No. 717,024. Patented Dec. 30, 1902.

I. NELLENBOGEN.

HANDLE FASTENING.

(Application filed May 13, 1902.)

(No Model.)

Fig. 1.

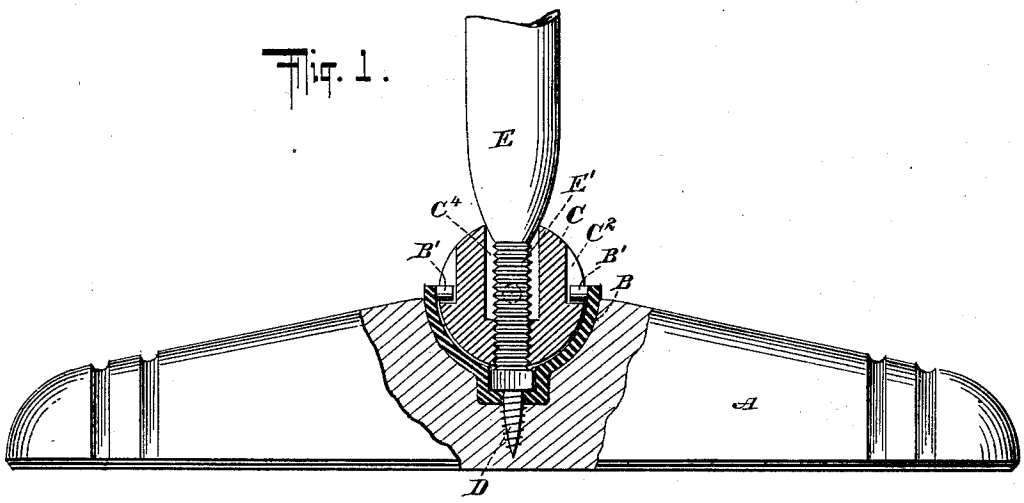


Fig. 2.

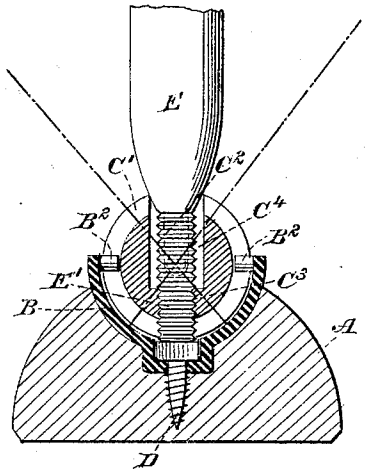


Fig. 3.

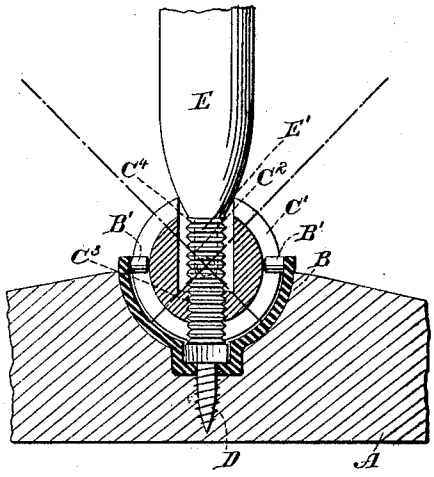
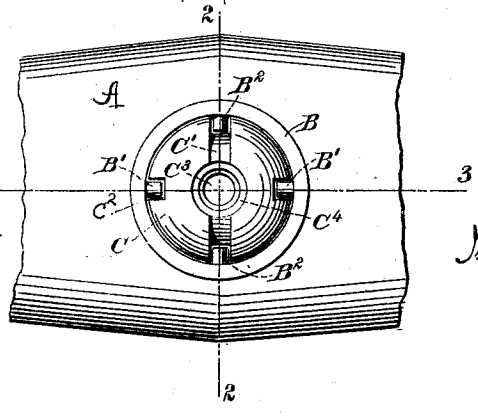


Fig. 4.



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HANDLE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 717,024, dated December 30, 1902.

Application filed May 13, 1902. Serial No. 107,125. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR NELLENBOGEN, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Handle-Fastenings, of which the following is a specification.

The object of my invention is to provide improved means for fastening a handle to articles of various kinds—such as, for instance, brushes, carpet-sweepers, and tools.

