(No Model.)

C. O. HARLEY.

REVERSIBLE SCREW EYE.

No. 377,611. Patented Feb. 7, 1888.

Fig. 1.

Fig. 2.

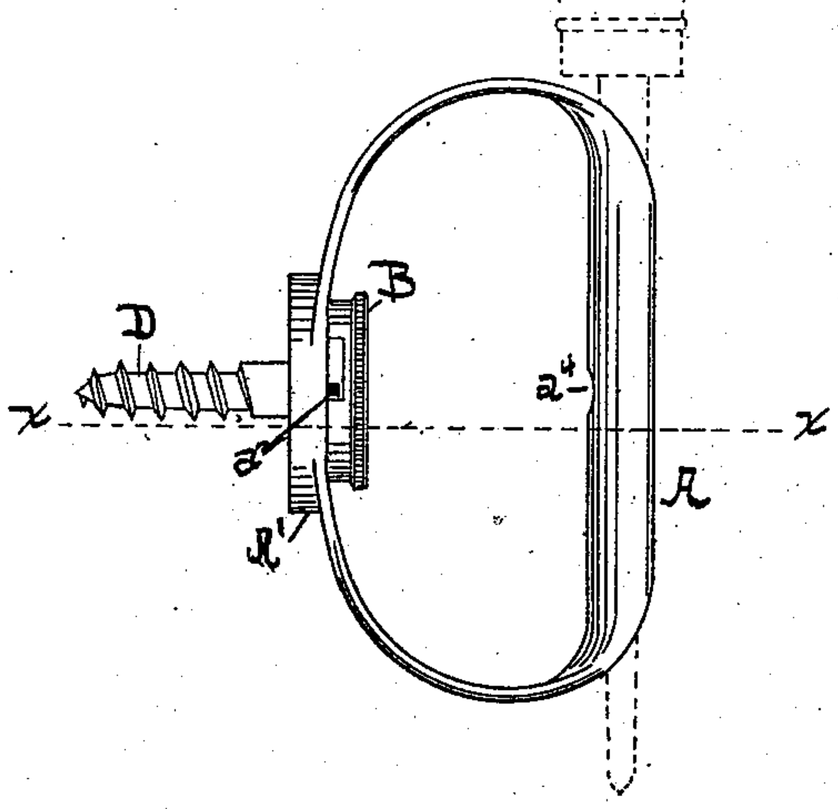


Fig. 3.

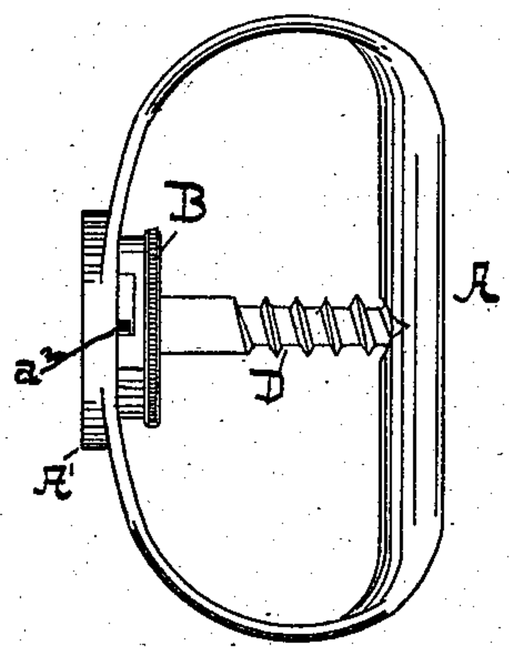


Fig. 4.

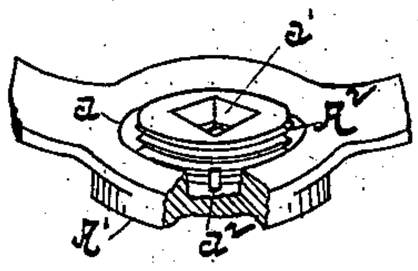


Fig. 5.

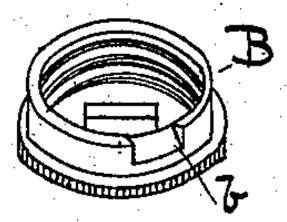


Fig. 8.

Fig. 6.

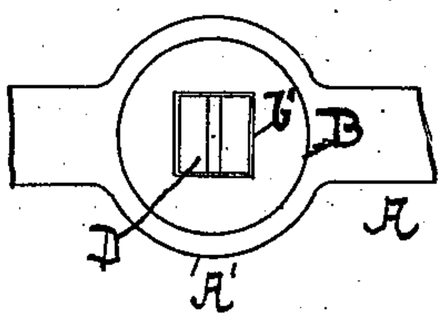


Fig. 7.

