(No Model.)

H. B. WALMSLEY.

SET SCREW PROTECTOR.

No. 456,527. Patented July 21, 1891.

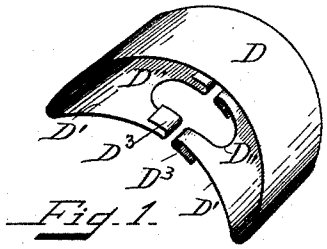

Fig. 1.

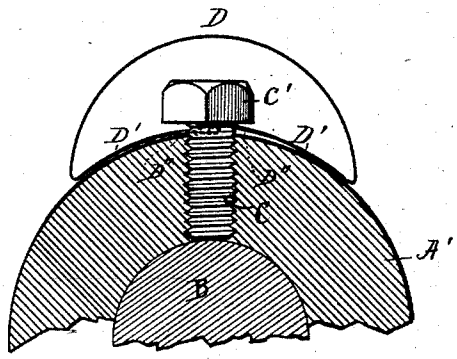

Fig. 2.

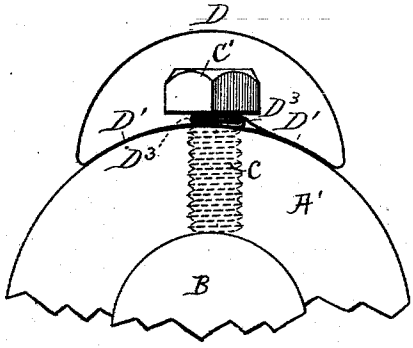

Fig. 3.

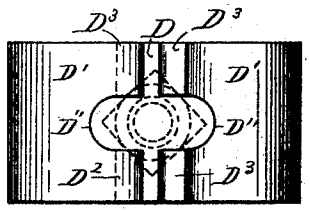

Fig. 4

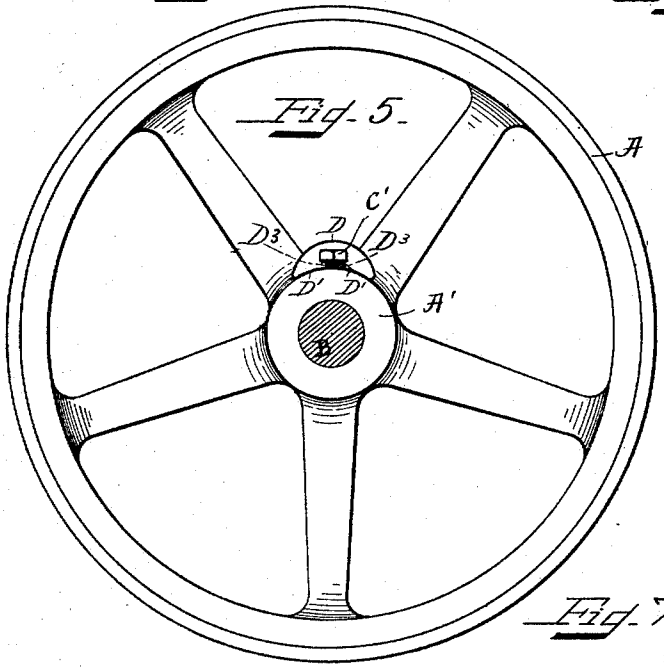

Fig. 5.

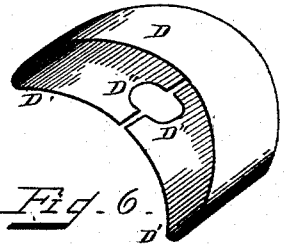

Fig. 6.

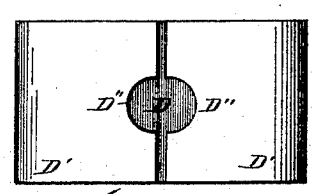

Fig. 7.

Witnesses.
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Francis J. Severance.

Inventor.
Harry B. Walmsley
by Alvan Andrén his atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY B. WALMSLEY, OF BEVERLY, ASSIGNOR OF ONE-HALF TO CHARLES H. KING, OF SWAMPSCOTT, AND CHARLES H. WARREN, OF LYNN, MASSACHUSETTS.

