April 24, 1928. 1,667,205

G. F. INGWERSEN

ARTIFICIAL JAWS

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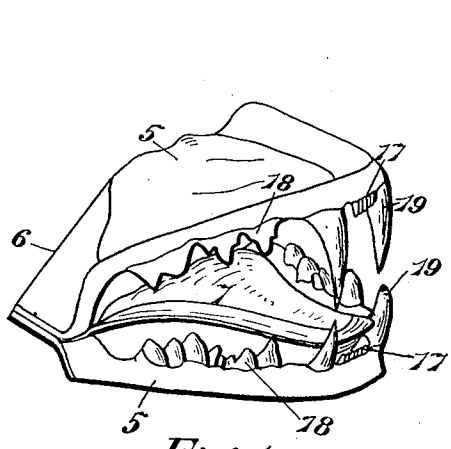


Fig. 1

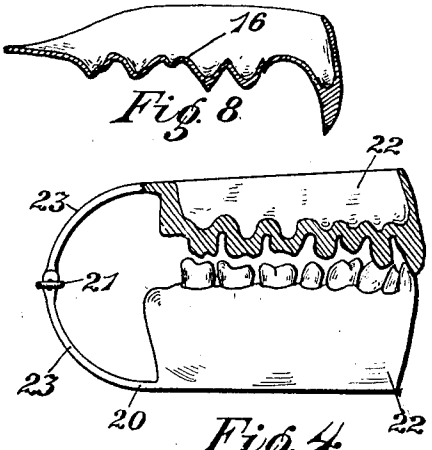


Fig. 4

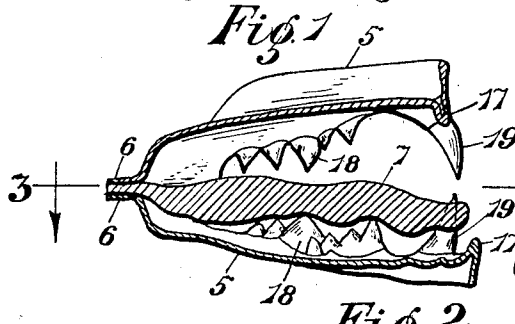


Fig. 2

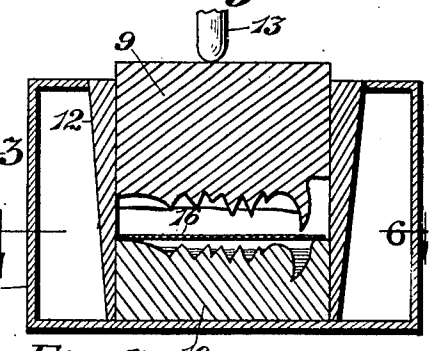


Fig. 5

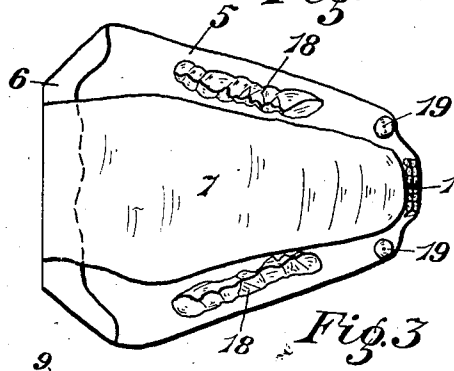


Fig. 3

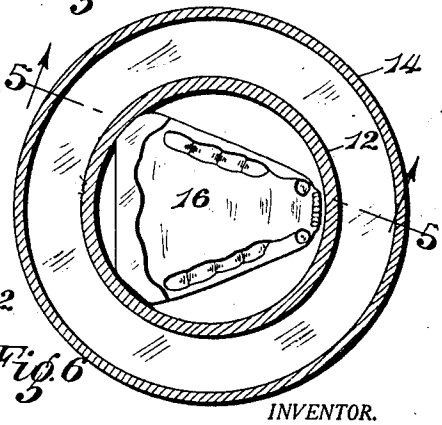


Fig. 6

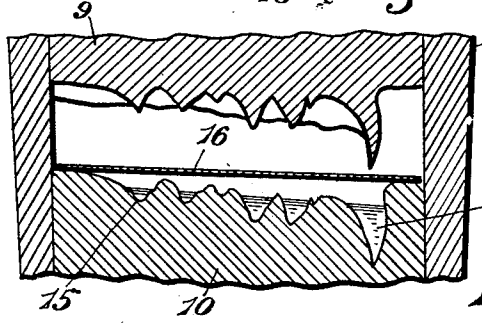


Fig. 7

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UNITED STATES PATENT OFFICE.

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ARTIFICIAL JAWS.

Application filed May 29, 1924. Serial No. 716,713.

My invention relates to artificial jaws and an object of the invention is to provide as a new article of manufacture a simulation of the jaws of carnivorous animals for use in mounting skins and furs.

