July 10, 1934. T. W. MILLER 1,966,101

SCOURER AND PROCESS OF MAKING THE SAME

Filed Aug. 18, 1930

Fig. 1

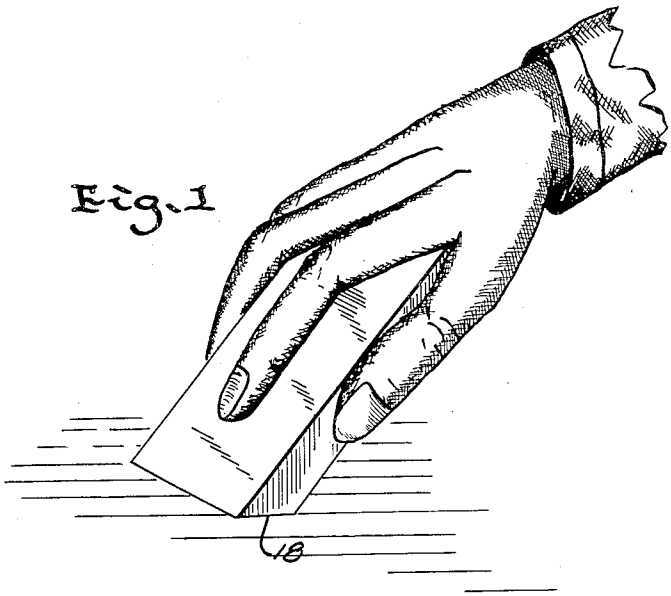


Fig. 2

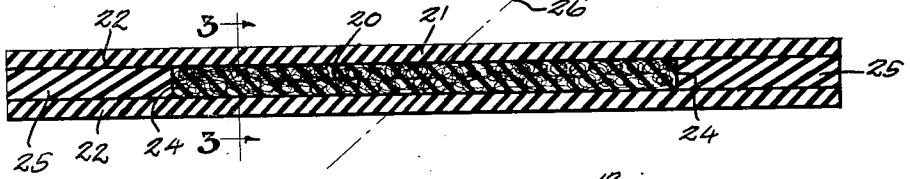


Fig. 4

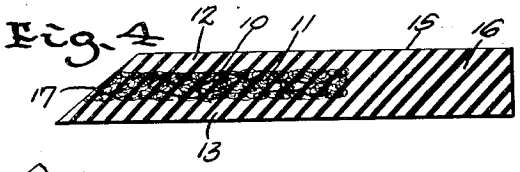


Fig. 5

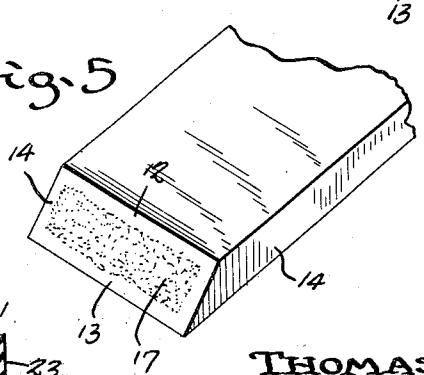
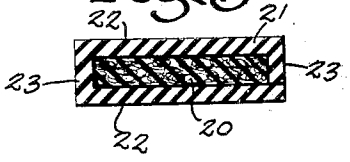


Fig. 3



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SCOURER AND PROCESS OF MAKING THE SAME

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Application August 18, 1930, Serial No. 476,217

8 Claims. (Cl. 18—59)

This invention relates to scourers and a process of making the same, and has for an object the provision of a new and improved article and process of this character.

In the drawing accompanying this specification and forming a part of this application I have shown, for purposes of illustration, one form which my invention may assume, and in this drawing:

Figure 1 is a perspective view showing an embodiment of the invention in use,

Figure 2 is a vertical longitudinal sectional view showing the process of making said embodiment,

Figure 3 is a transverse sectional view corresponding to the line 3—3 of Figure 2,

Figure 4 is a longitudinal vertical sectional view of the embodiment shown in Figure 1, while

Figure 5 is a fragmentary perspective view of the embodiment shown in Figure 4.

Referring to Figures 1, 4, and 5, the embodiment herein disclosed comprises a core 10 of rubber, preferably sponge rubber, permeated by scouring material, such as asbestos fibre, sand, metal filings, pumice stone, and/or the fibers 11 of metal wool herein shown, vulcanized into the rubber core 10, the core 10 being surrounded by upper and lower walls 12 and 13 and side walls 14 vulcanized to the rubber of the core, and entirely enclosing the core 10 at the top, bottom, and sides, and also preferably of sponge rubber.

At one end of the core 10, as at 15, there is provided an extension 16 of rubber of the same consistency as the walls 12, 13, and 14, and integral therewith, as by folding over excess length of the walls, the extension 16 providing an excess of material at the portion of the scourer where the greatest pressure is applied, thereby avoiding any possibility of the metal wool coming into contact with the hand of the user. At the opposite end of the scourer the metal wool is exposed, as indicated at 17, and for convenience in using, the scourer is cut at an angle, as indicated at 18, so that it may be readily applied to the surface to be contacted.

