C. E. PIERCE.

SET SCREW GUARD.

APPLICATION FILED OCT. 11, 1912.

1,066,841. Patented July 8, 1913.

Fig. 1.

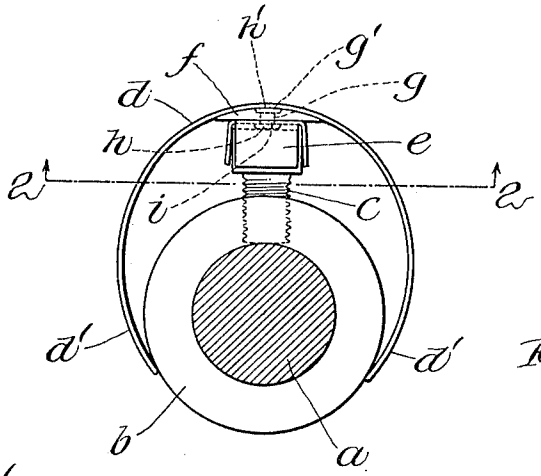


Fig. 2.

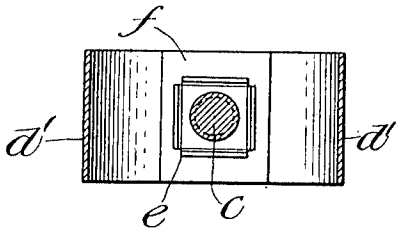


Fig. 2a

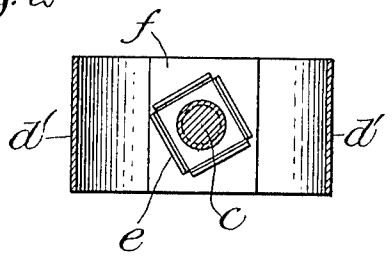


Fig. 3.

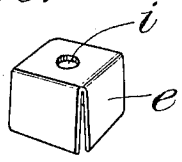


Fig. 5.

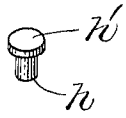


Fig. 4.

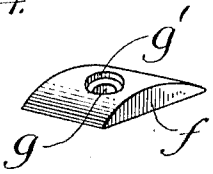
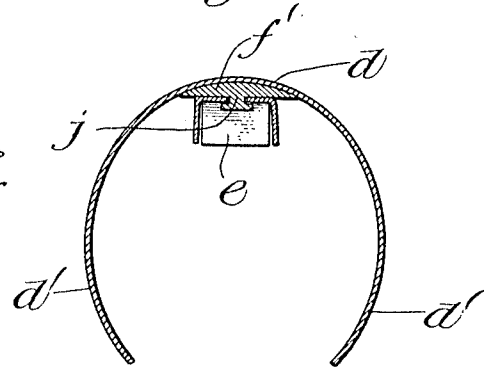


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES E. PIERCE, OF CAMBRIDGE, MASSACHUSETTS.

SET-SCREW GUARD.

1,066,841. Specification of Letters Patent. Patented July 8, 1913.

Application filed October 11, 1912. Serial No. 725,217.

To all whom it may concern:

Be it known that I, CHARLES E. PIERCE, a citizen of the United States, and resident of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Set-Screw Guards, of which the following is a specification.

This invention has for its object to provide a simple and effective device adapted for quick and secure application to a projection such as a set-screw on a rotary body such as a shaft, or a collar thereon, to the end that said set-screw may be covered and prevented from all liability of catching the clothing or hair of persons working in the vicinity.

The invention is an improvement on that set forth by Letters Patent of the United States, No. 761,708, granted to me June 7, 1904, and is embodied in the improved construction which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a side view of a set-screw guard embodying my invention, applied to a collar on a shaft, the latter being shown in section. Figs. 2 and 2ª represent sections on line 2—2 of Fig. 1. Fig. 3 represents a perspective view of the socket shown by the preceding figures. Figs. 4 and 5 represent perspective views of the reinforcing member and rivet forming parts of the construction represented by Fig. 1. Fig. 6 represents a sectional view of a modified construction embodying the invention.

The same reference characters indicate the same parts in all of the figures.

In the drawings, *a* represents a shaft, and *b* represents a collar thereon, the collar being secured to the shaft by a set-screw *c*. The part *b*, may, however, be any rotary member which is secured in place by a set-screw projecting from its periphery.

The guard is composed of a single curved strip of resilient material, preferably tempered steel, constituting a bridge extending over the set-screw, and comprising a central portion *d*, and arms *d' d'* integral with the central portion, the lower or outer portions of said arms converging inwardly toward each other, so that their ends are separated by a space of less width than the diameter of the collar or body *b*. The bridge can therefore be engaged with the collar by placing the ends of its arms against the periphery of the collar and applying force tending to move the central portion of the bridge toward the collar, the arms being thus caused to first spring apart until they pass over the center of the collar, the arms then springing inwardly and engaging the collar, as indicated in Fig. 1.

The construction thus far described is the same as that set forth in the above-mentioned Letters Patent.

In carrying out the present invention I provide the guard with a socket *e*, adapted to receive and closely fit the head of the set-screw *c*, the socket being preferably composed of a cruciform blank of sheet metal, the arms of which are bent downwardly from the central portion to form the sides of the socket, the central portion forming the closed end or bottom of the socket.

The socket *e* is pivotally connected with the central portion of the bridge by means which are covered by said central portion so that there is no protuberance on the outer surface of the guard, the pivotal connection enabling the socket to be turned to different angular positions, as illustrated by Figs. 1, 2 and 2ª, and thus conform to the different angular positions which the sides of the screw head are liable to assume when the screw is set up to its final position.

The connecting means in the embodiment of the invention shown by Figs. 1 to 5, inclusive, comprise a reinforcing member *f*, which is preferably a metal block having a flat under side and a curved upper side, conforming to the curvature of the central portion of the bridge, said block being soldered, or otherwise firmly secured to the inner side of the bridge, as indicated by Fig. 1. The reinforcing member *f* has an aperture *g*, which is enlarged at *g'*, and is adapted to receive the shank *h* and head *h'* of a rivet. The rivet is inserted in the said orifice before the member *f* is attached to the guard, the shank of the rivet projecting below the flat under side of the reinforcing member and entering an orifice *i* formed for its reception in the socket *e*. The outer end of the shank of the rivet is then upset to form a bur engaging the inner side of the socket and holding the socket in place against the flat side of the reinforcing member, and at the same time permitting the

socket to be turned so that it may occupy the positions shown by Figs. 2 and 2ª, and other angular positions.

In the construction shown by Fig. 6, a reinforcing member f' of the same general form as the member f is employed, said member having a shank j which is inserted in the socket orifice i, and is upset to secure the socket to the reinforcing member. It will be seen that the external surface of the guard is entirely free from any projections liable to engage the clothing of a person near the rotating shaft.

I claim:

1. A set-screw guard comprising a resilient bridge having a central portion and converging arms formed to engage a cylindrical body, a set-screw-engaging socket between the said arms, and means covered by the central portion of the bridge for pivotally connecting the socket thereto.

2. A set-screw guard comprising a resilient bridge, a reinforcing member attached to the inner side of the bridge and a set-screw-engaging socket pivotally connected with said member, the central portion of the bridge extending across and covering the reinforcing member.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CHARLES E. PIERCE.

Witnesses:
C. F. BROWN,
E. BATCHELDER.

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