July 23, 1946. H. BARISHMAN 2,404,684

DENTAL TRAY

Filed Sept. 26, 1944

Fig. 1.

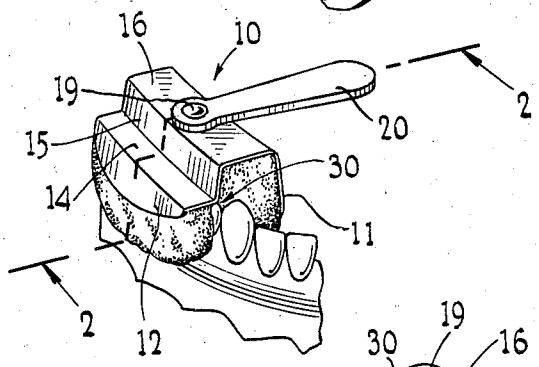


Fig. 2.

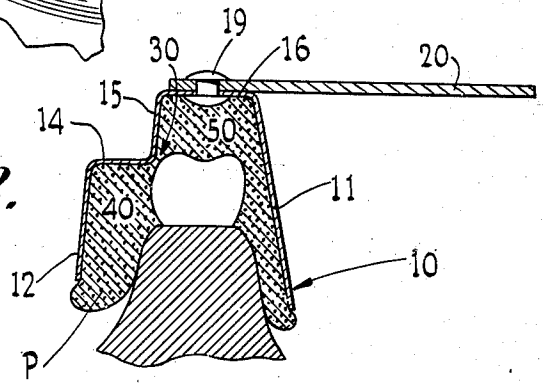


Fig. 3.

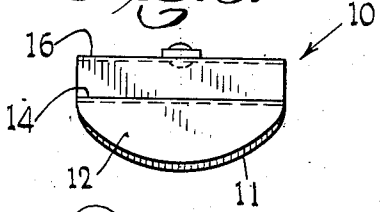


Fig. 4.

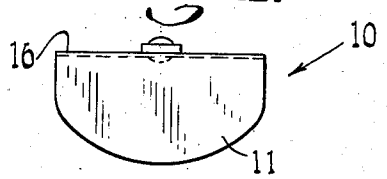


Fig. 5.

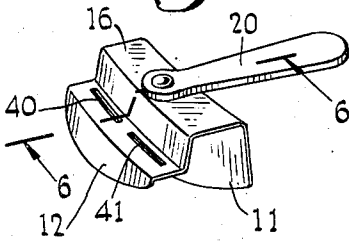
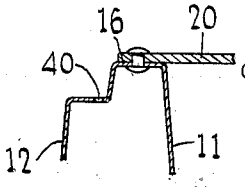


Fig. 6.



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Patented July 23, 1946 2,404,684

UNITED STATES PATENT OFFICE

2,404,684

DENTAL TRAY

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Application September 26, 1944, Serial No. 555,779

3 Claims. (Cl. 32—18)

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My invention relates to dental impression trays.

In the practice of dentistry plaster impressions of the teeth are made for various purposes, primary among these being in fixed and removable bridge work. The general practice of making plaster impressions consists in filling a receptacle, usually called a tray, with soft plaster after which it is placed in the mouth in the area where an impression is desired. When the plaster has set, the tray is removed leaving a block of hardened plaster on the teeth. Next, the plaster block is removed from the teeth in sections by cutting or breaking and reassembled into the tray where it is joined and luted into a unitary structure. The removal of the hardened plaster impression from the teeth heretofore presented the most difficult problem to the dentist because of the fact that the plaster was apt to break in areas where important impressions have been made thus marring the original impressions made and interfering with accuracy of the ultimate bridge work. Attempts have heretofore been made to solve this problem of the removal of the plaster block from the teeth by the specific design of trays, all of which have had certain inherent disadvantages.

It is therefore one of the principal objects of my invention to provide a highly improved and novel construction for a dental impression tray by means of which the plaster block may be easily and quickly removed from the teeth in a minimum number of parts and which at the same time will not break up or otherwise disturb the impression of the occlusal and lingual portions, so that the crown and inlays (abutments) for the bridge can be accurately placed in position.

Another object of my invention is to provide a dental impression tray which shall be characterized by the simplicity of its construction.

Other objects and advantages of my invention will hereinafter be pointed out or will become apparent as the description proceeds.

