F. C. DAVIS.

RETAINING LATCH FOR HANDLES.

APPLICATION FILED NOV. 10, 1919

1,379,085. **Patented May 24, 1921.**

Fig. 1.

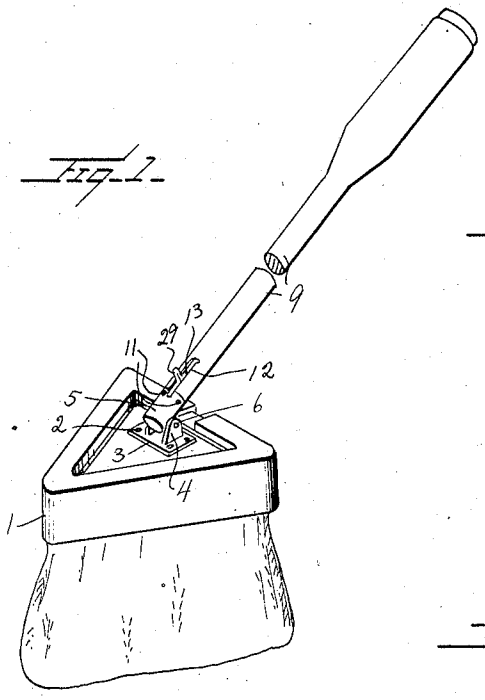


Fig. 5.

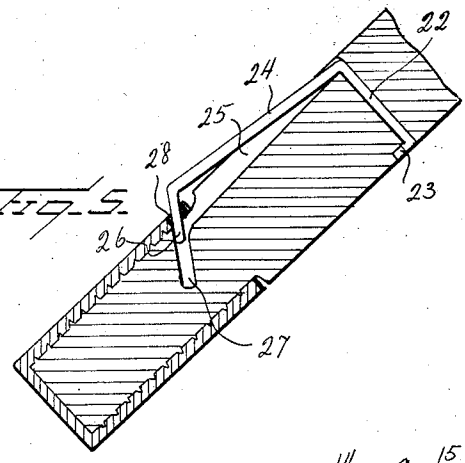


Fig. 4.

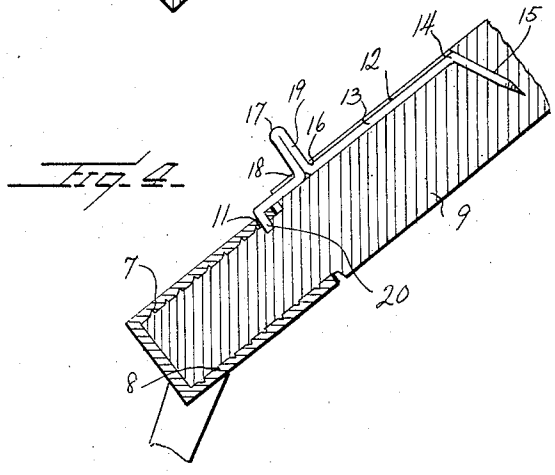
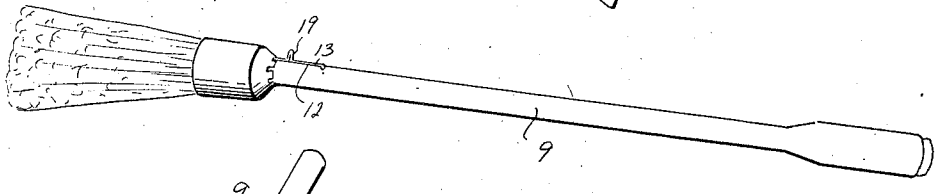


Fig. 3.



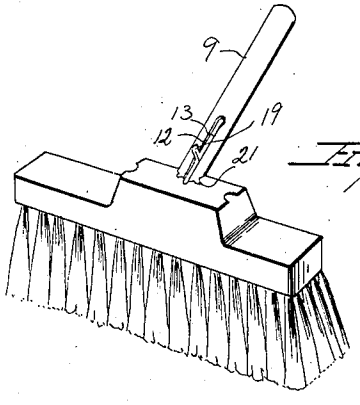


Fig. 2.

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RETAINING-LATCH FOR HANDLES.

1,379,085. Specification of Letters Patent. Patented May 24, 1921.

Application filed November 10, 1919. Serial No. 336,839.

To all whom it may concern:

Be it known that I, FRANK C. DAVIS, a citizen of the United States, residing at Tucson, in the county of Pima and State of Arizona, have invented certain new and useful Improvements in Retaining-Latches for Handles, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved retaining latch for handles of various implements such as scrub brushes, mops, feather dusters, sweepers, and like devices.

An object of the invention is to provide a very simple, efficient and practical device of this kind, which may be manufactured for relatively low cost and sold at a reasonable price.

A further object of the invention is to afford a retaining latch especially adapted for handles, which are threaded into sockets of the implements, so as to prevent the handle from turning and subsequently becoming detached.

A further object of the invention is to provide a retaining latch carried by the handle and having means at one end adapted to engage a notch or opening in the wall of the socket, to prevent the handle from turning in the socket.

