

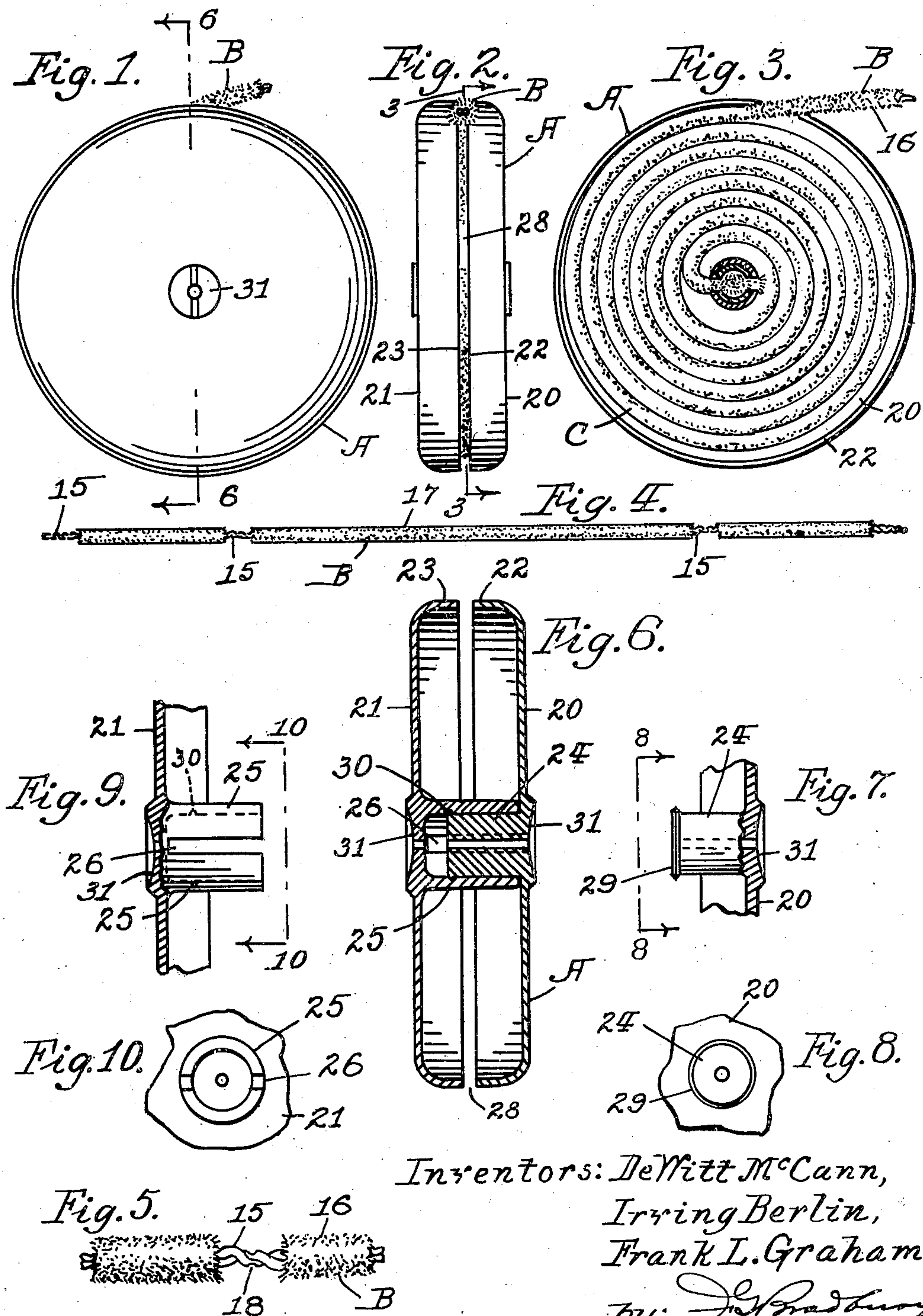
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PIPE STEM CLEANER

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PIPESTEM CLEANER

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2 Claims. (Cl. 131—245)

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Our invention relates to a pipe stem cleaner which is adapted to be used for cleaning the stems of tobacco smoking pipes. More particularly our improvement provides a strip of pipe stem cleaner in a magazine forming a self contained unit which is adapted to be carried in the pocket of the user without crushing or breaking the strip and from which short lengths of the cleaner can be readily dispensed as required for use. More particularly our improvement provides improved features of construction and cooperating parts hereinafter set forth and described. Our improvement also provides an improved method by which the magazine and its load of pipe stem cleaner sections are manufactured, whereby a self contained unit loaded with a frangible strip of pipe steam cleaner can be economically produced by a minimum amount of hand labor and expense.

