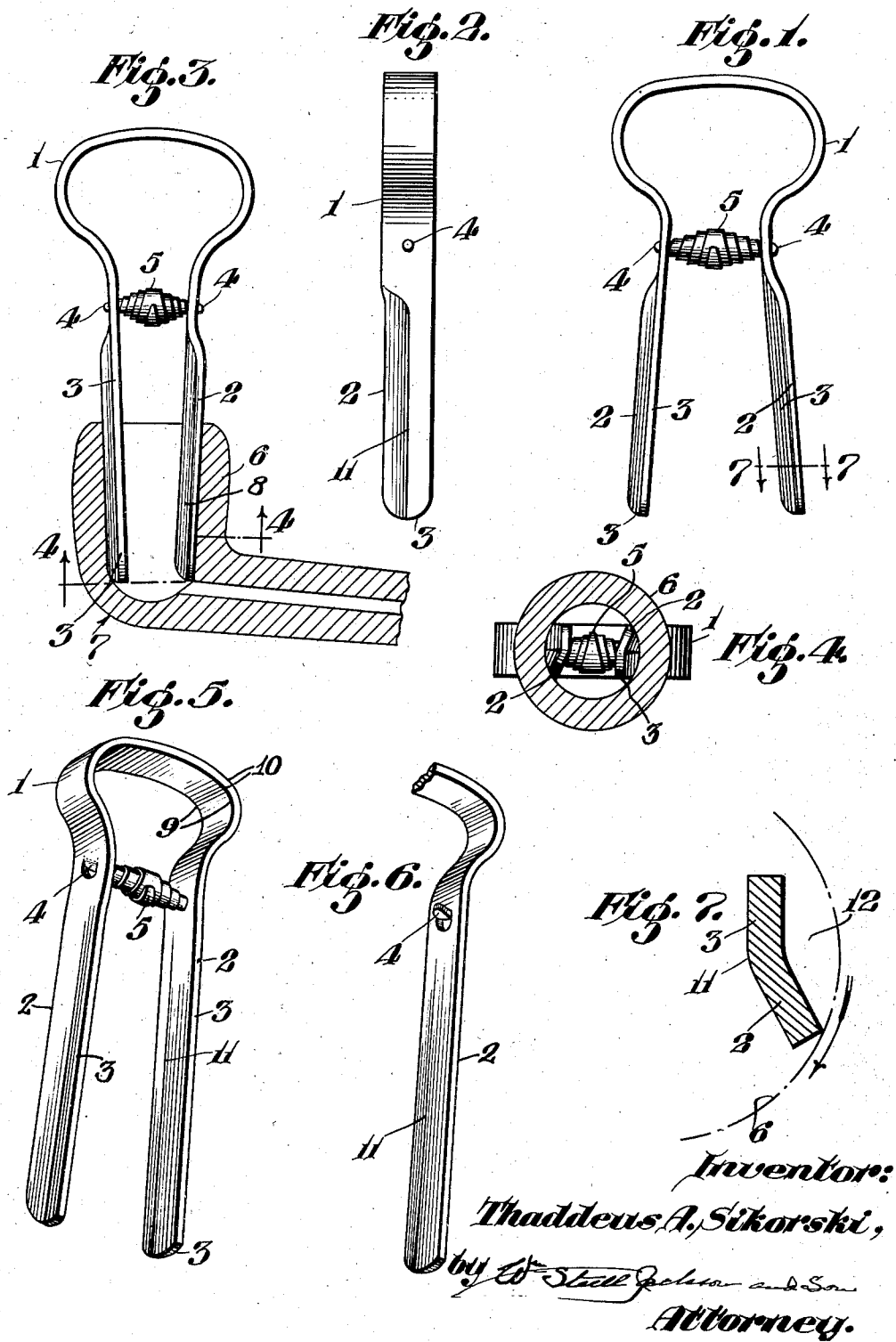


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TOBACCO PIPE REAMER
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TOBACCO PIPE REAMER

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3 Claims. (Cl. 131-13)

The purpose of the invention is to provide a device of simple construction, all metal and of economical cost of manufacture.

The principal object of the invention is to provide a quick, easy, uniform and equalized method of removing from the inside of the tobacco smoking pipe such accumulated carbon or "cake" and in any amounts as preferred by the user, i. e., he can remove a small portion of the accumulation or cut to the inner original surface of the tobacco pipe bowl.

A further purpose is to construct a tobacco pipe reamer having cutters mounted on prongs on either side of a U-shaped handle, the cross section of the prongs and cutters being such that the cutters extend obliquely outwardly from the prongs, desirably at an angle of about 40° with respect to the prongs in prolongation.

A further purpose is to produce a tobacco pipe reamer of a flat continuous sheet metal strip, with prongs forming arms of a U on either side of a handle, and cutters mounted upon the prongs, the strip material at the cutters being substantially narrower than the strip material in the handle.

A further purpose is to resiliently urge the cutters apart by a spring acting between the prongs holding the cutters at points adjacent the handle, the spring producing a spreading action according to the counteracting force exerted by the hand to supplement the normal spring of the strip material and determine the amount and depth of cut.

