

Dec. 6, 1938.

E. HANDLER

2,139,496

COMPENSATING DENTAL PRESS

Filed Oct. 7, 1936

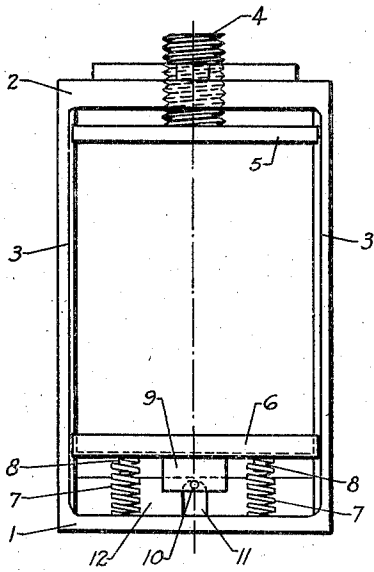


FIG. 1

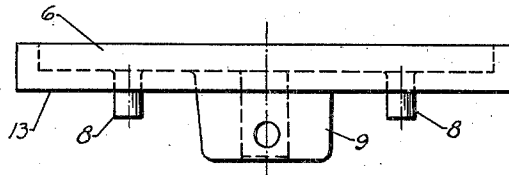


FIG. 2

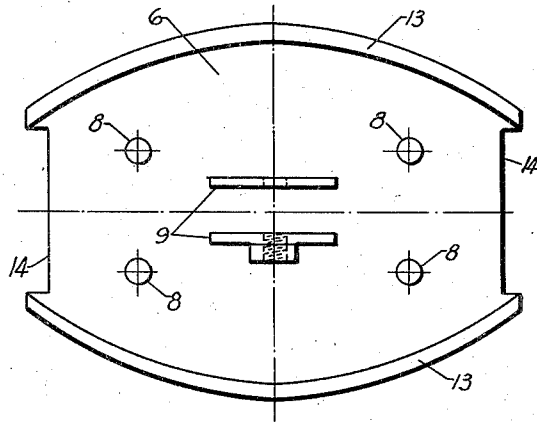


FIG. 3

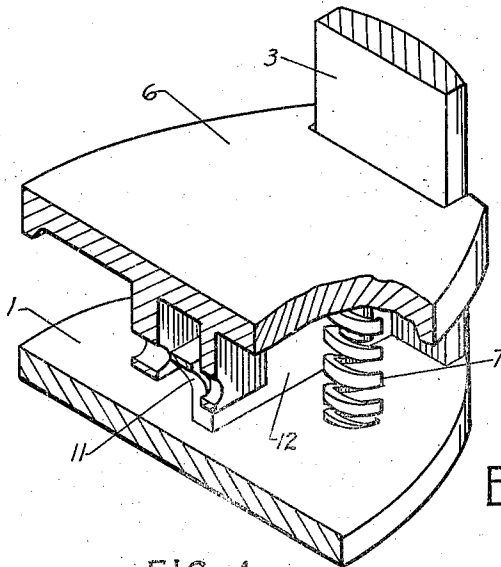


FIG. 4

EDWARD HANDLER
INVENTOR

BY *Chester Mueller*

ATTORNEY

UNITED STATES PATENT OFFICE

2,139,496

COMPENSATING DENTAL PRESS

Edward Handler, Irvington, N. J.

Application October 7, 1936, Serial No. 104,406

5 Claims. (Cl. 18—33)

The invention relates to compensating presses, more particularly to those employed in the art of fashioning dental appliances and has for its object the production of presses that have more inherent ruggedness and strength, and that also afford greater ease in disassembling and assembling.

Another object is to provide a more stabilized compensating bearing plate and a more uniform distribution of pressure from the bearing plate to the frame of the press.

A still further object is to keep more perfectly aligned and true the bearing plate during its vertical movement under pressure.

Other objects will appear from the description of my invention which follows.

A press essentially consists of two opposing faces that generally by a screw may be brought closer together compressing the object placed between them. The moving face plate I term the pressure plate while I term the stationary press the bearing plate. In a compensating press the bearing plate is elastically supported so that, as in the case of dental structures when the rubber is under compression and heat is subsequently applied in the vulcanizing process, there is available means for "absorbing" or compensating for the increase in pressure between the plates caused by expansion. Such presses have spring supported bearing plates and replacement of broken springs is a normal, frequently occurring, operation. Heretofore these presses have been so constructed that special tools are required to detach the bearing plate from the press. Distortion of the bearing plates and breakage due to unequal stresses set up in the press is also a common disadvantage. To obviate these and other difficulties in such presses I have made the improvements that I set out in greater detail hereinafter.

