June 25, 1940. R. S. BLAIR 2,205,553

PIPE CONSTRUCTION

Filed Feb. 27, 1939

Fig. 1

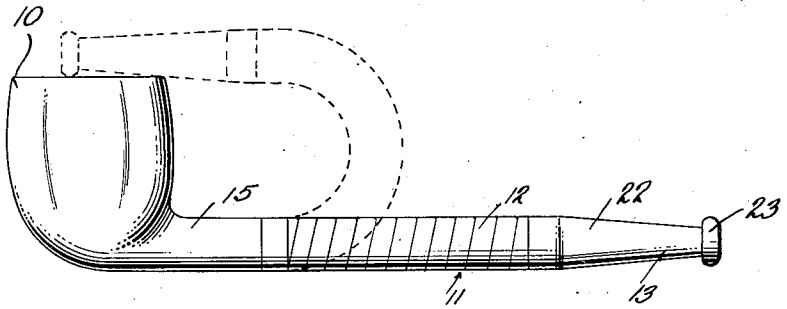


Fig. 2

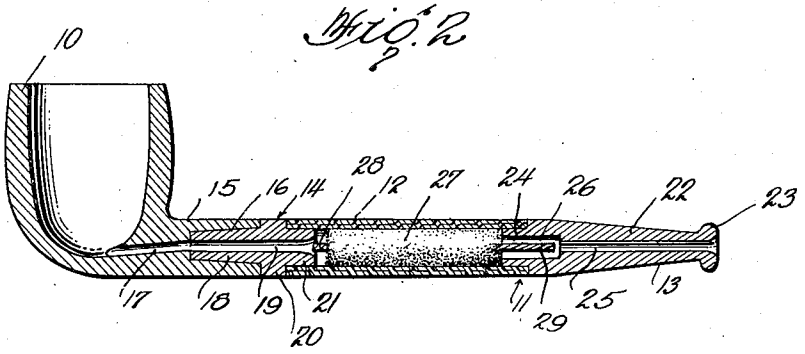
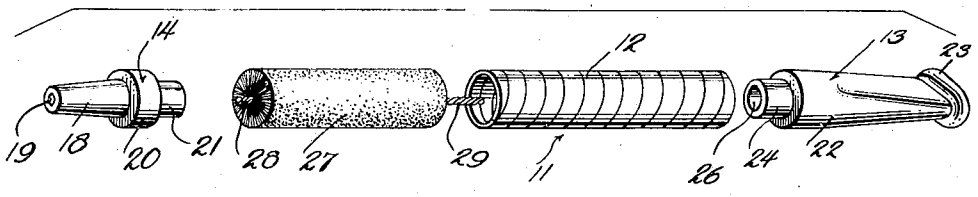


Fig. 3



Inventor

Robert S. Blair

Patented June 25, 1940 2,205,553

UNITED STATES PATENT OFFICE

2,205,553

PIPE CONSTRUCTION

Robert S. Blair, Stamford, Conn.

Application February 27, 1939, Serial No. 258,759

8 Claims. (Cl. 131—225)

This invention relates to pipe construction. One of the objects of this invention is to provide a simple, inexpensive and practical pipe construction which will be well adapted to meet the varying conditions of use. Another object is to provide a pipe construction of the above character which will be neat and attractive in appearance and yet be of such sturdy construction as to withstand hard usage. Another object is to provide a pipe construction of the above character which will be inexpensive to manufacture and easily assembled. Another object is to provide a pipe construction of the above character which will be efficient and reliable in operation. Another object is to provide a pipe construction of the above character which will form a compact object readily carried in the pocket and yet adapted for efficient use in form to suit the user. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, as will be exemplified in the structure to be hereinafter described and the scope of the application which will be indicated in the following claims.

In the accompanying drawing in which is shown one of the various possible embodiments of my invention—

Figure 1 is a side elevation of my pipe construction;

Figure 2 is a vertical sectional elevation of the pipe shown in Figure 1; and

Figure 3 is an exploded view of the parts forming the stem of the pipe shown in Figure 1.

