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BODY TREATING BAND OR ARTICLE

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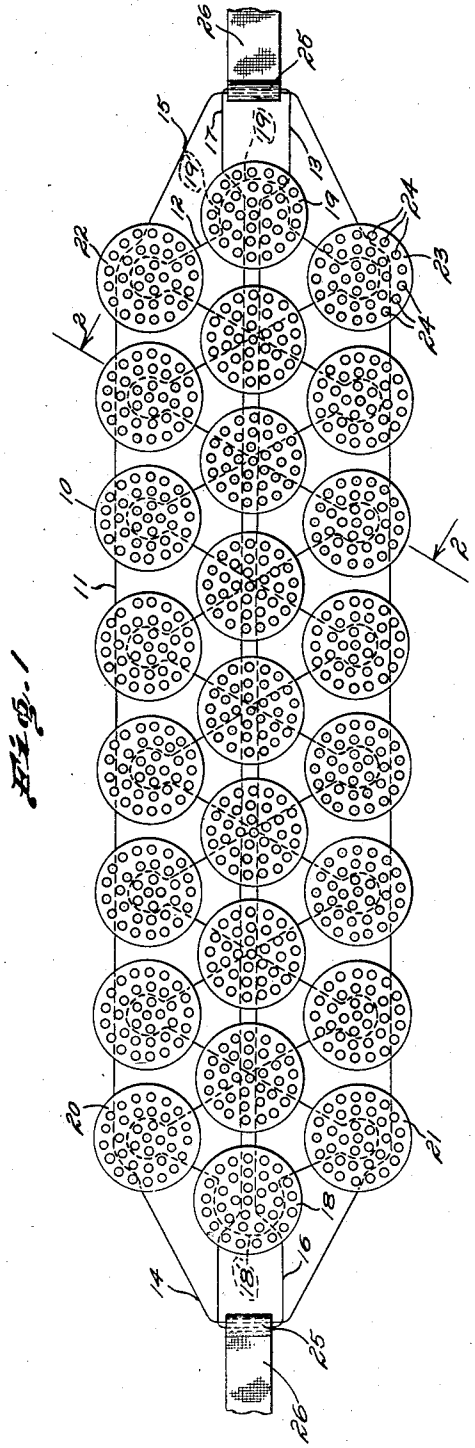


Fig. 1

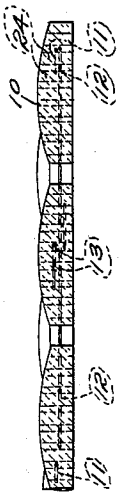


Fig. 2

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BODY TREATING BAND OR ARTICLE

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5 Claims. (Cl. 128—163)

This invention relates to an article of manufacture comprising a flexible band, formed of a plurality of perforated unglazed ceramic disks and an interconnecting wire truss work, which is adapted for use in the cosmetic and therapeutic arts.

The article, as hereinabove set forth, is used in the cosmetic and therapeutic arts whenever it is desired to utilize the absorptive properties of unglazed ceramic material for absorbing a liquid such as cooled water or an astringent, for the application thereof to the desired part of the anatomy. More particularly, this article with its absorbed liquid, can be used to relieve headaches, the absorbed liquid being slowly evaporated and thus acting to cool or treat the body.

In actual practice, the article or belt is first saturated with ice water or an astringent, or a mixture of the two, and then applied to the desired part of the anatomy in any desirable manner.

The article as hereinabove described is, in general, old as it has been made by uniting the perforated unglazed ceramic disks into the form of a flexible sheet or fabric by means of threads, fibrous strings or the like, which were sewed or threaded through the perforations, and along the edges of the disks. Any strains set up in this fabric were entirely withstood by the ceramic disks, and as a result, many of them were ripped away from their attaching medium when in use rendering the article unfit for further use. Moreover, these threads, when wetted, shrunk or tightened upon drying and consequently exerted a great strain on the disks which tended to break them. In addition, the continual wetting of the threads caused them to rot and disintegrate which finally resulted in a dismembering of the fabric rendering it unfit for use.

