March 5, 1935. H. A. SODERBERG 1,993,571

HOLDER FOR SHEET MATERIAL

Filed Oct. 20, 1934

Fig. 1.

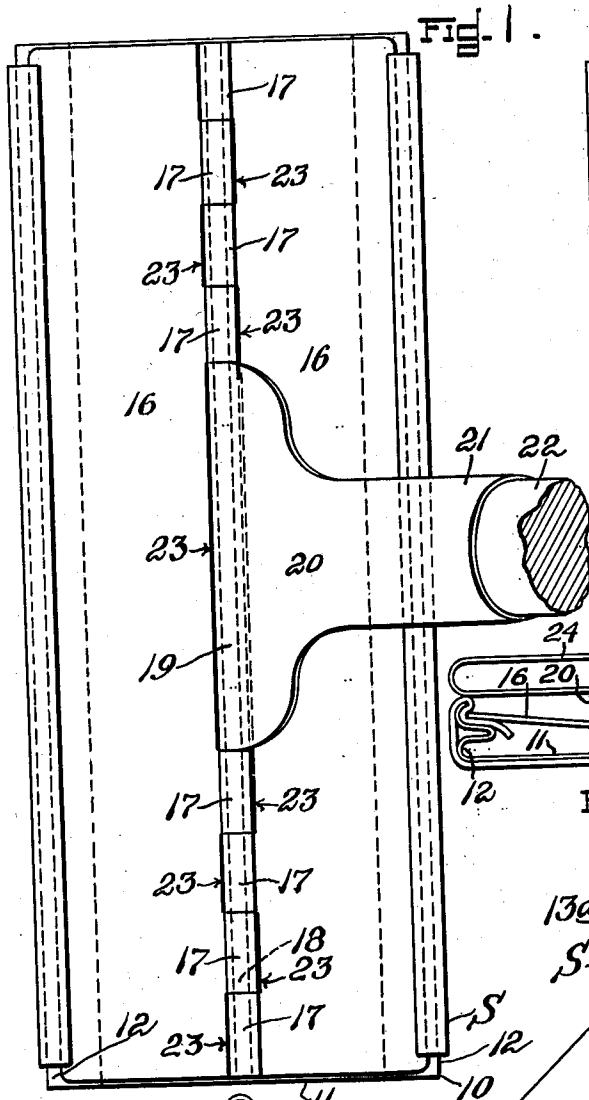


Fig. 2.

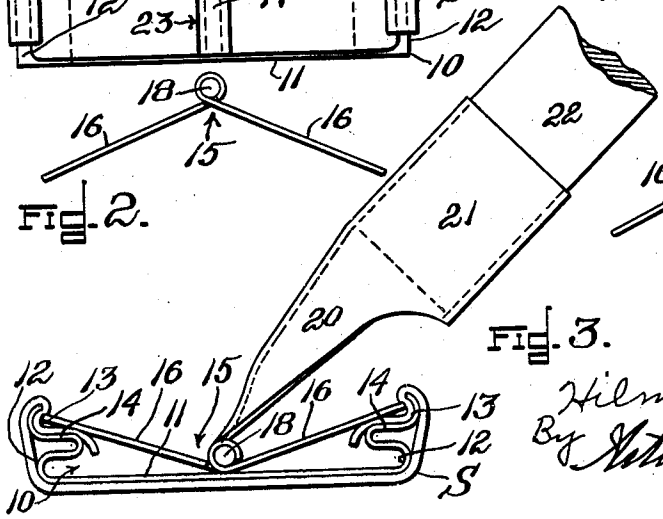


Fig. 3.

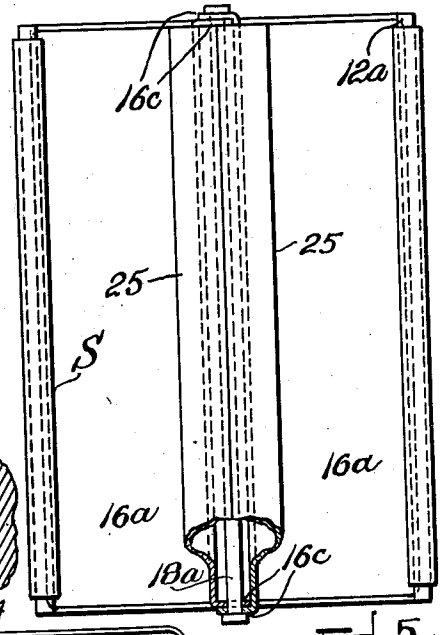


Fig. 5.

Fig. 4.

