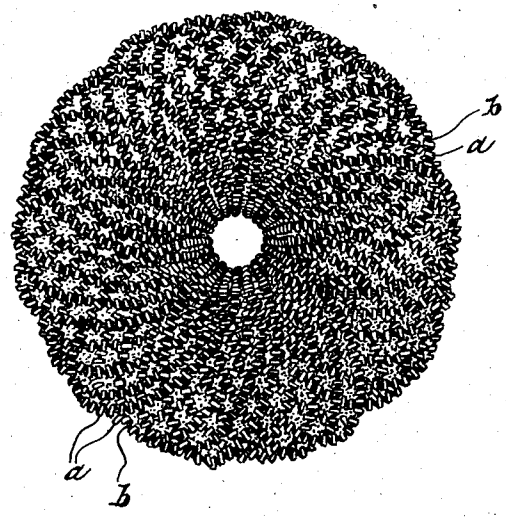
Feb. 12, 1935. D. J. MAYER 1,991,023

SCOURING PAD

Filed Oct. 2, 1931

Fig. 1



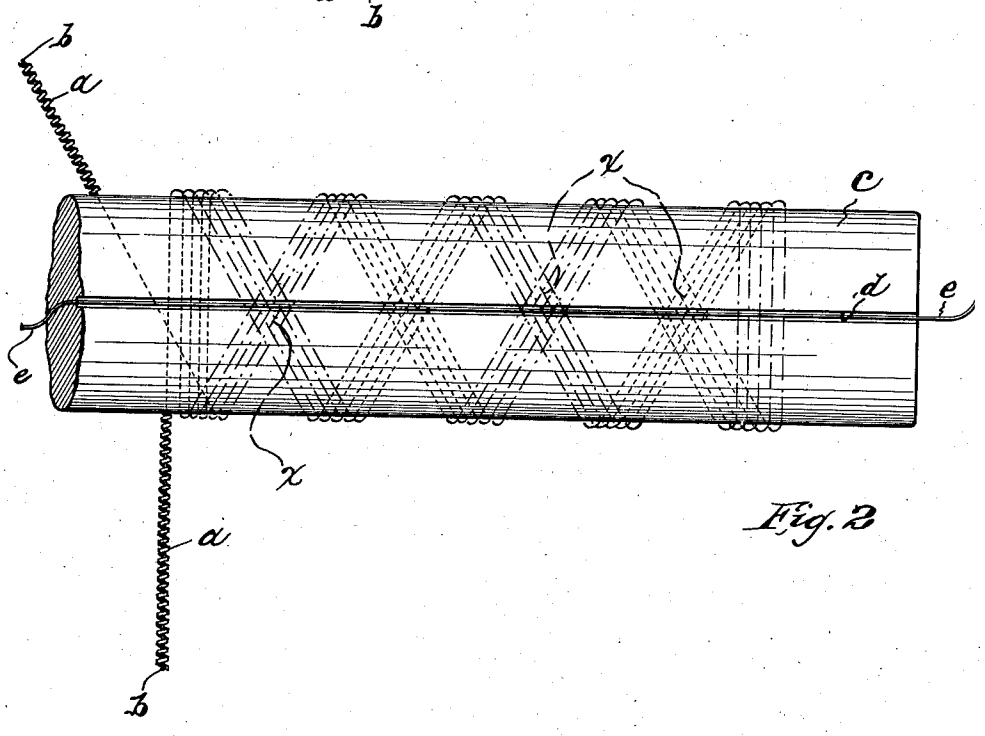


Fig. 2

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SCOURING PAD

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3 Claims. (Cl. 15—208)

This invention relates to an improved construction of metallic abrasive device, and, more particularly, to a new form and construction of metallic scouring pad for scraping, cleaning and polishing the surfaces of kitchen and other utensils and other surfaces to be so treated; and the invention further relates to a novel method of producing the scouring pad aforesaid.

The present invention has for its principal object to provide a hand implement comprising a spirally convolute strand of metallic wire looped and interwoven transversely back and forth upon itself to produce a matted elongated body, which is preferably turned endwise upon itself and its ends secured to provide a padlike finished body of suitable form, which may be comfortably grasped in the hand of the user for application to a surface to be treated thereby.

The invention has for a further object to provide a metallic scouring pad of the kind above generally characterized, in which the strand of spirally convolved metallic wire is interwoven upon itself in a criss-cross relation so that in the finished article the interwoven strand portions will interlock one with another so as to form a non-raveling body calculated to retain its shape under more or less rough usage, and so that the individual loops will be so entangled one with another that pulling out or fraying of said loops from the body will be prevented, and consequently the integrity and form of the body or pad will be maintained over a long period of usefulness; and, furthermore, the interweaving of the loops or strand portions will tend to dispose the convolutions of the metallic strand at a great diversity of angles of projection, whereby scraping edges offered by said convolutions will project in the many various directions of movement which may be imparted to the finished device when rubbing a surface to be scoured or scraped thereby.

The invention has for a further object to provide a novel interwoven structure of the kind hereinabove referred to, which provides a coarsely interstitial body which may be quickly and easily washed and rinsed out after use, so that it may be easily kept in a clean and sanitary condition.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

An illustrative embodiment of this invention, together with a disclosure of the preferred method of producing the same, is shown in the accompanying drawing, in which:—

Fig. 1 is a face view of the novel scouring pad made according to the present invention; and Fig. 2 is a diagrammatic view illustrating the preferred method of interweaving the looped strands of spirally convolute metallic wire in the production and formation of said novel scouring pad.

