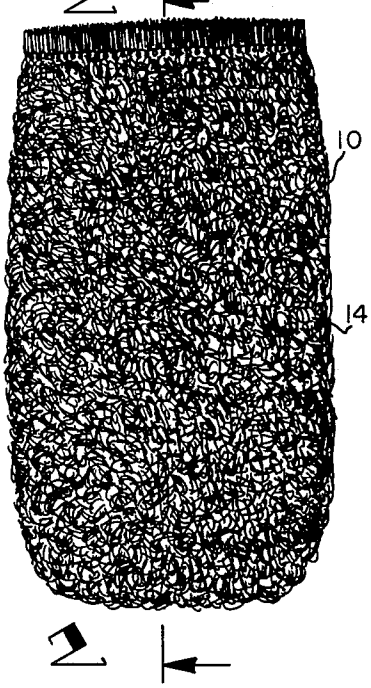
July 13, 1965 G. D. COPPOCK, JR 3,193,869

HAND DRYING DEVICE

Filed Feb. 28, 1963

Fig 1



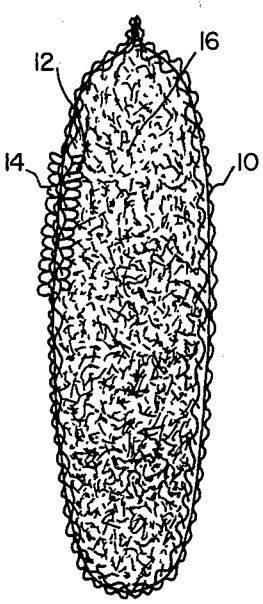


Fig 2

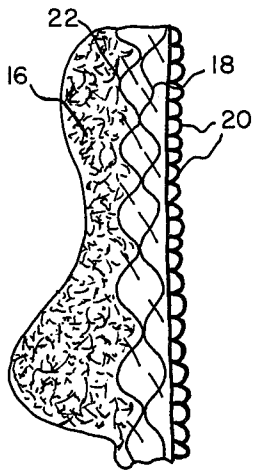


Fig 3

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HAND DRYING DEVICE

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This invention relates to a hand drying device and more particularly to a hand drying device useful by bowlers to dry the hands and attain a proper frictional engagement of the hand with a bowling ball.

Various devices, including towels, powder bags and other equipment, have been used by bowlers for the purpose of drying the hands so that the bowler may attain a proper frictional grip on the bowling ball. Many of these devices have been used and the relative efficiency thereof depends upon the overall surface area of the device used to dry the hands and its capacity to absorb moisture. The bulky devices, such as large towels or the like, are relatively undesirable, while the more compact devices of the prior art, which may be carried in the bowlers pocket, are inefficient and so small that they are incapable of performing a proper and efficient operation of drying the bowlers' hands so that he may attain a proper frictional grip on a bowling ball.

Accordingly, it is an object of the present invention to provide a very small and compact hand drying bag for bowlers which comprises a great amount of surface area relative to its size and which utilizes diatomaceous earth exuded through the side wall of the bag; said diatomaceous earth also having great water absorbing capacity and surface area and also being dispensible to the hands to dry them and additionally, to provide for a proper co-efficient of friction of a bowler's hands with a bowling ball so that he may properly handle the ball.

Another object of the invention is to provide a bowler's hand drying device comprising a bag containing diatomaceous earth; said bag having fabric mesh between which finer particles of said diatomaceous earth may be dispensed outwardly; said bag also having a large extended surface area nap portion outwardly of said fabric through which said diatomaceous earth may be dispensed whereby the large area nap and the large surface area of the diatomaceous earth efficiently absorbs moisture from a bowler's hands while the device itself may be very small and compact and capable of being carried on a bowler's person or in his pocket, if desired.

Another object of the invention is to provide a novel bowler's hand drying device comprising a very small compact bag utilizing a large surface area nap fabric structure on the outside thereof and a fabric mesh diatomaceous earth dispensing structure inwardly of the nap and containing diatomaceous earth so that the drying device has a two-fold action, including moisture absorption by the enlarged area nap on the outside and the dispensation of diatomaceous earth therethrough to the hands which provides for absorption of moisture by the nap and also by the diatomaceous earth and further, coats the hands with particles of diatomaceous earth to attain a proper co-efficient of friction of the hands on various articles grasped, including bowling balls.

Another object of the invention is to provide a hand drying device comprising an absorbent bag structure containing diatomaceous earth; said bag structure having a mesh permitting dispensation of the diatomaceous earth therethrough to the hands so that the fabric mesh, upon contact with the hands, will absorb moisture which is transmitted to diatomaceous earth internally of the bag and whereby diatomaceous earth, transmitted through the mesh of the bag, to the hands, also absorbs moisture directly upon the surfaces of the person's hands.

Another object of the invention is to provide a hand

drying device including a novel bag structure comprising a fabric mesh containing diatomaceous earth and an external high pile fabric protruding outwardly from the mesh there providing great surface area externally of the bag and a diatomaceous earth dispensing mesh to control the flow of diatomaceous earth from the interior of the bag into said high pile fabric so that the fabric and the diatomaceous earth directly may contact hands of the user to accomplish a two-fold drying action and friction conditioning of the hands.

Other objects and advantages of the invention may be apparent from the following specification, appended claims, and accompanying drawings, in which:

FIG. 1 is a side elevational view of a hand drying device of the present invention;

FIG. 2 is a sectional view thereof taken from the line 2—2 of FIG. 1; and

FIG. 3 is an enlarged fragmentary sectional view similar to that of FIG. 2, but showing a modification of the bag structure of the invention.