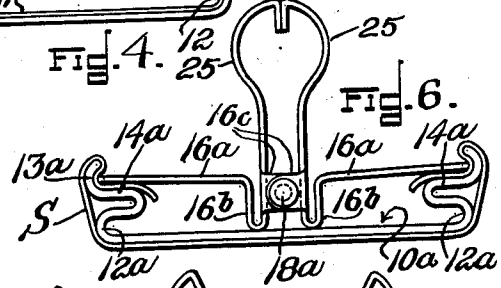


Fig. 6.

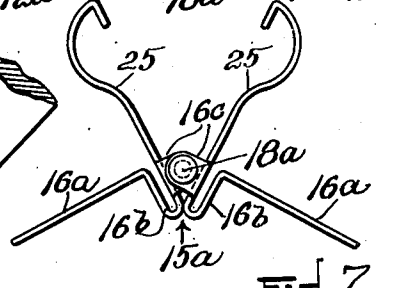


Fig. 7.

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Patented Mar. 5, 1935 1,993,571

UNITED STATES PATENT OFFICE

1,993,571

HOLDER FOR SHEET MATERIAL

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Application October 20, 1934, Serial No. 749,318

9 Claims. (Cl. 15—231)

My invention relates to holders for sheet material such as a piece of sandpaper, pile fabric, blotting paper or the like, and it has for its object to provide an improved holder of this class.

To this end I have provided an improved holder of the character described having the novel features of construction and operation set forth in the following description, the several features of the invention being separately pointed out and defined in the claims at the close thereof.

In the accompanying drawing:

Figure 1 is a top plan view of a holder of the character described embodying one form of my invention.

Figure 2 is a side elevation of the clamping member of the holder illustrated in Fig. 1.

Figure 3 is a side elevation of the holder illustrated in Fig. 1.

Figure 4 is a side elevation of another form of holder constructed in accordance with my invention.

Fig. 5 is a top plan view, partly broken away and in section, of a third form of holder constructed in accordance with my invention.

Figure 6 is a side elevation of the holder shown in Fig. 5.

Figure 7 is a side elevation of the clamping member of the holder illustrated in Figs. 5 and 6 showing the same in its contracted condition.

The embodiment of my invention illustrated in Figs. 1, 2 and 3 comprises a sheet metal base member that is indicated generally at 10 and a toggle clamping member that is indicated generally at 15. The base member 10 comprises a flat intermediate panel or portion 11 whose front and rear marginal portions are bent upwardly to provide a pair of upstanding resilient walls 12 each of which is a counterpart of the other in shape.

Each resilient wall 12 is bent so as to provide a socket 13 adjacent to the top edge of the wall and upon the inner side thereof and a shelf or ledge 14 at the bottom of socket 13 and also upon the inner side of the wall.

The toggle clamping member 15 comprises a pair of sheet metal toggle-jaws 16 each constructed along its inner side with spaced apart eyes 17 which alternate and are alined with the eyes 17 of the other jaw with which they are pivotally connected by a single long pintle 18 extending through all of the eyes of both jaws.

The intermediate portion of pintle 18 between the two innermost eyes 17 of one of the jaws 16 extends through an elongate eye 19 provided at the lower end of an arm 20 forming part of a sheet metal ferrule 21 which is fixedly mounted upon and forms part of the lower end of a wooden staff 22. In this way the two toggle jaws 16 are pivotally connected together and also to the lower end of staff 22, the pintle 18 and eyes 17 constituting the middle joint of the toggle structure.

The edge portions 23 of each toggle-jaw which alternate with the eyes 17 thereof provide stop shoulders for engagement with the other toggle-jaw thereby to limit the buckling or inward swing of the toggle-jaws 16 relatively on the axis of pintle 18 as shown in Fig. 2.

When the toggle structure is thus contracted or shortened the distance between the free edge of one jaw and the free edge of the other jaw is substantiallly less than the distance between the top edge of one wall 12 of the base member and the top edge of the other wall 12 so that the toggle structure can be placed between said two walls while it is in its contracted condition illustrated in Fig. 2.

The sheet material S that is to be used with the holder is wrapped around the outside of the bottom wall 11 and side walls 12 of the base member, and its opposite front and rear marginal portions are folded over the tops of walls 12 into the interior of the base member 10. Then, while maintained in its contracted condition shown in Fig. 2, the toggle structure is inserted within the base member between the upper portions of the side walls 12 and the marginal portions of the sheet material that are within the base member.

