

(No Model.)

S. BARR.
CONNECTION FOR GAS TUBES.

No. 299,720.

Patented June 3, 1884.

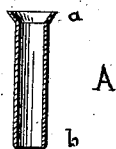


FIG. 1.

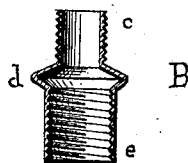
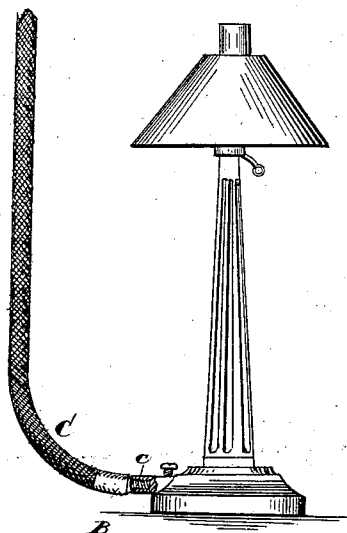


FIG. 2.



FIG. 3.

FIG. 4.



WITNESSES,

Geo B Day
Geo R Winslow

INVENTOR,

Samuel Barr

UNITED STATES PATENT OFFICE.

SAMUEL BARR, OF PROVIDENCE, RHODE ISLAND.

CONNECTION FOR GAS-TUBES.

SPECIFICATION forming part of Letters Patent No. 299,720, dated June 3, 1884.

Application filed May 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BARR, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful improvements in the metal connections used upon flexible gas-tubing for the purpose of attaching the same to gas-burners, &c.; and the nature of the improvement consists in providing one end of the tubing with a peculiar combination of parts, old and well known individually, but when combined and used, as is done in my invention, to effect a certain purpose, is new.

Heretofore flexible gas-tubing connections have been very imperfect in construction in the respect that they were not entirely gas-tight at their junction with the tubing, and also, in some instances, it was necessary to remove a portion of the spiral-wire foundation in order that the tip-connection could be properly attached. To remedy such defects is in part the object of my invention.

Referring to the drawings, in Figure 1, A is a vertical sectional view of a short metallic tube of a diameter sufficient to insure a close fit within the spiral-wire foundation of a flexible gas-tube. It is flaring at one end, as shown at *a*, so that when it is inserted within the flexible tube the flaring end will abut or fit closely against an annular shoulder within the casing B and be flush with the end of the tubing. The other end is beveled off to facilitate its easy introduction into the coiled-wire foundation. It is not necessary to remove any of the wire, and the insertion of the tube A serves to make rigid and also give strength to the end of the flexible tube when joined to a gas-burner, and, moreover, when the tubing is bent, causes the bearing or tension to be on the beveled end of the tube A, instead of on the end of the shell B, thereby rendering the part *c* of the casing less liable to work loose on the tubing C. This will be apparent from an inspection of Fig. 3 of the drawings, which shows the tubing A extended down below the end of casing B, so that as a consequence the tubing C is held rigidly between the tube A and casing B, and can bend only at the lower end of tube A. The strain being thus taken away from the tubing and casing at the end of the latter, there can be no lateral pulling of

the tubing away from the sides of the casing, which would loosen the joint between the tubing and casing and cause a leak at that point. 55

In Fig. 2, B is a vertical sectional representation of the casing. The part *c* is provided with either a male or female screw, which screw is used for attaching the connection to a gas-burner, while the part *e* is forced over one end of the flexible tubing, and serves to retain the short tube A in place; and to enable it to be more effectually united to the tubing, that part of the casing inclosing the same is furnished with a screw-thread upon its interior. Midway between the parts *c* and *e* is an annular projection, *d*, which can be so manipulated as to affix or detach the casing when required. 60 65

Fig. 3 shows my invention in its entirety; and Fig. 4 shows the tubing applied to a gas-burner, in this instance an Argand burner. 70

Having thus described the several parts of my invention, I will now explain the manner in which I unite my improved connecting-tip to the tubing. 75

I take a section of flexible tubing, after the same has received its necessary coatings of my impervious compound and envelopes of braid, and evenly trim the end thereof destined to receive the connection. I then bind around that end a small quantity of thread to keep the braid from unraveling. The next step is to apply suitable adhesive and gas-tight cement to the end thus bound, and while it is yet warm and plastic I insert into the coiled-wire foundation the beveled end of the tube A, first giving it a touch of cement. This tube is forced in until its flaring end is flush with the end of the flexible tubing. I then heat the part *c* of the casing and crowd it over the end of the tubing thus prepared. Then, wiping off the exuded and superfluous cement, the process of uniting the connection and tubing is complete, and all the parts are firmly held together, while the junction is rigid and gas-tight. It is also my custom to ream out the connection, when affixed, with a heated wire, in order to clear the passage and allow an unimpeded flow of gas. The bright casing, when fitted upon the tubing as described, and seen as contrasted with its colored braid, adds much to the finished appearance of the manufacture. 80 85 90 95 100

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. The combination of the internal wire-supported flexible tubing, the casing surrounding the same at the end thereof, and the tube inserted within the end of the tubing inside of the wire support and extended below the lower end of the outer casing, substantially as described.

2. The combination of the flexible gas-tubing, the casing formed with an annulus be-

tween its ends and fitted over the end of the tubing, and the tube formed with a flaring end and fitted within the tubing, with the flaring end opposite the annulus of the casing and its other end extended below the lower end of the casing, substantially as described.

SAMUEL BARR.

Witnesses:

GEO. B. DAY,

GEO. K. WINSLOW.