I have found that the objections inherent in these prior art devices, can be readily overcome by uniting the perforated ceramic disks into a flexible belt or band through the medium of wire strings. These wire strings are formed into a framework similar to a truss and are embedded in the disks in such a manner that any strains on the device are entirely withstood by the wire, thus preventing the breaking or tearing away of the disks. In this manner, a therapeutic article is provided which is capable of use for an indeterminate period of time.

It is therefore an object of my invention to provide a therapeutic article of this character which obviates the objections inherent in the prior devices.

It is a further object of my invention to provide a wire framework resembling a truss about and on which the perforated ceramic disks are formed and supported respectively, to provide a flexible structure. The wires are so arranged in the disks that all strains in the structure are entirely withstood by the wires.

It is a further object of this invention to provide a useful article of manufacture which is simple in design and construction, relatively inexpensive to manufacture, and which is capable of use for an indeterminate period of time.

My invention possesses many other advantages, and has other objects which may be made more easily apparent from a consideration of one embodiment of my invention. For this purpose I have shown a form in the drawing accompanying and forming part of the present specification. I shall now proceed to describe this form in detail, which illustrates the general principles of my invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of my invention is best defined by the appended claims.

Referring to the drawing:

Figure 1 is a plan view of a therapeutic article embodying my invention; and

Fig. 2 is a section thereof taken substantially along the plane 2—2 of Fig. 1.

My invention contemplates the use of the thermal characteristics of the human body to effectuate the evaporation of a liquid medium for the purpose of cooling and consequently stimulating a localized area of the body to produce a therapeutic effect. To accomplish this, use is made of an absorbing medium having a large absorptive area, which can be readily applied to the desired part of the anatomy. Although any desired material may be utilized as the absorbing medium, I preferably use a thoroughly fired unglazed ceramic material due to its unusual absorptive property and to the fact that it lends itself readily to be treated for the purposes of sterilization without undergoing any change in its physical properties, and further because it is capable of use for an indefinite period of time.

In the drawing, the unglazed ceramic material is shown in the form of disks 10 positioned in three parallel rows. The corresponding disks in the outside rows are diametrically opposite to each other, and the disks in the center row

are off-set from the other disks to permit the assemblage of these disks into a flexible structure in a manner and for a purpose to be described.

These disks are held together in the same plane in the form of a flexible fabric by means of endless wires 11, 12 and 13.

The endless wire 11 is strung through the disks 10 of the outer rows along a chord of the disks adjacent the outer periphery thereof, and is provided with a free loop or end 14 and 15 at each end thereof. These loops extend outwardly from the disks in a direction coincident with the length thereof. The endless wire 13 is strung through the central row of disks 10 with its side portions equally spaced from the diameters of the disks and closely adjacent thereto. This wire is likewise provided with a free loop 16 and 17 at each end thereof which extends outwardly from the central row of disks.

As thus far described, it is apparent that the disks are maintained in their respective rows by means of the endless wires 11 and 13; however, no attempt has been made to maintain the disks in the same plane. To accomplish this, use is made of the endless wire 12.

The wire 12 serves to maintain the disks 10 of the respective rows in the same plane and to secure the disks of the central row to those of the outer rows to form the flexible fabric. As is apparent from Fig. 1, the wire 12 is provided with a loop 18' and 19', which is embedded in the respective end disks 18 and 19 of the central row about an arc of a circle spaced from the outer periphery of the disks. The ends of these loops lead into the adjacent disks 20, 21, 22 and 23 respectively of the outer rows, loop about the center of these disks, and then lead to a diagonally disposed disk in the outer rows through a diameter of a disk in the central row. It will be apparent from the drawing, that by continuing this manner of securing the disks into a flexible fabric, the wire 12 will criss-cross back and forth from one disk in one outer row to a diagonally disposed disk in the other outer row, and always intersecting the disks in the central row along a diameter thereof. This arrangement progressively continues from the loop portion 18' of the disk 18 to the loop portion 19' of the disk 19 or vice versa.