A still further object of the invention consists in the provision of a spring retaining latch which may be constructed so that the latch may be either depressed or withdrawn, to disengage from a notch or opening of the wall of the socket, to allow the handle to be unscrewed and detached.

While the design and construction at present illustrated and set forth is deemed preferable, it is obvious that as a result of a reduction of the invention to a more practical form for commercial purposes, the invention may be susceptible to changes, and the right to these changes is claimed, provided they are apprehended within the scope of what is claimed.

The invention comprises further features and combination of parts, as will be hereinafter set forth, shown in the drawings and claimed.

In the drawings:

Figure 1 is a perspective view of a mop head, showing a handle attached and also illustrating the improved retaining latch as applied.

Fig. 2 is a perspective view of a scrubbing brush including a handle, and illustrating the retaining latch applied.

Fig. 3 is a perspective view of a feather duster also including a handle, and showing the application of the retaining device for the handle.

Fig. 4 is a sectional view through the socket and portion of a handle, more clearly showing the construction and application of the retaining device.

Fig. 5 is a sectional view through a socket and a handle showing a modified form of retaining device.

Referring to the drawings, particularly to Fig. 1, 1 designates the head of a household implement, and screwed to the head as shown at 2 is a plate 3, provided with upstanding arms 4. A cylindrical tubular socket 5, though not necessarily, is pivoted at 6, between the upstanding arms 4. The socket 5 is open at one end as shown and closed at its opposite end, and is provided with interior threads 7, which are engaged by threads 8 of a handle 9. The marginal edge of the open end of the socket is provided with a plurality of openings 11, as shown in Figs. 1, 3 and 4. Each of the handles shown in Figs. 1 to 4 inclusive, is provided with a longitudinally arranged recess 12, in which the spring retaining device 13 is positioned. The spring retaining device consists of a length of suitable spring wire material, bent at one end, as indicated at 14, to form an anchoring shank 15. This shank extends into the handle, as shown clearly in Fig. 4, on an angle relatively to the handle in order to hold the retaining device in the recess or channel 12. The shank 15 is also sharpened, so that it can be driven into the wood of the handle. The retaining device, near its other end, is bent upon itself as indicated at 16, 17 and 18, so as to form a lateral loop arm 19, adapted to be grasped by the thumb and index finger, whereby the spring retaining device may be sprung outwardly from the handle. The spring retaining device beyond the loop arm is extended, and the extremity of the extended part terminates in a lateral lug or finger 20, which is designed to engage in one of the openings 11 in the wall of the socket.

The handle is first attached to the socket by screwing the same therein, and when the threaded extremity of the handle reaches

a position very close to home, the spring retaining device is sprung outwardly and maintained in such position, until the handle is eventually screwed home. The retaining device is then released, allowing the lug 20 to enter one of the openings 11, thereby preventing the handle from turning and unscrewing from the socket.

In Fig. 2 the head of the implement is provided with notches 21, in lieu of the openings 11. These notches 21 are arranged adjacent the marginal edge of the open end of the socket, and either one of them may be engaged by the lateral lug or finger 20 of the spring retaining device, thereby preventing the handle from unscrewing out of the socket of the head 1, shown in Fig. 2.

In Fig. 5 of the drawing the lateral loop arm 19 is eliminated, and furthermore the particular form of shank 15 shown in Fig. 4 is displaced by substituting an anchoring arm 22. This anchoring arm 22 extends entirely transversely of the handle and its extremity is bent to form a lateral part 23, to prevent the arm 22 from detaching. The spring retaining device 24 in Fig. 5 also engages an elongated recess or channel 25. The retaining device 24 in Fig. 5 is normally sprung outwardly from the handle, and its lateral or angularly extending lug 26 engages a recess 27, near one end of the channel or recess 25. It is to be noted that in all handles equipped with retaining devices such as indicated at 24, in Fig. 5, it is necessary to utilize a socket having its wall provided with notches 28 instead of openings 11.

It is necessary in this case to depress the retaining device 24, so that it may be entirely received by the channel 25, so that the handle can be unscrewed. When the retaining device 24 is depressed, it will assume a position under the wall of the socket, so that the handle may be rotated and detached.

The retaining latch may be applied to any construction of handle or socket, either of the threaded type or the non-threaded type or to any other kind of handle receiving member.

The invention having been set forth, what is claimed as new and useful is:

An implement head provided with an internally threaded socket, the marginal edge of which having latch receiving notches, a handle engaging and threaded in said socket, said handle adjacent the socket having an elongated channel extending in a direction longitudinally of the handle and from the socket and terminating at one end in an aperture positioned in a direction angularly of the handle and at its other end in an aperture through the handle and having a grooved extension, a latch comprising a single length of spring wire having one end bent angularly and depressibly engaging the angular extension of the channel with its bent portion overlying the marginal edge of the socket to engage any one of said notches in the socket, thereby holding the head in different positions rotatably relatively to the handle and preventing the handle from disengaging the socket, the other end of the latch passing through the aperture which is formed through the handle, said other end of the latch terminating in a lateral lug extending in a direction to engage the grooved extension, thereby preventing rotatable displacement of the latch.

In testimony whereof I hereunto affix my signature.

FRANK C. DAVIS.