

A. R. DE PASS.
METHOD OF PROTECTING DENTAL WORK.
APPLICATION FILED JUNE 24, 1911.

1,035,950.

Patented Aug. 20, 1912.

Fig. 1.

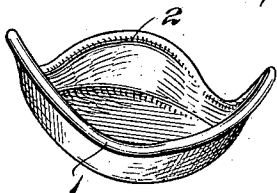


Fig. 2.

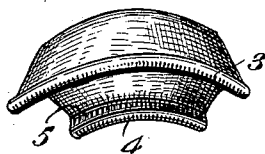


Fig. 4.

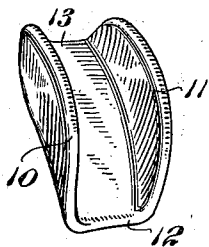


Fig. 3.

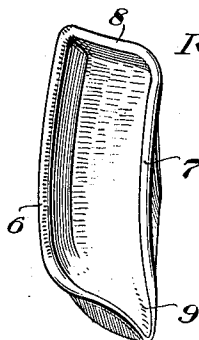


Fig. 5.

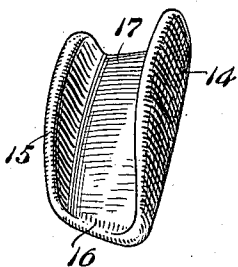
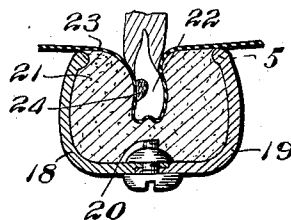


Fig. 6.



Witnesses

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METHOD OF PROTECTING DENTAL WORK.

1,035,950.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed June 24, 1911. Serial No. 635,233.

To all whom it may concern:

Be it known that I, ADDISON R. DE PASS, a citizen of the United States, and resident of Columbia, in the county of Richland, State of South Carolina, have invented certain new and useful Improvements in Methods of Protecting Dental Work, of which the following is a specification.

This invention has for its object the protection of dental work in the mouth of a patient.

It is a well known fact that fillings and other dental work should be protected from moisture in the mouth of the patient for a certain period of time after the work is done and various means have been used by dentists for this purpose. The patient has been required to keep his mouth open and cotton has been stuffed around the teeth to protect them from saliva, and in addition a rubber sheet or dam is often kept around the tooth. In spite of these precautions, however, it is not always possible to prevent the access of moisture to the work.

My present invention is designed to effectively and absolutely protect the work from moisture, and in addition to this to avoid in a great measure the discomfort to the patient incident to the method and means heretofore used and to reduce to a minimum the exertion on the part of the dentist in protecting the work.

The novel features of the invention will be apparent from the following description taken in connection with the drawings.

I have illustrated a series of forms or molds for use in carrying out my invention, and these are made the subject of the claims in my divisional application No. 649,334 filed September 14, 1911.

In the drawings: Figure 1 is a perspective view of a form or mold adapted to fit over the upper front row of teeth; Fig. 2 shows a similar form adapted to fit over the lower front row of teeth; Fig. 3 is a similar view of a form adapted to fit over the upper right row of teeth; Fig. 4 shows a similar but shorter form adapted to fit over a section of the upper left row of teeth; Fig. 5 shows a similar form adapted for use on the lower right row of teeth; and Fig. 6 is a cross sectional view showing the details of construction

which may be used in making the mold, and in addition showing the device applied to the teeth as in actual use.

In carrying out my invention I cover the teeth upon which the work has been done with a mold or casting of plastic material held in a form so shaped as to properly and conveniently fit over the section of the teeth in which the work has been done. The form itself does not come in contact with the teeth, but extends along both sides of the teeth up to a point beyond the exposed portions so that the teeth may sink down in the form and in the plastic material contained in the form until that plastic material closely fits around the teeth and up to the gums of the patient. Plaster of Paris is a suitable material for use as the plastic material in which the teeth are embedded, but it will be understood that any other similar or suitable material may be used. When I make use of plaster of Paris I preferably place sufficient material in the form to fill it and then spread a thin sheet of elastic rubber over the plaster of Paris and press the form up firmly against the teeth until the teeth are embedded in the plaster of Paris with the layer of rubber between the teeth and the plaster of Paris, thus effectively protecting the teeth even from the moisture contained in the plastic material. It will, of course, be understood that the plaster of Paris is moistened and in plastic form when the teeth are embedded, but that it will quickly set forming a rigid cast around the teeth effectively protecting them and keeping out moisture. The forms are so shaped that they will properly fit the various parts of the mouth with as little inconvenience to the patient as possible. When it is desired to remove the cast from the teeth the mold may be first withdrawn from the cast and the plaster of Paris is then broken up and removed in sections. It will be understood however that there is sufficient give in the material to permit the mold to be withdrawn from the teeth while the plaster of Paris form is in it.

