Sept. 3, 1935. W. H. STEVENS 2,013,545

FILE CLEANER

Filed June 11, 1934

Fig. 1.

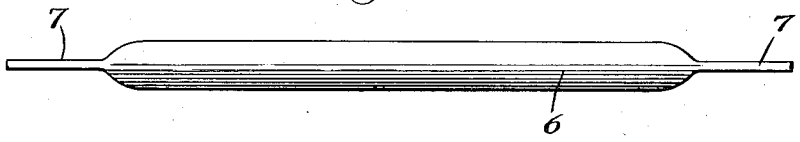


Fig. 2.

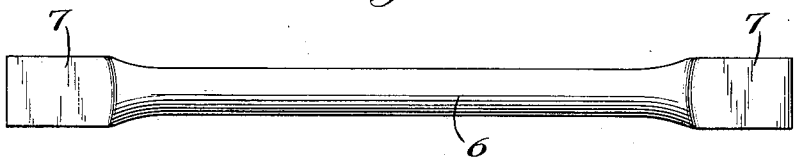


Fig. 3.

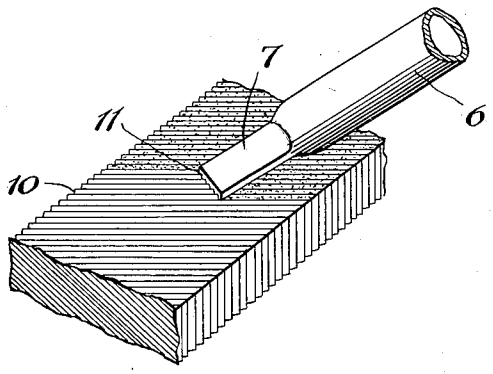
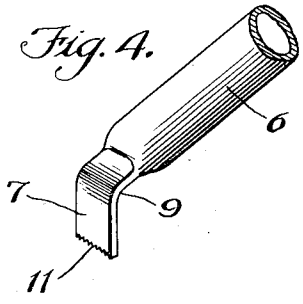


Fig. 4.



INVENTOR.
William H. Stevens
BY Kent W. Mounell
ATTORNEY.

Patented Sept. 3, 1935 2,013,545

UNITED STATES PATENT OFFICE

2,013,545

FILE CLEANER

William H. Stevens, Waukegan, Ill.

Application June 11, 1934, Serial No. 729,983

5 Claims. (Cl. 15—236)

This invention relates in general to a tool or implement for removing and cleaning dirt, metals and the like, from files.

An important object of this invention is the provision of a simple, inexpensive and effective tool or implement to remove dirt and other materials from between the teeth of files for rendering them more effective and efficient in use.

A further object of the invention is in the provision of a file cleaner having a handle portion and end cleaning or scraping portions which may be extended as the material thereof is worn away in use.

A still further object of the invention is in the provision of a flat file cleaner which is made of a soft tubular metal such as aluminum by flattening the ends thereof.

In the accompanying drawing illustrating a preferred embodiment of the invention,

Figs. 1 and 2 are side and top elevations respectively of a tube flattened at the ends in accordance with this invention;

Fig. 3 is a fragmentary perspective illustrating the tool as applied to the cleaning of the file; and

Fig. 4 is a perspective of a portion of a file cleaner with a bent extremity.

In ordinary use the grooves of a file soon become clogged with dirt, soft metal, grease and the like, which renders them inefficient in use. Some of these clogging materials are easily removed but others adhere firmly thereto and must be pushed or scraped from the grooves in order to remove them successfully. The present invention consists in the provision of a light metal tubing of relatively soft metal such as soft copper and aluminum, preferably flattened at one or both ends to provide a wider contact surface for engagement with the teeth of a file.

Referring more particularly to the drawing, a short piece of soft metal tubing 6 is formed with a flat extremity 7 at either or both ends which widens the scraper portion to that extent. Being of soft metal the extremity may be left straight as shown in Fig. 1, or it may be provided with a bend 9 as shown in Fig. 4, which adapts it more readily to be used as a scraper as well as a pusher for removing dirt and other material from a file.

In use the flattened end is applied to the surface of a file 10 as shown in Fig. 3, the extremity being pressed into and between the teeth of the file, thereby forming a serrated edge 11 at the extremity of the tube. This serrated edge conforms to the teeth of the file so that the points of the tool will enter closely into the grooves of the file so that by pressing the tool firmly and moving it across the teeth of the file, all dirt and other material is easily pushed or scraped from the grooves.

If the teeth 11 formed at the end of the cleaning implement do not at once conform to the teeth of the file which is being cleaned the continued movement over the teeth of the file will soon cause the teeth on the cleaner to exactly conform to those of the file and if necessary a slight pressure on the tool will make the teeth thereof of sufficient length to entirely fill the grooves of the file.

In cutting or forming new teeth at the end of the tool it is gradually worn away and if the flattened portion 7 becomes too short the adjacent tubular portion of the handle may be further flattened, thereby extending the cleaning and scraping portion.

The intermediate or rounded portion of the tool constitutes a handle for both ends, and by continually flattening the ends the entire tube may be used for the desired cleaning purposes.

The metal in the cleaner does not file away, it is soft enough so that it spreads to conform to the teeth in the file, but continued use and reuse gradually wears away the soft metal at the ends.

I claim:

1. A file cleaner and scraper comprising a tube of soft metal with a flattened end in which teeth are formed conforming to the teeth of a file as it is cleaned.

2. A file cleaner comprising a tube of soft metal flattened at the ends to provide contacting extremities and a central handle portion.

3. A file cleaner comprising a tube of soft metal flattened at one end and the flattened portion bent at an angle to the tubular portion which forms a handle therefor.

4. A file cleaner comprising a short tube of metal softer than a file and flattened at one end to provide a wider section engageable at its extremity with the teeth of a file and thereby providing teeth which enter between the teeth of a file for removing dirt and other material therefrom.

5. A file cleaner comprising a tube of soft aluminum flattened at an end.

WILLIAM H. STEVENS.