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H. D. MAITLEN

2,429,581

CLEANING ROD FOR WELDING TORCHES

Filed July 3, 1944

Fig. 1

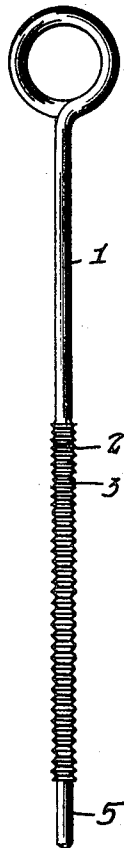
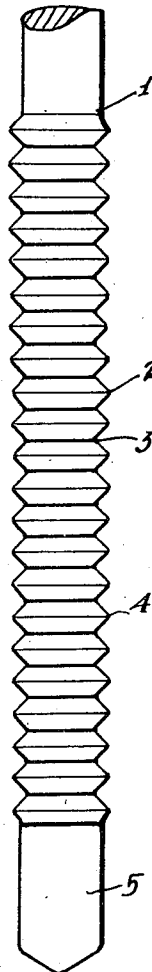


Fig. 2



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CLEANING ROD FOR WELDING TORCHES

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2 Claims. (Cl. 15—104.05)

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My invention relates to a cleaner, and more particularly to a tool for cleaning the cutting and pre-heat holes in gas and acetylene burning and welding tips, or other jets for oil or gas.

The holes or jets in acetylene torches and other burners are often closed by carbon deposits, dust and rust. The usual procedure in cleaning these holes has been to force a wire or drill therein. The result is that the jets are distorted, causing pockets on the inside and tapered exit points, which prevent the jets from burning in a true cone. This makes it very difficult to use a welding or burning torch, as the cone of the flame flutters.

My invention will not distort the edges of the jet nor the inner holes, since the holes are cleaned by a scrubbing action and not by a drilling action.

One of the objects of my invention is that it can be used without danger of distorting the shape of the jet, and will, at the same time, completely clean out all carbon, dust and other deposits in the jet.

Other objects of my invention will be apparent from the following description of the preferred embodiment thereof.

In the drawings:

Fig. 1 is a side elevation.

Fig. 2 is an enlarged elevation, partially broken away.

I prefer to use an ordinary drill steel or semi-hard stainless steel wire as the base from which my cleaner is manufactured. Any one of these materials comes in small rods or wires with a substantially uniform cross-section throughout its length.

The rod 1 is rolled between dies to cause the ridges 2 to rise above the surface of the rod 1 and to have its indentations 3 below the surface thereof. The ridges are rolled so that they are approximately .001 to .003 of an inch longer in diameter than the rod 1. I prefer to make the ridges approximately .015 of an inch from crest to crest.

To prevent a cutting action when the cleaner is inserted in a shaft, the crest 4 of the ridges is flattened out, or slightly rounded over, thus allowing the ridges to scrub rather than file upon the sides of the jet. To prevent the cleaner from being placed in the jet at an angle, and thus damaging the sharp corners of the jet at its outlet, a pilot 5 is provided upon the end of the cleaner.

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The action of my cleaner is that upon insertion in a jet the flattened crests 4 scrub particles and other materials deposited therein from the bore of the jet and carries them out of the jet in the valley 3 between the ridges 2. As the carbon to be removed is usually very hard if left near the surface of the jet while scrubbing, it would result in scratching, and would cause the flow of gases through the jet to be turbulent, thus destroying the efficiency of the jet.

My cleaner permits the carbon upon being loosened by the crest 4 of the ridges 2 to fall into the valleys, where it no longer contacts the sides of the jets.

While I have described the preferred embodiment of my invention, I am not limited to any details stated therein other than described in the following claims.

I claim:

20 1. In a cleaner, a rod, ridges raised on said rod in a plane perpendicular to the axis of said rod, valleys between said ridges, said ridges being smoothed at their outer peripheries to prevent cutting, and a pilot positioned perpendicular to said ridges and centrally on said rod to guide said cleaner.

25 2. In a cleaner, a rod, ridges raised a few thousandths of an inch above the rod in a plane perpendicular to the axis of said rod, valleys between said ridges to receive and carry off debris, said ridges being smooth at their outer peripheries to provide a scrubbing surface and to prevent cutting, and a pilot positioned perpendicular to said ridges and centrally on said rod to guide said cleaner.

HARRY D. MAITLEN.

REFERENCES CITED

The following references are of record in the file of this patent:

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Disclaimer

2,429,581.—*Harry D. Maillen*, Long Beach, Calif. CLEANING ROD FOR WELDING TORCHES. Patent dated Oct. 21, 1947. Disclaimer filed Dec. 8, 1947, by assignee, *Maillen & Benson, Inc.*

Hereby enters disclaimer of any combination of the recited elements in claims 1 and 2 having "ridges" of unequal diameter and further disclaims any and all cleaners as described in said claims which do not have "ridges" substantially uniformly "raised" "on" or "above" the "rod in a plane perpendicular to the axis of said rod."

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