March 12, 1963 E. I. WHITE 3,080,654

PRESSURE APPLICATOR

Filed May 16, 1961 2 Sheets-Sheet 1

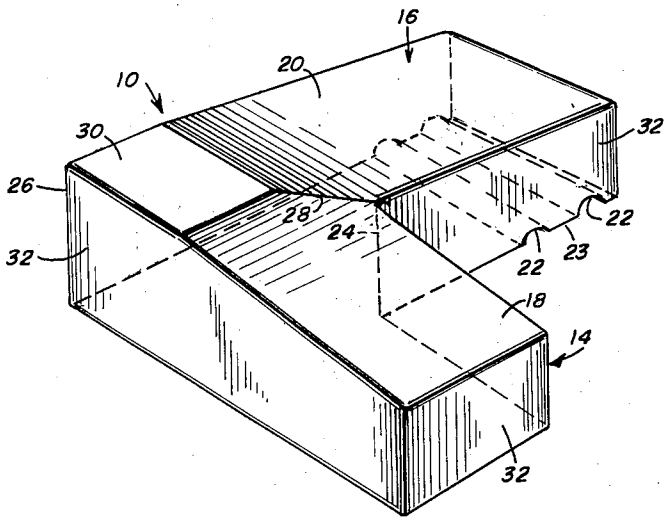


FIG. 1

FIG. 2

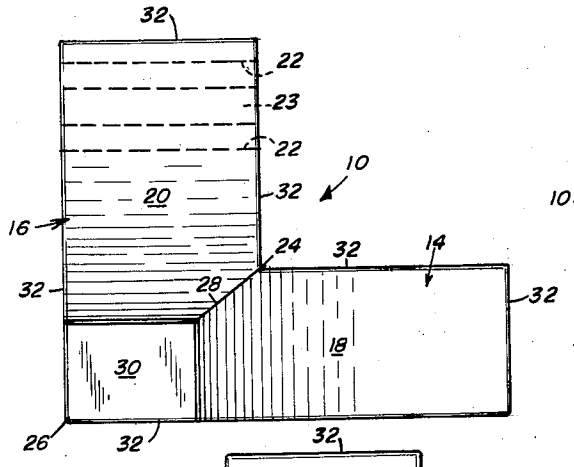
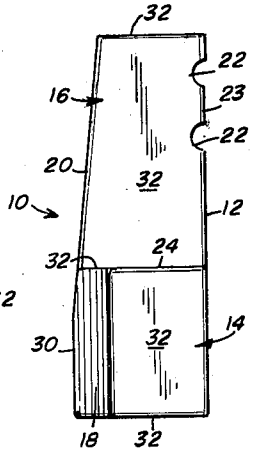


FIG. 3



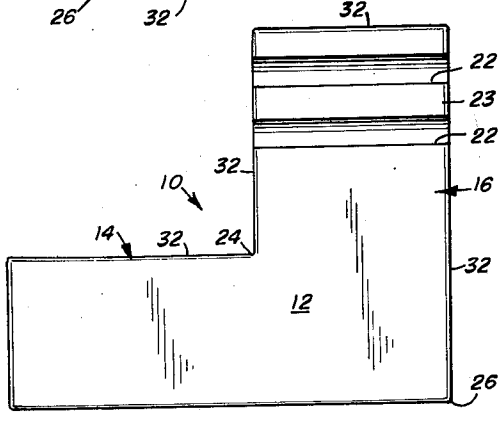


FIG. 4

INVENTOR

ERNEST I. WHITE

BY Fred L. Witherspoon, Jr
Fred. E. Shoemaker

ATTORNEYS

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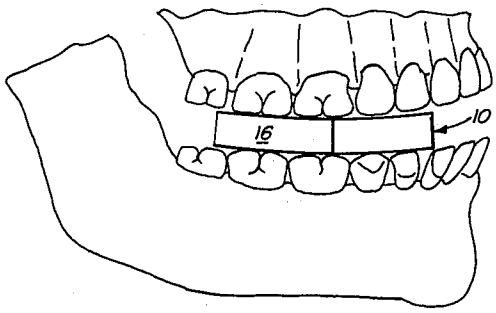


