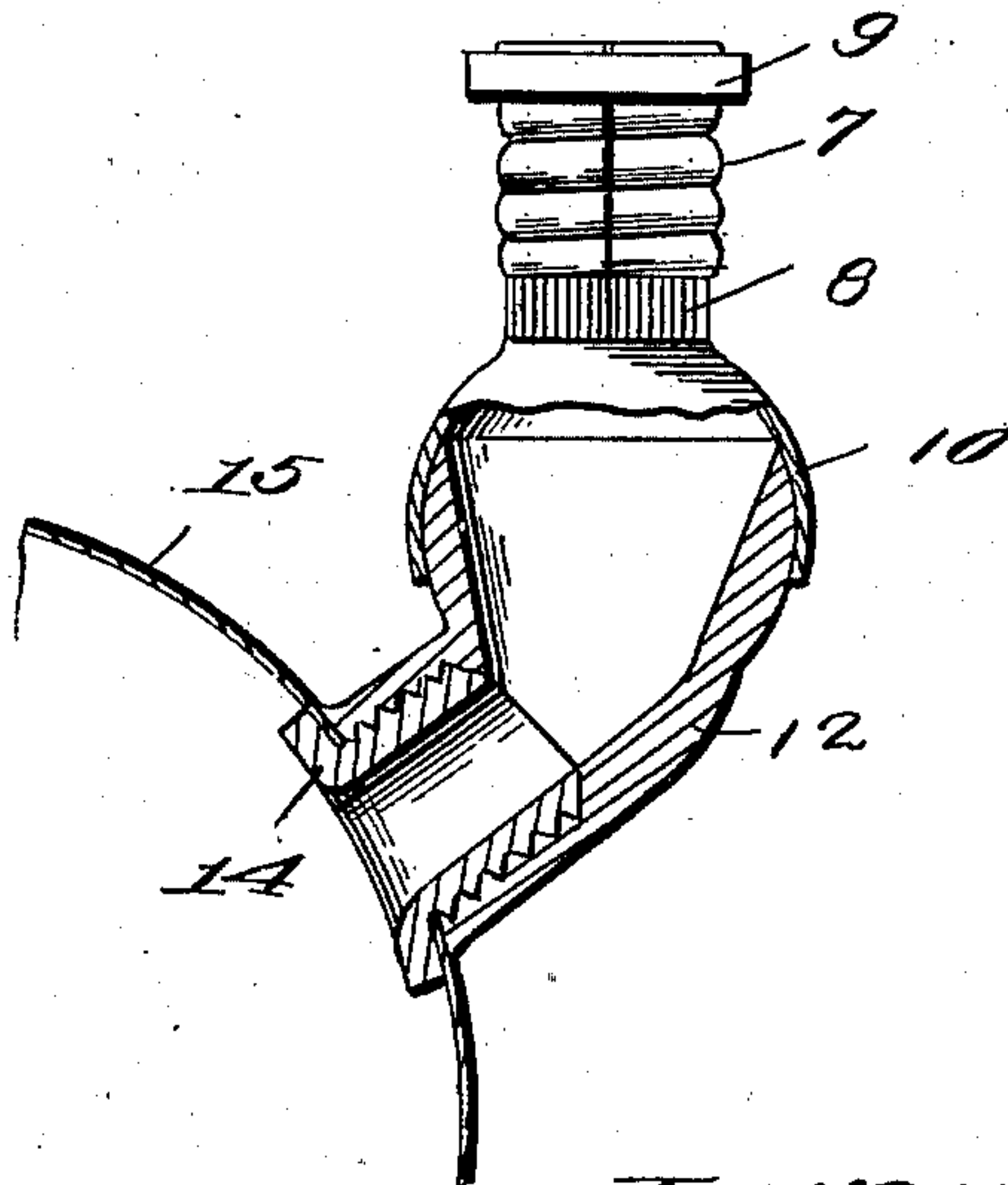


Fig. 5.