Describing in illustration and not in limitation and referring to the drawing:

Figure 1 is a side elevation of my novel tobacco pipe reamer.

Figure 2 is a right end elevation of the structure of Figure 1.

Figure 3 is a side elevation of the reamer in use in a tobacco pipe bowl, the pipe being shown in central vertical section.

Figure 4 is a bottom plan view of the reamer in position in a smoking pipe bowl, the pipe bowl being sectioned at 4-4 in Figure 3.

Figure 5 is a perspective view of the completed reamer.

Figure 6 is a fragmentary perspective view showing the spring removed.

Figure 7 is a section of a reamer prong and cutter on the line 7-7 of Figure 1.

A general description of the tobacco pipe reamer is as follows: It is constructed of a semi-resilient strip of metal of width 9 and thickness 10

with a U-shaped handle 1 of sufficient width and depth to be easily held in the hand. The two arms or prongs 3 for insertion into the pipe bowl are of the same material preferably slightly narrower in width. The operating portion of each prong is deformed or bent along a longitudinal line 11, the bend being preferably about 40° and the suitably sharpened cutting edge is indicated at 2. The cutting edges 2 engage diametrically opposite sides of the pipe interior where they cut, remove or scrape the accumulated tobacco or "cake" to any desired depth when the reamer is simply turned clockwise. The longitudinal bending along the line 11 stiffens the blade, makes it more narrow, and also provides greatly increased clearance at 12 between the pipe and blade across the blade width. This latter feature permits more easy escape of the powdered "cake" making the reamer more effective and rapid.

A spring 5 is placed between the prongs about one-third of the way down from the top of the handle. The spring 5 preferably is a coiled spring tapering from the middle to the ends which are positioned and retained by inward lugs 4 from the prongs. The retaining lugs 4 may be pressed from the metal strip or may consist of rivets 4' or solder.

The spring 5 is intended to be any suitable resilient spreader compressed between the prongs and located downwardly from the handle and upwardly from the operating portions of the blades, being located between the top of the pipe bowl and the handle, maintaining cutting engagement between the blades and the bowl along the full depth of the bowl at diametrically opposite sides of the bowl, and with the pressure of engagement between the cutting or scraping edges 2 adjustably modified by the hand of the user.

The spring 5 is intended to be conventionally shown for any suitable compression spring, being illustrated, however as a flat coil spring of known type.

The device is not necessarily confined to use in tobacco pipe bowls; it is intended to be used in any other suitable article and is susceptible to various changes and sizes and I claim all such as may come within the scope of the claims.

The handle 1 is U-shaped, and may be made of metal, plastic or other suitable material.

In operation the reamer is inserted as in Figure 3 into the bowl 6 of the pipe 7 by grasping the sides of the handle and compressing the blades against the retraction of the spring 5. The reamer is then turned clockwise while exerting

by the bend sufficient compression to give the desired depth and quantity of cut.

As will be seen in Figure 3 the pipe bowl 6 has a slightly tapered interior (a common characteristic of pipe bowls), and the resilient strip material of the reamer conforms readily to this shape due to the tendency of the prongs to bend about the base of the U (the handle) and due to the tendency of the spring 5 acting on the prongs near the handle to bulge the upper ends of the prongs outwardly. This contour of the prongs and cutters is shown in Figure 3.

The prongs and cutters being slightly narrower than the handle will conform to the curvature of even rather small pipe bowls.

It will be evident that the oblique bend along the longitudinal line 11 of each blade at once stiffens the blade, makes it somewhat narrower adapting it to use with pipe bowls of smaller diameter and provides much greater clearance at 12 between the bowl and blade, making it more effective in its breaking or scraping of the cake into fine particles without digging into the bowl.

What I claim and desire to secure by Letters Patent is:

1. A tobacco pipe bowl reamer consisting of resilient metallic strip material of generally U-shape, the base of the U providing a handle and the arms of the U providing prongs, cutters formed on longitudinal edges of the prongs facing in the same direction of rotation and a spring acting between the prongs near the handle and resiliently urging them apart, the spring being located

outwardly of the cutters between the bowl and handle permitting hand adjustable compression of the spring for hand adjustment of the cutting pressure of the edges along their cutting length.

2. A tobacco pipe reamer consisting of a single resilient metal strip bent into general U form, the base of the U forming a handle and the arms of the U forming prongs, cutters one on each prong extending longitudinally of the prongs on edges of the prongs, both facing in the same direction of rotation, each prong having a longitudinal bend of the cutting edge, stiffening and narrowing the blade and providing greater clearance away from the cutting edge and between the bowl and the body of the prong across the width thereof, and each cutter on the forward edge making an angle of less than 90° with the pipe bowl, the cross section of the strip through each prong and cutter being substantially narrower than the cross section in the handle.

3. A tobacco pipe bowl reamer consisting of a resilient metal strip bent into the form of a U, the base of the U acting as a handle and the arms of the U comprising prongs and each prong having an outward longitudinal bend for a portion of its length, from its end toward the handle and having scraper outer edges along the outwardly bent portions for presentation to the pipe bowl at opposite sides thereof, each scraper edge making an angle of less than 90° with the pipe bowl.

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