Dec. 1, 1931. O. LAUENSTEIN 1,834,460

WRAPPING MACHINE FOR CANDY, FILLED CHOCOLATES, AND OTHER KINDS OF CONFECTIONERY

Filed March 14, 1928

Fig. 1

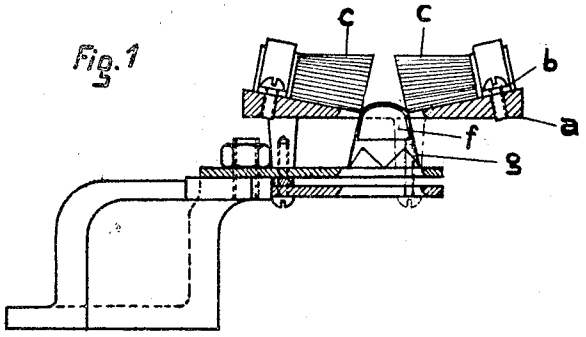


Fig. 3

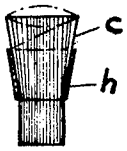


Fig. 2

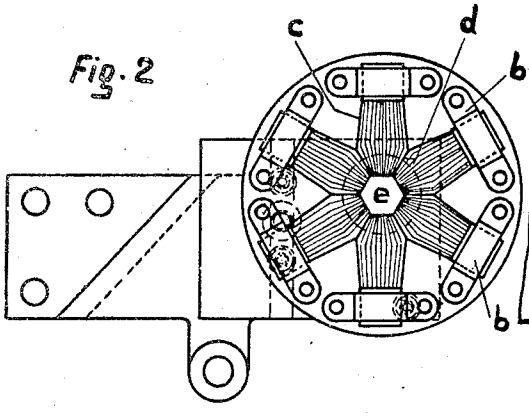


Fig. 4

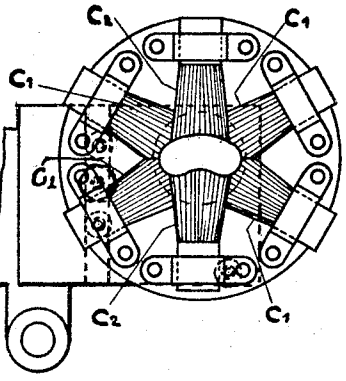


Fig. 5

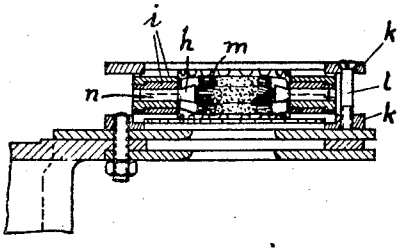


Fig. 7

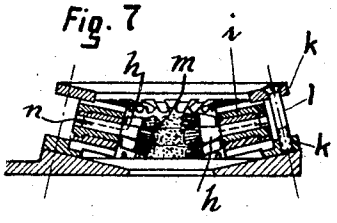


Fig. 8

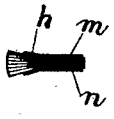
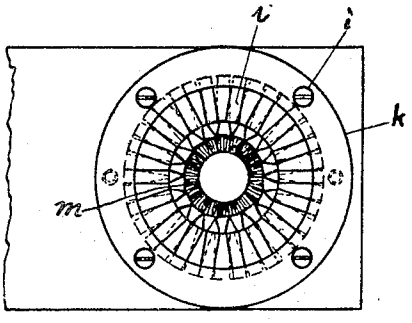


Fig. 6



Inventor:
O. Lauenstein

By: Marks & Clark
Attys.

Patented Dec. 1, 1931 1,834,460

UNITED STATES PATENT OFFICE

OTTO LAUENSTEIN, OF WERNIGERODE, GERMANY

WRAPPING MACHINE FOR CANDY, FILLED CHOCOLATES, AND OTHER KINDS OF CONFECTIONERY

Application filed March 14, 1928, Serial No. 261,635, and in Germany March 26, 1927.

This invention has reference generally to improvements in wrapping machines and more particularly relates to a machine for wrapping candy, filled chocolates and other kinds of confectionery.

It is the primary aim and object of the invention to provide a machine of the above mentioned character for applying individual wrappers or the like to a piece of candy or like confectionery in such a manner as not to injure the same.