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2 Sheets—Sheet 2.

Fig. 6.

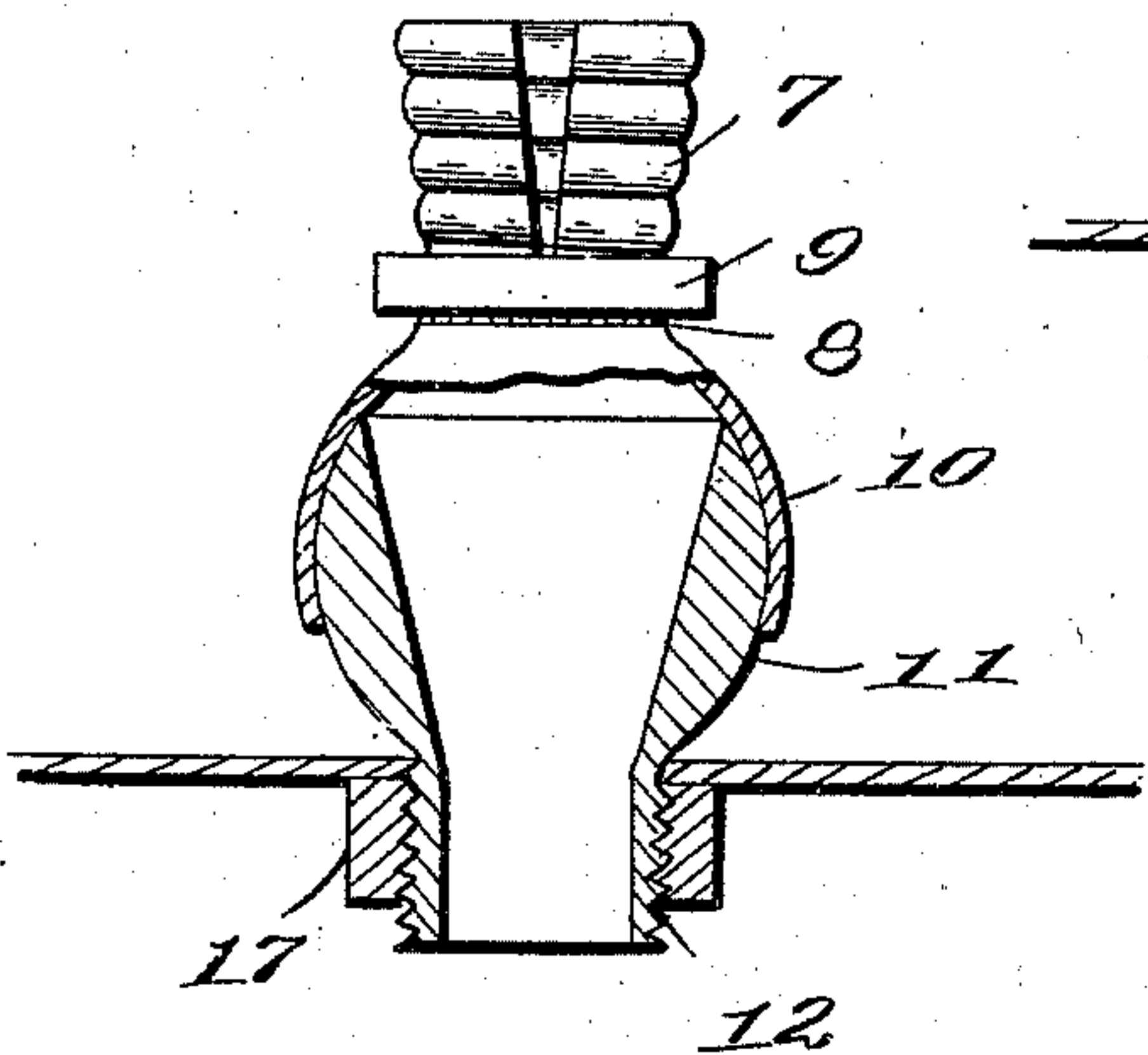


Fig. 7.

