

June 29, 1926.

1,590,431

W. H. ESEMAN ET AL

METHOD AND DEVICE FOR MARKING ARTICLES

Filed Sept. 7, 1923

2 Sheets-Sheet 1

Fig. 1.

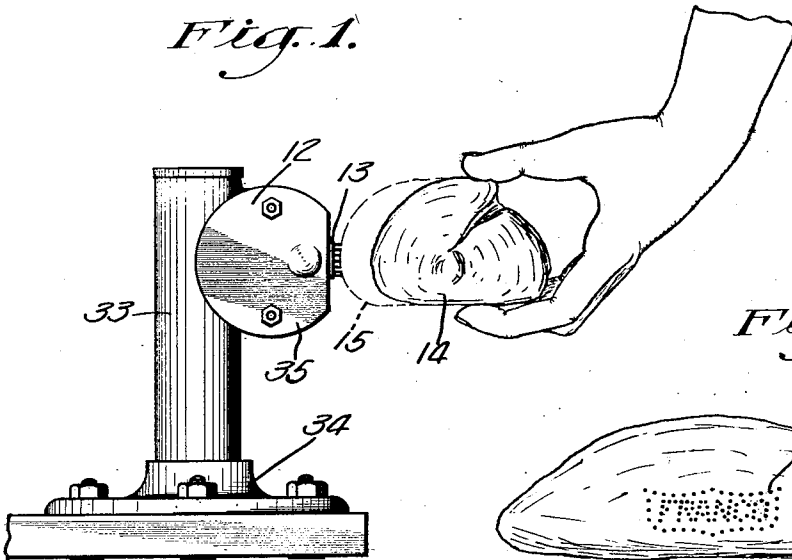


Fig. 2.

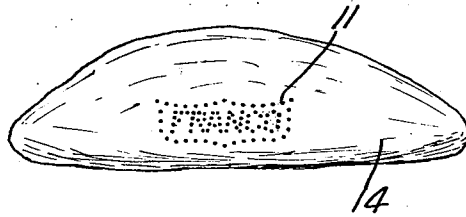


Fig. 4.

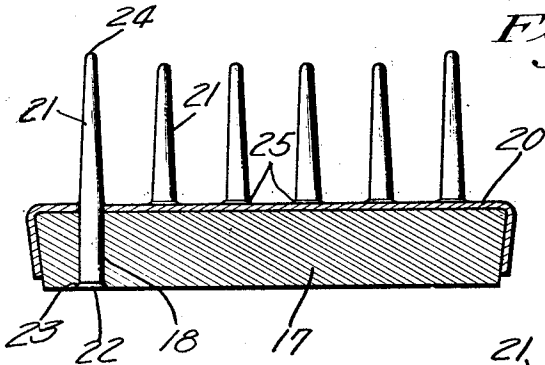
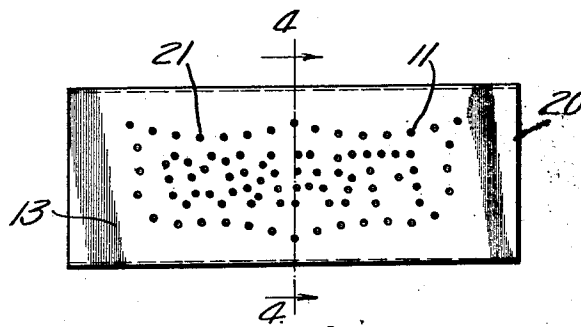


Fig. 3.



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Fig. 6.

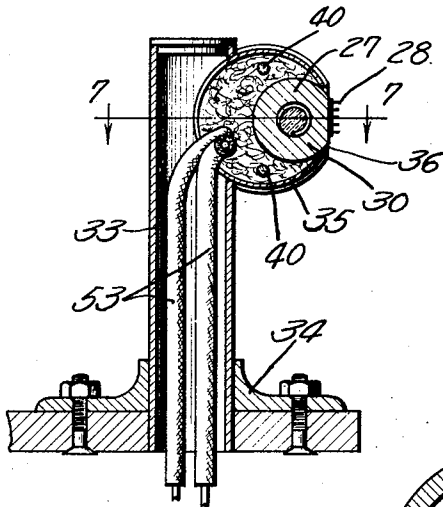


Fig. 5.

