F. F. FISCHER & C. M. KALETSKY.

DENTAL ENGINE TOOL GUARD.

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1,134,833. Patented Apr. 6, 1915.

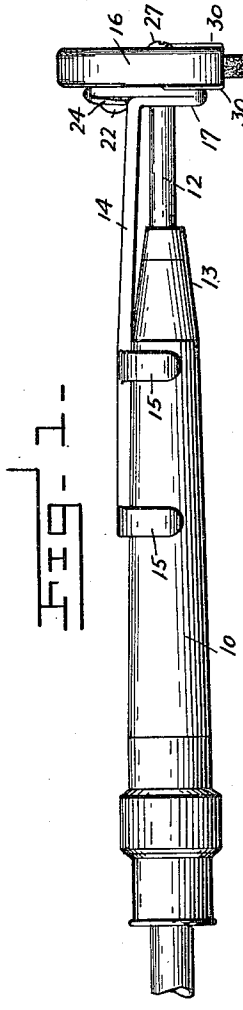


Fig. 1.

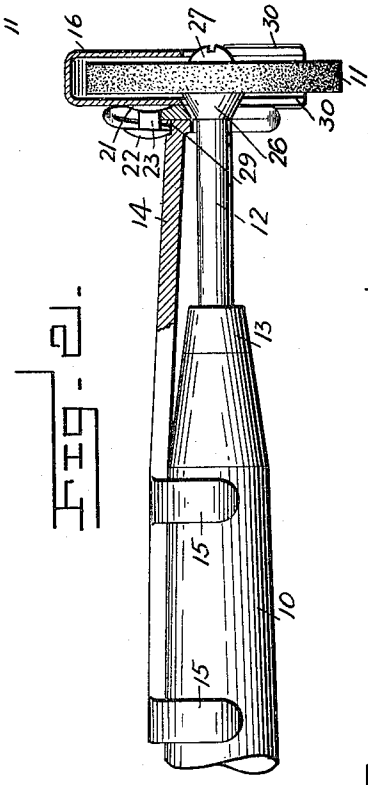


Fig. 2.

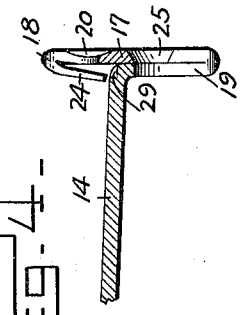


Fig. 4.

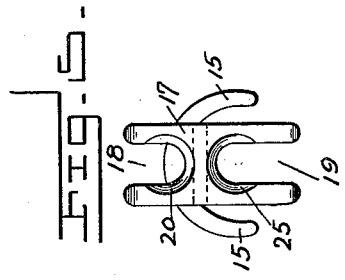


Fig. 5.

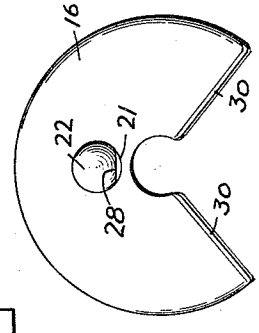


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK F. FISCHER AND CORNELIUS MYRON KALETSKY, OF NEW YORK, N. Y., ASSIGNORS TO KALFER COMPANY, INC., A CORPORATION OF NEW YORK.

DENTAL-ENGINE TOOL-GUARD.

1,134,833. Specification of Letters Patent. Patented Apr. 6, 1915.

Application filed August 1, 1914. Serial No. 854,519.

To all whom it may concern:

Be it known that we, FRANK F. FISCHER and CORNELIUS MYRON KALETSKY, both citizens of the United States, and residents of the city of New York, Jamaica, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Dental-Engine Tool-Guard, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: To provide a guard arranged to prevent the intrusion of flesh between said guard and the abrasive tool; and generally, to provide a guard and holder therefor having a compact structure and a neat appearance.

Drawings.—Figure 1 is a side view of the tool handle of a dental engine having a guard and holder therefor, said guard and holder being constructed and arranged in accordance with the present invention; Fig. 2 is a detail view on an enlarged scale, showing an end fragment of said handle and a guard and holder therefor, said guard and holder being shown in section; Fig. 3 is a detail view on an enlarged scale, showing the back of a guard constructed and arranged in accordance with the present invention; Fig. 4 is a detail view on an enlarged scale, showing an end fragment of the guard-holder arm; Fig. 5 is a detail end view of a guard-holder constructed and arranged in accordance with the present invention.

