

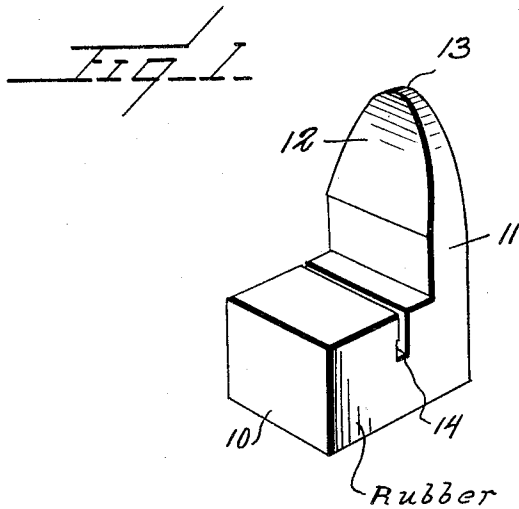
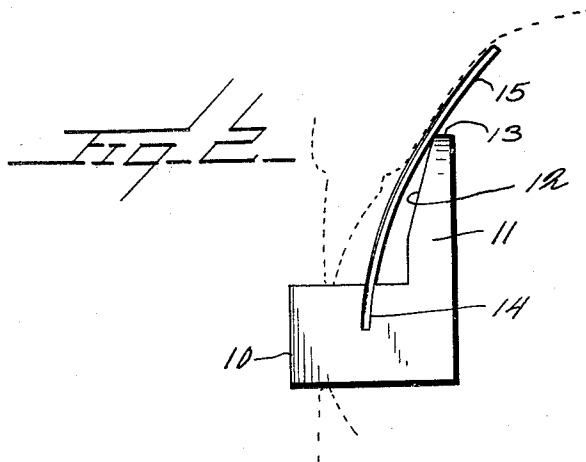
May 2, 1933.

A. W. BUCK

1,906,223

HOLDER FOR DENTAL X-RAY FILMS

Filed June 30, 1931



Inventor

A. W. Buck

By *Watson E. Coleman*
Attorney

UNITED STATES PATENT OFFICE

ARTHUR W. BUCK, OF ST. LOUIS, MISSOURI, ASSIGNOR TO BUCK X-OGRAPH COMPANY,
OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI

HOLDER FOR DENTAL X-RAY FILMS

Application filed June 30, 1931. Serial No. 547,969.

This invention relates to holders for dental films to be held in the patient's mouth while X-ray exposures are being made, such a holder being disclosed in Patent 1,548,171 granted August 4, 1925.

One of the objects of the present invention is to improve upon holders of this character by making the holder of one solid piece of rubber, the holder being formed to provide a base slotted to receive the X-ray film and an upwardly extending resiliently yielding wall or finger adapted to extend upward beyond the film and hold it in proper position against the teeth. Another object in this connection is to provide a notch in the rubber base of the holder such that the holder, being of rubber, may be flexed to open the notch and that when the base is released the elasticity of the rubber will cause the notch to close and bind upon the film.

A further object of the invention is to make the supporting base of yielding material which, when placed between the upper and lower jaw for radiographing over the upper and lower teeth, will be compressed on the side of the base adjacent the hinge in the jaw so that the base or holder will not be pushed out of place when the teeth are closed upon the base.

A further object of my invention has to do with so constructing this holder that it may be readily sterilized or in other words to construct the holder of one piece of solid rubber having no crevices in which germs may lodge, thus preventing the carriage of infectious germs from the mouth of one patient to another, this being very liable to occur where the holder is made up of a number of pieces or of material which from its nature is full of crevices or recesses in which germs are liable to lodge, and a further object in this connection is to provide a holder which is nonabsorbent.

Another object is to provide a holder having very simple means for clamping the mar-

gin of an X-ray dental film within the holder.

My invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a perspective view of my improved film holder;

Figure 2 is an end elevation thereof showing the holder in use.

Referring to this drawing, 10 designates the base of the holder and 11 the upwardly extending wall thereof, this wall having its outer face perpendicular with the under face of the base. The inner face of the wall is beveled downward and inward toward the upper face of the base at 12. The base 10 is preferably rectangular in form and the upwardly extending wall or finger 11 is upwardly rounded toward the apex 13. Extending diametrically across the wall and spaced from the inner face of the portion 11 is a narrow slot 14. This is adapted to receive within it the X-ray film designated 15 in Figure 2.

The base 10 with the finger 11 is made of one piece of relatively soft rubber having perfectly smooth faces except for the slot 14.

In the use of this device, the film packet 15 is placed within the slot 14. The holder is then inserted in the patient's mouth as illustrated in Figure 2, the patient biting down upon the upper and lower faces of the base 10. The film will be inclined rearward toward the finger 11 and this will hold the film in the best possible position for X-raying the teeth.

One of the advantages of my invention resides in the fact that inasmuch as it is made in one piece and made of rubber with smooth surfaces, there are no crevices, cracks, joints or pits or recesses within which germs may lodge.

All dental film holders are used over and over again, from one patient to another and are supposed to be sterilized each time the doctor is finished with the patient. Where a holder is made up of a number of parts,

there must be some crevices in the joints and into which a variety of infectious germs may become lodged. In fact should these germs exist in the patient's mouth, they are
 5 sure to become lodged in these crevices and it is doubtful if ordinary process of sterilizing in hot water will kill germs lodged in these joints or small crevices.

There is still another and more serious
 10 condition which must be taken into account. Where the dental film holder is so formed that there are cracks, crevices and recesses and is used in the mouth of a patient having syphilis, there would be very great
 15 danger, even though the holder had been sterilized, that the germs of this dread disease would be transmitted, particularly due to the fact that a dentist cannot always detect the symptoms of the disease in the patient, particularly where the disease is in its
 20 early stages.

While there are many holders on the market made from one piece of wood, wood, from
 25 its very nature, has crevices and pits into which germs may gather. A dental film holder formed of one piece of soft rubber does not absorb moisture and, therefore, will not be soggy or wet within the patient's
 30 mouth, it will not tend to carry germs as easily as a wooden holder would, nor will it have joints such as are found in composite holders.

By providing the slot 14, a ready means is provided for holding the film packet firmly
 35 in place. To insert the film packet, the base of the holder is slightly bent to open the slot, the film packet is inserted and then the holder is allowed to close through its own resistance, clamping the margin of the film
 40 packet firmly in place. Furthermore, where a holder has a base of material which is practically non-compressible or non-elastic, the holder while operating properly when it is disposed at the front of the mouth will
 45 not operate properly when it is disposed adjacent the hinges of the jaw as under these circumstances, when the back teeth strike the rear end of the rubber block, they act to tip the block or base out of proper position.
 50 With my improved block, however, the closing of the jaws simply compresses the rear portion of the base adjacent the hinge of the jaw and the film remains in its proper
 55 position without any tendency of the holder to tip or get out of place.

I claim:—

1. An X-ray dental film holder comprising a base and an upwardly extending finger at one side of the base, the finger and
 60 base being made of one piece of elastic rubber, the base having a slot extending parallel to the finger and upon the upper face of the base inward of the finger for engaging the margin of a film packet.

65 2. An X-ray dental film holder comprising

ing a base having flat upper and lower faces and a laterally disposed upwardly extending finger, the finger and base being of one piece of rubber, the base being slotted inward of and parallel to the finger to receive
 70 an X-ray film pack, and the finger upon its face confronting the film pack being upwardly and outwardly inclined.

In testimony whereof I hereunto affix my
 75 signature.

ARTHUR W. BUCK.

70

75

80

85

90

95

100

105

110

115

120

125

130