July 31, 1956 R. B. KALBACH 2,757,110

BRAIDED RUG AND METHOD OF MAKING SAME

Filed Sept. 10, 1952

Fig. 1.

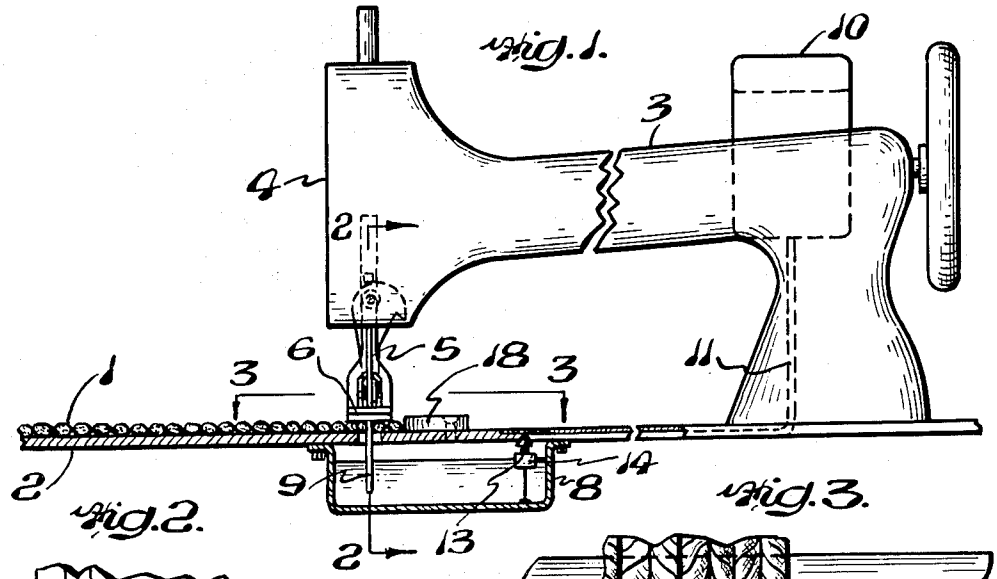


Fig. 2.

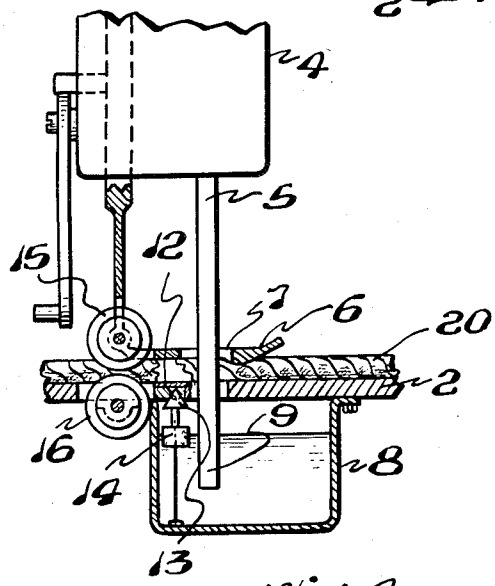


Fig. 3.

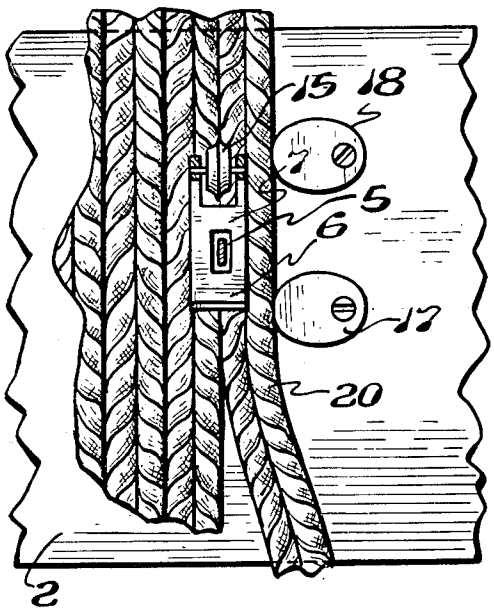


Fig. 4.