Description.—As seen in the drawings, the conventional tool handle 10 is provided with a grinding wheel 11 also conventional in form and arrangement, having a spindle shaft 12, which shaft is held in the jaws of a chuck 13. The barrel of the handle 10 supports the guard holder 14, being to this end provided with spring clips 15. The clips 15 grip the body of the handle 10 to maintain the holder 14 in fixed position. It is designed that when the holder 14 is fixed or adjusted in proper relation to the end of the spindle shaft 12, said holder need not thereafter be removed incident to the removal or replacement of any number or kind of wheels 11 or similar devices, or for the removal of the guard shield 16.

The guard holder 14 has at the outer end thereof a T-head 17. The head 17 is formed preferably with the body of the holder 14, the metal whereof is bent and doubled upon itself to stand at right-angles, as shown best in Fig. 4 of the drawings. The head 17 is slotted to form recesses 18 and 19, as shown best in Fig. 5 of the drawings. The recess 19 fits over the spindle shaft 12 and the head thereof.

The recess 18 with which the T-head 17 is provided is designed to hold the cover 16 in service position. To this end, the recess, at the lower end, is furnished with a chamfered surface 20, which forms a seat for a rounded pad 21. The pad 21 is shaped to fit the chamfered edge 20, and to support a button head 22, a shank 23 connecting said pad and head. The shank 23 in length equals the thickness of the head 17 where the spring back 24 unites with the front or rigid portion of the head. The spring back 24 is spread from the face of the head 17 at the lower end of the recess 18, the object being to draw the shank 23 and pad 21 connected therewith backward to rest and hold firmly the pad 21 upon the chamfered surface 20 with which said recess is provided. When, in the course of operation, the head 22 is forced over the spring back 24, the latter is contracted to subsequently expand when the pad 21 registers with or becomes concentric with the chamfered surface 20. When so expanded, said spring back draws the cover 16 until it rests against the face of the head 17, the pad 21 seating within the recess.

From the foregoing, it is obvious that when it is desired to remove the shield 16, this may be readily effected by pressing with the finger on the head 22, the thumb, to brace the hand, resting on the grinding wheel 11. The spring back 24 is compressed to permit the pad 21 to be lifted from the chamfered surface 20, and the shank 23 to pass freely upward and out of the recess 18.

A chamfered surface 25 is formed at the upper or inner end of the recess 19 to fit over the head 26 of the spindle 12, which forms a rest for the wheel 11, against which the same is pressed by a screw 27, when set up. The surface 25 rests upon the head 26 to form an auxiliary bearing therefor. This construction permits the shield 16 to fit closer to the wheel 11, and thus save space.

To steady the shield 16 in service position, the head 22 is provided with a straight edge 28, which rests upon a flattened surface or

shoulder 29 formed on the holder 14, as shown best in Fig. 2 of the drawings.

It will be understood that various forms and sizes of shield 16 are employed in the usual service of a dentist, and that each of these shields is preferably furnished with a button head 22 having a shank 23 and pad 21, all of the same size and character to correspond with the holder 14, which is universal or common to all.

To prevent the intrusion of flesh between the side of the wheel 11 and the shield 16, said shield is provided with radially-disposed lips 30. As best seen in Fig. 3 of the drawings, these lips are extended at an incline from the sides of the shield, and so serve to form a clearance space between the shield and the wheel.

Claims:

1. The combination with a dental engine having a tool handle, a rotary spindle, and a grinding wheel, of a guard comprising a holder having a head provided with a perpendicular socket recess, said socket recess having at the inner end a chamfered surface; a shield having a pad to rest on said chamfered surface; and means mounted on said shield for holding said pad upon said chamfered surface.

2. The combination with a dental engine having a tool handle, a rotary spindle, and a grinding wheel, of a guard comprising a holder having a head provided with a perpendicular socket recess, said socket recess having at the inner end a chamfered surface; a shield having a pad to rest on said chamfered surface; means mounted on said shield for holding said pad upon said chamfered surface; and means mounted on said holder, juxtaposed to said spindle in closer relation than said shield to said grinding wheel.

3. A guard as characterized, having a holder; a guard shield; a T-head rigidly mounted on said holder and having an upwardly-opening recess; a chamfered surface opening outward from the inner end of said recess; a button mounted on said shield, having a head, a base pad disposed on the surface of said shield, and a shank connecting said pad and said head; and a spring at the back of said head, adjacent said recess to extend below the head of said button, to force the same backward from said head.

4. A guard as characterized, comprising a holder having a T-head, both extensions whereof are provided with open-ended recesses, one of said extensions having a resilient back member; and a shield having a button rigidly attached thereto, the head of said button being adapted to override said resilient back member, to be engaged thereby to draw said shield into service relation to said T-head.

5. A guard as characterized, having a box-like shield provided with a radial segmental opening, the edges of said opening being outwardly flared.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANK F. FISCHER.
CORNELIUS MYRON KALETSKY.

Witnesses:
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EDWARD R. BERAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."