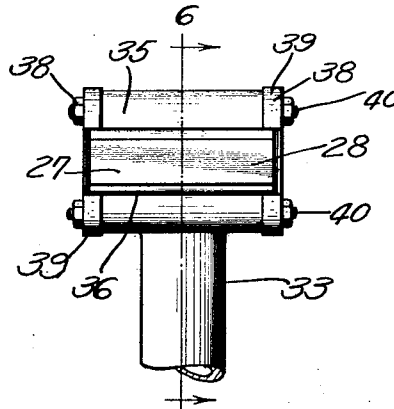


Fig. 7.

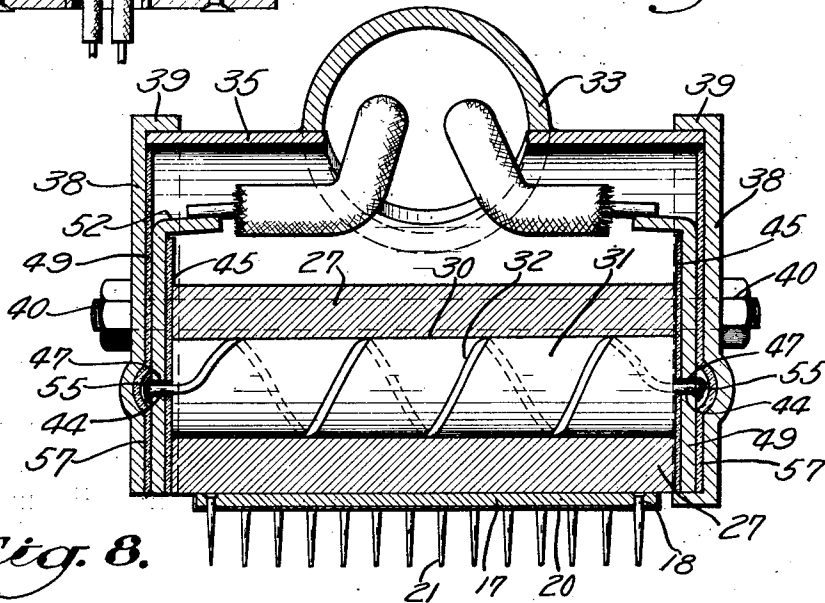
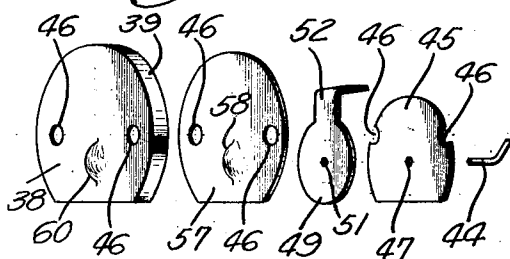


Fig. 8.



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UNITED STATES PATENT OFFICE.

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METHOD AND DEVICE FOR MARKING ARTICLES.

Application filed September 7, 1923. Serial No. 661,368.

This invention relates to a device for marking brands on articles of manufacture and has its particular utility in the marking of bakery goods.

In labeling bread and other bakery goods, it has been a wide practice to paste small labels thereon. This practice is not satisfactory to the purchaser as the labels must be cut off from the bread. It often occurs that the removal of such labels is neglected and are served with the slices of bread, their presence not being recognized until the mastication of the bread takes place. We have devised a novel means of applying a label or trademark to bread, rolls and other bakery articles which consist of toasting a design thereon by means of a heated die, this mark, unlike paper labels, may be eaten without ill effects.

