

Aug. 12, 1930.

D. MALDARI

1,772,872

MACARONI DIE

Filed Oct. 23, 1929

Fig. 1

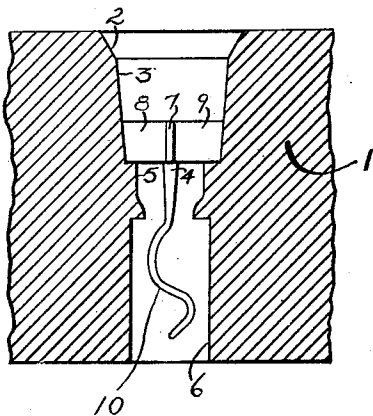


Fig. 2

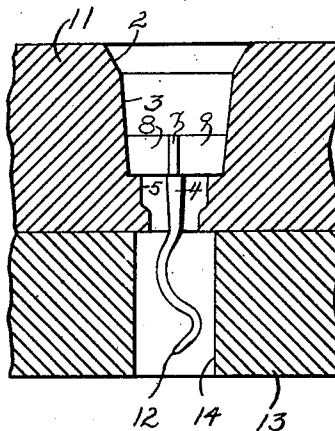


Fig. 3

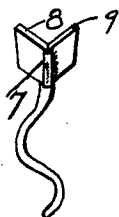


Fig. 4



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MACARONI DIE

Application filed October 23, 1929. Serial No. 401,755.

The object of this invention is to provide a die for forming twisted macaroni of the type generally referred to as "Fusilli".

In the past, a very complicated die was used for making this kind of macaroni, and the die was so complicated and so subject to wear that the manufacturer of this type of macaroni was discouraged. Originally, this macaroni was twisted by hand, but that process is slow and expensive.

My invention consists of producing Fusilli, or twisted macaroni, from a die having a straight apertured perforation therein, and so constructing the pin that it will give to the macaroni, the desired appearance.

The following is what I consider the best means of carrying out my invention, and the accompanying drawing should be referred to for a complete understanding of the specification which follows.

In the drawing:—

Figs. 1 and 2 are fractional views of macaroni dies.

Fig. 1 shows in section, a one-piece die with a pin arranged therein, and

Fig. 2, shows in section, a two-piece die with a pin arranged therein.

Fig. 3, is a perspective view of the pin, and Fig. 4, a plan view of the resulting material.

Similar reference numerals indicate like parts in all the figures where they appear.

At 1, I show the die base, and it will of course be understood that this die member is a plate having a number of perforations therein. The number of perforations in the plate will be determined by the diameter of the plate and the diameter of the perforations.

It will be noted in Fig. 1, that the perforation wherein the pin is arranged, extends quite through the plate, but that it actually has four diameters. The entrance to the perforation may be bevelled, as shown at 2, so as to allow a free entry into the die.

At 3, I show the larger diameter wherein the pin is introduced; for this diameter the perforation should be slightly tapered. The main body, or straight portion of the pin, as shown at 4, passes through a portion of the perforation somewhat reduced in diameter, as

shown at 5, and the remainder of the pin passes through what may be termed the "discharge" portion of the perforation, and is of a still larger diameter, as shown at 6.

The pin 4 is provided with a plurality of supporting wings, tapered to engage in the perforation 3, as shown at 7, 8 and 9. The number of wings provided is three, and that is the number that I have used.

I call attention to the fact that the pin that I employ in this die is very much longer than the ordinary pin, and that the end of the pin is twisted on a spiral, as is shown at 10. The body of the pin serves to produce the hole in the macaroni or spaghetti, and the twist in the pin causes the material to twist in moving the die, giving it the spiral curl, as shown in Fig. 4.

This spiral is similar to the spiral which results when the round spaghetti or macaroni is rolled on a round stick, and then the stick is withdrawn therefrom, and that is the effect that is desired, for it is that effect that produces the commonly termed "Fusilli".

In Fig. 2, I show an ordinary die plate 11, and this ordinary die plate serves to indicate the length of the pin 4. It will be noted that the end 12 of the pin 4 projects beyond the bottom of the ordinary die plate.

To protect the end of the pin, and to prevent the accidental bending of the pin end, I place a protector plate 13 over the pin ends, the protector plate being provided with perforations 14, which coincide with and serve as extensions of the perforation 6 in the die body.

I show this construction of Fig. 2, so that it may be understood that ordinary die plates may be employed if elongated and twisted pins are provided, and that is only thereafter, to provide a guard or protector for the protruding ends of the pins.

As previously stated, the pins may be of any size, and the perforations in the die of any size. The pins serving to form the hole in the spaghetti or macaroni, may be arranged to provide a hole of greater or less diameter. The pitch of the spiral may be varied so that a close or wide spiral may be had in the finished product, and other modi-

fications may be made within the scope of the appended claims, without departing from the principle or sacrificing the advantages of this invention.

5 Having carefully and fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A spaghetti or macaroni die having a plurality of perforations and arranged in
10 each perforation, an elongated pin, a portion of the end of which is turned on a spiral.

2. A spaghetti or macaroni die having a plurality of perforations therethrough, said perforations being produced on at least three
15 different diameters, a pin supported in the largest diameter and projecting into the smallest diameter. said pin having a portion of its end turned on a spiral.

3. A spaghetti or macaroni die and a spiral
20 pin adapted to operate therewith for the production of spiral spaghetti.

4. A die for producing Fusilli, which consists of a die plate provided with a plurality of perforations therein, an elongated pin
25 supported in each perforation and projecting therefrom, said pin being turned on a spiral and a guard plate into which all of said pins project.

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