FIG. 5

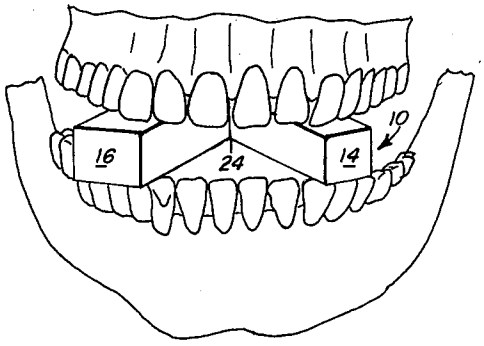
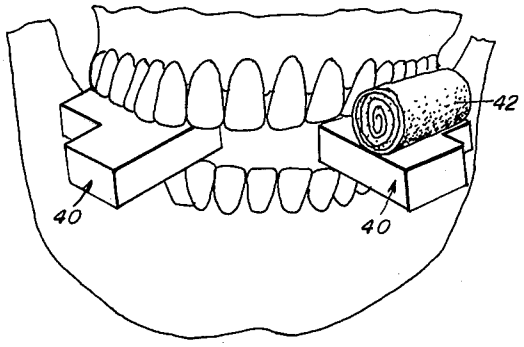


FIG. 6

FIG. 7



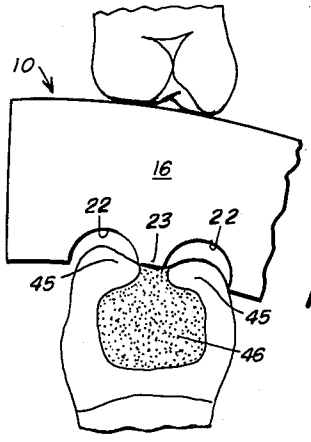


FIG. 8

INVENTOR
ERNEST I. WHITE

BY Fred L. Witherspoon, Jr.
Fred E. Shoemaker
ATTORNEYS

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PRESSURE APPLICATOR

Ernest I. White, P.O. Box 122, Greeneville, Tenn.

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6 Claims. (Cl. 32—40)

This invention relates to pressure applicators as used in dentistry and more particularly a multi-dimensional bite block useful in forceably seating restorations such as inlays, crowns and bridges.

The dentist, in placing restorations, often finds it desirably to apply relatively heavy resilient pressure to the work in order to firmly seat same and at the same time force out any excess cement while the cement is still flowable. Obviously, the most desirable instrument for performing such a function would be one of such a universal nature that only one would be needed for all of the various spacing and positioning problems encountered in inserting restorations.

In view of the above, it is an object of this invention to provide a universal instrument of resilient material which may be inserted in the patient's mouth so that he may bite thereon to apply the desired pressure to firmly press a restoration in position.

It is yet another object to prove an instrument of resilient material having a plurality of dimensions to accommodate various distances and positions encountered in patients who have various mouth sizes and tooth spacing.

It is an object of this invention to provide a multi-dimensional bite block comprising an L-shaped block of resilient material in which the legs taper from their junction so that the legs are thinner at their extremities.

It is a still further object to provide a multi-dimensional bite block comprising an L-shaped block of resilient material wherein the bottom faces of the two legs of the block are plane and the upper faces of the two legs taper so that their extremities are thinner than their junction, with one of said legs being wider than the other and one of the legs having spaced parallel grooves adjacent its end and parallel to the length of the other leg.

The above, and other objects, will become more apparent when taken in conjunction with the following detailed description and drawings showing by way of example one embodiment of this invention and wherein:

FIGURE 1 is a perspective view of the multi-dimensional bite block of this invention;

FIGURE 2 is a top plan view of the multi-dimensional bite block;

FIGURE 3 is a side elevational view of the device;

FIGURE 4 is a bottom plan view of the device;

FIGURE 5 is a side elevational view showing one way the device of this invention may be used;

FIGURE 6 is a front elevational view showing another way the device may be employed;

FIGURE 7 is a front elevational view showing an arrangement wherein two blocks are used; and

FIGURE 8 is an elevational view showing the manner in which the grooves and projection therebetween may be used to firmly hold a restoration in place.

As illustrated in FIGURES 1–4 the multi-dimensional bite block **10** is generally L-shaped, the bottom **12** of the block being a plane surface. The legs **14** and **16** taper from their intersection downwardly and outwardly so that the legs are thinner at their extremities than at their intersection. In forming these tapers the upper faces **18** and **20** of the legs **14** and **16**, respectively, are the surfaces which slope downwardly and outwardly to produce the tapers. Leg **16** is shorter and wider than leg **14**, thus providing additional dimensional variations,

and leg **14** has the greater taper as best illustrated in FIGURE 3.