In the development of this idea, we have found that it is desirable to employ a marking die having a multiplicity of extending points which are arranged in configuration of the design to be imprinted. The use of the multiplicity of fine points reduces the area of contact between the marking die and the crust of the article being marked and, due to the smaller pressure required for producing the desired imprint, prevents crushing in or breaking of the crust. The invention employs a novel form of die which has been developed for operation in this particular usage, and is also provided with a novel construction of elements for supporting and heating the marking die.

The particular advantages of the invention and further objects thereof will be made evident hereinafter.

Referring to the drawings which are for illustrative purposes only:

Fig. 1 is an elevational view showing the manner in which the invention is employed in the marking of an article of bakery goods such as a French roll.

Fig. 2 is a side view showing the mark imprinted upon the French roll.

Fig. 3 is a somewhat enlarged face view of the die employed for imprinting the mark.

Fig. 4 is an enlarged cross section taken upon a plane represented by the line 4—4 of Fig. 3.

Fig. 5 is a front elevation of the heat

head, the heat holding element thereof being shown without the marking die in place thereon.

Fig. 6 is a section taken on a plane represented by the line 6—6 of Fig. 5.

Fig. 7 is an enlarged section taken as indicated by the line 7—7 of Fig. 6.

Fig. 8 is a view showing in perspective certain structural elements of the device.

The crusts or outer surfaces of bakery goods such as bread and rolls are of non-rigid nature and require but small pressure for the crushing or caving in thereof. In the marking of this class of merchandise, it is desired that the crust or surface of the article be left in unbroken condition.

The roll shown in Fig. 2 has a trademark consisting of a shield and a name outlined in our improved manner in small toasted dots 11. It will be recognized that the combined area of these dots is relatively very small compared to the same mark represented in continuous lines. In the application of a heated die for the purpose of toasting the trademark, pressure must be applied to force the die into the surface of the crust. This pressure must be kept below the crushing strength of the crust if the desired results are to be accomplished.

We have found that the area presented by a die formed in continuous lines requires an imprinting pressure greater than the resisting strength of the crust but that by forming a design in small dots, the area of contact may be reduced to such an extent that the mark may be imprinted without damage to the receptive article.

In Fig. 1 of the drawing, we represent an electrical die heating device 12 which supports a marking die 13 against which a roll 14 or other article to be marked is placed as indicated by the dotted lines 15. The die 13 as shown in Figs. 3 and 4 is formed from a flat bar or base of silver 17 having holes 18 formed therein in outline of the design. The outwardly disposed surface of the base 17 is inclosed by a layer of sheet gold 20 through which platinum pins locked in the holes 18 are extended. The pins 21 have small heads 22 formed upon the inner ends thereof which are received in counter-sunk portions 23 formed at the ends of the holes 18, and are tapered to relatively small rounded points 24 on the extending ends

thereof. After the placement of the platinum pins 21 in the base 17, a gold solder is fused over the upper face of the gold surface layer 20 so that a perfect seal as indicated at 25, is formed around each pin. In this manner the steams and vapors produced by the scorching of the roll 14 are prevented from reaching the silver base 17 which, although of a durable nature and a splendid conductor of heat, does not resist chemical disintegration in the presence of the vapors produced by the toasting. The platinum successfully resists chemical reaction in this usage as likewise does gold, which is therefore used as a protective surface for the silver base.

