Aug. 13, 1935. V. FISCHER 2,011,477

CASTING MOLD FOR COATING CORES FOR ARTIFICIAL TEETH WITH WAX

Original Filed Dec. 27, 1932

Fig. 1.

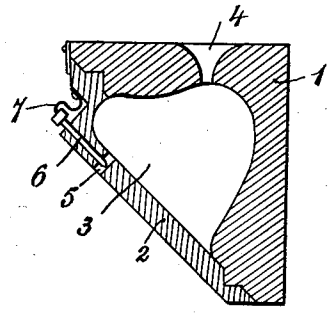


Fig. 2.

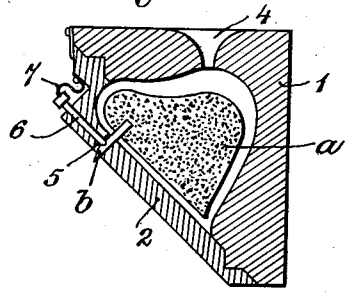
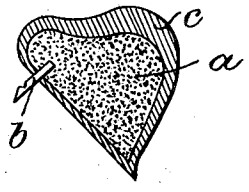


Fig. 3.



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CASTING MOLD FOR COATING CORES FOR ARTIFICIAL TEETH WITH WAX

Victor Fischer, Beziers, France

Original application December 27, 1932, Serial No. 649,025. Divided and this application November 1, 1933, Serial No. 696,248. In France December 31, 1931

3 Claims. (Cl. 18—34.1)

This invention relates to improvements in molds for coating cores for artificial teeth with wax, and has for its object the provision of an improved construction of a mold for the manufacture of tooth blanks comprising cores coated with wax, as described in my co-pending patent-application Ser. No. 649,025 filed December 27, 1932 of which this application is a division.

Another object of the invention is to provide a casting mold of the above mentioned character in which the cores to be coated with wax are automatically and firmly mounted in correct position and secured against rotation and displacement with respect to the cavity of the mold.

A further object of the invention is to avoid all the technical difficulties which actually exist in the wrapping of cores with precious metal and to facilitate the manufacture of the artificial teeth by providing for the manufacture of any number of blanks of a given shape, comprising a core coated with wax, a choice of said blanks being made available to the dentist. The artificial teeth are improved by the fact that the layer of wax, which corresponds to the layer of precious metal to be applied afterwards, is given an appropriate thickness without relying on the skill of the dentist.

With these objects in view, the invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which:

Fig. 1 is a vertical cross section of the casting mold.

Fig. 2 is a cross section of the casting mold, containing a tooth core, locked in the position required for the coating with wax, by means of an automatic locking device.

Fig. 3 is a vertical cross section of the finished blank consisting of a core coated with wax.

The casting mold comprises two parts 1 and 2 which, when locked together, form a hollow space 3 corresponding to the shape of the tooth blank to be manufactured.

The parts 1 and 2 are provided with inter-engaging projections and cavities serving to maintain said parts in correct position when the mold is closed by means of the hooks 9. The part 2 comprises a channel 5 adapted to receive the pin *b* of the core *a* to be coated with wax. There may be provided an auxiliary channel parallel to said channel 5 and adapted to receive a thinner auxiliary pin. The part 2 further comprises a second channel, perpendicular to the channel 5 and opening into the same. In said second channel slides a locking pin 6 on which acts a spring 7. The end of the locking pin 6 which protrudes into the channel 5 is chisel-shaped and reaches the middle of said channel 5. The opposite end of the pin 6 is provided with a head having a notch in which is engaged the spring 7 mounted on the part 2, urging said pin 6 towards the channel 5 and securing it against rotation.

This device provides for the automatic locking of a core of the kind described in my patent application Ser. No. 649,025, to which is secured a pin *b* having a wedge shaped end and a lateral notch adjacent to said end. When the core pin *b* is introduced into the channel 5, the locking pin 6 is pushed back by the wedge-shaped end of said core pin *b* and then snaps under the pressure of the spring 7 into the lateral notch of said core pin, thus locking the core pin firmly and maintaining the core immovably suspended in the mold, an appropriate space being provided between the core and the walls of said mold. The side of said notch adjacent to the core being abrupt, it is impossible to push the core pin *b* too far into the channel 5.

When it is desired to manufacture by means of the described mold a tooth blank comprising a core coated with wax, a core is placed and locked in the mold, in the manner hereinbefore described, the mold is closed and a molten wax mixture is poured through the opening 4 into the space remaining between the core and the inner walls of the mold. After cooling and solidification of the wax *c*, the mold is opened; by means of a slight pressure on the protruding end of the core pin the blank is separated from the wall of the mold and is then easily removed. Any number of models of the same shape may be manufactured. When it is desired to wrap the cores with thicker or thinner layers of wax, this may be obtained by using cores of different sizes.

The casting mold may be modified according to the complicated form of the tooth blank to be manufactured, without departing from the scope of the invention.

I claim:

1. A metallic casting mold for coating with wax cores for artificial teeth provided with a fixed notched pin, said mold comprising parts formed with cavities composing the internal space of the mold, means for locking said parts together, one of said parts having two channels formed therein, one of said channels connecting the exterior to the internal space perpendicularly to the interal surface of said part and adapted to receive

said notched pin fixed to the core, the second channel being parallel to said surface and opening into the first mentioned channel, a locking pin slidably mounted in said second channel and having a chisel-shaped end, said end protruding partially into the first mentioned channel, and a spring urging said locking pin towards said first mentioned channel, said locking pin thus automatically engaging the notch of said notched pin when it is introduced into the first mentioned channel and firmly immobilizing the core at its correct place, without any contact with the inner walls of the mold.

2. A casting mold for the coating with wax of cores for artificial teeth provided with a fixed pin having a notch, said mold comprising parts formed with cavities composing the internal space of the mold, means for locking said parts together, one of said parts having a channel opening into the interior space of the mold and adapted to receive said pin fixed to the core to be coated, said part having a second channel opening laterally into the first mentioned channel, a locking pin slidably mounted in said second channel and having a chisel-shaped end, and a spring urging said locking pin towards the first mentioned channel so that said chisel-shaped end protrudes resiliently into said first mentioned channel and engages automatically the notch of said pin fixed to the core to be coated, thus immobilizing said core against any displacement and rotation and locking it in a freely suspended position in the internal space of the mold, without any contact with the walls of the same.

3. A metallic casting mold for the coating with wax of cores for artificial teeth provided with a fixed pin having a notch, said mold comprising parts formed with cavities composing the internal space of the mold, means for locking said parts together, one of said parts having a channel opening into the internal space of the mold, perpendicularly to the inner surface of said part, and adapted to receive said pin fixed to the core to be coated, said part having a second channel parallel to the inner surface of said part and opening perpendicularly into said first mentioned channel, a locking pin slidably mounted in said second channel and having a chisel-shaped end, and a spring urging said locking pin towards said first mentioned channel so that said chisel-shaped end protrudes resiliently into said first mentioned channel so as to be pushed back upon introduction of said pin fixed to the core and to snap into said notch, thus immobilizing said core against any displacement and rotation in a freely suspended position in the mold.

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