Similar reference characters refer to similar parts throughout the several views of the drawing.

In order that the various novel features of my invention may be more readily understood, it might be here pointed out that the average pipe is not an object which may be readily carried in the pocket of the user. The reason for this is that the distance between the end of the stem and the bowl is too great for the average pocket with the result that no matter how the pipe is carried it is awkward. Furthermore it is well known that pipe smokers like variety in the shapes of the stems of their pipes. This necessitates changing from one pipe to another and is also costly in that many pipes must be purchased. It is accordingly another object of this invention to provide a pipe construction which effectively overcomes the above-mentioned difficulties.

Referring now to the drawing in detail, the pipe construction consists of a bowl, preferably of the ordinary size to be carried in the pocket, generally indicated at 10, having a stem, generally indicated at 11, secured thereto. The stem preferably comprises a mouthpiece, generally indicated at 13, secured to a section of flexible tubing, generally indicated at 12. The tubing is in turn secured to a nipple, generally indicated at 14, which is secured to the neck 15 of the pipe bowl. It might here be pointed out that the pipe bowl and its neck may be made in any desired shape and that the stem construction to be hereinafter described is adaptable to any type of bowl.

Referring now to Figure 2, neck 15 of bowl 10 has a tapered hole 16 formed therein, the inner end of which connects to vent 17 leading through the neck to the bottom of bowl 10. Nipple 14 (Figures 2 and 3) has a tapered portion 18 which is adapted to form a wedge fit in tapered hole 16 securing the nipple to the bowl of the pipe. A hole 19 extends through the center of nipple 14 and registers with vent 17 when the nipple is attached to the bowl. The center portion 20 of the nipple preferably has the same diameter as the neck of bowl 10 separating the tapered portion of the nipple from a circular recess 21 formed on the other end of the nipple.

Mouthpiece 13 may be of any desired shape and is shown as comprising a body portion 22 which has an outer end 23 shaped to form a gripping surface for the teeth of the user. The inner end of the mouthpiece has a circular recess formed thereon preferably of the same depth and length as the recess formed on nipple 14. Hole 25 which extends through the mouthpiece is preferably enlarged at the inner end, as shown in Figures 2 and 3, the purpose of which will be pointed out more fully hereinafter.

Mouthpiece 13 and nipple 14 are connected by a piece of flexible tubing 12 to form the stem of the pipe as best shown in Figures 2 and 3. This tubing is preferably made of a metal strip spirally twisted and formed so that each layer laps over the preceding and under the following layers (Figure 2). These layers have a strong frictional grip on each other so that while permitting the tube to be bent they retain their hold on each other to preserve any shape into which the tube might be bent. I do not wish to be limited to this type of tubing as a plurality of different types of tubing have this characteristic and thus the tubing used can be of any type which has no leakage through the joints and which will retain the various shapes into which it is bent.

The diameters of recessed portions 21 and 24

on nipple 14 and mouthpiece 13 respectively are slightly greater than the inner diameter of tubing 12. Thus when the recessed portions are forced in the ends of tubing 12, the nipple and the mouthpiece are securely connected by the tubing with a frictional grip. It is to be understood that the tubing, nipple, and mouthpiece may be connected together in a plurality of different ways and that the construction is not intended to be limited to the type of connection shown and described.

Referring now to Figures 2 and 3, a condenser is shown which is adapted to fit within tubing 12. This condenser preferably comprises a resilient twisted wire center having a multitude of bristles 28 extending radially therefrom. The outer diameter of these bristles is preferably greater than the inner diameter of tubing 12 so that when the condenser is inserted in the tubing it forms a maze through which the smoke passes and which eliminates undesirable foreign material therefrom. It may be noted that the twisted wires 28 extend beyond the brush at one end 29. When the pipe construction is assembled, this portion extends into the enlarged hole 26 in the mouthpiece 13. Thus when the mouthpiece is removed to clean the pipe, the condenser may be easily removed from the tubing by means of the extended portion of the twisted wires 28.

