Oct. 28, 1930. A. F. GILLET 1,779,427

BROOM HOLDER

Filed April 12, 1930

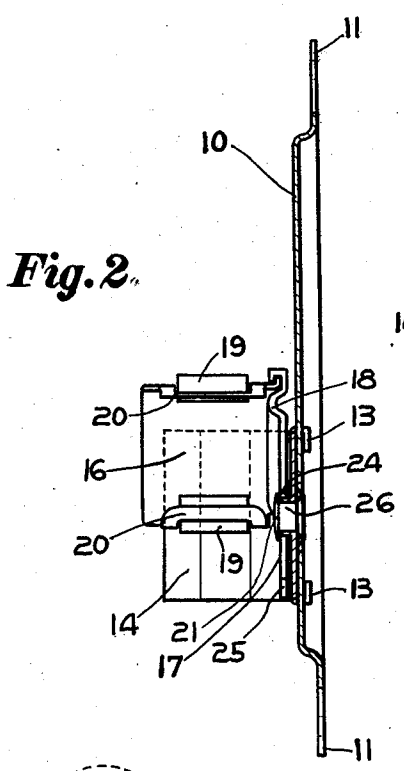


Fig. 2.

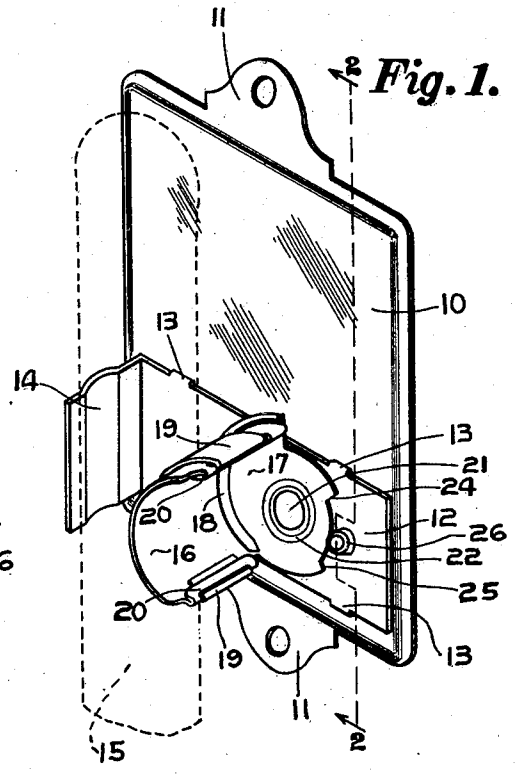


Fig. 1.

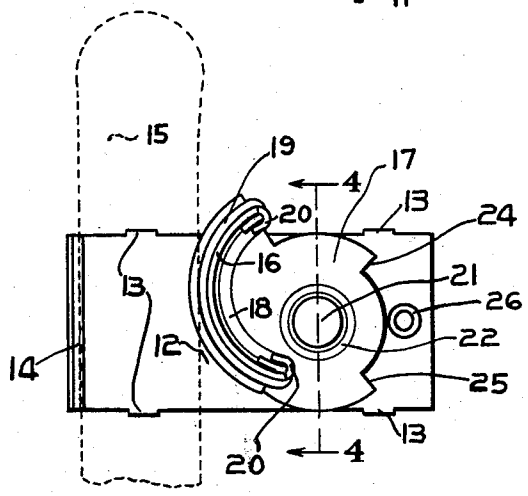
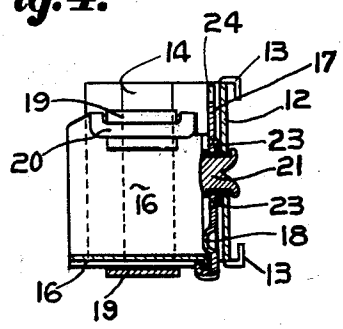


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE

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BROOM HOLDER

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The present invention relates to broom holders, and has for an object to provide an improved structure of broom holder wherein the broom is supported by its weight acting upon a cam jaw in opposition to a fixed jaw, the jaws being arranged in a relatively novel manner and so peculiarly associated as to provide a relatively strong sheet metal structure, having few parts and capable of withstanding rough usage.

Another object of the present invention is to provide a novel structure of cam jaw which is so disposed upon the holder that the broom handle may be quickly and easily entered into position between the fixed and movable jaws of the holder without requiring any manual manipulation of the parts and by merely introducing the handle of the broom and elevating the same to the desired height above the floor so that upon the downward movement of the broom handle the latter will automatically actuate the movable jaw and bind the handle in suspended position.

Another feature of the present invention is to provide a holder of this type for brooms, mops or other devices, and which is provided with a yielding facing or strip upon the binding jaw so mounted and disposed that the strip may be readily mounted on the jaw and renewed when occasion requires, and wherein the two jaws are provided with a relatively rigid and strong connecting piece or plate so as to resist the bending and separation of the jaws and to thus strengthen the holder with material of the desired thickness and strength only at those portions where such thickness and strength are required, thus reducing the cost of the production of the holder and providing a general structure which may be economically produced and which will stand up during use.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a perspective view of a broom holder embodying the features of this invention and shown in position and supporting a handle of a broom or the like, the handle being shown in dotted line.

