T. J. SAYRE.

PIPE CLEANER.

APPLICATION FILED AUG. 15, 1912.

1,068,606.

Patented July 29, 1913.

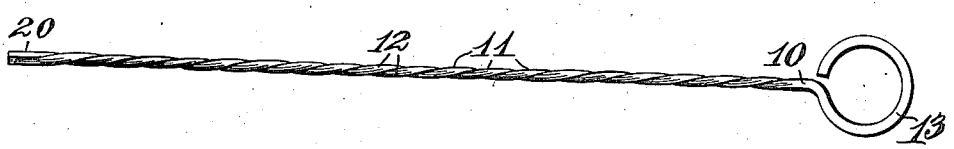

Fig. 1

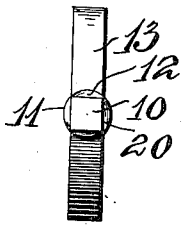

Fig. 2

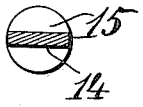

Fig. 3

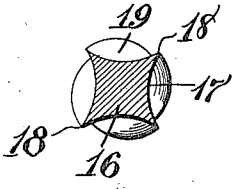

Fig. 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

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PIPE-CLEANER.

1,068,606. Specification of Letters Patent. Patented July 29, 1913.

Application filed August 15, 1912. Serial No. 715,160.

To all whom it may concern:

Be it known that I, THEODORE J. SAYRE, citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Pipe-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to a cleaner for the stems of smoking pipes, the cleaner having cleaner elements which are rigid on the body portion, but the whole body portion is somewhat pliable so that the cleaner can be passed through curved pipe stems. The elements are helical so that all parts of the bore in the stem can be cleaned by a cutting or shearing action, but the cleaner is of a form to permit its being easily cleaned.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a side view of my improved cleaner for the stems of pipes. Fig. 2 is an enlarged end view of the cleaner. Figs. 3 and 4 are sections of strands of modified form from which cleaners can be made.

The cleaner consists of a strand 10, preferably metal, which is formed with the helical edges 11, the strand thus having cleaner elements formed along its sides, the edges being rigid in their relation with the strand, that is, they are not resilient, but the whole strand can be bent to pass through the bore of a curved pipe stem. The corrugations 12 between the edges 11 follow the helical disposition of the edges and form pockets in which the dirt lining the stem is carried when the cleaner is withdrawn.

The cleaner can be made in any usual manner, but is preferably formed of a rectangular strand which is twisted to form the helical edges 11 and is bent into a suitable handle 13. The strand can be of any desired cross-section, two modified forms being shown in Figs. 3 and 4. In Fig. 3 a flat strip 14 is twisted into helices 15, and in Fig. 4 a strand 16 with indented sides 17 forming cutting edges 18 is bent into the convolutions 19. The convolutions of all the forms are made with a coarse pitch so that the cleaner can be easily inserted and withdrawn into and from the pipe stem. The forward end 20 of the strand is preferably left straight so that if the convolutions or edges 11 engage a very much obstructed stem, the strand is caused to turn, which turns the straight portion 20, and this part then acts as a reamer in the bore of the stem. The straight forward end also makes it easier for the eye to observe the insertion of the end of the cleaner in the bore of the stem, since the strand is small and a convoluted end would be disconcerting to a person, particularly one with poor eyesight.

Having thus described my invention, what I claim is:—

1. A cleaner for pipe stems consisting of a metal strand square in cross-section, said strand being twisted to form helical cutting edges, said strand having a handle on one end, the end of the strand opposite the handle having its cutting edges straight.

2. A cleaner for pipes consisting of a single piece of wire square in cross-section and having its corners longitudinally parallel for a short distance from one end, the straight corner merging into helical cutting edges for a considerable distance so that straight entrance edges are provided on a helical cleaner, the wire being bent on the end opposite the first-mentioned end into an eye forming a handle, said eye being transversely arranged on the wire.

In testimony, that I claim the foregoing, I have hereunto set my hand this 9th day of August 1912.

THEODORE J. SAYRE.

Witnesses:
WM. H. CAMFIELD,
M. A. JOHNSON.