More particularly the invention may be said to consist in the provision of a brush die embodying a plurality of groups or bundles of brush-like filaments adjustably mounted in the wall of the die or holder by securing means so that after loosening the securing means the groups or bundles may be adjusted longitudinally, turned and rotated and replaced.

It is an additional object of the invention to provide improved means in the form of a rubber sleeve which surrounds each bundle of brush-like filament, the sleeves or covers being adjustable longitudinally so as to determine the length of the exposed or operating portion of the brush bundles and in this manner regulating the elasticity of the same. In addition the sleeves coact with the securing means so as to facilitate the proper supporting of the brush-like or fiber bundle.

The adjustability of the bundles in their longitudinal direction has the essential advantage that not only the pressure can be regulated by this adjustment but that the die may be adapted to different shapes and sizes of pralines by the said adjustment so that in contradistinction to the known dies of this type a large number of dies is not necessary. According to the known machines the number of dies kept in stock must be kept in size according to the shape of the pralines to be wrapped.

Other objects as well as the nature, characteristic features and scope of the invention will be more readily apparent from the following description taken in connection with the drawings and pointed out in the claims, forming a part of this specification.

The invention will be more particularly described by reference to the accompanying drawings showing by way of exemplification several embodiments of the principles of the invention. Fig. 1 is a longitudinal, vertical section of a die with a row of groups of hairs or the like; Fig. 2 is a top plan view of the die according to Fig. 1, and Fig. 3 is a detail showing a bundle of fibres with surrounding rubber rings. Fig. 4 is a modified form of arrangement of a die or matrice with a row of groups of hairs and the like. Fig. 5 shows a die with a plurality of rows of such groups in vertical, longitudinal section, the several groups or brushes being horizontally arranged. Fig. 6 is a top plan view of the die according to Fig. 5 and Fig. 7 is a modified construction of a die with several rows of groups or brushes in vertical, longitudinal section with the brushes arranged at an incline; and Fig. 8 is a detail showing a brush employed in the modifications of Figures 5 to 7 in longitudinal section.

Upon ring *a* and by means of the clasps *b* the groups, bundles or tufts of hairs or fibres *c* are secured, which may comprise ordinary brush fibres such as for instance badger hairs or the like. The front ends of the bundles or fibres are caused to be engaged with each other at *d* with a certain pressure, so that the bundles of fibres or hairs will surround an opening *e* on all sides through which the candy or other article *f* is forced together with the metal foil *g* by means of a stamp or the like not shown in the drawings. As appears from Fig. 1 the several bundles *c* are disposed somewhat at an inclination on the ring *a*, and in such a manner that, when the article is introduced from below the front ends are downwardly inclined, so that the free passage opening for the article *f* will be downwardly enlarged and the pressure of the hairs or fibres against the foil *g* will become increased as a result of the insertion of the article into the die.

In view of the peculiar manner of arrangement of the bundles or brushes of fibres they may be made adjustable with relation to each other, so that the passage opening may be reduced or enlarged according to require-

ments. It has been found to be of advantage in this connection to arrange a plurality of bundles or brushes *c* above each other and in such a manner that the rows are spaced from each other, the next higher row substantially admitting of the bending of the preceding row or preventing the same to a certain extent only. Rings of rubber or other elastic material *h* may be placed around the bundles of fibre *c*. By means of these rings the exposed length of the fibres is reduced so that the touch and engagement of the fibres, as in the case of the tied painting brushes becomes harder. The length of the rings is selected in accordance with the desired degree of operation; and a change of the action of the hairs or fibres may also be produced by varying the thickness of the wall of the rings, inasmuch as the resiliency of the elastic rubber rings will be reduced in case of an increased thickness of the wall of the elastic rubber rings.

In the case of the superimposing of a plurality of rows of brushes or groups of fibres or hairs the different rows may serve in succession for the preliminary folding, plaiting, putting down, smoothening and hugging of the foil upon the article. In the case of the superimposing of a plurality of rows each of the rows is preferably arranged upon a separate ring *a*. These rings *a* are secured to each other or to the frame of the machine in such a manner that the distances of the rings *a* from each other may be adjustable.

As appears from Fig. 4 of the drawings the bundles or brushes of hairs or fibres may also be arranged in somewhat different manner with relation to each other, that is to say, so that the front surfaces of one kind of bundles *c*1 will bear against the side surfaces of other bundles *c*2. It will also be seen from Fig. 4 that the opening which is formed or enclosed by the bundles or brushes of fibres or hairs may be shaped and cut out so as to correspond to the general shape of the article to be wrapped.

