DEVICE FOR SLICING SEMIPLASTIC MATERIAL

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DEVICE FOR SLICING SEMIPLASTIC MATERIALS
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This invention relates broadly to an improved method of forming packages for soft homogene-ous or plastic materials and comprehends, in addi-tion a wrapper construction which embodies a cutting medium for slicing or otherwise separ-atting portions of the material enclosed within the improved wrapper.

One of the objects of the invention is to provide a wrapper for a soft plastic material such, for example, as cheese, which will facilitate the separation of portions of the material from the body thereof in slices or sections of uniform size without the use of an extraneous cutting tool and with minimized effort of operation.

Another object of the invention is to provide a sheet or blank of wrapping material having threads or strands of relatively fine wire attached upon a surface thereof in such a manner as to facilitate the disposition of the threads in circumambient relation with material forming the contents of the package when the wrapper blank is folded thereover. The invention further contemplates a wrapper material formed with the threads or strands imbedded therein or mounted thereon in such a manner and in such pattern as to facilitate a cutting or shearing action of the wrapper material when the threads are tensioned and drawn through the material forming the contents of the package.

Another object of the invention is to construct a wrapper sheet having a plurality of threads attached thereon through a medium which will prevent the threads from being pulled longitudinally from the sheet, but which will accommodate their removal when peeled from the sheet as through tensile strains applied substantially normal to the plane thereof.

Ancillary to the foregoing the object further comprehends a thread mounting which offers sufficient restraint of removal to cause the tensioned thread to be drawn through rather than about the relatively soft material contemplated herein as constituting the contents of the package.

Another object of the invention is to provide threads or similar strands of fine strong material in or about the periphery of the soft or plastic substance forming the package, coincident with the wrapping operation thereof, the object further contemplating the selection of strands of such a character and the arrangement thereof in such a manner relative to the density of the material being packed, as to cause the strands to cut through the material under tension applied to an end thereof.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description.

Referring to the drawing:
Fig. 1 is a plan view of a sheet of the improved wrapper illustrating one form in which the threads or strands may be arranged;
Fig. 2 is an enlarged transverse sectional view of the wrapper illustrated in Fig. 1;
Fig. 3 is a view in perspective of a package formed with the wrapper illustrated in Fig. 1, the wrapper being partially unfolded to illustrate with greater clarity the organization thereof in relation to the material covered thereby;
Fig. 4 is a transverse section through a block of the packaged material illustrated in Fig. 3 showing the arrangement of the threads in the wrapper and the disposition thereof upon the goods;
Fig. 5 is a view in perspective, shown somewhat diagrammatically, illustrating the manner in which a thread or strand when tension effects the slicing or cutting operation of the soft or plastic material constituting the contents of the package;
Fig. 6 is a view in perspective of a block of the soft material to be packed illustrating the encircling arrangement of threads when mounted directly on the material or slightly embedded therein;
Fig. 7 is a transverse sectional view through a block of soft or plastic material showing an alternate form of arrangement of the threads when the density of the material necessitates appreciable tensioned effort to sever portions thereof; and
Fig. 8 is a diagrammatic view in perspective of a block of soft or plastic material having a single thread wound about the periphery thereof in a manner which will facilitate separation of the material into a plurality of slices in a single operation with the wrapper as indicated by a broken line.

Referring first to Fig. 1, the improved wrapper (I) may be formed of various types of sheet material which are susceptible of a treatment which will facilitate the adhesion of the threads (II) in the desired pattern upon the surface thereof. The wrapper, for example, may be formed from waxed paper which in the presence of heat possesses sufficient tenacity to support the threads. Moreover, a paper of this character may be readily cut by the thread when it is desired to arrange the threads and the wrapper.
to perform such function. As illustrated, the threads are preferably mounted upon the sheet with the free ends thereof extended slightly beyond the edge of the sheet which forms the outer fold of the wrapper so that the strands may be readily accessible from the exterior of the package.

In a wrapper thus formed, the threads may be arranged in relation to the size, shape, configuration and weight of the material to be wrapped, to effect the desired divisions of package and/or contents thereof when the proper thread or threads are sufficiently tensioned to be drawn therethrough. Thus soft plastic materials such as cheese, certain types of confections, butter and other similar commodities may be molded or prepared so that, upon application of the wrapper, accurate divisions by weight or slices of uniform size may be cut from the body of the material by tensioning one or both ends of the threads without use of extraneous tools, without loss of any of the material or deformation of the remaining portion of the package.

In forming the package the face of the wrapper upon which the threads have been mounted is preferably disposed adjacent the material being wrapped. The wrapper may also be cut by first drawing the thread or strand backwards through the overlapped edge of the folded sheet, as illustrated in dotted lines in Fig. 4, then upwardly until the portion of the strand which encircles the material forming the contents of the package is drawn therethrough.