As shown in Figs. 5 and 6, the heating device 12 is provided with a heat holding member 27 having an outwardly disposed flat surface 28 upon which the marking die 13 is secured with silver solder or by other suitable means. The heat holding member 27 is formed from a bar of Monel metal and is provided with a bore 30 in which there resides a heat resisting and di-electric core 31 preferably of soapstone upon which core a helical spiral heating element 32 of nichrome wire is wound. A supporting structure for the heating element is provided in the form of a hollow tubular post 33 provided with an adjustable mounting plate 34 and having a laterally disposed cylindrical housing 35 formed at the upper end thereof, this housing 35 being open at the front side as shown at 36 so as to expose the flat face 28 of the heat holding member 27. End plates 38 having inwardly extending flanges 39 are provided upon the cylindrical portions 35 and are held in place by bolts 40, which extend through holes provided in the plates 38. The simplicity of construction of the heater and the perfection of electrical connection into the heating element 32 contribute considerably to the value of the device. As shown in Fig. 7, the ends 44 of the wire forming the heating element 32 are brought inwardly to the central axis of the core 31 and project axially outwardly therefrom. Against the end of the Monel metal bar 27 an insulating plate 45, (see also Fig. 8), is placed having holes 46 therein for the passage of the bolts 40 and being provided with a small aperture 47 through which an end 44 of the heating element 32 projects outwardly. A terminal plate 49 is next placed adjacent to each of the insulating plates 45. These plates may be formed as shown in Fig. 8 so as to provide a hole 51 through which the extremity of the pin 44 extends, and having an inwardly bent leg 52 to which an electric current feed wire may be suitably connected either by soldering or otherwise. A drop of solder 55, Fig. 7, is applied to the projecting tip of the end 44, thus soldering it

to the plate 49 and producing a perfect electrical connection. An outer insulating plate 57 of mica is then placed over each terminal plate 49. The outer insulating plates 57 are also provided with holes 46 and are outwardly pressed or humped at 58 so that the pressure applied by the caps 38 under the action of the bolts 40 will not act against the soldered ends 44 but will be distributed over a sufficient area to firmly clamp the plates 45, 49 and 57 against the ends of the heat holding member 27. As shown in Figs. 7 and 8, the end plates 38 are also outwardly pressed at points 60 adjacent to the ends 44 of the heat element. The conductors 53 extend downwardly through the tubular interior of the post 33 and are therefore concealed and relieved from subjection to chemical vapors which are produced by the toasting action of the heated die on baked goods. The interior of the housing member 35 may be packed with asbestos or other heat insulating material to prevent excessive radiation of heat from the interior surfaces of the heat holding member 27.

We claim as our invention:

1. In a device for marking cooked food products, a die comprising: a base having an arrangement of openings to form a design; pins extending through said base; a covering for said base through which said pins also extend; and means for heating said base.
2. In a device for marking cooked food products, a die comprising: a base having an arrangement of openings to form a design; pins extending through said base; a covering for said base through which said pins also extend, said covering being sealed to said pins; and means for heating said base.
3. In a device for marking cooked food products, the combination of: a die formed of a base having durable heat resisting qualities and having an arrangement of holes therein in configuration of a design, pin members secured in said holes and extending outwardly from said base, said pin members being adapted to resist acid and heat, and a coating of material having low chemical reaction characteristic covering the exposed surface of said base, and surrounding the inner portions of said extending pin members; and means for heating said die.
4. In a device for marking cooked food products, the combination of: a die formed of a base of silver having an arrangement of holes therein in configuration of a design, platinum pin members secured in said holes and extending outwardly from said base, and a coating of gold, covering the exposed surface of said base and surrounding the inner portions of said extending pin members; and means for heating said die.
5. In a device for marking cooked food

products, the combination of: a die consisting of a base having an arrangement of openings to form a design, pins extending through said base, and a gold covering for said base through which said pins also extend; and means for heating said die.

6. In a device for marking cooked food products, a die comprising: a silver base; a gold covering for said silver base; and a plurality of platinum pins extending through said silver base and said gold covering, said platinum pins being arranged to form a design.

7. In a device for marking bread stuffs and like food products, the combination of: a die comprising a base and a plurality of rela-

tively spaced toasting pins projecting from said base and arranged to form a design; and means for heating said pins.

8. A bread toasting device comprising: a base; a plurality of relatively spaced toasting pins projecting from said base and of suitable size and sharpness to puncture the crust of a baked bread product; and means for heating said pins to toast the walls of said punctures.

In testimony whereof, we have hereunto set our hands at Ontario, California, this 23rd day of August, 1923.

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