

J. A. ROWSE.
DENTAL IMPRESSION TRAY.
APPLICATION FILED AUG. 10, 1910.

Patented Jan. 10, 1911.

981,476.

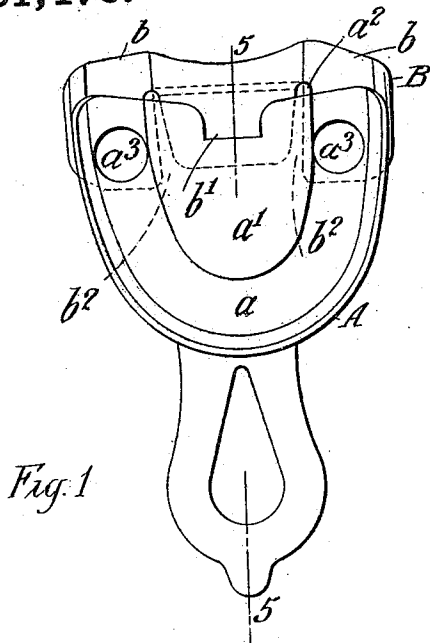


Fig. 1

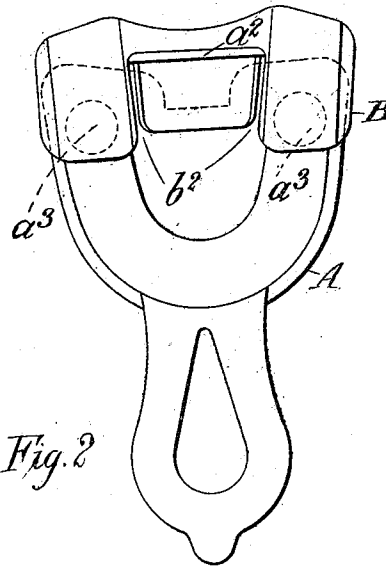
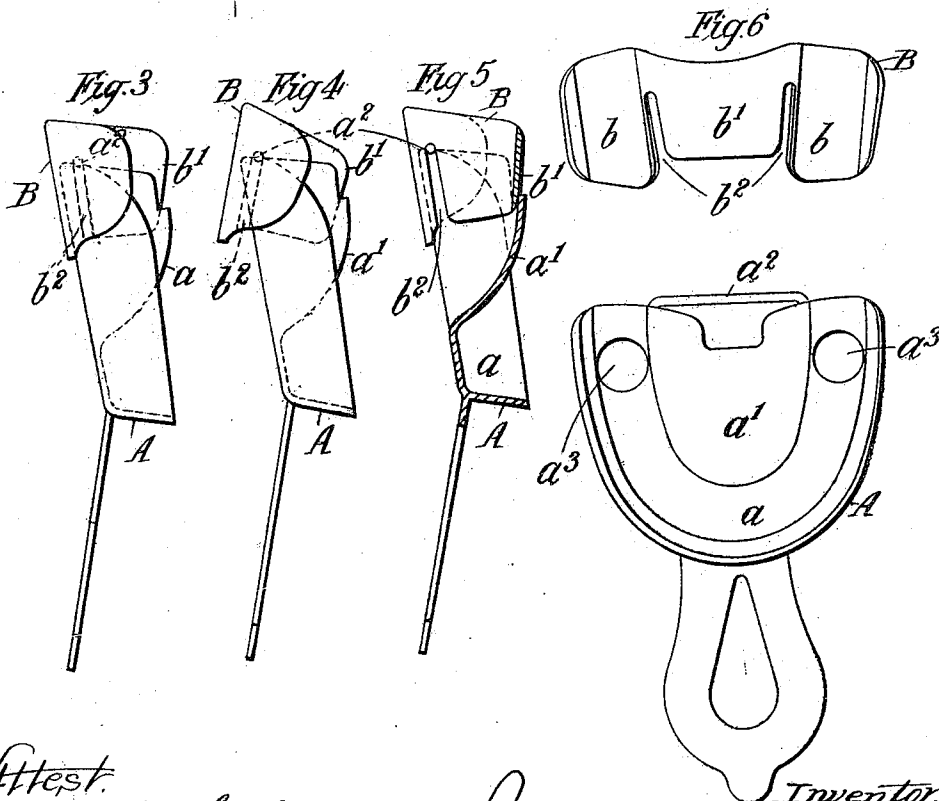


Fig. 2



Attest.
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John Ambrose Rowse
by Spear Middleton, Attorney at Law

UNITED STATES PATENT OFFICE.

JOHN AMBROSE ROWSE, OF NEWQUAY, ENGLAND, ASSIGNOR OF ONE-HALF TO THE DENTAL MANUFACTURING COMPANY, LIMITED, OF LONDON, ENGLAND.

DENTAL IMPRESSION-TRAY.

981,476.

Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed August 19, 1910. Serial No. 578,038.