If desired, a portion of the material within the package may be sliced and removed from the wrapper without mutilation of the remaining portion of the package. This operation is effected by tensioning the free ends of the threads until the body portions thereof are drawn through the material and the opposed ends of the threads are torn from the sheet and fully released from the package. Thereupon the end of the wrapper may be partially unfolded, the sliced contents removed and the wrapper refolded to cover the material remaining in the package.

As shown in Figs. 3 and 4, the inner longitudinal edge of the wrapper may be folded back upon itself to effect the anchorage of the inner end of the thread. This construction is particularly desirable when the material to be cut is of a relatively hard nature, or when the adhesion of the thread to the wrapper is ineffective. With the threads thus supported it is readily apparent that when the free end of the thread is suitably tensioned, the thread will be drawn into and through the material in the manner illustrated in Fig. 5, though it will be seen that the same result can be obtained if the thread is suitably affixed to the wrapper or the material is configured with sharp edges as shown to restrain withdrawal of the thread longitudinally of its length by the slippage thereof about the periphery of the material.

As contemplated by the organization of the cutting strands illustrated in Fig. 6, the slicing operation may be effected by the threads when relieved directly on or about the periphery of the body of the material or by embedding the threads slightly below the surface thereof during the molding or forming operation of the material. With this arrangement, as in the structure heretofore described, each thread is disposed to shear a predetermined mass and each thread is mounted so that it may be drawn free of the package and discarded after the cutting operation.

When the material to be wrapped is of a tenacious character, or of greater density than that considered in the foregoing description, the threads may be arranged to encircle the material and also extend through the central portion thereof, as shown in Fig. 7. In this embodiment both of the free ends of the thread are drawn apart to sever the sections embraced by the respective loops of the thread. With this arrangement the strain upon the thread may be sufficiently reduced to permit the use of the cheaper grades of textiles, and in addition the cutting operation may be performed with greater dispatch and facility than could be accomplished in such materials with a single loop.

A still further organization of the cutting thread is shown in Fig. 8 where a single thread is arranged about the periphery of the material forming the body of the package in alternate looped portions and intermediate lineal portions, said looped portions being transaxial to the material and said lineal portions being parallel the medial axis of the material. It is only contemplated that the material be cut in the manner illustrated in such embodiments.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining and that various re-arrangement of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

1. A package construction for a block of soft plastic material comprising a single thread arranged about the periphery of said block in alternate looped portions and intermediate lineal portions, said looped portions being transaxial to the block and said lineal portions being parallel the medial axis of the block and a wrapper folded around said block to restrain movement of the threads around the periphery of the block under longitudinal tension applied upon one end of the thread.

2. A wrapper for a block of soft plastic material comprising a sheet of paper, threads cementitiously mounted in spaced relation upon a face thereof, one end of said sheet being folded to effect the anchorage of the threads, said wrapper being proportioned in relation to said block to be folded therewithall with each of the threads disposed to define a plane passing through the body of the block.

3. A detachable wrapper for a block of soft plastic material comprising a sheet adapted to cover the sides and ends of said block when folded therewithall, a thread interposed between said wrapper and block with one of its ends secured to the wrapper, said block adapted to
be severed by said thread under tension applied to its free end normal to the axis of the block and without deformation of the folded wrapper.

4. A wrapped block of soft plastic material comprising, a sheet covering the sides and ends of said block, a longitudinal edge of said sheet being disposed in overlapping relation with the body of the sheet along a side wall of said block, a thread detachably mounted upon the inner surface of said sheet and extending throughout the transverse dimension thereof, said thread having an end portion thereof extended beyond said overlapped edge to effect the slicing of the block within the wrapper.

5. A slicer for a soft plastic body comprising, a wrapper, a thread on the inner face thereof and extending throughout the transverse dimension of the wrapper, said wrapper adapted to be folded about said body with the thread adjacent thereto and in looped relation therewith, and means on the wrapper to restrain the separation of the thread therefrom except through the narrowing of the loop of the thread when a tensile strain is imposed upon one end thereof.

6. A wrapped block of soft plastic material comprising, a paper sheet embodying a portion adapted to encircle the sides of the material with the edges thereof in overlapped relation and portions adapted to be folded about the ends of the material, a thread cemented to said portion of the wrapper adapted to encircle the sides of the material and extending throughout the transverse dimension thereof, a free end of said thread being disposed in the edge of the encircling portion of the wrapper, said wrapper being folded about the material with the thread adjacent thereto whereby the thread may be peeled from the wrapper and slice the material when tension is applied to said free end of the thread.

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