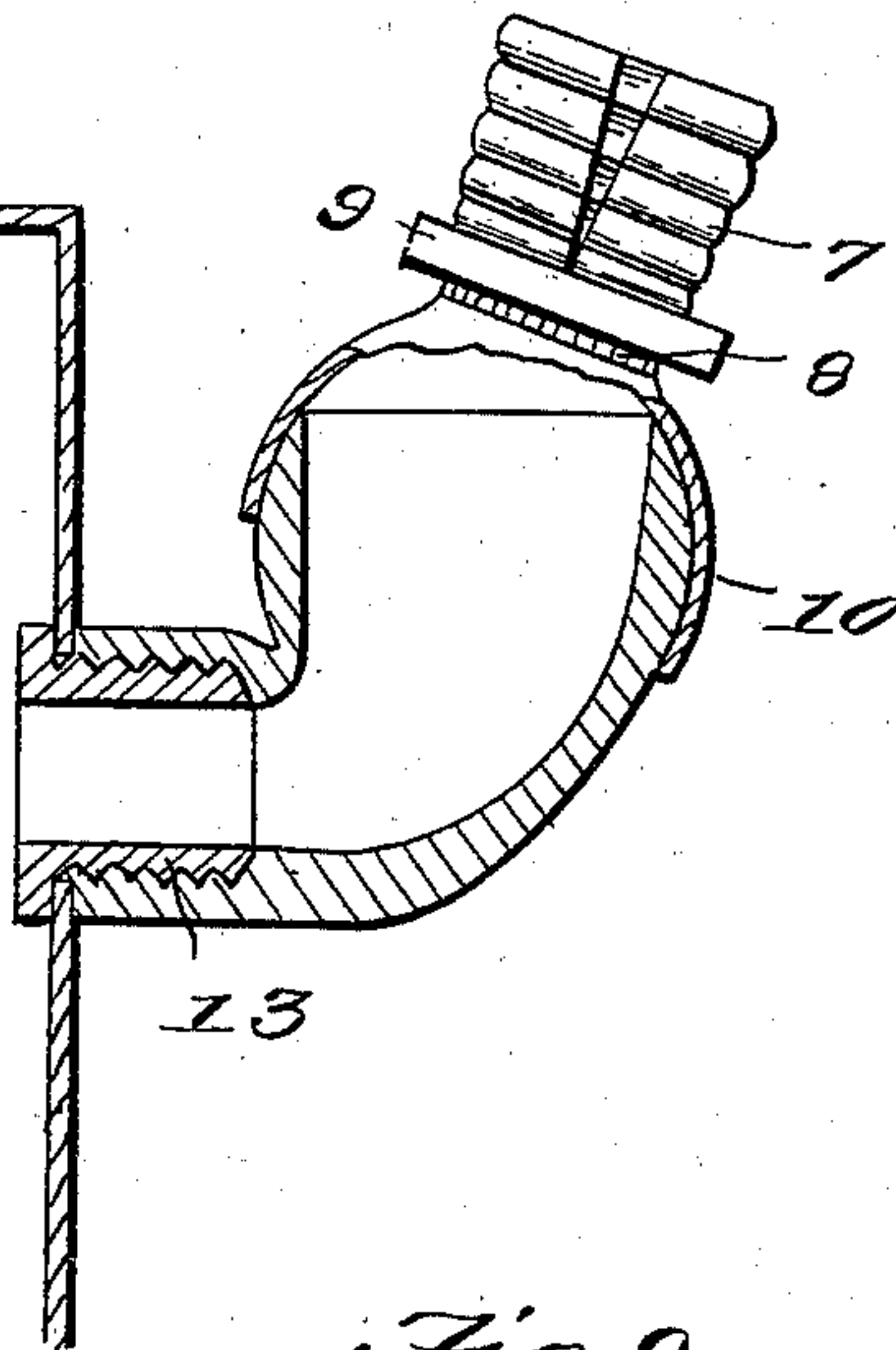


Fig. 8.