In the modified constructions according to Figs. 5 and 6 the brushes *c* are disposed in several rows above each other. The several brushes are arranged in openings of bisectional rings *i*, any suitable number of which may be arranged above each other so that in accordance therewith any suitable number of rows of brushes may be provided. The rings *i* with the brushes inserted therein are connected by means of the pressure rings *k* and of the screws *l* inserted therein. The brushes of the superimposed rows are alternatingly disposed with relation to each other. In the form of construction according to Figs. 5 and 6 the brushes are arranged substantially at right angles to the center axes of the die. In the modification according to Fig. 7 which in other respects corresponds to the construction of Figs. 5 and 6, the brushes are inclined with relation to the center axes, and in this particular case they are downwardly inclined similarly to the construction according to Fig. 1. By this means as in the case of Fig. 1 the result is obtained that by the insertion of the article into the die and by the upward bending of the brushes thereby produced the opening of the dies is reduced, so as to obtain in this manner a very intimate engagement of the brushes with the article and with the wrapping foil placed around it and a very smooth forcing of the envelope into contact with the article. The brushes employed in the forms of construction according to Figs. 5 to 7 are of the general shape shown in Fig. 8, that is to say, they comprise a tuft or bundle of hairs *m* which is retained by a ring of sheet metal or of other material *n*. The free ends of the hairs or fibres are surrounded by rubber rings *h*. In accordance with the length and thickness of wall of these rubber rings the brushes are caused to oppose a greater or smaller resistance against deflection, so that the pressure produced by the brushes upon the inserted article and its wrapper may be regulated at discretion by varying the sizes of these rubber rings.

In connection with the sleeves or rings *h* and *n* attention is directed to the fact that the respective bundles of bristles or fine filaments *c* and *m* are connected together at their inner ends in the usual manner so as to form groups or units, the sleeves or rings being slidable thereover to regulate the elasticity or flexibility of the engaging portions of the bristles of each group. In addition the inner portions and the sleeves are receivable in the clamping devices *b* or rings *i*. In this connection each group may be adjustably clamped in any desired position radially of the holder by the same clamps *b* or rings *i*. Moreover when these clamping devices or rings are loosened each bundle of bristles may be rotated by hand to assume the desired position.

I am aware that numerous details of the construction and arrangement of parts may be varied without departing from the principles of this invention, and I therefore do not propose limiting the ambit and scope of my invention otherwise than necessitated by the appended claims.

I claim:—

1. In a device of the kind described, an apertured die, a plurality of brush-like groups of hairy filaments, secured to the die away from the opening, and having their free ends in lateral contact with each other and spacedly projecting into the opening, and means to regulate the flexibility and the length of the free ends.

2. In a device of the kind described an apertured die, a plurality of brush-like groups of hairy filaments, secured to the die

away from the die-opening, and having their free ends in lateral contact with each other and spacedly projecting for a uniform distance into said opening, and adjustable sleeves on said brushes, adapted to regulate the flexibility and the length of the free ends of the brushes.

3. In a device of the kind described an apertured die, a plurality of brush like groups of hairy filaments, secured to the die away from the die opening, and having their free ends in lateral contact with each other and diametrically spaced and projecting for a uniform distance into said opening, and adjustable resilient sleeves on said brushes regulating the flexibility and the length of the free ends thereof.

4. In a device of the kind described an apertured die, a plurality of groups of hairy filaments assembled around the die-opening and marginally protruding into said opening and diametrically spaced, fastening means for said groups at a distance from the opening, and means to rotatably and exchangeably secure the groups in said fastening means.

5. A die for machines for wrapping pralines and other forms of confectionery, including an annular holder and a plurality of brush-like groups of hairy filaments mounted in the holder so as to be adjustable radially with respect to the center of the holder.

6. A die as claimed in claim 5, in which the groups of filaments are mounted in the holder so as to be readily rotated or replaced substantially as described.

7. A die as claimed in claim 5, in which a resilient sleeve is mounted on each group of filaments, substantially as described.

8. A die as claimed in claim 5, wherein the holder includes a number of clamping rings having the number of groups and filaments arranged therein and the distance between the groups and filaments being adjustable, substantially as described.

In testimony whereof I affix my signature.

OTTO LAUENSTEIN.