To all whom it may concern:

Be it known that I, JOHN AMBROSE ROWSE, a subject of the King of Great Britain formerly residing at Treviddo, near Liskeard, in the county of Cornwall, England, but now of Newquay, in the same county, have invented a certain new and useful improved Dental Impression-Tray, of which the following is a specification.

10 This invention relates to an impression tray as used in dentistry for holding a quantity of modeling material by means of which an impression can be taken of the palate or upper portion of a person's mouth.

15 According to the present practice it is customary to construct the rear and front portions of the tray in one piece and a disadvantage of such an arrangement resides in the fact that owing to the rigidity of the tray there is considerable difficulty in so manipulating the same as to obtain a correct model or impression of the patient's mouth. This is due to the fact that slight excess of pressure upon the back of the mouth near the soft palate, is liable temporarily to distort the same from its normal shape with the result that an inaccurate impression of this part of the mouth is obtained.

30 The present invention has for its chief object to obviate this difficulty and to so construct the tray as to prevent excess of pressure being exerted upon the aforesaid portion of the mouth.

35 According to this invention the tray is formed with a front and rear portion for carrying the modeling material, the said portions being so constructed and arranged in relation to each other that upon pressure being exerted upon the front portion in a direction toward the palate of the patient's mouth, the modeling material that is carried by such portion will impart a tilting motion in an upward direction to the rear portion of the tray with the result that the modeling material carried by such portion is gradually brought into intimate contact with the back of the mouth without the pressure exerted thereon being sufficient to distort the same from its normal shape and so produce an incorrect impression.

50 In order that the said invention may be clearly understood and be readily carried into the effect the same is described with

reference to the accompanying drawings, in 55 which:—

Figure 1 is a plan and Fig. 2 an inverted plan of a dental impression tray constructed in accordance with this invention. Fig. 3 is a side elevation of the tray and Fig. 4 60 is a similar view showing the rear portion of the tray in its tilted condition. Fig. 5 is a section taken on line 5, 5, of Fig. 1, and Fig. 6 is a similar view to Fig. 1 showing the two portions of the tray detached from 65 each other.

A represents the front portion and B the rear portion of the tray.

In the arrangement shown the front portion A of the tray is formed with a curved 70 channel *a* surrounding a bridge shaped portion *a'* and extending across the space that intervenes between the inner sides of the channel *a* is a hinge pin *a²*. Formed in the base of the channel *a* at or near each end 75 thereof and in advance of the hinge pin *a²* is an aperture *a³* for the purpose herein-after described.

The rear portion B of the tray is formed at each side with a channel *b* and with an 80 intervening tongue or bridge shaped portion *b'* which respectively constitute a continuation of the curved channel *a* and of the bridge shaped portion *a'* when the two portions of the tray are connected together. 85 This connection is effected by causing the hinge pin *a²* to enter a slot *b²* formed on each side of the bridge shaped portion *b'* in which position the rear portion of the tray extends partly around the sides and partly 90 underneath the bottom of the front portion.

When a tray constructed in the manner described is charged with the modeling material and is pressed in an upward direction against the roof or palate of a patient's 95 mouth, the pressure exerted upon the modeling material causes the latter to bear against the tongue or bridge portion *b'* and also to pass through the apertures *a³* and exert pressure upon the base of the channels *b*. This 100 pressure causes the rear portion of the tray to be tilted in the direction indicated in Fig. 4, with the result that the modeling material is brought into intimate contact with the back portion of the patient's mouth with a 105 yielding pressure that is so balanced or controlled by the aforesaid action of the modeling material as to be incapable of detrimen-

tally affecting the formation of the back portion of the palate and thereby producing an incorrect impression.

What I claim and desire to secure by Letters Patent of the United States is:—

- 5 1. A dental impression tray comprising a front and a rear portion for carrying the modeling material, the said portions being hinged together transversely.
- 10 2. A dental impression tray comprising a front and a rear portion for carrying the modeling material, the said portions being hinged together transversely, and formed with overlapping surfaces.
- 15 3. A dental impression tray comprising a front portion having a bridge shaped portion surrounded by a curved channel having an aperture at or near each end thereof in the base, a hinge pin extending between
20 the inner sides of the channel at the rear of the aforesaid apertures, and a rear portion arranged to engage with such hinge pin and

to extend partly around the sides and partly underneath the bottom of the front portion.

4. A dental impression tray comprising a front portion having a bridge shaped portion surrounded by a curved channel having an aperture at or near each end thereof in the base, a hinge pin extending between the inner sides of the channel at the rear of the aforesaid apertures, and a rear portion formed at each side with a channel and with an intervening bridge shaped portion having a slot at each side thereof to engage with the aforesaid hinge pin, the said rear portion overlapping the sides and bottom of the front portion.

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

JOHN AMBROSE ROWSE.

Witnesses:

ALBERT ROWETT,
E. J. CHIVETT.