In the accompanying drawings I have shown one example of the application of my invention; but I desire it to be understood that the construction may be varied without departing from the nature of my invention.

In the said drawings, Figure 1 is an elevation of my improved handle-fastening with parts in section. Fig. 2 is a cross-section thereof substantially on line 2 2 of Fig. 4. Fig. 3 is a sectional elevation in which the article itself appears in longitudinal section, as indicated by the line 3 3 in Fig. 4; but the handle and the ball which receives said handle and fits into a socket of the article are in this figure shown in a different position from that which they occupy in Figs. 1, 2, and 4; and Fig. 4 is a plan of the construction as shown in Figs. 1 and 2, with the handle proper removed.

A represents the article to which the handle is attached. This may be, for instance, the back of a brush or the casing of a carpet-sweeper. I will designate this article by the generic term of the "body." This body is formed or provided with a socket B, curved hemispherically to receive the handle-holder C, mounted to turn, as will be described presently. The shape of this holder is substantially spherical, and it is therefore hereinafter referred to as a "ball." At its upper edge the socket B is formed with four equidistant projections or pins B′, extending inwardly toward the center. The socket is secured to the body A in any suitable manner—for instance, by means of a screw D. The ball C is formed with a substantially continuous circumferential groove C′, into which are adapted to project either the pins B′, as in Fig. 3, or the pins B^2, as in Figs. 1, 2, and 4. In a plane at a right angle to that of the groove C′, I provide other circumferential grooves C^2, which, however, do not extend entirely around the ball, but terminate at the center, as clearly shown in Fig. 1 and as indicated by dotted lines in Figs. 2 and 3. I thus form shoulders on which the pins B′ or B^2 may become seated, as shown in Fig. 1. In addition to this the ball C is provided with an axial bore or perforation, preferably made with a screw-threaded portion C^3 and with a wider portion C^4. The screw-threaded portion C^3 is adapted to receive the threaded end E′ of the handle, while the widened portion or enlargement C^4 will receive a portion of the handle-body E.

The device is used as follows: All the parts being disconnected, the ball C is held so that the grooves C^2 are at its lower portion, and these grooves are then fitted over one set of pins, either B′ or B^2. The holder then is given a half-turn about the horizontal axis formed by the pins with which it was engaged before, and is thus brought, for instance, into the position illustrated by Fig. 1. Then the handle C is screwed in. It will be seen that in this position the pins B′ will form an axis about which the ball and the handle will swing, the plane of such movement being indicated by the line 2 2 in Fig. 4. The pins B^2 will act merely as guides during this movement and are, strictly speaking, not required for this purpose. It will of course be understood that the handle may be locked at various angles, as indicated by the dotted lines in Fig. 2, by simply screwing it down against the socket B, so as to press the shoulder at the inner ends of the grooves C^2 against the pins B′. (See Fig. 1.) When it is desired to make the handle movable in the longitudinal plane of the body C—that is, in the plane indicated by line 3 3 in Fig. 4—the parts are again disconnected and the ball C is dropped into a different position—that is, the grooves C^2 are made to receive the pins B^2. In this case, as shown in Fig. 3, the pins B′ will fit into the continuous groove C′, and the handle will be allowed to rock in a longitudinal plane. By screwing the handle down against the socket, it can then be locked in position in the same manner as hereinbefore described.

I claim as my invention—

1. The combination of two elements, a body having a socket and a ball arranged to be received in said socket, one of said elements being provided with two shouldered grooves and with an additional groove located in a plane at right angles to that of the shouldered grooves, while the other element is provided with two sets of pins, either one of which may be engaged with the shouldered grooves to form a pivot for the ball, while the other set of pins moves freely in the said additional groove.

2. The combination of a body having a socket provided with four equidistant inward projections, a ball provided with a substantially continuous groove adapted to receive two of said projections, and two shouldered grooves arranged to receive the other two projections, which then form a pivot-axis for the said ball, and a handle secured to the ball.

3. The combination of a body having a socket with inward projections, a ball provided with a substantially continuous groove adapted to receive sundry of said projections and with shouldered grooves or recesses located at opposite sides and adapted to receive the other projections, and a handle connected with said ball.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISIDOR NELLENBOGEN.

Witnesses:
JOHN LOTKA,
EUGENE EBLE.