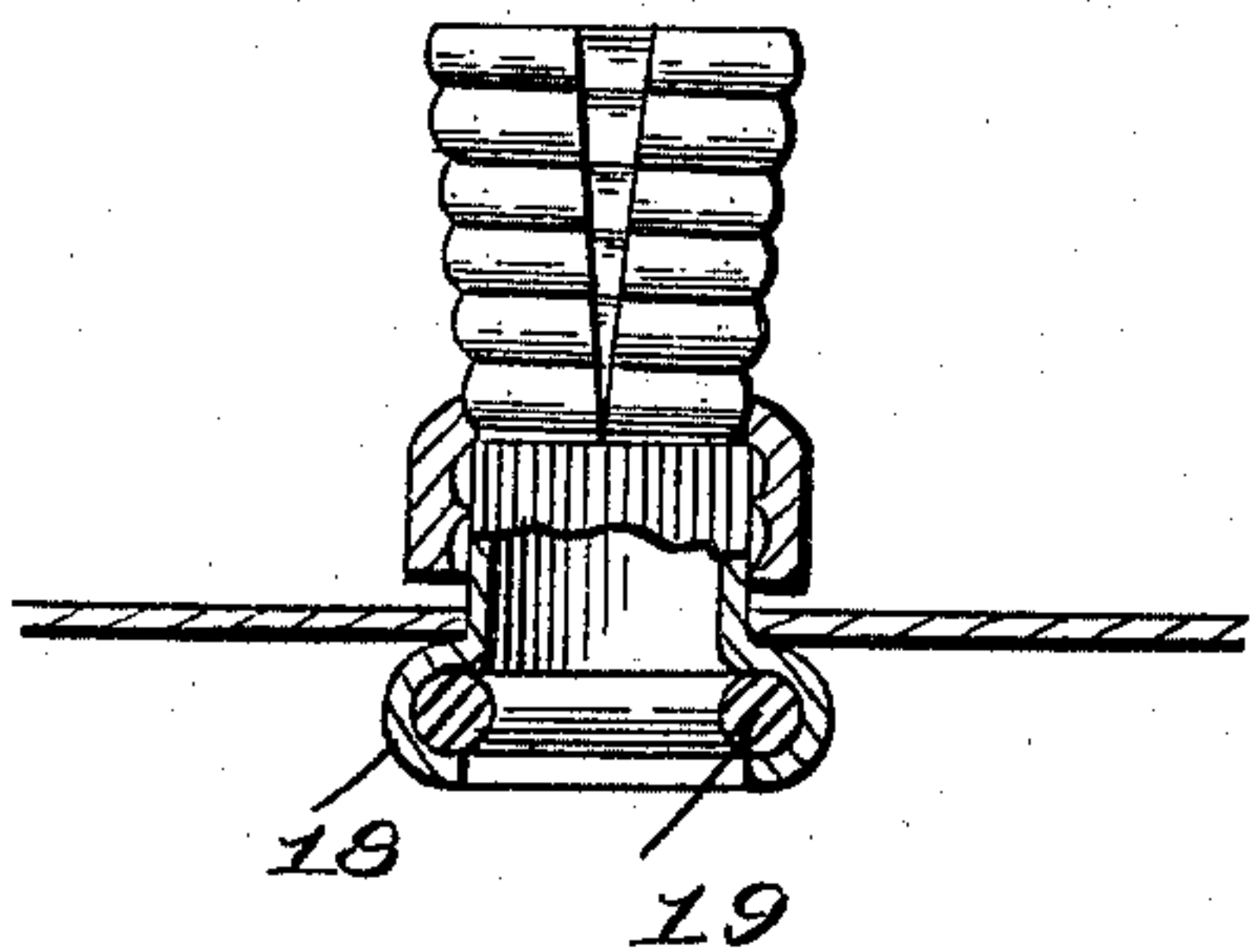


Fig. 9.