As shown in FIG. 1 of the drawings, a bag **10** is formed of a high pile fabric, such as "terry cloth." This bag structure, as shown in FIG. 2 of the drawings, is provided with an internal mesh fabric structure **12** having a high pile fabric **14** comprising loops of thread of fabric internally and externally of the mesh **12**. This high pile loop structure provides great extended surface area on the inside and outside of the bag while the mesh **12** is sufficiently open to permit dispensation of diatomaceous earth **16**, or other powder such as talc, or the like, from the interior of the bag through the mesh structure **12** into the high pile fabric structure **14**. This high pile fabric, internally of the mesh, holds the powder away from the dispensing mesh. The diatomaceous earth **16**, or other powder such as talc, or the like, is a finely ground fossil structure of diatoms. Fossils of the diatoms comprise small shell-like silicate structures which include microscopic matrix. These matrix structures have innumerable small openings therethrough such that the diatomaceous earth will hold an amount of liquid equal to its weight and yet pour as a dry powder. Additionally, this preferred powder, diatomaceous earth, has a substantially high co-efficient of friction when applied to the hands of a person and will, at the surface of a person's hands, absorb a considerable amount of moisture in proportion to the amount of diatomaceous earth dispensed thereon.

The mesh structure **12**, of the bag **10**, efficiently contains the diatomaceous earth but very slowly dispenses it through to the outside of the bag and into the high pile fabric lops or extended surface area **14** so that a bowler's hands, when covered with perspiration, may contact the surface **14** and even though the bag is small and may be contained in a person's hand, it has great extended surface area loaded with diatomaceous earth powder. This material also having great water absorbing character provides for very rapid drying of a person's hands and this is particularly important to a bowler. The bowler's hands are thus quickly dried and also slightly coated with diatomaceous earth in microscopic form, but which immediately absorbs perspiration on the surfaces of a bowler's hands and also tends to improve the co-efficient of friction of the bowler's hands with a bowling ball. This device may also be used by baseball pitchers or batters or any other person requiring hand drying operations during the performance of tasks under high temperature conditions in which the hands tend to perspire. This drying device may also be used as a very compact device for drying hands under other conditions.

It will be seen that the device of the invention is very small, being disclosed in actual size in FIG. 1 of the drawings, so that it may be contained in a person's pocket and is very small, as compared to a conventional hand

drying towel. Yet, this device has extremely great drying capacity and has the novel function of dispensing diatomaceous earth onto the hands at the same time that the pile, externally of the bag, absorbs moisture thereinto and into diatomaceous earth held in said pile or fabric of great extended area.

In the modification of the invention, as shown in FIG. 3 of the drawings, the bag is composed of a fabric mesh structure **18**, similar to the fabric mesh **12**. This mesh **18** may be coarser than the fabric mesh **12** and is also provided with great surface area comprising fabric loops or high pile structure **20**, externally of the mesh structure **18**. Internally of the fabric mesh structure **18** is finer fabric mesh structure **22** adjacent to the diatomaceous earth **16**. The fabric mesh **22** contains the diatomaceous earth **16** and may be of a mesh to control the dispensation of the diatomaceous earth into the fabric **18** and high pile fabric structure **20**. This construction, as shown in FIG. 3 of the drawings, permits the use of a particular and precisely woven mesh fabric structure **22** internally of a coarse mesh high pile fabric **20**, whereby economy of manufacture may be attained. The simple mesh fabric 22 may be inexpensive and the wide mesh high pile fabric structure **18** may be inexpensive relative to that comprising a fabric mesh structure which will be small enough or fine enough to efficiently control the flow of diatomaceous earth **16**, or other powder such as talc, or the like, therethrough.

It will be obvious to those skilled in the art that various modifications of the present invention may be resorted to in a manner limited only by a just interpretation of the following claims.

I claim:

1. In a hand drying device the combination of: a bag structure containing powdered diatomaceous earth; terry cloth mesh fabric structure of said bag structure containing said diatomaceous earth and being of dimensions to permit diatomaceous earth to pass through the said mesh structure; said terry cloth having structure externally of said mesh structure comprising loops of fabric coupled to said mesh structure.

2. In a hand drying device the combination of: a bag structure containing powdered diatomaceous earth; terry cloth mesh fabric structure of said bag structure containing said diatomaceous earth and being of dimensions to permit diatomaceous earth to pass through the said mesh structure; said terry cloth having structure externally of said mesh structure comprising loops of fabric coupled to said mesh structure; a second mesh structure internally of said first fabric mesh structure disposed to control the flow of powdered diatomaceous earth from the interior of said bag to the external extended surface area of said bag.

3. In a hand drying device the combination of: a flexible bag structure; powdered diatomaceous earth therein; a terry cloth mesh fabric structure of said bag containing said diatomaceous earth and having mesh dimensions large enough to permit dispensation of diatomaceous earth through said mesh; said terry cloth comprising extended surface fabric means externally of said mesh structure and coupled thereto.

4. In a hand drying device the combination of: a flexible bag structure; powdered diatomaceous earth therein; a terry cloth mesh fabric structure of said bag containing said diatomaceous earth and having mesh dimensions large enough to permit dispensation of diatomaceous earth through said mesh; said terry cloth comprising surface fabric means externally of said mesh structure and coupled thereto; said terry cloth surface fabric means comprising loops of moisture absorbent fabric.

5. In a hand drying device the combination of: a fabric terry cloth bag containing powdered diatomaceous earth.

6. In a hand drying device the combination of: a fabric terry cloth bag containing powdered diatomaceous earth; mesh structure of said fabric bag being disposed to dispense diatomaceous earth therethrough.

7. In a hand drying device the combination of: a fabric terry cloth bag containing powdered diatomaceous earth; mesh structure of said fabric bag being disposed to dispense diatomaceous earth therethrough; said terry cloth surface comprising fabric structure externally of said mesh structure and of moisture absorbent material.

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