Figure 2 is a vertical section taken through one side of the same substantially on the line 2—2 of Figure 1 and in position to receive a handle.

Figure 3 is a detail front elevation of the jaws and their connecting parts, removed from the wall plate, and

Figure 4 is a transverse section taken through the same substantially on the line 4—4 of Figure 3.

Referring now to the drawing, and first to Figures 1 and 2, 10 designates a wall plate of any suitable shape and configuration and which is preferably flat so as to lie closely against a wall or other suitable support and which may be provided at its upper and lower ends with outstanding ears 11 suitably apertured for the reception of screws, nails or the like for securing the wall plate 10 against the support.

The wall plate 10 is provided preferably near its lower end with the handle engaging means so that the latter may be more ably supported upon the plate 10 when in position as the direct weight of the handle when in plane will be sustained by the lower ear 11 and the upper ear 11 will have less tendency to break away outwardly from the wall or support.

The handle engaging means comprises a relatively stiff strong plate which may be termed "the jaw plate" and indicated at 12. The plate 12 is provided near its opposite ends and at its upper and lower edges with integral tongues 13 which extend rearwardly through slots formed in the wall plate 10 and which are overturned against the rear side of the wall plate for holding the jaw plate 12 across the lower end portion thereof.

It will be noted that the intermediate portion of the wall plate 10 may be offset outwardly so as to provide ample space at the rear of the wall plate for accommodating the tongues 13. One end of the jaw plate 12, preferably the left-hand end as shown in the

present embodiment, is bent outwardly at substantially right angles to the jaw plate 12 to provide a fixed outwardly extending jaw 14.

The fixed jaw 14 is adapted to receive one side of a handle 15 thereagainst, the handle 15 being shown in dotted line in Figures 1 and 3. The jaw 14 may be provided with a vertically extending and outwardly pressed crimp or bead adapted to conform to some extent to the exterior cylindrical surface of the handle 15.

Near the opposite end of the jaw plate 12 is mounted the pivoted or movable cam jaw 16. This jaw 16 comprises a curved plate which is of substantially the same width as the fixed jaw 14 but which may extend slightly beyond the same for the purpose of facilitating the introduction of the handle 15 between the jaws, and which at its inner edge is secured to the outer marginal edge portion of a cam disc 17 in any suitable manner, such as by rolling over the outer edge portion of the disc 17 as shown in Figure 2 to engage with the out-turned or flanged inner edge of the jaw 16 so as to provide an interlock between the disc 17 and the jaw 16. To further strengthen the jaw 16 against the pressure to which it is subjected, the disc 17 may be provided with an arcuate bead 18 lying immediately against the inner side of the jaw 16 to form a supporting shoulder therefor and to hold the inner edge portion of the jaw 16 beneath the rolled over bead or edge of the disc 17.

With reference to Figure 3 in particular, it will be noted that the movable jaw 16 is arranged opposite to the fixed jaw 14 and that the upper end portion of the jaw 16 is spaced further away from the central portion of the disc 17 than is the lower end of the movable jaw 16, and that the movable jaw 16 is curved on an arc the radius of which is struck from a center located above the axial center of the disc 17.

Extending over the outer surface of the movable jaw 16 is a yieldable pad 19 which may be in the form of a strip of rubber which has its opposite ends turned over the opposite edge or end portions of the jaw 16 and secured against the inner surface thereof by slotted tongues 20 which are integral with the jaw 16 and overturned against the rear side thereof, the ends of the yieldable strip or pad 19 extending through the slots in the tongues 20 and being compressed beneath the free end portions of the tongues when the latter are bent inwardly against the inner side of the jaw.

These tongues 20 may be raised sufficiently to release the ends of the pad 19 when the latter is worn or broken so as to introduce a new pad when necessary, the tongues 20 being then compressed or bent down against the rear side of the jaw 16 for holding the new pad in place.

The disc 17 is provided at its axial center with a supporting rivet or portion 21 which has a head or enlargement upon its outer end adapted to bear against the outer side of the disc 17 and which at its inner end is expanded or overturned against the rear side of the jaw plate 12 as shown particularly in Figure 4. The disc 17 may be reinforced about its axial opening through which the pivot 21 engages by an outwardly pressed bead 22, and a spacer 23 may be interposed between the jaw plate 12 and the rear side of the disc 17 for reducing the frictional contact between the disc and the plate.

The movable jaw 16 is mounted upon the edge portion of the disc 17 at one side of the pivot 21 and tends to normally swing the disc 17 in a direction to lower the movable jaw 16. The opposite side of the disc 17 is provided with a recess forming stop shoulders 24 and 25 adapted to engage a stop 26 which is carried by the jaw plate 12 and preferably pressed outwardly therefrom and lying in the recess of the disc 17 so as to alternately engage with the shoulders 24 and 25.