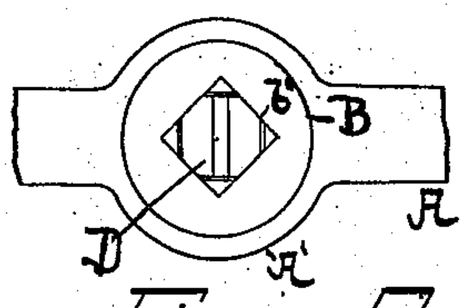
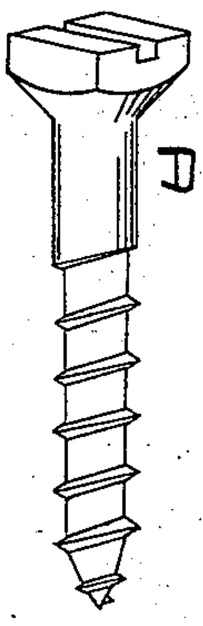
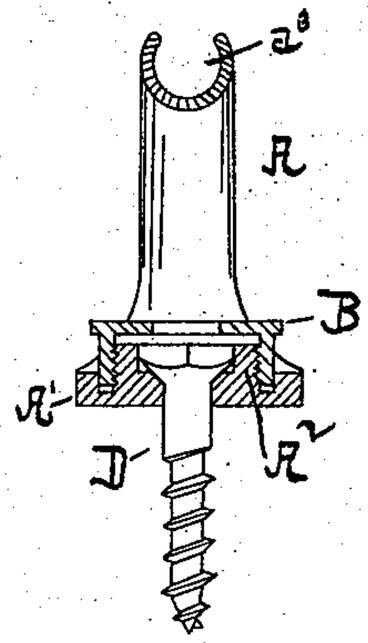


Fig. 9.





Witnesses—

Harrison Gardner.

N. T. Chapman.

Inventor—

C. O. Harley.

By Hawes & Chapman

Attorneys.

UNITED STATES PATENT OFFICE.

CORNELIUS O. HARLEY, OF LEEDS, MASSACHUSETTS.

REVERSIBLE SCREW-EYE.

SPECIFICATION forming part of Letters Patent No. 377,611, dated February 7, 1888.

Application filed June 17, 1887. Serial No. 241,675. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS O. HARLEY, of Leeds, in the county of Hampshire and Commonwealth of Massachusetts, have invented a new and useful Reversible Screw-Eye, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to devices comprising an eye or handle and a screw adapted to be applied to a variety of uses, and has for its object to provide a device of this nature in which the screw is readily detachable from and reversible within the eye or handle, whereby it is adapted to be carried within the pocket of the user without danger of injury to either his person or clothing.

To this end my invention consists in a screw-eye in which the screw is detachable from and reversible within the eye, as hereinafter fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a side elevation of the device with the screw in its operative position. Fig. 2 is a similar view thereof with the screw in its reversed or inoperative position. Figs. 3, 4, and 5 are perspective, and Figs. 6 and 7 are plan, views of parts of the device hereinafter described. Fig. 8 is a sectional view taken upon the line *x x* of Fig. 1. Fig. 9 is an enlarged view of the screw detached.

The letter A designates the eye or handle, of suitable size and shape to admit the hand, as shown, and the letter D designates the screw.

The straight portion of the handle A is preferably bent outwardly, to form the exterior groove, a^3, for a purpose presently to be described, and is provided midway between the ends thereof with the orifice a^4, to receive the point of the screw when the latter is in its inoperative position, as shown in Fig. 2. Opposite said orifice a^4 the handle is widened to form the circular base A′, which receives the screw and retains it in either of its positions by means which are constructed as follows:

Within the inner surface of the base A′ is a depression, *a*, (see Fig. 3,) and centrally located within said depression is a hub, A^2, preferably made integral with the handle, as shown in Fig. 8. The hub A^2 is centrally bored to receive the shank of the screw D, and has within its face a depression, *a′*, corresponding in size and outline to the head of the screw, which may be rectangular, as shown, or of other angular conformation, which will prevent axial movement of said screw when its head is located within said depression. Said depression *a′* is of such depth that the head of the screw, when placed therein, will be substantially flush with the face of the hub, as shown in Fig. 8.

The letter B designates a cap adapted to be secured upon and removed from the hub A^2, preferably by means of screw-threads upon the periphery of the hub and inner side of the cap, as shown, said cap being also preferably milled upon its periphery, as shown, to facilitate turning it upon the hub. The cap B has a central opening, *b′*, corresponding in size and outline with depression *a′* in the hub and the head of the screw.

It will be obvious from the construction thus described that when the cap is placed upon the hub with its opening *b′* registering with the depression in the hub, as shown in Fig. 6, the screw can be inserted in the handle either with its shank passing through the base A′, as shown in Figs. 1 and 8, or with its shank extending transversely across the handle and its point projecting within orifice a^4, as shown in Fig. 2, the head of the screw in either position being seated within depression *a′* of the hub and substantially flush with the face of the hub. It will be obvious, also, that by imparting a slight axial movement to the cap—say one-eighth of a revolution—as shown in Fig. 7, whereby its opening *b′* is thrown out of register with the depression in the hub, the screw will be firmly secured to the handle in either of its positions, its head being held within the depression by the cap.