In the accompanying drawing forming part of this specification, Fig. 1 is a side elevation of our improved magazine or carrying case showing an end of the strip of pipe stem cleaner sections projecting from its perimeter; Fig. 2 is an elevation looking at the right hand edge portion or perimeter of the carrying case or magazine shown in Fig. 1; Fig. 3 is a partial sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a side view of a portion of the strip of pipe steam cleaner which is used in the carrying case or magazine; Fig. 5 is a slightly enlarged side view of a portion of the pipe stem cleaner illustrated in Fig. 4, showing one of the frangible joints or nodes at which the strip of pipe stem cleaner is adapted to be separated during the use of the device; Fig. 6 is an enlarged central section of the magazine taken approximately on the line 6—6 of Fig. 1, when the magazine is empty; Fig. 7 is a section of a detail portion of the male member of the magazine showing the hub portion thereof in full; Fig. 8 is a side elevation of that portion of the magazine taken from the position indicated by the line 8—8 in Fig. 7; Fig. 9 is a section of a detail portion of the female member of the magazine showing the hub portion thereof in full; and Fig. 10 is a side elevation of that portion of the magazine taken from the position indicated by the line 10—10 of Fig. 9.

Our invention includes a magazine or carrying case A, which is loaded with a coiled strip of pipe stem cleaner B, said cleaner strip being dispensed in sectional lengths when withdrawn from the magazine by the user. The strip of pipe stem cleaner as shown resembles a twisted wire core (Fig. 5), composed of metal or other suitable ma-

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terial, between the convolutions of which short brush bristles or threads 16 of substantially even length are secured transversely to form a swab or brush, this portion of the structure being well known and in common use. This feature also is set forth in companion application filed by DeWitt McCann and Irving Berlin on the 24th day of September, 1945, bearing Serial Number 618,276, upon which the present application is an improvement. The strip of pipe stem cleaner is apportioned into a series of substantially even lengths or sections 17 suitable for use in cleaning a smoking pipe stem, as shown in Figs. 4 and 5, each node or apportioning means being formed by transverse weakening indentures or notches such as 18 in the wire core and by separating or removing a small portion of the brush or jacket 16 at each junction or node between adjacent sections as shown in Fig. 5. The strip thus resembles a continuous length of frangible sections at evenly spaced intervals throughout its length. This strip is condensed by forming into a coil C in the magazine A and normally cooperates with the magazine in producing a self contained unit in the following manner.

The magazine A is disk-like in shape and may be made out of plastic or other suitable material. It has two similar thin wall housing sections 20 and 21 which are formed with peripheral inwardly directed marginal edges 22 and 23. The housing sections are joined together by two engaging coaxially disposed male and female hub members 24 and 25, the member 24 resembling an inner cylindrical stud integral with the section 20 and the member 25 resembling an outer sleeve which is integral with the section 21. These hub members telescope tightly together. The female hub member is split longitudinally by the slots 26 in its wall to provide resilient claspings sides which engage tightly over the male hub member 24. The female hub member is also of sufficient length to abut by its outer end portion against the inner wall of the housing member 20 and hold the housing members 20 and 21 with their intumed marginal edges 22 and 23 spaced apart at a suitable distance to provide an annular orifice or channel 28 which enters the chamber circumferentially within the magazine. The housing sections are locked together when the hub members are fully connected by an annular extruded bead or shoulder 29 on the inner portion of the male hub member which snaps into engagement with the female hub member 25 in an annular groove 30 in the inner surface of the female hub member. When the hub members are

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interlocked by the engagement of the shoulder 29 in groove 30 the outer end of the male hub member is spaced from the inner end of the female hub member, thus exposing the inner ends of the slots 26 which connect with the chamber in the magazine for the purpose of providing an anchorage for the inner end of the coil of pipe stem cleaner B as will be hereinafter described.

The interlocking engagement above described is preferably inseparable but may be proportioned and made separable by the application of sufficient force if so desired. When made separable the magazine can be recharged with a coil of fresh pipe stem cleaner.