Another object of the invention is to provide jaw models for use in taxidermy or for technical or experimental work or for demonstrating purposes in which the teeth and the jaw structure are formed integrally of one piece of moldable material, and further objects reside in details of construction all of which will fully appear in the course of the following description made with reference to the accompanying drawings.

In the drawings in the several views of which like parts are similarly designated,

Figure 1 represents a perspective view of a jaw-structure made in accordance with my invention in simulation of the open mouth of a carnivore for use in mounting skins or furs;

Figure 2, a vertical section of the structure shown in Figure 1;

Figure 3, a top view of the lower jaw of the structure taken on the line 3—3, Figure 2;

Figure 4, a sectional elevation of a dental demonstrating model made in accordance with my invention;

Figure 5, a vertical section of a press adapted to form the parts of an article of the character illustrated in Figures 1 and 4, by my novel process taken in a plane indicated by the line 5—5 in Figure 6;

Figure 6, a section along the line 6—6, Figure 5;

Figure 7, a fragmentary sectional view of the cooperative portions of the die-members of the press shown in Figure 5, drawn to an enlarged scale; and

Figure 8, an enlarged section of the finished article, taken in the plane of the section shown in Figures 5 and 7.

Referring first to Figures 1 to 3 of the drawings, the new article of manufacture shown therein comprises the upper and lower jaws 5 of the mouth of a carnivore in the open position with the tongue between them. The article is adapted to be placed as an entirety into the prepared head of a dead animal in the art of preserving it either in life-like manner or in the form of a rug or as a fur piece for feminine apparel.

The jaws and the teeth thereon are molded integrally of a celluloid compound or other suitable material that will soften under heat and harden in pressed form when subsequently cooled and they are connected at their rear ends by an adhesive such as dissolved celluloid applied between adjoining flanges 6. The tongue 7 which may be made of the same material, is fastened between the flanges and the parts are colored to correctly represent the tissues of the mouth of the animal and distinguish them from the teeth.

In forming the jaws, the shape of the tissues and the teeth is faithfully represented and the tongue is likewise made in true representation of the natural member. The jaws are formed separately by subjecting a sheet of celluloid compound or other moldable material between male and female dies in an embossing press of suitable construction.

In using a celluloid compound it is essential that the material be heated before or while it is subjected to the pressure required to mold it in the desired form and this may be accomplished by heating the press through the medium of steam or hot water contained in or passing through a jacket formed around the same.

In Figures 5, 6 and 7 of the drawings is illustrated a press of simple form consisting of a female die 10 fixed at the bottom of a casing 12, a male die 9 fitted for reciprocation in the casing above the female die, a screw 13 or other pressure element engaging the male die to force it toward the female die, and a heating jacket 14 formed around the casing.

In the production of jaws having teeth of different lengths like those shown in Figure 1, it is required that the material from which the jaws are formed be augmented according to the varying proportions of the teeth, at the points at which the teeth are located, so that the finished article may be of substantially uniform thickness throughout its extent and any one part thereof will not be weaker or more fragile than another. This object I accomplish by placing in the cavities of the intaglio die 10 pieces of the material in quantities varying in ratio to their depth, which when heated to the required temperature will unite with the sheet from which the body of the article is formed and become an integral part thereof when the dies between which the sheet is placed are forced together.

This feature of my invention is best illus-

trated in Figure 7 in which the material placed in the depressions of the female die has been designated by the reference character 15 while in both Figure 5 and Figure 7, the blank sheet of the material from which the article is formed is shown at 16.

The finished article produced between dies of the form shown, is illustrated in section in Figure 8.

It will be apparent that the above described method of making the jaws is of particular importance when the teeth differ in length as markedly as those in the mouth of the carnivorous animal shown in Figure 1 of the drawings, which include the incisors 17, the molars 18 and the comparatively large canine teeth 19.

It will be evident that my invention as herein described, is not restricted to the production of jaws for taxidermal use but that it is equally suitable for making similar articles designed for different purposes. Thus in Figure 4 is illustrated a dental model for technical or experimental work, or for demonstrating purposes, composed of two members 20 hinged together as at 21. Each member consists of a model 22 of a human jaw with the teeth thereof in perfect form and arrangement, at the end of a curved stem 23 by means of which it is connected to the other member, the two members being relatively arranged to place the teeth in a position for correct articulation. Each of the members is made of a single sheet of celluloid compound and the teeth and other parts which differ in depth and width, are produced by augmentation of the material in the forming press as hereinbefore described.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. As a new article of manufacture, an artificial mouth structure for taxidermal use, comprising two members simulating the jaws of an animal inclusive of the tissues and the teeth, and a member simulating the tongue of the animal, the members being immovably fixed together in their natural open position.

2. As a new article of manufacture, an artificial mouth structure for taxidermal use comprising two members simulating the jaws of an animal, inclusive of the tissues and teeth, and a member simulating the tongue of the animal, the members being rigidly connected at their posterior portions.

In testimony whereof I have affixed my signature.

GUSTAV FRED INGWERSEN.