

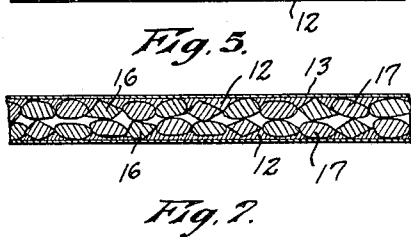
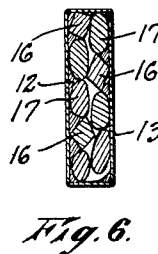
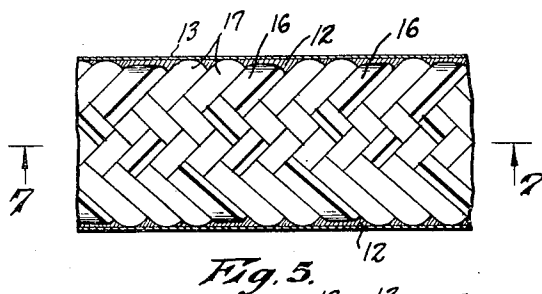
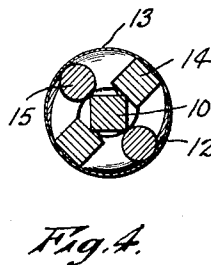
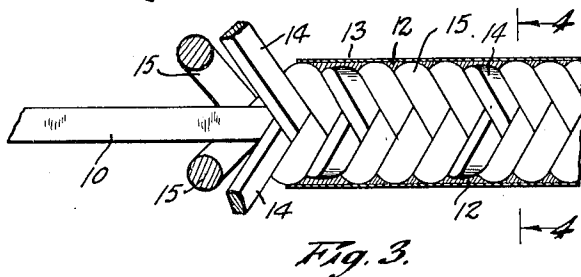
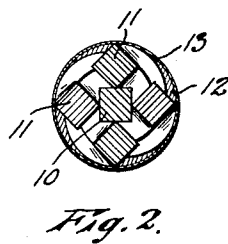
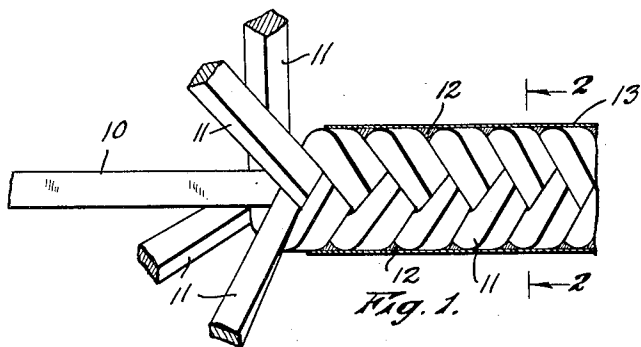
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J. A. LAWTON

1,839,486

MEDICAMENT CARRIER

Filed June 12, 1930



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UNITED STATES PATENT OFFICE

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MEDICAMENT CARRIER

Application filed June 12, 1930. Serial No. 460,560.

This invention relates to a cleaner and medicament carrier for use in cleaning the teeth, and has for an object to provide an improved device of this character which is adapted to be inserted into the interproximal spaces between the teeth and used for cleaning the adjacent surfaces of the teeth and gums, will carry cleaning material or medicament to the proper surfaces and will cooperate therewith to clean or medicate the surfaces.

It is also an object of the invention to provide an improved construction of carrier which will effectively carry the medicament or cleaner in such a manner that it is easily available for use; which, by its construction, will be very efficient in applying or using the cleaner or medicament, and which can be manufactured at relatively low cost.

With the foregoing and other objects in view, I have devised a construction, several forms of which are shown in the accompanying drawings forming a part of this specification. In these drawings

Fig. 1 is a partial section and partial side elevation of one form of my improved medicament carrier on a greatly enlarged scale.

Fig. 2 is a transverse section thereof, substantially on line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 1 showing a somewhat different construction.

Fig. 4 is a transverse section thereof, substantially on line 4—4 of Fig. 3.

Fig. 5 is a view similar to Figs. 1 and 2 showing another modification.

Fig. 6 is a transverse section of Fig. 5, and

Fig. 7 is a longitudinal section substantially on line 7—7 of Fig. 5.

It will be understood that the drawings are on a greatly enlarged scale and also are exaggerated to more clearly disclose the invention. Broadly speaking, the invention comprises a flexible carrier composed of braided, woven or otherwise fabricated strands which may be impregnated with the medicament or cleaner or may have a coating of medicament or cleaner thereon, and the fabricating of the strands forms interstices which may carry medicament or cleaner and, therefore, in effect form pockets to hold the medicament or

cleaner which may then be sealed by some suitable material, as by covering the carrier with a coating of a rubber cement, a gum in solution or a suitable varnish and the like, which when the carrier is used may be broken by pressure against the surfaces to be cleaned or dissolved by the saliva. Also, medicament or cleaner may be incorporated in the sealing coating. This may be merely a cleaning material, a medicament or the like, or a combination thereof, and I have used the term "cleaning material" throughout the specification and claims in its broader sense as meaning merely a cleaning material, a medicament, a combination of the two or similar materials, and it may also be used in various forms such as a liquid, a paste or a powder. It is preferred that the carrier be prepared in strips of considerable length so as to be wound on a support or folded and marketed in a suitable container so that it is kept clean and sanitary, and desired lengths for use can be cut off as desired.

