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PIPE CLEANER

Filed Feb. 28, 1930

Fig. 1

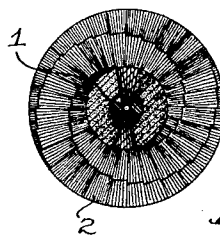


Fig. 3

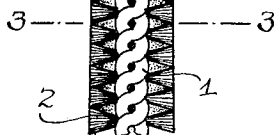
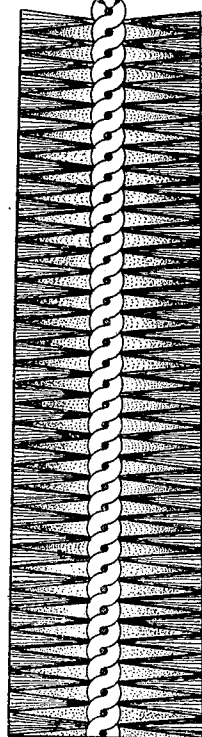


Fig. 2



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PIPE CLEANER

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The present invention relates to pipe cleaners and more particularly to the type in which there is employed a ductile stem with fibres radiating therefrom. An object of this invention is to so arrange the fibres on the stem that the latter is adapted for cleaning the bores of pipe stems of different diameters, while giving a more effective cleaning of a pipe stem bore of any given diameter.

To this and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described; the novel features being pointed out in the appended claims.

In the drawings:

Fig. 1 is a plan view of a pipe cleaner embodying this invention;

Fig. 2 is an enlarged fragmentary view of the cleaner; and

Fig. 3 is a section on the line 3—3, Fig. 2.

When a pipe cleaner is made of uniform diameter throughout, its use is limited to pipe stem bores of certain diameters and in addition one portion of the cleaner is no more effective than another. It has been suggested to form the fibres so as to provide what may be termed a plurality of successive tufts or brushes, but in this arrangement all the long fibres are arranged on both sides of the center of the cleaner stem. This prior suggestion is not so easily introduced into pipe bores of small diameters as the long tufts act to resist the movement of the pipe cleaner before it can be passed entirely through the pipe bore. Furthermore, such an arrangement does not permit a gradually increased cleaning action throughout the length of the pipe cleaner, because once a large tuft is passed through the bore, the next tuft merely repeats the cleaning action of the former without any increased brushing action.

With this invention, the fibres at one end and substantially throughout one half of the cleaner are short while the long fibres are in the other half of the cleaner, the fibres preferably increasing gradually in length from one end of the cleaner to the other. This arrangement permits the end of the

cleaner with the short fibres to be passed through or substantially through a bore to remove the heavy material in the bore without resistance to be followed by the longer fibres whose action then becomes a cleaning action instead of a plowing action.

In the embodiment of the invention shown in the drawings 1 indicates the stem of the cleaner formed, in this instance, by two intertangled wires of ductile metal permitting the stem to bend easily in turning curves in a pipe to be cleaned. These two wires secure fibres 2 which project radially from the stem 1. It will be noted that these fibres in this instance, gradually increase in length from one end of the stem to the other and that all the fibres on one side of the center or middle of the stem are shorter than fibres on the other side.

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

1. A pipe cleaner comprising a stem formed of ductile material, and fibres extending radially from the stem throughout the length of the latter, the fibres gradually increasing in length from one end of the stem to the other.

2. A pipe cleaner comprising a stem formed of ductile material and fibres extending radially from the stem throughout the length of the latter, the fibres adjacent one end and for a distance extending substantially one half of the stem from said end being shorter than fibres in the other half of the stem.

3. A pipe cleaner comprising a stem formed of ductile material, and fibres extending radially from the stem throughout the length thereof, the fibres at one end of the stem being shorter than the fibres at the other end, and none of the fibres in that half of the stem adjacent the first named stem being so long as fibres in the other half of the stem.

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