One form of my invention is illustrated in the accompanying drawing in which:—

Fig. 1 is a front elevation of the assembled press.

Fig. 2 is a front elevation of the bearing plate.

Fig. 3 is a plan view of the bottom of the bearing plate.

Fig. 4 is a section view in perspective of the lower one-half of the press showing the relation between the press frame and the bearing plate.

The press frame is a casting characterized by a base 1, a cap 2 and two vertical side posts 3. Thru cap 2 a screw 4 turns on a thread and imparts vertical movement to pressure plate 5 which is suitably guided on side posts 3.

Bearing plate 6 is, like pressure plate 5 guided on side posts 3 by means of recesses 14 at its ends. It is supported on base 1 by four coiled springs 7 which are retained in place by pins 8 cast into the under side of plate 6. Bearing plate 6 is attached to base 1 and is restrained in its upward movement by a connection which consists of clevis member 9 adapted to straddle rib, fin, or flange 12, the clevis being threaded for a closure such as a bolt 10 which passes thru slot 11 in flange 12.

Flange 12 projects upward from base 1 along its center line and is integral at each end with side posts 3. Thus, to remove bearing plate 6 from the press, screw 10 is removed by use of a common screwdriver and plate 6 lifted out of position. This frees springs 7 and makes replacement of any of them easy. Reassembling is likewise a simple, rapid procedure.

Flange 12 serves a dual purpose. It not only has part in the articulate connection between the press frame and bearing plate 6, but it is designed to add rigidity and strength to the frame and to prevent warping of base 1 under loading.

Base plate 6 is improved in strength by raised beading or ribbing 13 which outlines its under surface and since its impressed load is distributed to the base 1 thru four spring supports more uniformity in internal stresses is secured.

Base plate 6 has cut out 14 at its ends to adapt it to slide freely on side posts 3. Not only is it guided and aligned by means of side posts 3 but it is further held in alignment by clevis member 9 which straddles flange 12. Breakage of a spring or springs causes plate 6 to rest on the top edge of flange 12.

It is evident from the foregoing that my invention enables compensating dental presses to be made readily accessible for repairs or replacements and more sturdy in construction. While I have described my invention in its preferred form, I wish it understood that changes in form and application may be made without departing from the scope of my invention.

What I claim is:—

1. In a compensating dental press a fixed support, a bearing plate, means for yieldably supporting said bearing plate on said support, said means comprising a plurality of pins projecting downward of such bearing plate and a coil compression spring positioned on each pin, a clevis member centrally disposed and projecting downward of said bearing plate, a vertical flange member projecting upward of the fixed support, said vertical flange having a slotted opening there-

through and a pin passing through the clevis member and the slot in said flange.

2. In a compensating dental press a base member having a pair of upwardly extending supports diametrically positioned thereto, a bearing plate slidable on such side posts and yieldably supported on such base member, a vertical flange projecting upward of the base member and integral therewith and with the lower portion of each side post, a vertically extending slot in such vertical flange, a clevis member projecting downward of the bearing plate and a clevis closure passing through the clevis member and the slot in said vertical flange.

3. In a compensating dental press a base member having a pair of upwardly extending side posts diametrically positioned thereto, a bearing plate slidable on such side posts, a plurality of coil compression springs retainable beneath such bearing plate, a vertical flange projecting upward of the base member and joining both side posts at their lower portions, a vertically extending slot in such vertical flange, a clevis member projecting downward of the bearing plate and a

removable clevis closure passing through the clevis member and the slot in said vertical flange.

4. In a compensating dental press, a base member, a bearing plate, a plurality of coil springs interposed between said base member and bearing plate and an extensible connection comprising a flange extending upward from said base member, said flange having a slotted opening therethrough, a clevis member integral with the under side of the bearing plate, and a clevis closing pin passing through the clevis member and the slot in said flange.

5. In a compensating dental press, a base member, a frame, a bearing plate slidable in the frame, pins projecting downward of the bearing plate, a coil compression spring positioned on each pin, a clevis member extending downward of the bearing plate, a flange extending upward from said base member, said flange having a slotted opening therethrough and a clevis closure passing through the clevis member and the slot in said flange and adapted to freely move in such slot.

EDWARD HANDLER.