W. F. GUBITZ.

DENTAL PLUGGER.

APPLICATION FILED FEB. 12, 1910.

1,001,638. Patented Aug. 29, 1911.

Fig. 2.

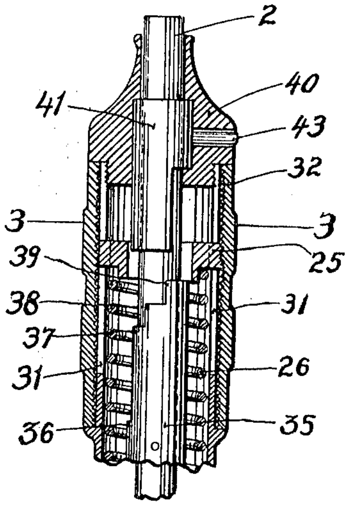


Fig. 1.

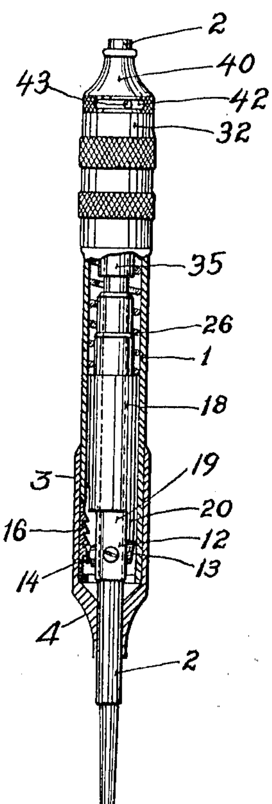
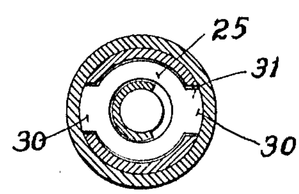


Fig. 3.



Witnesses:

Inventor:

W. F. Gubitz.

H. E. Hart

Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM F. GUBITZ, OF HARTFORD, CONNECTICUT.

DENTAL PLUGGER.

1,001,638. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed February 12, 1910. Serial No. 543,425.

To all whom it may concern:

Be it known that I, WILLIAM F. GUBITZ, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Dental Pluggers, of which the following is a specification.

My invention is illustrated and described in connection with its use on a dental plugger and is an improvement upon the structure illustrated and described in United States Patent No. 916,387, issued March 23, 1909, to William G. Church.

The invention relates particularly to tools such as are described in said patent for striking a number of successive blows and the improvement relates particularly to a mechanism by means of which the number of blows to be struck can be varied between maximum and minimum.

Figure 1 is a side view of a tool embodying my invention, with part of the casing shown in section. Fig. 2 is a central section on a large scale. Fig. 3 is a sectional end view on the line 3—3 of Fig. 2.

One embodiment of the invention is illustrated in the drawings in which 1 denotes the case of the tool, at one end of which there is secured a sleeve 3 having a reduced end 4 through which a tool holder or spindle 2 projects. This spindle has a lateral opening 12 in which is pivoted a hammer-operating lever 13 carrying a pawl 14 spring pressed in one direction by a spring (not shown), which normally holds it in engagement with a rack 16 secured to the case 1, all substantially as described in the above-mentioned patent.

A spindle 2 extends entirely through the case, its opposite end being provided with a socket to receive a tool. Mounted on the spindle is a hammer 18 which rests on an enlargement 19 on the spindle against which the blow is delivered. This hammer also has a part 20 which lies against one end of the lever 13 and by means of which the hammer is raised as the pawl engages the teeth of the rack. Within the upper end of the case is secured a nut 25 between which and the hammer 18 is located a spring 26 which is put under compression as the hammer is raised by the lever 13 and which, when the hammer is released by the pawl 14 passing by a tooth of the rack, throws the hammer against the projection on the spindle to strike the blow. This nut has oppositely disposed projections 30 which pass through slots 31 in the upper end of the case, the outer surfaces of these projections being screw-threaded to engage an internally threaded sleeve 32. When the sleeve is rotated the nut is held against rotary movement and so moves longitudinally of the case to vary the amount of compression to which the spring is subjected and therefore the force of the blow of the hammer on the spindle.

The mechanism by means of which the number of blows is varied comprises a hub 35 secured to the spindle and having on its upper end a series of steps 36, 37, 38, 39, and a cap 40 threaded into the end of the casing and in which is rotarily mounted a stop 41. The cap has a peripheral slot 42 through which extends a pin 43 connected with said stop and by means of which it can be turned. By moving said stop to its extreme left hand position the maximum amount of endwise movement of the spindle is permitted and four blows are delivered; moving the stop to the right so that it overlies the second step 37 the amount of longitudinal movement of the spindle is decreased slightly so that but three blows are delivered; by moving the stop to the next step to the right but two blows are delivered; and movement of the stop to its extreme right hand position permits of but a single blow. This construction while extremely simple permits the operator to vary the number of blows delivered by the hammer to the spindle to suit the varying conditions of the work under which the tool is used so that in some parts of the operation more rapid work can be accomplished by the use of four blows, while in the finishing stages a fewer number of blows can be utilized; and also the compression of the spring can be varied to strike a heavier or lighter blow.

I am aware that the invention which has been herein illustrated and described in one of its embodiments can be changed in its construction and adaptation.

I claim:—

1. In a dental plugger the combination with a casing and a tool carrying spindle mounted therein, of mechanism whereby said tool is caused to strike a series of blows, and means comprising a rotary stem mounted in the casing and step devices on said spindle coöperating therewith whereby

the number of blows may be varied and limited.

2. In a dental plugger of the character described the combination with a casing, a tool carrying spindle mounted therein, and means including a hammer, actuating spring and tripping device whereby said tool is caused to strike a series of blows, of a hub on said spindle and having a series of steps, and a rotarily mounted stop constructed for engagement with said steps.

3. In a dental plugger of the character described the combination with the case, a longitudinally movable tool carrying spindle, a longitudinally movable hammer also mounted therein, and means including a tripping device for causing said hammer to deliver a series of blows on said spindle, of a hub secured on said spindle and having one or more steps on its upper end, a cap secured to said case, a stop rotarily mounted in said cap and located in operative relation to and adapted for coöperation with the steps on said hub.

WILLIAM F. GUBITZ.

Witnesses:
D. I. KREIMENDAHL,
H. E. HART.