Normally, the jaw 16 hangs downwardly with the stop shoulder 25 against the underside of the stop 26, and the stop shoulder 24 is adapted to limit the upward swinging movement of the jaw 16 so that the latter cannot swing beyond such point that the jaw 16 by its weight will not swing back into normal position.

In use, the wall plate 10 is secured against a wall or support in vertical position as shown in Figure 1, and when the handle is not suspended in the device the jaw 16 swings down into a lower position with the upper end of the jaw approaching the fixed jaw 14. To suspend a broom handle or the like 15 in the device, the upper end of the handle may be inserted upwardly between the jaws 16 and 14, or an intermediate portion of the handle may be introduced between the jaws and pushed upwardly so as to swing the movable jaw 16 upwardly and increase the size of the jaw opening sufficiently to freely receive the handle. In either event, the weight of the jaw 16 tends to swing the same downwardly against the inner side of the handle 15 and force the handle over against the fixed jaw 14. The resilient pad 19 is adapted to bear frictionally against and to conform to some extent to the inner rounded surface of the handle 15 so as to provide sufficient frictional contact to prevent the slipping of the handle 15 downwardly between the jaws 14 and 16.

The weight of the handle 15 and the implement secured thereto is sufficient to tend to swing the jaw 16 downwardly and to thus bind the jaw more firmly against the handle 15 and thus more firmly bind the handle

against the fixed jaw 14 so that the handle 15 cannot slide downwardly between the jaws on account of the cam action of the movable jaw 16.

To release the handle 15 it is only necessary to slightly raise the same and at the same time draw the handle outwardly from between the jaws. This movement causes the moveable jaw 16 to swing upwardly and increase the size of the jaw opening so that the handle 15 may be easily drawn out of the holder.

Another feature of the present invention is that the yieldable pad 19 is preferably of less width than that of the movable jaw 16 and the movable jaw 16 extends outwardly from the outer edge of the pad 19 so as to increase the size of the jaw opening at the outer edge portion of the movable jaw 16. This admits of the ready positioning and removal of the handle 15 and prevents the movable jaw 16 from clinging to the handle as the latter is raised and removed from the holder.

This feature also admits of the easy introduction of the handle into position between the jaws for first swinging the movable jaw 16 upwardly by bearing the side of the handle thereagainst while the handle is moved upwardly and backwardly into position between the jaws.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A broom holder comprising a wall plate, a jaw plate fixedly secured across the lower portion of the wall plate and having one end out-turned to provide a fixed jaw, a disc pivotally mounted upon the jaw plate in spaced relation to the fixed jaw, an outstanding curved plate carried by the disc and arranged in eccentric relation to the pivotal support of the disc and with the upper end portion of the curved plate receding from the pivotal axis of the disc, and means for limiting the turning movement of the disc to maintain the curved plate within the limits of its length in position opposite to the fixed jaw.

2. A broom holder comprising a wall plate, a jaw plate secured across the lower portion of the wall plate and having one end out-turned to provide a fixed jaw, a cam disc pivotally mounted upon the outer face of said jaw plate in spaced relation to the fixed jaw, a movable jaw comprising a curved plate secured to the outer edge of said cam disc and being curved to the configuration of the cam disc for varying the size of the jaw opening between the fixed and movable jaws, the opposite edge portion of the cam disc being recessed and having opposed shoulders at the opposite ends of the recess, a stop extending outwardly from the jaw plate lying in said recess and adapted to engage said shoulders for limiting the turning movement of the cam disc and the raising and lowering of said movable jaw, and a resilient pad mounted upon the outer surface of said movable jaw adapted to yieldably bind a handle between the jaws.

3. A broom holder comprising a wall plate, a jaw plate secured across the lower end portion of the wall plate, one end of said jaw plate being out-turned to provide a fixed jaw, a cam disc pivotally mounted on the jaw plate in spaced relation to the fixed jaw and having an outwardly extending plate curved into cam formation and having its outer surface arranged opposite to the gripping surface of the fixed jaw, said curved plate having slotted tongues at its opposite ends turned inwardly against the inner side of the plate, and a resilient strip secured across the outer side of the cam plate and having its end portion engaging through the slots in said tongues and secured against the tongues against the inner side of the curved plate.

4. A broom holder comprising a wall plate having means for attaching the same to a wall, a jaw plate fixedly secured across the lower portion of the wall plate and provided at one end with an outstanding fixed jaw, a cam disc pivotally mounted upon the outer face of said jaw plate in spaced relation to the fixed jaw, a jaw carried by the disc for advancing toward the fixed jaw during the downward movement of the cam disc, the opposite edge portions of the cam disc being recessed and having opposed shoulders at the opposite ends of the recess, a stop extending outwardly from the jaw plate lying in said recess and adapted to engage said shoulders for limiting the turning movement of the cam disc.

In testimony whereof, I have affixed my signature.

ALEXIS F. GILLET.