J. G. WARE.

PIPE CLEANER.

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1,256,402.

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Fig. 1.

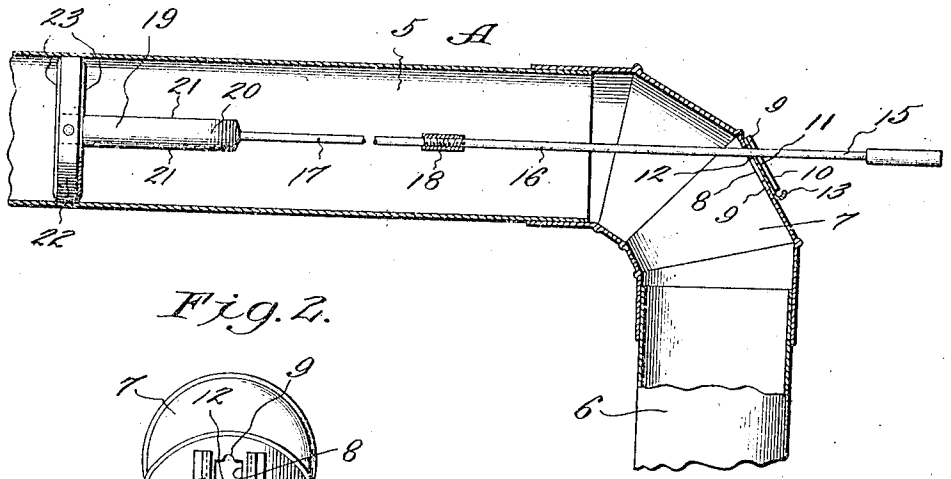


Fig. 2.

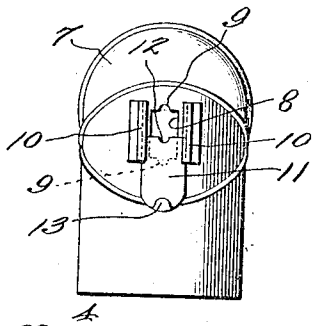


Fig. 4.

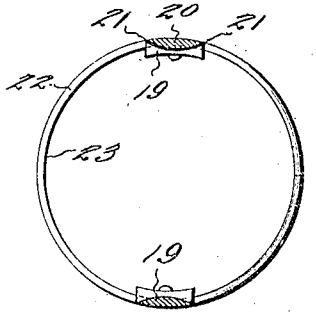
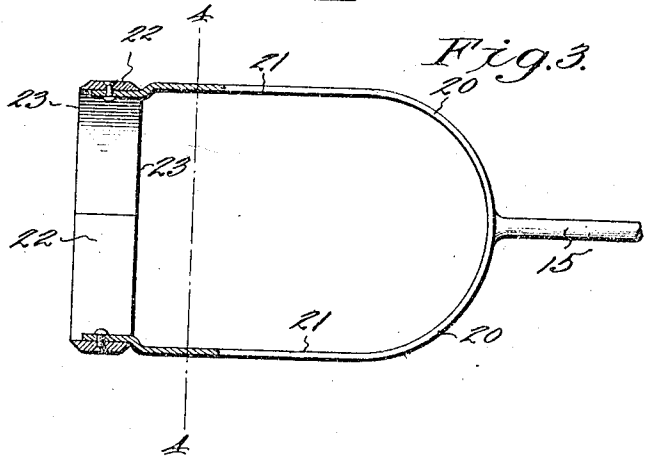


Fig. 3.



WITNESSES

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PIPE-CLEANER.

1,256,402. Specification of Letters Patent. **Patented Feb. 12, 1918.**

Application filed May 11, 1917. Serial No. 167,973.

To all whom it may concern:

Be it known that I, JOSEPH G. WARE, a citizen of the United States, residing at Ryder, in the county of Ward and State of North Dakota, have invented new and useful Improvements in Pipe-Cleaners, of which the following is a specification.

This invention relates to a pipe cleaner which is especially adapted for dislodging and removing from a stove pipe the foreign matter which has accumulated therein, such as soot, rust or the like.

The primary object of the invention is to provide a pipe cleaner in which a split band having oppositely beveled side edges has connected therewith the yoke at one end of a handle with the arms of the yoke so shaped as to permit the yoke to coact with the split band in removing material adhering to the wall of the pipe sections and elbows.

With these and other objects in view the invention resides in the novel combination and arrangement of parts which will be hereinafter described and particularly pointed out in the claim.