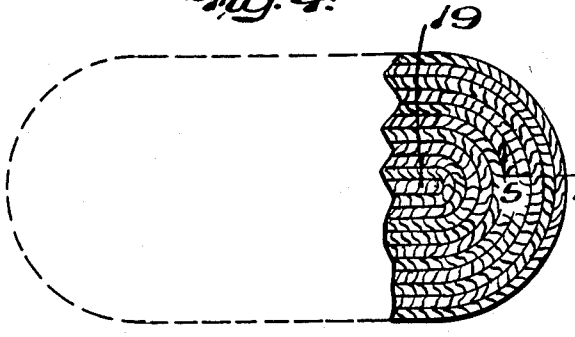
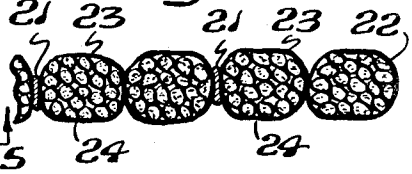


Fig. 5.



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BRAIDED RUG AND METHOD OF MAKING SAME

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2 Claims. (Cl. 154—90)

My invention relates to braided rugs and a new method of making same.

Heretofore, in the making of a rug of this type a braid was coiled about the forming section or strip and about itself in ever widening loops until the desired size was obtained, the end of the braid being sewed to the outermost loop. Generally, these rugs have been held together by sewing the adjacent braids together by zig zag or overseaming stitches as indicated in my Patent No. 1,487,860. In order to overcome the inherent difficulties in sewing such an item, it has been necessary that the thread be exposed to view in the finished rug. The thread, of course, lies substantially on the surface of both sides of the rug and detracts somewhat from the otherwise pleasing appearance of the rug. The amount of thread can, of course, be reduced in order to enhance the general appearance of the rug but such procedure necessarily weakens the strength of the rugs and reduces its life. A major difficulty encountered when the braids are sewn together is that the thread being exposed is subject to wear and tear. Obviously when the thread is worn through the rug must be resewn or discarded. The size and amount of thread used is generally a compromise between strength and lasting qualities on the one hand and appearance on the other.

To overcome these difficulties there have been attempts to coat one side of the rug so as to firmly bind the braids together and improve the appearance of one surface of the rug. Such attempts have met with little success largely due to the fact that the coating material either did not hold the rug together in the proper manner or that the coating material adhered to or scratched the surface of the floor on which the rug was placed. A further objection to this type of adhesion was that it prevented the rug from being reversible and, therefore, its usefulness and life were substantially reduced.

My rug is bound together at the touching edges of the braids but the binder is substantially invisible to the observer and spaced from both bearing surfaces of the rug.

By means of my inventiotn I can produce a rug of this type in the same time as previously required but the stitching is completely eliminated, the appearance of the rug is greatly enhanced and the strength and wearing qualities of the rug are increased.

An object of my invention is to produce a rug of the braided type which is held together without sewing.

A further object of my invention is to place the binding medium beyond the area of normal wear.

A further object of my invention is to provide a machine for quickly and easily binding together the braids without sewing and for keeping the braids together under pressure until the binder has set.

A further object of my invention is to produce a rug of the type described which may be easily and quickly repaired in the event of a tear or rupture.

The principles and characteristics of my invention and the manner of making and constructing my improved rug

will further appear in the accompanying drawings and the following description explaining the best modes in which I contemplate using such principles.

Fig. 1 is a side elevational view of my machine and apparatus for making my improved rug; Fig. 2 is an enlarged, side elevational view, partly in cross section, of the machine shown in Fig. 1 taken along the line 2—2 of Fig. 1; Fig. 3 is a plan view of a portion of my improved rug and machine taken along the line 3—3 of Fig. 1; Fig. 4 is a plan view of a braided rug embodying my invention; and Fig. 5 is an enlarged, cross sectional view of my improved rug taken along the line 5—5 of Fig. 4.

