April 12, 1927.

1,624,755

H. M. MURPHY

PIPE CLEANING MEANS

Filed June 25, 1926

FIG. 1.

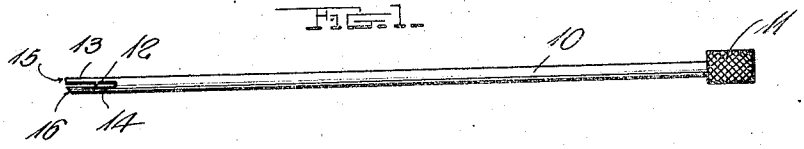


FIG. 2.

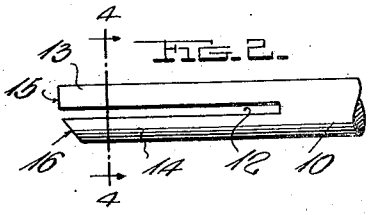


FIG. 3.

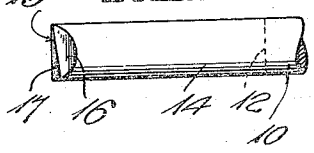


FIG. 4.

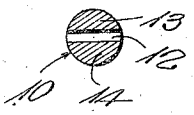


FIG. 5.

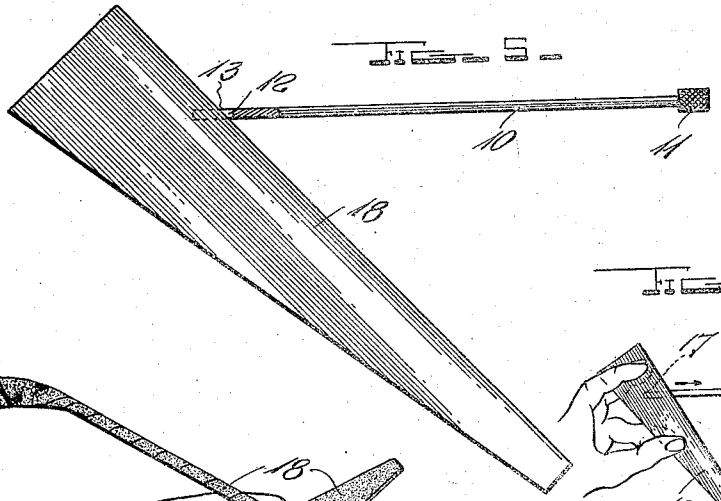
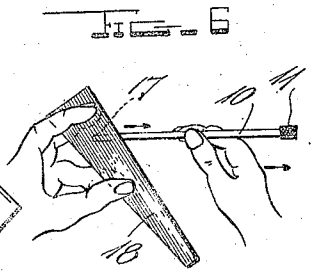


FIG. 6.



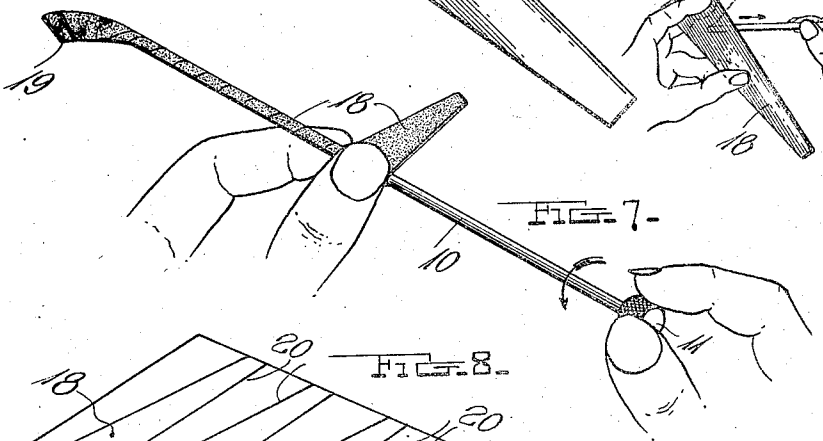
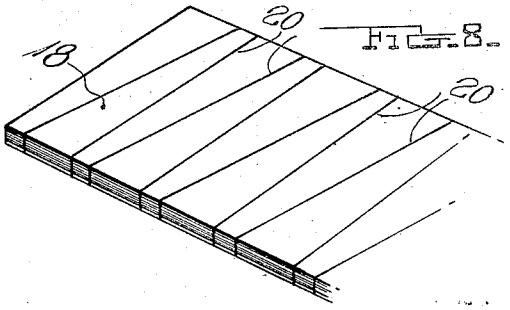


FIG. 7.

FIG. 8.



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UNITED STATES PATENT OFFICE.

HOWARD M. MURPHY, OF PHILADELPHIA, PENNSYLVANIA.

PIPE-CLEANING MEANS.

Application filed June 25, 1926. Serial No. 118,530.

