G. PETRICH.

SMOKE PIPE CLEANER HEAD.

APPLICATION FILED APR. 15, 1915.

1,162,393.

Patented Nov. 30, 1915.

Fig. 1.

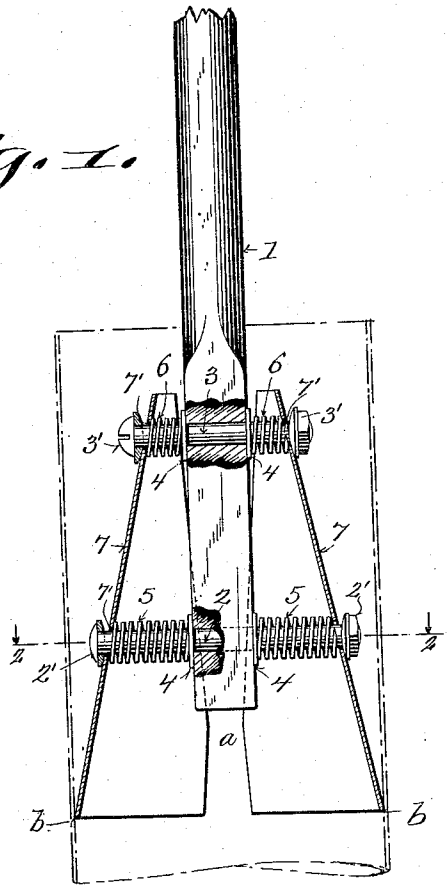
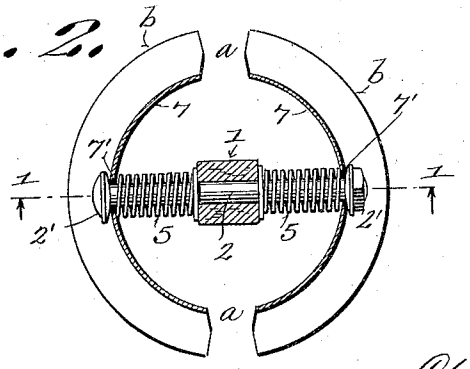


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GUSTAV PETRICH, OF WESTFIELD, WISCONSIN.

SMOKE-PIPE CLEANER-HEAD.

1,162,393. Specification of Letters Patent. Patented Nov. 30, 1915.

Application filed April 15, 1915. Serial No. 21,550.

To all whom it may concern:

Be it known that I, GUSTAV PETRICH, a citizen of the United States, and resident of Westfield, in the county of Marquette and State of Wisconsin, have invented certain new and useful Improvements in Smoke-Pipe Cleaner-Heads; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple, effective and economical smoke-pipe cleaner head.

The construction and arrangement of said invention embodies a pair of semi-conical scraper-blades loosely mounted upon companion sets of studs carried by a handle, the said studs carrying coiled springs whereby the blades are independently yieldable and within limits compensatory, the coiled springs being adjustable as to tension. Thus, when the semi-conical scraper-blades are assembled they together form a broken hollow cone fructum under spring tension, whereby different sizes in pipes can be operated upon.

With the above objects in view the invention consists in certain peculiarities of construction and combination of parts as hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings Figure 1 represents a sectional elevation of a scraper embodying the features of my invention, the section being indicated by line 1—1 of Fig. 2, with the handle broken away, and Fig. 2, a cross-section of the same, the section being defined by line 2—2 of Fig. 1.

Referring by characters to the drawings, 1 represents the head end of a handle having spaced apertures, through one of which a long stud 2 extends in opposite directions. A correspondingly arranged short stud 3 extends through the rear aperture, said studs being in the same longitudinal plane. Washers 4 are fitted over the studs in engagement with the handle and coiled springs 5, 5, 6, 6, are also fitted over the studs and adapted to seat upon the washers. Between the heads 2′, 3′, of the respective long and short studs and the ends of the coiled springs, are fitted apertured semi-conical scraper-blades 7, 7, which blades, when assembled, are spaced apart longitudinally to form clearance throats *a*, as best shown in Fig. 2. The outer scraping edges *b* of the blades are upon a higher plane than the heads of the studs, whereby the same are protected to clear the pipe surface to be cleaned, which pipe surface is indicated by dotted lines in Fig. 1. The apertures 7′ of the semi-conical through which the studs extend, are preferably greater in diameter than said studs, whereby a limited amount of play is permitted in all directions when the blades are subjected to a scraping strain, this provision being for the purpose of permitting the cutting edges *b* of the blades to conform to the circular surface of the pipe.

By this simple construction it is apparent that a cleaner head is produced which is simple in construction and effective due to the fact that the blades are rendered yieldable and compensatory to insure a perfect scraping operation.

It is also possible to adjust the tension of the springs by turning the loose heads of the studs which are in the form of nuts in threaded union with said studs and when so adjusted it is obvious that, owing to the fact that the studs are capable of movement in their handle apertures, both sets of springs may be simultaneously tensioned.

I claim:

1. A smoke-pipe cleaner-head comprising a handle, a pair of transversely disposed studs extending from the handle, a pair of apertured semi-conical scraper-blades loosely mounted upon the pair of studs, and coiled springs surrounding the studs interposed between the handle and said scraper-blades, the cutting edges of the blades being at a greater distance from the axis of the handle, than the stud heads.

2. A smoke-pipe cleaner-head comprising an apertured handle, a short and long stud slidably mounted in the handle apertures having heads positioned at different distances from said handle, a pair of semi-conical scraper-blades having apertures loosely engaging the pair of studs, the longitudinal

edges of the blades being spaced apart to form clearance throats, and coiled springs surrounding the studs interposed between the handle and said scraper-blades.

In testimony that I claim the foregoing I have hereunto set my hand at Westfield, in the county of Marquette and State of Wisconsin, in the presence of two witnesses.

GUSTAV PETRICH.

Witnesses:
F. W. MILLER,
G. A. DREWITZ.

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