In order to facilitate the operation of thus securing the screw to the handle, I prefer to make an open slot, *b*, in the edge of the cap, as shown in Fig. 5, into which slot projects the end of a stop-pin, a^2, inserted through the base A′ of the handle after the cap has been screwed down upon the hub. The slot *b* is of such length that when one of its end walls is in contact with said stop-pin, as shown in Figs. 1 and 2, the opening *b′* in the cap will

register with the depression in the hub, and the screw can be readily applied to or removed from the handle, and that when the opposite end wall thereof is brought in contact with said pin by turning the cap the said opening and depression will be out of alignment, as shown in Fig. 7, and the screw will be retained within the handle. I thus avoid the necessity of exercising care to bring the opening into alignment with the depression, and also prevent the accidental unscrewing of the cap from the hub.

A friction-spring, C, (shown in Fig. 4,) will preferably be located between the cap and the bottom of depression *a* of the hub to prevent accidental rotation of the cap upon the hub.

When the screw is secured in its inoperative position, as shown in Fig. 2, the device can be carried in the pocket of the user with perfect safety to person and clothing, and the screw can be almost instantly reversed and secured in its operative position whenever it is desired to put the device to use.

While, as hereinbefore intimated, there is a variety of uses to which the device thus constructed is adapted, I have devised it with especial reference to use by painters to steady themselves when working from ladders, scaffolds, &c., by turning the screw into the ladder or scaffold, or into the surface being painted, and clasping the handle with one hand while working with the other hand.

The outward curvature of the straight portion of the handle A not only secures great strength with slight weight, but enables me to utilize the groove a^3 thus formed as a holder for an idle or extra brush, as indicated by dotted lines in Fig. 1, thus causing the device to perform a double function.

Among the other uses to which the device may be put may be mentioned those of serving as a ring for hitching animals to trees, posts, &c., and as a handle for carrying wooden packages.

The device constructed as shown and described forms an article of manufacture which is simple in construction, very strong and durable, and which, carried in the pocket, is always ready to be utilized for any of the numerous purposes for which it is adapted.

It is obvious that various modifications of the details of construction shown and described can be made within the spirit of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The reversible screw-eye herein described, consisting of a handle provided with a centrally-perforated hub, said hub having in its face and surrounding the perforation therethrough a depression to receive the head of a screw, a screw the head of which is fitted to said depression, and a centrally-perforated cap fitted to said hub, substantially as set forth.

2. A screw-eye comprising, in combination, an eye or handle and a detachable and reversible screw, said eye or handle having a hub screw-threaded upon its periphery, and having a central bore to receive the shank of the screw and a depression in its face corresponding in size and outline with the head of the screw to receive said head, and a cap adapted to be screwed upon said hub, said cap having a central opening corresponding in size and outline to the depression in the face of the hub, substantially as set forth.

3. A screw-eye comprising, in combination, an eye or handle and a detachable and reversible screw, said eye or handle having a hub bored to receive the shank of the screw, and having in its face a depression corresponding in size and shape to the head of the screw, a cap adapted to be secured and have axial movement upon said hub, said cap having a central opening corresponding in size and outline to the depression in the hub, and a stop limiting the axial movement of said cap in both directions, whereby the opening in the cap can be moved into and out of alignment with the depression in the hub with speed and accuracy, substantially as set forth.

4. A screw-eye comprising an eye or handle and a detachable and reversible screw, said eye or handle being provided with a socket or holder for a paint-brush or similar article, substantially as set forth.

5. A screw-eye comprising the eye or handle A, having the orifice a^4, base A′, depression *a*, hub A^2, having depression *a*′, and cap B, having the opening *b*′, in combination with friction-spring C and screw D, substantially as described.

6. In a screw-eye, the combination, with the eye or handle A, having the hub A^2, said hub being provided with the depression *a*′, to receive the head of a screw, of cap B, having opening *b*′ and slot *b*, and pin a^2, adapted to be inserted through the eye or handle and to project within said slot *b* of the cap when the parts are assembled, arranged and operating substantially as set forth.

7. A screw-eye comprising the eye or handle A, detachable and reversible screw D, and means, substantially as described, for locking said screw in both of its positions, said eye or handle A being provided with the exterior groove, a^3, substantially as and for the purpose set forth.

8. A screw-eye consisting of the eye or handle A, having the hub A^2, provided with a central bore and rectangular depression in its face, cap B, having a rectangular opening corresponding in size and outline with the depression in the hub, and screw D, having a rectangular head adapted to closely fit said depression, substantially as described.

CORNELIUS O. HARLEY.

Witnesses:
W. H. CHAPMAN,
B. F. DAVENPORT.