Referring to Figs. 1 and 2, the carrier may comprise a central strand 10 and any number of strands 11 braided about the central strand. These strands may be of fibre such as cotton, silk and the like or they may be rubber strands, or part may be fibre and other rubber and may be of any desired shape in cross section. If they are rubber strands, it is preferred that they be substantially square or rectangular in cross section as indicated in Figs. 1 and 2. In braiding the strands, a large number of interstices are formed between the strands in which a medicament or cleaning material, as above described, may be placed as shown at 12. Also in the case of fibre strands, the cleaning material or medicament may be carried in the strands themselves as by impregnating them with the material in a solution or it may be applied as a coating to the strands, either fibre or rubber before or after braiding. After this material is applied, it may be sealed in the carrier by a sealing coating 13 of suitable material such as rubber cement, a gum in solution, or a suitable varnish, which after hardening or drying effectively seals the medicament or cleaning material in the carrier or in the in-

terstices which in effect form pockets for holding the material. This sealing coating is adapted to be ruptured in use and by pressure against the surfaces to be cleaned, or may be of material which would be dissolved by the saliva. The use of the central strand 10 is optional and if omitted, the central part of the carrier would carry more of the medicament or cleaning material. The braiding arranges the strands in such a way that they form very effective cleaning means for the surface of the interproximal spaces between the teeth and the gums and also very effectively carry the medicament or cleaning material and rubs it against these surfaces. If the strands are made of rubber, the carrier is elastic as well as flexible and may be stretched to pass into smaller spaces. The rubber also increases the frictional action on the surfaces, and the composition of the rubber itself has some cleaning and medicinal action. As the element is used, the pressure on the surfaces will rupture the enclosing coating 13 forcing the cleaning material out onto the teeth and gums and also exposing the strands for the cleaning process, and as the carrier is drawn back and forth it will carry this material against the surfaces of the teeth and the gums and will rub it against these surfaces so that the cleaning operation is performed not only by the cleaning material, but it is also assisted by the rubbing or frictional action of the carrier against these surfaces.

In Figs. 3 and 4, I have shown a similar carrier which may be formed of strands of different materials. For example, the strands 10 and 14 may be of rubber while other strands 15 are of fibre. They are braided together as in the first form providing the interstices for the cleaning material 12 which may be sealed by the enclosing covering 13 or the strands themselves may carry the material as in the first form. Also the central strand 10 may be omitted or it may be of fibre, as silk or cotton.

In the forms shown in Figs. 5, 6 and 7, instead of being woven or braided as a round carrier, it is braided or woven in such a way as to make it flat or substantially rectangular in cross section, and the strands may be of either fibre or rubber as desired. In the particular showing of Figs. 5 and 7, the carrier is formed of braided strands of rubber and fibre, as silk or cotton or the like, the rubber strands being indicated by the numeral 16 and the fibre strands by the numeral 17. This carrier, as in the other forms, provides interstices between the strands which in effect provide pockets for the cleaning material or medicament 12 which is sealed therein as in the other forms by the sealing coating 12, or the strands themselves may be impregnated with cleaning material or medicament as in the other forms, or by coating on the strands

or in the coating 12 as well as in the interstices.

This improved carrier and cleaning element will provide means for the individual person as well as for the dentist in operation for effectively and quickly cleaning interproximal spaces between the teeth and the curved margins of the teeth by friction. It will effectively remove food debris and other solid matter from between the teeth and will discover if there are faulty or imperfect fillings and obscure cavities between the teeth. This carrier can be used for carrying other antiseptics or medicinal fluids, pastes or solids between the teeth for treatment of diseased condition of the teeth, gums, or surrounding tissues. If the carrier is made of rubber, this cleaning material or medicament should be of a material which is not affected by contact with the rubber or will cause deterioration of the rubber, or the surfaces of the rubber strands may be coated with some material which would not affect or be affected by the cleaning material. Or the medicament may be incorporated in the strands themselves, either the rubber or fibre strands or both.

Having thus set forth the nature of my invention, what I claim is:

1. A dental cleaning element comprising a flexible cleaner and carrier adapted to be inserted in the interproximal spaces between the teeth, said cleaner and carrier comprising fabricated strands including rubber strands, and a medicament or cleaning material carried by said carrier.

2. A dental cleaning element comprising a flexible cleaner and carrier adapted to be inserted in the interproximal spaces between the teeth, said cleaner and carrier comprising fabricated strands, a cleaning material or medicament carried by the strands, and a sealing coating enclosing the strands and adapted to be ruptured in use to release the cleaning material or medicament.

3. A dental cleaning element comprising a flexible cleaner and carrier adapted to be inserted in the interproximal spaces between the teeth, said cleaner and carrier comprising fabricated strands including rubber strands, a medicament or cleaning material carried by said strands, and a sealing coating enclosing the strands and adapted to be ruptured in use to release the medicament or cleaning material.

4. A dental cleaning element comprising a flexible cleaner and carrier adapted to be inserted in the interproximal spaces between the teeth and comprising fabricated strands forming interstices, a cleaning material in said interstices, and an enclosing covering for sealing the cleaning material in the interstices adapted to be ruptured to release the cleaning material.

5. A dental cleaning element comprising a

flexible carrier adapted to be inserted in the interproximal spaces between the teeth, said carrier comprising fabricated strands including rubber strands, and a cleaning material in the interstices formed between the strands.

6. A dental cleaning element comprising a flexible carrier adapted to be inserted in the interproximal spaces between the teeth, said carrier comprising fabricated strands including rubber strands, a cleaning material in the interstices between the strands, and an enclosing covering for sealing the cleaning material in the interstices adapted to be ruptured to release the cleaning material.

In testimony whereof I affix my signature.

JAMES A. LAWTON.

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