The preferred embodiment of the invention has been illustrated in the accompanying drawing, although no restriction is necessarily made to the precise details of construction therein shown, as changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawing:

Figure 1 is a longitudinal sectional view through a portion of the stove pipe in which is arranged the improved pipe cleaner,

Fig. 2 is a detail view of the portion of the elbow to more clearly illustrate the construction of the slide for closing the opening therein,

Fig. 3 is a view in side elevation partly in section of the scraper band and handle associated therewith, and

Fig. 4 is a horizontal section on the line 4—4 of Fig. 3.

Like characters of reference denote corresponding parts throughout the various views in the drawing.

Referring now to the drawing in detail the letter A designates a portion of the stove pipe in which the pipe sections 5 and 6 are connected through the medium of an elbow 7 having formed therein an elongated opening 8 alining with the longitudinal center line of the pipe section 5. The top and bottom walls of the opening 8 have formed therein a substantially semi-circular shaped recess 9, while arranged on the elbow 7 adjacent each side wall of the opening 8 is a guide strip 10. A cover plate 11 for the opening 8 is mounted to slide between the guide strips 10 and has formed in one end thereof a semi-circular shaped recess 12 adapted to co-act with the recess 9 in the bottom wall of the opening 8 in providing an opening in the elbow through which may be passed the handle of a scraper hereinafter described. The other end of the cover plate 11 is rolled to provide a lip 13 which may be engaged by the finger to slide the cover plate between the guide strips 10.

The improved pipe cleaner has been shown in Fig. 1 in the drawing arranged within the stove pipe A and includes a handle 15 to extend when the cleaner is in use through the openings formed by the recesses 12 and 9 and comprises handle sections 16 and 17 connected through the medium of a coupling 18. The handle section 17 has formed thereon at one end a yoke 19 the arms 20 of which are curved for a portion of their length adjacent the handle section as shown to coincide with the transverse curvature of the wall of a stove pipe elbow, to enable material which has accumulated within the elbow 7 to be dislodged therefrom when the yoke is rotated therein. The arms 20 of the yoke are provided with outer and inner convex faces, the curvature of the outer convex faces coinciding with the curvature of the wall of the stove pipe section, while the inner convex faces at their intersection with the outer convex faces provide the arms throughout their length with knife edges 21, which when the yoke is rotated within the pipe A by means of the handle connected therewith scrape from the wall of the pipe sections the matter which has adhered thereto. The arms 20 of the yoke are offset for a portion of their length as shown with the offset portions arranged within and connected with the inner wall of a split scraping band 22, the marginal edges of the band being oppositely beveled, as at 23 to provide the band with scraping edges, so that as the handle is reciprocated within the pipe A the greater portion of the material adhering

to the wall of the pipe will be loosened therefrom and advanced toward the flue with which the pipe is connected.

When it is desired to employ the improved pipe cleaner for cleaning a stove pipe of the material which has accumulated therein and the cleaner is arranged within the pipe as shown in Fig. 1 in the drawing, the cover plate 11 is moved upwardly between the guide strips 10 on the elbow 7, so that the end of the handle section 16 may be grasped and the handle 15 partially withdrawn from the stove pipe through the opening in the elbow.

The cover plate 11 is now pushed downwardly, so that the handle section 16 will pass through the opening formed by the recess 12 and recess 9 in the elbow and cover plate, thus enabling the cover plate to close the opening 8 in the elbow.

By reciprocating and rotating the cleaner within the stove pipe the matter which has adhered to the wall thereof may be dislodged and carried into the flue with which the pipe is connected by the draft passing therethrough.

When the cleaning of the pipe has been completed the handle associated with the scraper band may be passed within the pipe A and the opening in the elbow closed by the cover plate 11.

It will of course be understood that while the handle 15 of the improved cleaner is shown in the accompanying drawing as comprising only two handle sections any number of handle sections may be employed to render the cleaner effective for use in connection with pipes of different lengths.

From the foregoing description taken in connection with the accompanying drawing it is at once apparent that a pipe cleaner has been provided by means of which foreign matter may be removed from a stove pipe without disconnecting the sections thereof and that when the cleaner is not in use it may be left within the pipe without likelihood of the cleaner obstructing the draft through the pipe or serving to collect soot and the like therein.

Having thus described the invention, what is claimed as new, is:

In a pipe cleaner, a handle, a yoke at one end of the handle having the arms thereof curved for a portion of their length adjacent the intersection of the handle with the yoke to coincide with the transverse curvature of the wall of a stove pipe elbow, said arms having an outer convex face coinciding with the curvature of the wall of a stove pipe section and an inner convex face coacting with the outer convex face in providing a knife edge at the sides of the arms throughout their length, offset portions in said arms adjacent their free ends, and a split band to the inner wall of which said offset portions are secured having oppositely beveled side edges.

In testimony whereof I affix my signature.

JOSEPH G. WARE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."