In actual practice, the endless wires 11, 12 and 13 are first arranged in a mold in the manner set forth, and the mold is then filled with a ceramic forming material or the like, which forms a matrix or disk in which the wires are embedded. When the material has been moulded, it is taken from the mold along with the embedded wires and heated to slightly below the vitrification point. This is termed "firing" which forms the matrix into a hardened porous product termed a "ceramic". If it is desired to increase the absorptive area of the disks 10, a plurality of spaced perforations 24 can be formed therein prior to "firing" the material.

As the wires as well as the material are subjected to this high heat, substantially between 1652° F. to 2732° F., the wires must of necessity be capable of withstanding this temperature without being deleteriously affected thereby. I have found that flexible, corrosive and heat resistant wires such as those formed from stainless steel, Monel metal, or nichrome are admirably suited for this purpose.

From the foregoing, it is apparent that the wires 11, 12 and 13 form a flexible support for the ceramic disks 10 which is quite similar to a truss. The wires 11 and 13 act to absorb all strains on the fabric when in use and eliminate the setting up of strains or stresses in the brittle unglazed ceramic disks. The wire 12 serves to unite the disks of the respective rows and to maintain them in the same plane. Due to the arrangement of stringing the disks 10 in the manner disclosed, the structure will not become disrupted and rendered unfit for use should any one or more of the disks become broken.

In order to facilitate the mode of attaching this fabric to the desired part of the anatomy, a roller or bushing 25 is formed around the overlying ends of loops 14 and 16; and 15 and 17. One end of a piece of ribbon or the like is secured to each of the rollers in any desirable manner as for instance, sewing. The free ends of these ribbon strips 26 can be then tied together about the part of the anatomy to which the fabric is to be applied.

Although I have disclosed the assemblage of three rows of disks into a flexible structure, it is readily apparent, the invention is equally applicable to a structure having more or less rows as desired.

I claim:

1. A therapeutic article comprising a flexible structure formed of unglazed ceramic disks and an interconnecting wire truss, said disks being arranged in three respective rows, with the disks in the outer rows diametrically opposite to each other, and the disks in the central row offset from the disks in the other rows, said wire truss comprising three endless wires which substantially entirely withstand all strains on the structure, one of said wires extending through the disks of the outer rows, another of said wires extending through the central row of disks, and the third wire extending back and forth in criss-cross fashion between the disks of all the rows.

2. A therapeutic thermostatic article comprising a flexible structure formed of unglazed ceramic disks and an interconnecting wire truss, said disks being arranged in three respective rows, with the disks in the outer rows diametrically opposite to each other, and the disks in the central row offset from the disks in the other rows, said wire truss comprising three endless wires which substantially entirely withstand all strains on the structure, one of said wires extending through the disks of the outer rows along a chord adjacent the outer periphery thereof, and having free end portions extending outwardly from the disks forming loops, another of said wires extending through the central row of disks with the side portions thereof equally spaced from and adjacent the diameters of the disks and having free end portions extending outwardly from the disks forming loops, and the third wire extending back and forth in criss-cross fashion between the disks of all the rows to maintain the disks in the same plane.

3. The combination as set out in claim 2 in which the last named wire is looped within the end disks of the central rows, looped within the disks of the outer rows and intersects the intermediate disks of the central row substantially along a diameter thereof.

4. The combination as set out in claim 2 with the addition of means for securing the flexible fabric to the desired part of the anatomy.

5. A therapeutic thermostatic article comprising a flexible structure formed of unglazed per-

forated ceramic disks and an interconnecting wire truss, said disks being arranged in three respective rows, with the disks in the outer rows diametrically opposite to each other, and the disks in the central row off-set from the disks in the other rows, said wire truss comprising three endless wires which substantially entirely withstand all strains on the structure, one of said wires extending through the disks of the outer rows along a chord adjacent the outer periphery thereof, and having free end portions extending outwardly from the disks forming loops, another of said wires extending through the central row of disks with the side portions thereof equally spaced from and adjacent the diameters of the disks and having free end portions extending outwardly from the disks forming loops, and the third wire extending back and forth in criss-cross fashion between the disks of all the rows to maintain the disks in the same plane.

OSCAR L. MILLS.