SET-SCREW PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 456,527, dated July 21, 1891.

Application filed February 11, 1891. Serial No. 381,035. (No model.)

To all whom it may concern:

Be it known that I, HARRY B. WALMSLEY, a citizen of the United States, and a resident of Beverly, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Set-Screw Protectors, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in set-screw protectors on pulley-hubs, collars, couplings, shafting, and similar devices for the purpose of guarding and shielding the set-screw head, so as to prevent accidents caused by the clothing of operators or objects being caught by the head of said set-screw, by which the rotary pulley, &c., is secured to its shaft, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a perspective view of my improved set-screw protector. Fig. 2 represents a longitudinal section thereof, showing the device as secured to the set-screw of a pulley-hub. Fig. 3 represents a side elevation of the protector, shown also as secured to the set-screw of a pulley-hub. Fig. 4 represents a bottom view of the improved set-screw protector. Fig. 5 represents the device as applied to a pulley or wheel, and Figs. 6 and 7 represent in perspective and bottom view a modification of the improved set-screw protector.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents a pulley having its hub A′ secured to a shaft B in the usual manner by means of a set-screw C, provided with a head C′, projecting beyond the periphery of the pulley-hub, as shown. In connection with such set-screw I use my improved guard or protector, which is constructed as follows: It consists of a single piece of sheet spring metal having its middle portion D preferably made arched or curved, so as to serve as a guard or shield for the set-screw C, as shown. In one piece with said portion D are made the base-pieces D′ D′, which are bent inwardly below the portion D and curved so as to fit, or nearly so, against a portion of the periphery of the pulley-hub or collar. The inner ends D″ D″ of the base-pieces D′ D′ are forked, as shown in Figs. 1 and 4, and preferably provided with bent locking ends D^3 D^3, adapted to be locked together when the protector is to be secured to the set-screw, as shown in Fig. 3. The protector is preferably made of bent sheet metal properly tempered, so as to normally remain expanded, as shown in Figs. 1 and 4, before it is placed on the set-screw that is to be protected.

In attaching the protector to the set-screw it is only necessary to place the forked parts D″ D″ over the set-screw head and press the bases D′ D′ against the periphery of the pulley-hub, coupling, collar, &c., after which the inner ends of the base parts are brought toward each other below the set-screw head until the lips or bends D^3 D^3 are locked together, as shown in Fig. 3, causing the device to be held firmly on the set-screw and against the pulley-hub, coupling, collar, &c.

In Figs. 6 and 7 I have shown a modification of the device in which the locking-lips are dispensed with, and when made in this manner I bend or temper the sheet-metal guard in such a manner that the meeting edges of the base portions shall have a tendency in the normal state of the protector to spring toward each other, and to place such modified guard on the set-screw it is only necessary to expand it sufficiently to permit the forked base ends to be placed below the set-screw head, where they will be automatically retained, so as to hold the guard in place on the set-screw the moment the operator ceases to expand the same. Either form may to advantage be used without departing from the essence of my invention.

My improved guard is very simple in construction and can be made at a very slight expense, and being smooth and preferably curved on its exterior portion it effectually prevents clothing or other objects from being caught on the shaft or its connection during its operation.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. The improved protector consisting of a spring sheet-metal piece having the convex-curved portion D, adapted to cover the head

of a set-screw, and inwardly-projecting base parts D′ D′, adapted to fit the convex surface of the hub or collar, and having cut-away portions D″ D″ at their meeting edges adapted to fit around the set-screw below its head, substantially as and for the purpose set forth.

2. The improved protector consisting of a piece of sheet metal having a curved portion adapted to cover a set-screw head and inwardly-bent forked base portions having locking-lips adapted to be secured on said set-screw, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 14th day of November, A. D. 1890.

HARRY B. WALMSLEY.

Witnesses:
ALBAN ANDRÉN,
MARY C. TORREY.