My improved rug **1** is preferably made on a table **2** on which is mounted a machine **3** having a head element **4** in which is held one end of the applicator **5** and a vertically movable foot or shoe **6**. The foot **6** has a slot **7** cut in the center of the base portion thereof through which the applicator **5** can reciprocate. A tank or trough **8** is mounted beneath the platform **2** and is filled with an aqueous solution of coagulated rubber or the like into which the lower portion **9** of the applicator **5** projects. A container **10** is mounted on the side of the machine **3** and has a tube **11** connected with the tank **8** through which the aqueous solution of coagulated rubber flows to the orifice **12** at the end of the tube **11**. A valve body **13** mounted on the valve body float **14**, which rests on the surface of the solution aforesaid, projects into the orifice **12** so as to close the orifice and tube whenever the solution rises above a predetermined level. On the rear of the foot **6** is mounted a wheel **15** having the tread thereof formed in the shape of an inwardly curved V. A wheel **16** is mounted on the platform **2** opposite the wheel **15** and has a surface similar to wheel **15**. The opposing surfaces of the two wheels are less than the thickness of one braid apart.

An eccentric guide **17** is mounted on the platform **2** just forward of the applicator **5** and another eccentric guide **18** is mounted on the platform **2** in the vicinity of the center line of the wheel **15**. The eccentric guide **17** guides the braid to the body of the rug and the applicator **5** while the guide **18** provides a pressure surface for holding the newly coated surfaces of the braids together while the binder sets.

To make my improved rug a forming piece **19** is placed on the table **2** adjacent the applicator **5** and beneath the shoe **6**. A braid **20** is placed between the guide **17** and the applicator **5** and alongside the forming piece **19** beneath the shoe **6**. The applicator **5** is then reciprocated and draws solution from the tank **8** while the operator pushes the forming piece **19** and the braid **20** past the applicator **5** and against the eccentric guide **18**. The applicator places a small amount of the solution on the projecting edges of the braids as they are moved past the applicator and toward the wheels **15** and **16** which project partly between the coated braids and tend to force the binder solution to the equatorial lines of said braids. Pressing the rug against the eccentric guide **18** holds the braids together until the solution has set. A feed dog similar to that common to sewing machines may be mounted in the platform **2** below the foot **6** to aid in the feeding of the braid and rug along and beyond the applicator **5**.

As is clearly shown in Fig. 5, the binder **21** between the braids is restricted to the area immediately adjacent the equatorial lines **22** of the braids and does not extend or project to either of the bearing surfaces **23** and **24** of the braids. Thus, it is impossible for the binder to coat or attach to either the surface on which it is laid or the sole of a foot pressing against it. The retention of the binder **21** to the immediately adjacent sur-

faces of the braids tends to hide the binder from the casual observer and presents a rug whose surface is not marred by a formation of holding material, as has been usual heretofore.

While the braids shown have been two cored braids woven together, it is to be understood that single braids may be used with equal facility.

Having described my invention, I claim:

1. The method of binding together a braided rug which includes placing the braids in juxtaposition to each other but separated by a coated applicator, transferring said coating from said applicator to the outermost lateral portions only of said braids, removing any excess coating any concentrating the remaining coating at the center lines of said braids, and translating said braids away from said applicator under pressure until said coating develops a substantial holding strength.

2. A rug with upper and lower wearing surfaces composed of cored braids including a plurality of strands of yarn of which some of the yarn serves as a core and of which the remainder serve as surface strands, the

extreme lateral portions of said surface strands of each cored braid being joined to the surface strands of the next adjacent cored braid by the dried product of an aqueous solution of coagulated rubber, said coagulated rubber being spaced from the upper and lower wearing surfaces of said rug braids and substantially hidden from view.

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