As shown in Fig. 1 of the drawing, the mold for the upper front row of teeth has a wall 1 shaped to fit around the outside of the teeth and to extend upwardly beyond the exposed portions and there is also an inner

wall 2 fitting around the inside of the row
 of teeth. There is between these two walls a
 groove or recess which is to be filled with the
 plaster of Paris and covered with a thin
 coating of water-proof material, such as rub-
 ber. The mold for the lower front row of
 teeth is formed with the front wall 3 and
 the rear wall 4 leaving a groove for the teeth
 between them and as shown in this figure the
 upright walls are preferably undercut along
 their inner upper edges as shown at 5 so
 that the upper edges make a slightly con-
 tracted outlet for the material contained in
 the form serving to securely and firmly hold
 it in position. I preferably make use of this
 undercut arrangement on each of the forms
 since it not only holds them in position, but
 makes the plastic material more firmly press
 against the teeth when they sink into it up
 around the roots so as to make a close water-
 tight joint.

In Fig. 3 I have shown a form of mold
 embodying the side walls 6 and 7 and a rear
 end wall 8 of such shape that it can be fitted
 over the entire row of teeth on the upper
 right hand side. It has on its forward end
 on one side an outlet or opening 9 for the
 passage of the front teeth. It will be under-
 stood that a similar mold with the parts
 reversed may be used for the upper left
 hand row of teeth.

In Fig. 4 I have shown a shorter form
 for the upper left hand row of teeth having
 the inner wall 10 and the outer wall 11 so
 curved and shaped as to properly fit over
 a section of the teeth, but in this instance
 the form is made shorter than that indicated
 in Fig. 3 so that it will cover only a por-
 tion of the teeth on one side, and it will
 consequently not be so much in the way of
 the patient as will the long form covering
 the entire row. In this particular form
 the ends are open except that there are up-
 wardly bent or extending portions 12 and 13
 serving as ribs or dams to assist in holding
 the material in the form while the teeth are
 being embedded. It will be understood that
 the form for the upper right side will be
 similarly constructed so as to fit on that side.

The form shown in Fig. 5 has an outer
 side wall 14 and an inner side wall 15 and
 like that shown in Fig. 4 is provided with
 open ends with the upward projections 16,
 17 to hold the material in place.

Each of the forms used in carrying out my
 invention may be made of any suitable mate-
 rial such as rubber or metal. When made
 of rubber or similar material the side walls
 may have sufficient resiliency to permit the
 form to be withdrawn from the hardened
 plaster of Paris notwithstanding the fact
 that the form may have its side walls
 slightly contracted toward the top. Instead
 of making the forms with the resilient sides,
 however, I may make them of more rigid

material and in that case I prefer to make
 them in sections as indicated in Fig. 6,
 whereby they may be divided to release the
 hardened plastic material. As shown in
 Fig. 6, the form is made up of two longi-
 tudinal metal sections 18 and 19 divided
 longitudinally at the bottom, the two sec-
 tions overlapping or fitting together and
 being held by screws or bolts 20. The bolts
 may pass through slots in the overlapping
 portion so that when screwed tight they
 will hold the two sections firmly together
 forming a proper mold, but when the bolts
 are released the sections may be separated
 and removed from the material contained
 in the form. As shown in Fig. 6 the side
 walls are inclined slightly toward each other
 at the top and have the undercut portions 5
 so as to firmly hold the plaster of Paris, wax
 or other materials 21 and to make that
 material fit closely around the teeth 22 when
 they are embedded in it. The thin sheet of
 rubber 23 is placed across the top of the
 plastic material and when the teeth are em-
 bedded in that material the rubber sheet will
 be pressed closely around the teeth and up
 around the gums so as to form a tight fit,
 effectively keeping out any moisture. The
 rubber is not only water-proof, but is elas-
 tic and consequently will make a perfectly
 water-tight joint. As shown in this figure,
 24 represents a filling which is being pro-
 tected by the plastic material and rubber
 coating.

I prefer to use plaster of Paris in carry-
 ing out my invention, but it will be under-
 stood that other materials may be used and
 this is true also of the water-proof lining
 or coating over the tooth when it is embedded
 in the plastic material which is preferably
 of rubber, although my invention is not
 limited to the use of that material.

Having thus described my invention what
 I claim as new and desire to secure by Let-
 ters-Patent is:

1. The method of protecting dental work
 from saliva and moisture consisting in ap-
 plying to the tooth on which the work has
 been done a thin flexible water-proof cover-
 ing and embedding said tooth and covering
 in a plastic mold closely fitting around said
 tooth to keep out moisture.

2. The method of protecting dental work
 from saliva and moisture consisting in cov-
 ering a mass of plastic material with a thin
 sheet of elastic rubber and pressing said mate-
 rial covered with said rubber around the
 tooth upon which the work has been done
 forming a closely fitting water-proof pro-
 tecting covering for said tooth.

3. The method of protecting dental work
 from saliva and moisture consisting in cov-
 ering a mass of wet plaster of Paris with
 a thin sheet of elastic rubber and pressing
 said plaster of Paris against said sheet

around the tooth operated on forming a closely fitting water-proof protecting covering for said tooth.

5 4. The method of protecting dental work from saliva and moisture consisting in filling with plastic material an open top form shaped to fit the row of teeth worked upon, covering said material with a thin water-proof elastic sheet, pressing said form

against said teeth until they are embedded 10 in said material.

In testimony whereof I affix my signature in presence of two witnesses.

ADDISON R. DE PASS.

Witnesses:

PORTER A. McMASTER,
D. C. RAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