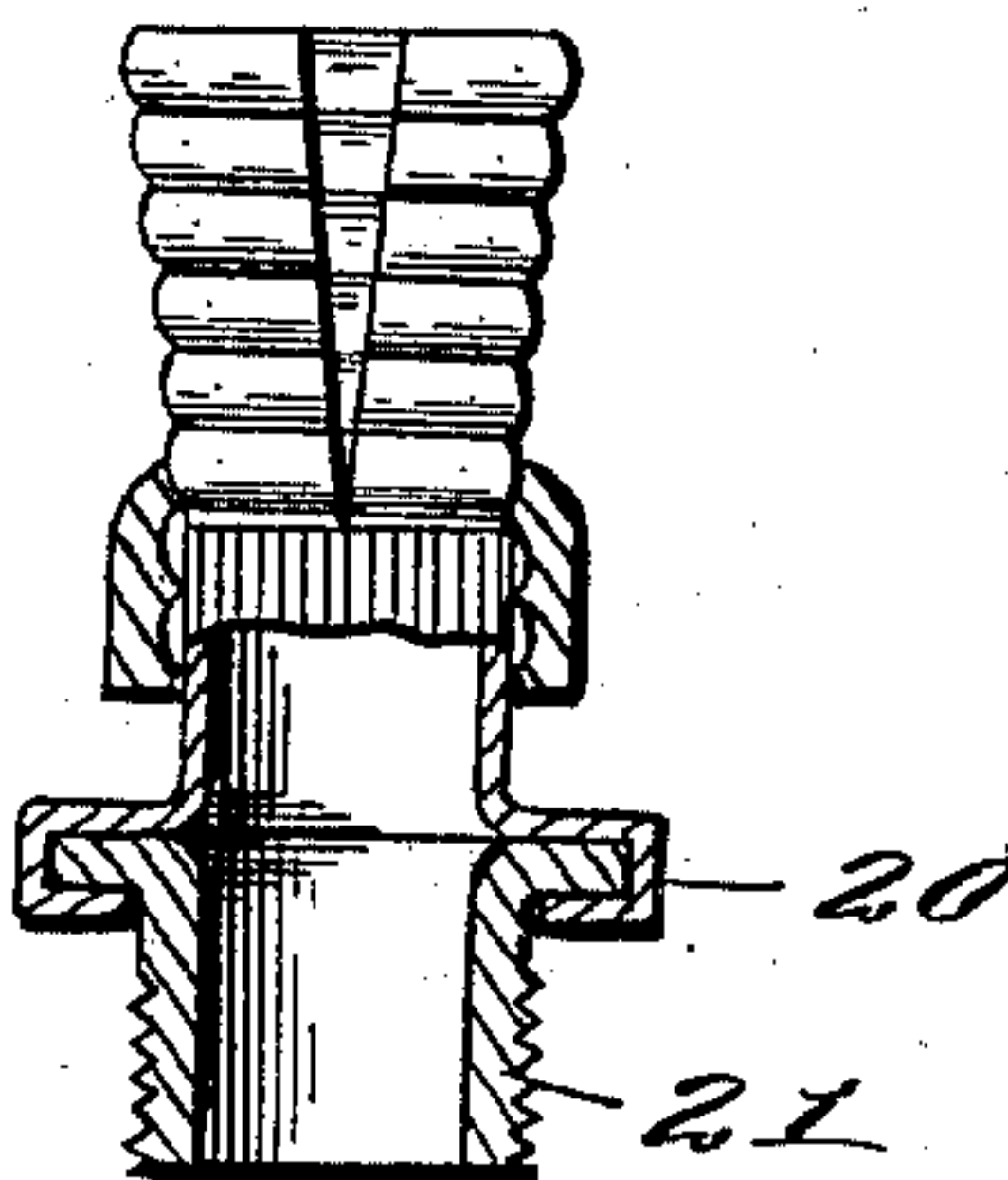
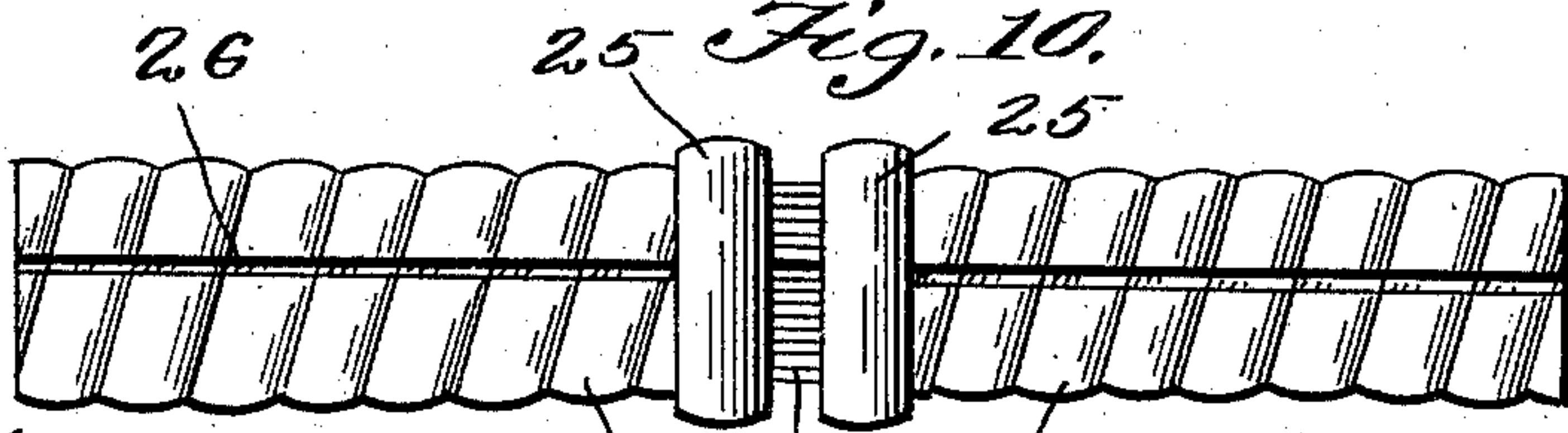