The scourer as thus provided contains the core 10 of metal wool exposed along the beveled edge 18, and adapted to be disposed in contact with the surface to be scoured. The metal wool core 10 is entirely surrounded by an appreciable thickness of flexible rubber provided by the walls 12, 13, and 14, insuring that the metal wool will not come into contact with the hand of the user, and the extension 16 provides an additional thickness of rubber where the greatest pressure is applied. In use the scourer has a combined abrasive effect due to the provision of the metal wool, and also a somewhat less abrasive effect due to the provision of the flexible rubber contacting surfaces, the metal wool and the rubber cooperating to provide a very efficient scouring material.

Figures 2 and 3 disclose an embodiment of a method of making scourers. In carrying out this embodiment a quantity of rubber, preferably of such character as to become spongeous during vulcanization, has a quantity of steel wool or other scouring material impregnated therein, as by milling the scouring material into the rubber. The rubber thus treated is then sheeted out and cut into bars, such as shown at 20 in Figure 2 of the drawing.

The bar 20 is then covered with a relatively thick flexible sheet 21 of sponge rubber material of such width that when wrapped about the bar 20 as shown in Figure 3, upper and lower walls 22, and side walls 23, will be provided. The walls 22 and 23 extend an appreciable distance beyond the ends 24 of the bar 20, and excess rubber 25 is provided at each of the extensions of the walls 22 and 23 at each end of the bar 20. The parts as thus assembled are placed in a mold and vulcanized under heat and pressure, resulting in the union of the excess 25, the wrapping providing the walls 22 and 23, and the rubber bar 20 containing the scouring material.

When removed from the mold this block may be cut, for instance along the line 26, thereby providing two scouring articles such as that illustrated and described in connection with Figures 1, 4, and 5.

It will be obvious to those skilled in the art that the embodiments herein described accomplish at least the principal objects of the invention; it will also be apparent that other advantages than those herein mentioned are inherent in the embodiments described and that the invention is capable of a variety of uses other than those described; furthermore it will be apparent that various changes and modifications may be made without departing from the spirit of the invention; and therefore it will be appreciated that the embodiments herein disclosed are illustrative only and that the invention is not limited thereto.

I claim:

1. A process of making scouring elements, comprising: impregnating a rubber core with scouring material, disposing a rubber covering about said core, vulcanizing said core and said covering together, and cutting said cover and core into two

articles each exposing impregnated material at one end only.

2. A process of making scouring elements, comprising: impregnating a sponge rubber core with scouring material, disposing a rubber covering about said core, vulcanizing said core and said covering together, and cutting the resulting article into two particles each exposing impregnated material at one end only.

3. A scouring element comprising: a core comprising scouring material and rubber intermingled and vulcanized together, and a covering substantially enclosing said core and vulcanized to said core, the uncovered portion of said core presenting a scouring surface, and said covering having an additional thickness opposite the uncovered portion of said core, to reinforce said scouring element and also provide a form to fit the hand.

4. A process of making scouring elements, comprising: impregnating rubber with scouring material, disposing a rubber covering about said impregnated material, said rubber extending beyond the ends of said impregnated material, vulcanizing together said impregnated material and said rubber covering, and cutting said cover and impregnated material into two articles each exposing impregnated material at one end and rubber at the opposite end.

5. A scouring element comprising: a core of relatively yieldable scouring material, and a covering of relatively flexible material substantially enclosing said core, an uncovered portion of said core presenting an abrasive operating surface adapted to engage the surface to be cleaned, and said covering presenting a relatively less abrasive operating surface of substantial area with respect to said abrasive operating surface, and cooperable with said scouring surface, and adapted to engage the surface to be cleaned, said covering having an additional thickness opposite the uncovered portion of said core to reinforce said scouring element and also provide a form to fit the hand.

6. A scouring element comprising: a core comprising metallic wool and sponge rubber intermingled and vulcanized together, and a rubber covering substantially enclosing said core, an uncovered portion of said core presenting a scouring surface adapted to be engaged with the surface to be cleaned, and said rubber covering having an additional thickness opposite the uncovered portion of said core to reinforce said scouring element and also provide a form to fit the hand.

7. A scourer, as for scouring kitchen utensils, comprising: a multitude of particles of abrasive material; a body of rubber embedding said particles and acting as a matrix for said particles, carrying and supporting said particles; said particles being dispersed through said body, to act successively as said scourer wears away; and a cover, of rubber, substantially free of said particles, integral with said body, leaving at least one end of said body exposed for scouring, but covering substantially the lateral surface of said body, by which said scourer may be held without contacting said particles.

8. A scourer, as for scouring kitchen utensils, comprising: a multitude of particles of abrasive material; a body of rubber sponge embedding said particles and acting as a matrix for said particles, carrying and supporting said particles; said particles being dispersed through said body, to act successively as said scourer wears away; and a cover, of rubber, substantially free of said particles, integral with said body, leaving at least one end of said body exposed for scouring, but covering substantially the lateral surface of said body, by which said scourer may be held without contacting said particles.

THOMAS W. MILLER.