

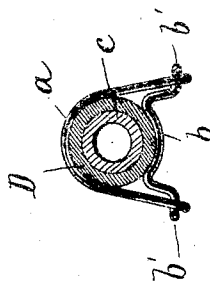
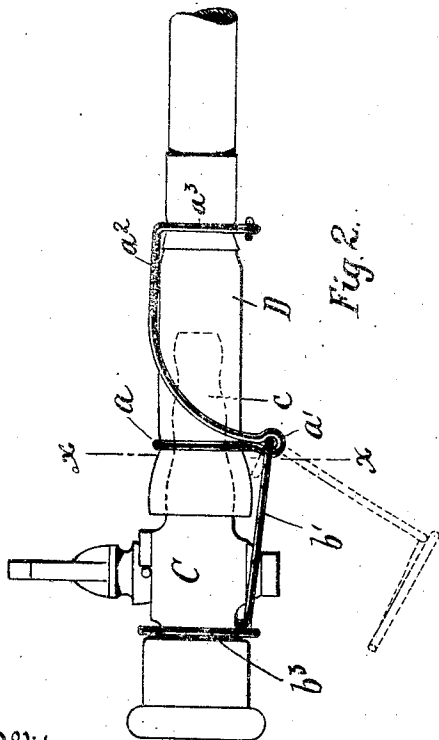
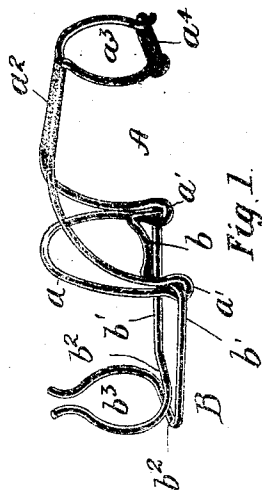
No. 770,982.

PATENTED SEPT. 27, 1904.

A. W. PLASSMANN.
TUBE RETAINER.

APPLICATION FILED JAN. 14, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST W. PLASSMANN, OF NEW YORK, N. Y., ASSIGNOR TO RICHMOND ELECTRIC MANUFACTURING COMPANY, A CORPORATION OF NEW YORK.

TUBE-RETAINER.

SPECIFICATION forming part of Letters Patent No. 770,982, dated September 27, 1904.

Application filed January 14, 1904. Serial No. 189,001. (No model.)

To all whom it may concern:

Be it known that I, AUGUST W. PLASSMANN, a citizen of the United States, residing in the city of New York, in the borough of Richmond and State of New York, have invented certain new and useful Improvements in Tube-Retainers, of which the following is a full, clear, and exact description.

This invention is a device for retaining the end of a tube of rubber or other soft material on the end of a metal pipe or the nipple of a cock or valve.

The most prominent use for the device is in securing the end of a gas-tube to the nipple of a gas-cock to secure the connections of gas stoves, heaters, &c.

The device consists, essentially, of two parts, each made of wire, one part being provided with a fixed clamping-jaw and with means for attaching it to the end of the tube, while the other part is articulated upon the first part and is provided with a movable clamping-jaw and with means which engage with the pipe or cock to which the tube is connected.

The details will be described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the complete device. Fig. 2 is a side elevation of the device in its working position, and Fig. 3 is a section on line *xx* of Fig. 2.

The device constituting my invention consists of two parts, A and B, respectively, both of which are preferably made of wire of proper strength and rigidity. The part A is formed with an inverted-U-shaped clamping-jaw *a*, the legs of which are terminated by two eyes *a'* bent into the wire, from which the two leads of the wire extend upward and rearward side by side, where they are connected together by means of a wrapping or binding element *a''*, and are finally bent downward at right angles and curved outward to form an open ring *a'''*, the ends of which may be secured together by a link *a''''* or twisted together.

The part B consists of a curved clamping-jaw *b*, from the extremities of which branches *b'*, respectively, lead first downward, then outward, and then forward or longitudinally to

form a lever, and having their ends *b''* first approaching each other until they cross and then curved outward and upward to form an open spring-loop *b'''*. Immediately below the jaw *b* those portions of the wire which lead outward pass through the eyes *a'*, respectively, which thus form bearings upon which the part B may swing. When the parts are in their closed or engaging position, (shown in Fig. 1,) it will be seen that the open ring *a'''*, the space inclosed by the two jaws, and the spring-ring *b'''* are axially in line with each other.

Referring now to Fig. 2, C represents a cock or valve of the character commonly used on gas-stoves or gas connections generally, and D is the end of a tube to be connected therewith. The cock is provided with the usual nipple *c*, over which the flexible end of the tube passes. It is a very common occurrence for these tubes to become detached or to leak, especially after being a short time in use, and by applying my device both the detaching and the leaking are prevented. The device is applied first to the end of the tube before the latter is passed over the nipple of the cock. This is done by passing the end of the tube through the open ring *a'''* and under the fixed jaw *a* to the proper distance, the part B being allowed to hang freely from its pivots in the position shown in dotted lines in Fig. 2. Then the end of the tube is passed the full distance over the nipple *c*, and to complete the attachment the part A is then swung upward, causing the jaw *b* to press tightly against the end portion of the tube and carrying the spring-ring *b'''* into engagement with a cylindrical part of the cock beyond the key itself, the spring-ring opening to pass around the pipe and then closing above the same. This spring connection of the part B with the cock and the clamping of the end of the tube between the two jaws of the device prevents the tube from being detached from the nipple, and inasmuch as almost the entire circumference of the tube is clamped or compressed by the two jaws leakage of gas or other material flowing through the tube cannot easily occur. The tube can be readily removed by simply swinging the part B downward and out of engage-

ment with the cock to loosen the jaw *b*, after which the tube can be readily withdrawn from the nipple and the device itself allowed to remain attached to the end of the tube, the link *a*⁴ securely holding it in place.

Having described my invention, I claim—

1. A tube-retainer consisting of the combination of two wire parts articulated together, each part provided with a jaw adapted to clamp the opposite sides of the tube and one of the parts having a clamp adapted for engagement with the tube, while the other part has a clamp adapted for engagement with the body with which the tube is connected.

2. The combination with a cock having a nipple and a tube fitting over said nipple, of a tube-retainer consisting of two parts each made of wire, one formed with a fixed jaw

and means for attaching it to the end of the tube and the other pivoted to the first and formed with a movable jaw and with a clamp adapted to secure it to the cock.

3. A tube-retainer composed of two members, one of which is provided with a fixed jaw and the other pivoted to the first and provided with a movable jaw, said jaws being adapted to embrace opposite sides of the tube, the pivoted part having a spring-clamp adapted to open and close and shaped to embrace a tubular body.

In witness whereof I subscribe my signature in presence of two witnesses.

AUG. W. PLASSMANN.

Witnesses:

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