Similar characters of reference are employed in the above described views, to indicate corresponding parts.

The novel scouring pad of this invention is made of metallic material, comprising a wire which is turned or twisted upon itself to provide a roughly spirally convolved strand *a*, or otherwise deformed to provide a multiplicity of scraping projections or points along its length. Preferably the wire is of flat ribbon-like form or of angular cross-sectional shape, although wire of any cross-sectional shape, round or angular, may be employed. The flat ribbon-like wire, however, when spirally convolved, provides a multiplicity of chisel-like scraping edges or projections calculated to provide a maximum of abrading effect. While it is possible to use the metallic strand *a* alone, preferably, however, a flexible carrier core of metallic wire or textile *b* is employed upon and around which is convolved or gimped the metallic strand *a*. If metallic wire is employed for the core *b*, the surface of the same may be suitably roughened to hold the convolutions of the gimped wire from undue longitudinal slippage thereon. Preferably the metallic material employed for the gimping *a* and for the carrier core *b*, when the latter is of metallic character, is of relatively non-corrosive character; for example, copper affords a good material, both by reason of its relatively non-corrosive character as well as because of its comparatively hard nature, whereby its scraping or abrading functions are rendered more efficient.

A preferred and novel method of fabricating any of the forms of spirally convolved metallic strand above mentioned to form the transversely criss-cross interwoven loops making up the desired matted body of the scouring pad, comprises the provision of a mandrel *c* of suitable length, preferably having along one face thereof a countersunk longitudinal channel *d* in which is laid a center-tie cord or wire *e*. The spirally convolved metallic strand is wound over and around the mandrel *c* with a progressive traverse forward and back motion, whereby a dia-

mond or criss-cross lattice pattern is executed, in which the looped strand portions interweave and inter-cross one another, as indicated at *x* in Fig. 2. The length of the thus applied and interwoven material may extend along the mandrel for such total distance as may be desired according to the size of article to be produced. The progressive back and forth traverse may be carried on as many times as desired to build up on the mandrel the desired amount of material according to the bulk and weight of the finished article to be produced. The amplitude of the back and forth traverse of the material, during the winding thereof on the mandrel *c*, may be varied according to the desired pitch of windings to be produced. In practice it has been found that pitch of three inches gives a very satisfactory result, and produces a criss-cross weave of about the proper mesh for the character of article desired.

After the interwoven metallic strand has been built up on the mandrel to the desired amount, the same is slid endwise off of the mandrel, together with the center-tie cord *e*, (when employed) which extends longitudinally through the interior of the fabricated interwoven mass or body. The mass or body thus withdrawn from the mandrel is turned endwise upon itself to bring its ends together, and the center-tie cord *e* is drawn or tightened to engage in the interior bights of the interwoven loops or strand portions, thus drawing and bunching the same together to form a center portion from which the outwardly extending portions radiate, as shown in Fig. 1. The meeting ends of the mass or body may be further secured against separation by any suitable means, as by tying or sewing the same together with wire or cord (not shown) or by stapling or by use of any other mechanical fastening means found convenient or expedient. The center-tie cord *e* may be omitted if desired, since the interweaving of the loops of metallic strand material will, for many purposes, adequately retain the mass in its symmetrical form, when the ends thereof are brought together and secured. The use of the center-tie cord *e* is preferred, however, since it forms and maintains a concentrated center portion in the finished device calculated to maintain the form of the latter even under the most harsh and rough circumstances of use.

As the result of the general method of fabrication above set forth, a novel scouring pad is produced, such as illustrated in Fig. 1 of the drawing, in which the body or mass is more or less coarsely interstitial in character, whereby cleansing fluids may be readily passed therethrough to clean and purify the same after use; while at the same time a comparatively soft, resilient mass is provided which is comfortable to the hand of the user, and easily compressible to efficiently contact with a surface desired to be scraped and cleaned therewith.

While I have shown the novel finished scouring pad in Fig. 1 as comprising an annular body formed by bunching and joining the ends of a length of the described interwoven mass of which it is basically formed together; it will be understood that the finished body may be finished in other shapes as well under the broader aspects of this invention.

Having thus described my invention, I claim:—

1. A resilent scouring pad substantially in the shape of an annulus, said pad being composed of loops projecting outwardly from the central portion of said annulus, certain of said loops extending obliquely to others of said loops, with portions of said certain loops interlaced with portions of said other loops.

2. A resilient scouring pad substantially in the shape of an annulus, said pad being composed of approximately circular loops radiating outwardly from the central portion of said annulus, and a tie encircling the bights of said loops at the central portion of said annulus for binding said loops together, certain of said loops extending obliquely to others of said loops, with portions of said certain loops interlaced with portions of said other loops.

3. A resilient scouring pad substantially in the shape of an annulus, said pad being composed of loops radiating from the center of and having opposite sides thereof respectively in the region of the opposite faces of the annulus, and a tie within the inner ends of the loops to pass through and bind together all the loops, the loops being in two sets oblique to each other, portions of the loops of one set crossing and passing under and over portions of the loops of the other set.

DANIEL J. MAYER.