Fig. 10.



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UNITED STATES PATENT OFFICE.

JOSEPH MARQUARDT, OF NEW YORK, N. Y.

COUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 683,312, dated September 24, 1901.

Application filed November 20, 1900. Serial No. 37,152. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MARQUARDT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Coupling Devices, of which the following is a specification.

This invention relates to certain new and useful improvements in coupling devices, more particularly detachable couplings for obtaining mechanical connections between conducting devices carrying wires forming a part of an electrical circuit, connecting together pipe-sections for conveying water, steam, or other fluid, and also for attaching a pipe to a reservoir, chamber, or other places.

The device is extremely simple in its construction, strong, durable, and efficient in its use, and comparatively inexpensive to manufacture; and the invention consists in the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a side elevation of the coupling device detached from a pair of conductors or pipes. Fig. 2 is a like view with the coupling device attached to the conductors or pipes. Fig. 3 is a cross-section of the fastening-nut. Fig. 4 is a side elevation, partly in section, of the coupling device and socket. Fig. 5 is a like view with the socket arranged obliquely. Fig. 6 is a like view with the socket externally screw-threaded and a nut attached thereto. Fig. 7 is a like view with the sockets substantially L-shaped. Fig. 8 is a like view with the end of the coupling device provided with a stop-flange and a gasket. Fig. 9 is a like view with the coupling device formed with a supporting-flange. Fig. 10 is a side elevation of a modified form of coupling which is split or slitted from end to end.