Thus a pipe has been described the stem of which may be folded as is generally shown at 30 in Figure 1. When the stem is thus folded, the pipe may be easily carried in the user's pocket as its length has been halved by bending and the length of a pipe is the feature which makes it an awkward object to carry. Furthermore the user of this pipe may bend it into any desired shape and thus may change from a straight to a curved pipe without having the bother of getting another pipe. The condenser shown is well adapted to this type of pipe because of its resilience which adapts the twisted wires to follow the axis of the vent as the shape of the tubing is changed. It will now become clear that I have provided a thoroughly practical and durable pipe construction in which the several objects hereinabove mentioned, as well as many others, are accomplished.

It is to be understood that the term "resilient" is used throughout with reference to the condenser as denoting that quality in such substantial degree that the member to which it is applied of a length substantially less than the normal length of a pipe may have its ends swung relatively throughout an angle substantially in excess of 90° and yet spring back into its initial position upon being released. As a matter of fact, the bend indicated in Figure 1 of the drawing is greatly in excess of that called for by the above definition.

As many possible embodiments may be made of the above invention and as many changes might be made in the embodiment above set forth, it is to be understood that all matters hereinabove set forth, or shown in the accompanying drawing, is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In pipe construction, in combination, a bowl, a mouthpiece and, a flexible tube interposed between the bowl and the mouthpiece, said tube being so constructed and of such material that it is bendable into and will retain a curved form at substantially any point intermediate its ends whereby the mouthpiece, while connected to the tube and while the tube is connected to the bowl, will be capable of assuming and maintaining a position at substantially any angle relative to the bowl or in any direction.

2. In pipe construction in combination, a bowl, a section of continuous flexible tubing adapted to be bent between its ends and to retain any shape into which it is bent attached to said bowl, and a mouthpiece secured to the other end of said tubing.

3. In pipe construction in combination, a bowl, a neck formed on said bowl, a flexible tube secured to said neck having formed therein substantially throughout its length overlapping airtight joints adapted to permit said tube to be curved and to retain such curved form and a member secured to the other end of said tube adapted to serve as a mouthpiece.

4. In pipe construction in combination, a bowl, a stem secured to said bowl, and a flexible tube made of spirally wound sheet metal having overlapping joints forming a part of said stem, permitting said stem to be bent into and maintain a variety of different shapes.

5. In pipe construction, in combination, a pipe bowl, a mouthpiece, and means interposed between and connecting said bowl with said mouthpiece and comprising a flexible tube having its walls formed of a spiral member the successive turns of which overlap and form a movable joint with respect to the next turn, whereby said tube may be bent into many desired shapes and tend to retain the form into which it is bent.

6. In pipe construction, in combination, a pipe bowl, a mouthpiece, each having a passage therethrough, means interposed between said bowl and mouthpiece comprising a flexible tubular member having an internal diameter greater than that of said first passages, and a brush condenser interposed in said flexible member and comprising a resilient supporting member, whereby said supporting member tends to follow and coincide with the axis of the tube as the tube is bent throughout an angle greater than 90° and returned to normal position.

7. In pipe construction, in combination, a bowl, a mouthpiece, means connecting said bowl with said mouthpiece and comprising a flexible tube formed and adapted to be curved at substantially any point in its length and to maintain the position into which it is curved, and a condensing device positioned within said flexible tube and adapted to conform to the tube as it is bent throughout an angle greater than 90° without material alteration of its relation to the inner walls of the tube.

8. In pipe construction, in combination, a bowl, a mouthpiece, means connecting said bowl with said mouthpiece and comprising a flexible tube formed and adapted to be curved at substantially any point in its length and to maintain the position into which it is curved, and a condensing device positioned within said flexible tube and adapted to conform to the tube as it is bent throughout an angle greater than 90° without material alteration of its relation to the inner walls of the tube, said condensing member comprising a resilient supporting element with bristles mounted thereon.

ROBERT S. BLAIR.