In the production of our improved pipe stem cleaner unit, the strip B is attached by one end across and through the slots 26 in the inner end portion of the female hub member 25 before the sections of the magazine or carrier case are joined together as shown in Fig. 3. Next the two sections of the magazine are snapped together by their hub members as shown in Fig. 6, while the body portion of the strip of pipe stem cleaner projects through the endless orifice or channel 28 and dangles from the magazine. Next the body portion of the strip of cleaner is coiled through said orifice or channel around the hub portion protruding therefrom as shown in Fig. 1 so that it can be engaged by hand to withdraw the strip from within the magazine. By this method the manufacture of our improved self contained pipe stem cleaner unit is expedited and its cost of production reduced to a minimum whereby it is not burdensome from the standpoint of expense to discard the exhausted magazine.

The thin wall sections of the magazine are preferably flexible so that by squeezing their outer portions inwardly together the orifice or channel 28 is contracted and the edges of the adjoining sections are made to engage and hold the strip of pipe stem cleaner at each junction or weakened portion of the strip, thus enabling the user to easily break away and remove the outermost section of cleaner for use. When thus segregated and the sections 20 and 21 of the magazine are released the remaining outer end portion of the pipe stem cleaning coil tends to spring radially outwardly a sufficient distance through the annular orifice or channel to enable the user to engage the outer end portion and withdraw another section of the strip from the magazine for use.

The width of the annular orifice or channel 28 is slightly in excess of the diameter of the core 15 of the cleaner but is considerably less than the diameter of the flexible brush portion 16, whereby the protruding end of each section of the strip of cleaner is exposed ready for use. By squeezing the lower portions of the sections of the magazine inwardly the upper portions adjacent to the protruding end of the cleaner are tilted apart and the orifice or channel thus widened to more easily permit withdrawal of the cleaner from the coil within the magazine.

Our improved pipe stem cleaner is exceedingly simple and inexpensive in construction and provides the user with a comparatively large number of pipe stem cleaner sections which can be conveniently carried in the pocket without crushing or breaking. The inexpensive construction and low manufacturing cost of the self contained unit thus provided enables the user to discard the magazine when the strip of cleaner is exhausted from within, without burdensome expense which is a distinct advantage. The outer side walls of the

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sections of the magazine adjacent to the hub portions are provided with coaxially disposed end concavities 31 which assist in enabling the magazine or housing to be rotatively held by hand while the strip of cleaner is withdrawn. The outer end portion of the cleaner strip may equally well be withdrawn longitudinally or lifted radially outwardly through the circumferential orifice, thus facilitating the use of the magazine and cleaner strip.

It is contemplated that the cleaner strip may be variously modified in construction and used with or without weakening indentures, in which event the core of the cleaner can be composed of more readily frangible material, or the entire strip can be made out of suitable material with or without a core. Also it is within the spirit of the invention that the sections of the strip of cleaner may be merely marked with color or dye spots to indicate the lengths of the sections, or that both weakened spots at spaced intervals in the core and color or dye spots may be dispensed with and the strip broken into sections of any chosen length by the user.

In accordance with the patent statutes we have described the principles of operation of our invention together with the construction which we now consider to represent the best embodiment thereof but we desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the spirit of the invention and the scope of the following claims.

We claim:

1. The combination of a housing and a pipe cleaner comprising, a flanged member provided with a central hollow hub with diametrically opposite slots extending inwardly from the free end thereof, a pipe cleaner consisting of a frangible wire and bristles, one end of the wire being secured to the hub by extending through the slots, a substantial portion of the remainder of the wire forming a coil about the hub, the free end of the wire extending outwardly past the flanged portion of the member, a second flanged member having a solid hub fitting in the hollow hub of the first member, both members constituting a housing for the pipe cleaner with their flanged portions facing inwardly toward each other, said members being formed of a material adapted to be readily flexed, whereby the flanged portions adjacent the free end of the pipe cleaner may be squeezed together sufficiently to facilitate breaking the cleaner.

2. The combination of a housing and a pipe cleaner comprising, a flanged member provided with a central hollow hub with diametrically opposite slots extending inwardly from the free end thereof, a pipe cleaner consisting of a frangible wire and bristles, one end of the wire being secured to the hub by extending through the slots, a substantial portion of the remainder of the wire forming a coil about the hub, the free end of the wire extending outwardly past the flanged portion of the member, a second flanged member having a solid hub fitting in the hollow hub of the first member, an annular flange formed on the free end of said solid hub and adapted for locking engagement within said hollow hub, both of said members constituting a housing for the pipe cleaner with their flanged portions facing inwardly toward each other, said members being formed of a material adapted to be readily flexed, and when joined together by said solid hub fit-

ting within said hollow hub, may be squeezed together so that the flanged portions will engage the free end of the pipe cleaner to facilitate breaking the same.

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The following references are of record in the 10
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