Referring to the drawings by reference-numerals, 1 and 2 denote the pipe-sections, which are connected together by my new and im-

proved coupling, consisting of a hollow cylindrical sheet-metal body having the internally and externally screw-threaded flaring split ends 2 and 3, connected together by a central portion 4 of smaller diameter than the split ends. The central portion 4 is usually crimped to contract the same for decreasing its diameter. Mounted upon the sheet-metal body is a pair of fastening-nuts 5, each provided with an opening flaring outwardly somewhat and having the walls thereof screw-threaded, as at 6. The nuts 5 are adapted to engage the screw-threads of the split ends for contracting the same to engage and connect a pair of pipe-sections together, and when it is desired to uncouple the sections of the pipe the nuts are moved to the central portion 5, which being of less diameter than the ends permits the latter to expand, and the pipe-sections can be removed. The split ends of the coupling, as before stated, are flared outwardly, so when contracted around the ends of the pipe by means of the nut the ends will securely clamp around the pipe and prevent the displacement or removal of the latter until the nuts are loosened.

The coupling may be provided with one flaring split end 7 instead of two and terminate at its inner end with a crimped portion 8 of smaller diameter, upon which is mounted the fastening-nut 9 when not in engagement with the split end 7 for connecting the pipe-section thereto. The crimped portion 8 terminates in a flaring end 10, substantially spherical in contour, in which is mounted the substantially spherical end 11 of the socket 12, provided with internal screw-threads 13. This construction forms a universal joint and permits the sheet-metal body to move to various positions, and it is particularly adapted for coupling a pipe-section to a reservoir or chamber. The socket 12 instead of extending vertically, as in Figs. 4 and 6, may extend obliquely, as in Fig. 5, or at a right angle to the spherical end 11, as in Fig. 7.

The reference-numeral 14 denotes an externally-screw-threaded bushing to which the socket 12 is connected.

The reference 15 denotes a round pipe to which the coupling is connected.

I may dispense with the bushing 14 and provide the socket 12 with external screw-

threads for attaching the same directly to the nut 17, as in Fig. 6, and the inner face of the coupling device may, if desired, be coated with a suitable adhesive composition which
5 may adhere to the conductor or pipe to prevent the latter from slipping. Instead of forming one end of the body of the coupling split or spherical the same may be formed with a stop-flange 18, provided with a gasket
10 19, as shown in Fig. 8, or the same may be formed with a supporting-flange 20 for connecting the threaded-pipe bushing 21 thereto, as in Fig. 9.

By providing a flaring split end in the manner as hereinbefore referred to the same can
15 be made to expand to fit various diameters of conductors, pipes, rods, &c., and which will be contracted around the latter by means of the fastening-nut connecting the pipes, conductors, rods, &c., either to the wall, reservoir, or other object, or couple together the
20 sections of the conductors, pipes, rods, &c.

In Fig. 10 is shown a modified form of coupling consisting of a hollow cylindrical sheet
25 metal having the internally and externally spiral screw-threaded ends 22 23 terminating at their inner end in the central portion 24 of smaller diameter. The coupling, as shown, is split or slitted entirely from end to end, as
30 at 26, and is provided with a pair of fastening-nuts 25. This form of coupling is adapted for use in connection with spiral tubing used for electrical conductors, the internal spiral screw-threads of the coupling making

the latter readily adaptable for engagement 35 with the spiral tubing.

It is thought the many advantages of my improved coupling can be readily understood from the foregoing description taken in connection with the accompanying drawings, and
40 it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having thus fully described my invention, 45 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a socket provided with a hollow spherical portion, of a coupling device comprising in its construction a hollow sheet-metal body having a spherical-
50 shaped end adapted to embrace the spherical portion of the socket, a longitudinally-extending split externally-screw-threaded flaring end and a portion interposed between the two
55 ends and of less diameter than the split ends.

2. A coupling device comprising a sheet-metal body portion having an internally and externally screw-threaded split end terminating in a portion of smaller diameter, and a
60 nut for contracting said split end.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH MARQUARDT.

Witnesses:

HERMAN BENZ,

HENRY WENWATZ.