In the accompanying drawing,

Fig. 1 is an elevational view, in perspective, of a dental impression tray constructed and arranged in accordance with my invention and illustrating the manner of its use;

Fig. 2 is a cross-sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is a front elevational view thereof;

Fig. 4 is a rear elevational view thereof; and

Fig. 5 is an elevational view, in perspective, similar to Fig. 1, but illustrating a modified form of my invention; and

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Fig. 6 is a cross-sectional view taken substantially along the line 6—6 of Fig. 5.

Referring now in detail to the drawing, I have shown a dental impression tray 10 constructed and arranged in accordance with my invention and preferably consisting of a one piece channel member having a substantially vertically disposed rear wall 11, a stepped construction front wall comprising the substantially vertically disposed parts 12, and 15, interconnected by the transverse wall 14. The walls 15 and 11 are interconnected by the transverse wall top 16. The tray 10 may be made of any suitable relatively rigid material such as metal or suitable plastic. If desired, the front wall parts 12 and 15 and the rear wall 11 may be outwardly tapered, as shown in Fig. 2 of the drawing to facilitate the removal thereof from the hardened block of plaster. It is also noted that the said walls 12, 15 and 11 may be slightly curved in a longitudinal direction to conform to the curvature of the arrangement of the teeth. To facilitate the handling of the tray 10, any suitable handle 20 may be provided, the said handle being pivotally attached to the top wall 16 by the pivot 19.

It is noted that the indentation formed by the angularly disposed walls 14 and 15 forms a pertinent part of my invention.

In use, the tray 10 is filled with soft plaster P, and then placed over the teeth in the mouth of the patient, as shown in Figs. 1 and 2 of the drawing and pressed downwardly to make an impression of the teeth in the plaster. It is noted from the drawing that a substantial amount of plaster surrounds the teeth with the exception of one small area, where a thin longitudinal line of plaster 30 is disposed between the junction of the walls 14 and 15 and the teeth. It is noted that in accordance with my invention the tray 10 is so constructed that the junction of the walls 14 and 15 will fall slightly below the top surface of the teeth and toward the front surface thereof.

It is thus seen from the above description that when the plaster has hardened and the tray 10 removed, it is merely necessary to exert a slight force with the fingers on the plaster part 40 disposed at the front of the teeth which will cause it to break along the thin line of plaster 30, and then to similarly remove the other part 50. By my invention, it is thus assured that the hardened plaster will always break in a controlled manner along a specified line which is so disposed that the break will not occur to mar the occlusal and lingual impressions.

In Figs. 5 and 6 I have shown a modified form

of my invention in which the tray 10 may be comprised in the identical structure as that shown in Figs. 1 to 4, except that there are additionally provided through slits 40 and 41 located at or near the junction of the walls 14 and 15. The slits 40 and 41 extend across substantially the length of the tray 10 and if desired a single slit may be provided instead of two illustrated. Or more than two slits may also be provided.

The purpose and function of the slits 40 and 41 will now be described.

There are times when making plaster impressions that the area of the teeth over which the tray is placed contains a plurality of adjacently disposed missing teeth leaving a space into which the plaster is pressed, filling it up. If this space is relatively long, it may interfere with the controlled accurate breaking of the plaster block along the thin longitudinal line hereinbefore described. Therefore, according to the form of my invention shown in Figs. 5 and 6, in cases where there are missing teeth in the mouth of the patient in the area where the tray is placed, it is merely necessary to take a toothpick or any other suitable similar article and before the plaster hardens, insert the point thereof through the slit 40 and/or 41 and draw it back and forth to create a groove in the plaster which will be in alignment with the thin line of plaster 30 and thus facilitate the controlled breaking of the plaster block from the teeth.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made

of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

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

1. A dental impression tray of the class described comprising a one-piece channel member having a substantially horizontal top wall, a substantially vertical rear wall depending from one end of said top wall, a front wall depending from the opposite end of said top wall, said front wall being of stepped cross-sectional contour in a direction away from said rear wall.

2. A dental impression tray of the class described comprising a one-piece channel member having a substantially horizontal top wall, a substantially vertical rear wall depending from one end of said top wall, and a front wall, said front wall comprising a relatively short substantially vertical portion depending from the opposite end of said top wall, a relatively long portion parallel to and spaced outwardly from said relatively short portion and a horizontal portion substantially parallel to said top wall and interconnecting said relatively short and long portions.

3. A dental impression tray of the class described according to claim 2 in which there is provided a longitudinal slotted opening substantially parallel to and disposed adjacent the junction of said relatively short portion with said interconnecting horizontal portion.

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