The invention relates to means for cleaning the smoke passages of pipe stems, and it is my object to provide a new and improved means of this character which will be simple and inexpensive, will be easy to operate and will be highly efficient.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is a side elevation of a rod which is used in the formation and operation of a swab for cleaning a pipe stem.

Figures 2 and 3 are fragmentary side elevations on an enlarged scale and Fig. 4 is a detail section on line 4—4 of Fig. 2, showing the construction at the front end of the rod.

Figure 5 is an elevation partly in section showing a paper strip engaged with a split in the rod, preparatory to winding around said rod to form a stem cleaner.

Figure 6 is a detail elevation illustrating the manner of engaging the paper strip with the split of the rod.

Figure 7 is a perspective view showing the manner of winding the paper strip around the rod to provide the cleaner.

Figure 8 is a perspective view showing the preferred way of forming the paper strips.

In the drawing above briefly described, 10 designates a straight rod of any desired length, preferably formed of metal and having a roughened operating head 11 at its rear end. In the front end of this rod, a split or kerf 12 is formed, providing two parallel fingers 13 and 14. The front extremity 15 of the finger 13 is at right angles to the length of the rod 10, while the front extremity 16 of the finger 14 is beveled toward said finger 13, the bevel being disposed in such a plane as to leave a triangular portion 17 at the inner side of the finger 13, laterally exposed, as seen most clearly in Fig. 3.

For use, one at a time, with the rod 10, I provide a plurality of cleaning strips 18, preferably formed from absorbent paper. By holding one of the strips 18 with the thumb and fingers of one hand, as seen in Fig. 6, pressing the rod 10 against one flat side of the strip with the finger 14 toward said strip, and moving the rod outwardly as indicated by the arrows of said view, one edge of the strip may be made to slide across the beveled end 16 of the finger 14, so that said strip will come to rest against the exposed triangular portion 17 of the finger 13. Then by inwardly moving the rod 10, an edge portion of the strip 18 is positioned in the split 12 as seen in Fig. 5. The strip and rod are then held between the thumb and a finger of one hand and the rod is rotated in either direction with the other hand, as will be clear from Fig. 7. This operation winds the strip 18 on the rod 10 and forms an effective pipe stem cleaner having a swab 19 at its front end. By means of the rod 10, this cleaner may be forced into a pipe stem. Then, the rod 10 may be withdrawn, leaving the strip cleaner in the stem, and by then re-inserting said rod, its blunt front end will first longitudinally compress the strip into a wad and will then force such wad entirely through the stem, effectively cleaning the latter.

If the device is to be used for cleaning a pipe which has not been used for some time, so that the accumulation in the stem is hard and dry, the rod 10 may be used first, without the strip 18, to scrape the accumulated matter from the wall of the smoke passage, and then said rod may be used with the strip 18 to effect the final cleaning operation. When the rod is used without the strip 18, the edges at the front ends of the fingers 13 and 14 form scrapers, and the bevel 16, by engagement with the accumulated matter in the stem tends to laterally force the rod, holding the scraping edge of the finger 13 (the most effective of the scraping edges) tightly against the wall of the smoke passage, so that it will perform effective scraping. Thus, by reciprocating the rod in the stem and slowly turning it, all accumulated matter may be readily loosened from the wall of the smoke passage, preparatory to the final cleaning operation performed by the cleaning strip 18, properly manipulated by means of the rod.

Preferably, in manufacturing the strips 18, I take a stack of paper sheets and cut them on non-parallel lines 20 (Fig. 8) forming stacks or books of strips 18, each strip having a wide end and a narrow end, the former being the one which is inserted into the split 12 and forms the swab 19 of adequate size. The strips 18 of the stacks or books may be glued together at one end of said strips if desired, and whenever the use

of one of the strips is needed, it is torn off with ease.

It will be seen from the foregoing that a pipe cleaning equipment of novel form has been devised for attaining the desired results, and on account of the advantages existing for the details disclosed, they are preferably followed. However, within the scope of the invention as claimed, modifications may be made.

I claim:—

1. Pipe cleaning means comprising a rod having a split which is parallel with the length of the rod and opens through the front end of said rod, and a longitudinally tapered flexible cleaning strip co-operable with said rod in forming a cleaner; the relatively wide end of said strip being adapted for partial reception in said split, whereby rotation of the rod while holding the strip, will form a swab from said wide strip end and will wind the remainder of the strip around the rod.

2. In a pipe cleaning means, a rod having a split which opens through its front end to provide two parallel longitudinal fingers, one of said fingers having a front extremity at right angles to the length of the rod, the front extremity of the other finger being beveled toward said one finger and disposed in an oblique plane, laterally exposing a triangular portion of the said one finger at the front end of the latter, substantially as and for the purpose set forth.

In testimony whereof I affix my signature.

HOWARD M. MURPHY.