The shorter leg **16** has a pair of spaced parallel grooves **22** in its bottom parallel to the length of the other leg **14**, thus forming a strip **23** therebetween.

FIGURES 1 and 2 clearly show that the sloping faces **18** and **20** of legs **14** and **16** do not intersect throughout the entire width or diagonal distance between the inside junction **24** and the outside junction **26** of the L-shaped block. The intersection line **28** of the two sloping upper faces of the legs extends partly across the diagonal between points **24** and **26**. The remainder of the distance forms the diagonal of the rectilinear figure which is in the form of a plane surface **30** parallel to the bottom **12**. This plane surface **30** and the bottom **12** define the thickest portion of the L-shaped block.

The upper and bottom faces of the legs and plane surface **30** are connected by vertical walls **32**.

A few of the multiple uses of this block are illustrated in FIGURES 5–8. For example, in FIGURE 5, in placing adjoining inlays or short bridges in posterior teeth the wider block leg **16** may be used by placing it on the restoration with the junction of the legs out at the side of the mouth so that the narrow leg **14** points outwardly. However, if a small restoration is being applied then it could well be that the thinner leg **14** would fit by reversing the position of the block shown in FIGURE 5.

When setting an upper or lower anterior bridge as from cuspid to cuspid teeth the bridge usually forms an arc and in placing same the pressure should be exerted on the abutting teeth since pressure on the bowed portion of the bridge will tend to distort same and prevent proper seating. In order to apply pressure properly the block is positioned in the patient's mouth as shown in FIGURE 6 with the junction **24** of the legs being directed outwardly with the thicker leg **16** on one side and the thinner leg **14** on the other, depending on the particular spacing required for a given patient. In this arrangement the legs of the block produce pressure only on the desired portions of the bridge when the patient closes on the block.

It is always tiring and somewhat painful when a patient is required to bite constantly on one side with nothing to support the other side of his jaw over a period of minutes. By employing the bite block in pairs and positioning the same portion of the block as a rest on the opposite side as had been selected to seat the restoration, the patient can exert considerable pressure over a long period of time without discomfort. This arrangement is illustrated in FIGURE 7 wherein a pair of bite blocks **40** are positioned in the patient's mouth with the like portion on each block being engaged between the teeth. A cotton roll **42** may be used to aid in keeping the area dry.

As shown in FIGURE 8, the purpose of the grooves **22** on one leg of the block is that frequently it is necessary to construct a restoration **46** that passes from the front to the back of a tooth, passing between cusps **45** of teeth which are higher than the body of the restoration **46**. In such a situation it is desirable to exert pressure on the restoration without producing excessive pressure on the cusps. To accomplish this the portion **23** between grooves **22** of leg **16** is positioned on the upper exposed portion of the restoration **46** so that the cusps **45** fall into the grooves **22** and thereby provide a means for applying pressure to the restoration.

This multi-dimensional bite block may be made from rubber or any other resilient material which is suitable for use in the patient's mouth. Obviously, such blocks will be relatively inexpensive, particularly in view of the general utility of same.

What is claimed and desired to be secured by United States Letters Patent is:

1. A multi-dimensional bite block comprising an L-shaped block of resilient material, the legs of the L-shaped block tapering from their intersection so that they are thinner at their extremities.

2. A multi-dimensional bite block comprising an L-shaped block of resilient material, the legs of the L-shaped block tapering from their intersection so that they are thinner at their extremities, one of said legs being of greater width than the other and one of said legs having a plurality of spaced grooves on its lower face parallel to the length of the other leg.

3. The invention as described in claim 2 and wherein each leg has a different taper.

4. A multi-dimensional bite block comprising an L-shaped block of resilient material, the bottom faces of the legs of the block being plane, the upper faces of the two legs tapering downward and outwardly from their line of intersection so that the legs are thinner at their extremities, one of said legs being of greater width than the other, one of said legs having a plurality of spaced grooves on its bottom face parallel to the length of the other leg and vertical sides connecting the bottom and upper faces.

5. The invention as described in claim 4 wherein each leg has a different taper.

6. The invention as described in claim 5 and wherein the upper face of the L-shaped block has a plane surface parallel to the bottom surface, said upper plane surface extending from the outside junction of the L-shaped block inwardly where it merges with the downwardly and outwardly tapering upper faces of the two legs.

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