As will be clear, the shelves 14 serve to maintain the outer free ends of the toggle-jaws 16 opposite the sockets 13 so that as the pintle 18 is forced bodily sidewise toward and into the base member the toggle structure forces the sheet material S into the sockets at the same time flexing the two walls 12 outwardly until pintle 18 passes the "dead center" position whereupon the flexed walls 12 force and hold the middle joint of the toggle against the bottom wall of the base member so that there is no relaxation of the grip of the device on the sheet material during use.

The above described form of my invention is primarily intended for use in waxing or otherwise operating upon a floor, the staff or handle 22 permitting the user to operate while standing.

In the form of my invention illustrated in Fig. 4 the base member is constructed as described in connection with Figs. 1, 2 and 3, but in Fig. 4 the arm 20 of the clamping member is an integral part of a sheet metal handle 24 which is made of sufficient width to seat upon the parts of the

sheet material that are bent around the top edges of the resilient walls 12 of the holder when the pintle 18 is forced beyond the "dead center" position of the toggle structure to clamp the sheet material and before the middle joint of the toggle structure engages the bottom wall 11 of the base member.

Thus, while the holder of Fig. 4 is in use with the walls 12 somewhat flexed outwardly, the sheet material is gripped between the handle 24 and each side wall 12 and also between the ends of the toggle-jaws and said walls.

The embodiment of my invention illustrated in Figs. 5, 6 and 7 comprises a sheet metal base member that is indicated generally at 10^a and which may, as shown, be of the same shape as the base members heretofore described, but which differs from the latter in that the side walls 12^a of Fig. 4 are rigid and co-operate with toggle-jaws 16^a which are radiantly resilient. Each jaw 16^a is rendered resilient radially by forming the same with a laterally extending loop 16^b adjacent to the pintle 18^a by which the two toggle-jaws are pivotally connected.

Each toggle-jaw 16^a is a molded piece of sheet metal provided at opposite sides thereof with apertured ears 16^c which occupy positions immediately alongside the corresponding ears of the other jaw member, the pintle 18^a extending through the apertures of all of the ears.

The loops 16^b are vertical and perpendicular to the outer flat portions of the jaws 16^a and of such length that when pivot pintle 18^a is inside of straight line intersecting the outer ends of the jaws 16^a, or in other words substantially inside of its position of "dead center", the outer ends of the jaws are in clamping engagement with the portions of the sheet material S within the sockets of the side walls 12^a; the loops 16^b are flexed and under stress and the ends of the loops are held in abutting engagement with the bottom wall of the base member.

The inner leg of each loop 16^b is extended upwardly to provide a handle section 25 and when the toggle-structure occupies clamping position within the base member 10^a these two sections are held against each other to provide a handle for the holder by means of which it is manipulated.

The toggle structure is removed from the base member by buckling the same upwardly and this may be accomplished by pulling in opposite directions upon the upper ends of the handle sections 25.

When the clamping toggle is removed from the base member the handle sections 25 can be swung apart until the loops 16^b are brought into abutting engagement which limits the relative movement of the toggle-jaws in this direction.

When the loops 16^b are thus brought into abutting engagement as shown in Fig. 7, the distance between the outer ends of the toggle-jaws 16^a is greater than the distance between the inner sides of the shelves 14^a of the base member and substantially less than the distance between the tops of the side walls 12^a. When the toggle structure is straightened while outside of the base member the distance between the outer ends of the toggle-jaws is preferably approximately the same as, or slightly greater than, the distance between the bottoms of the sockets 13^a near the tops of the walls 12^a.

What I claim is:

1. A holder of the character described comprising a base member made with a bottom wall to serve as a backing for the intermediate portion of a piece of sheet material and two oppositely disposed upstanding side walls around which opposite side marginal portions of said material are bent inwardly; and a toggle clamping member insertable between said walls and said inturned marginal portions, said clamping member comprising a pair of pivotally connected toggle jaws whose free ends are engageable with said marginal portions to clamp the same against the inner sides of said walls when the toggle member is extended through movement of its pivot toward said base member through a plane intersecting said ends.

2. A holder of the character described comprising a base member made with a bottom wall to serve as a backing for the intermediate portion of a piece of sheet material and two oppositely disposed upstanding side walls around which opposite side marginal portions of said material are bent inwardly; a toggle clamping member insertable between said walls and said inturned marginal portions, said clamping member comprising a pair of pivotally connected toggle jaws whose free ends are engageable with said marginal portions to clamp the same against the inner sides of said walls when the toggle member is extended through movement of its pivot toward said base member through a plane intersecting said ends, and stop means for limiting the movement of said pivot toward said base member.

3. A holder of the character described constructed in accordance with claim 1 wherein one of said members is made resilient so that said toggle member is yieldingly held in clamping position by the spring action thereof.

4. A holder of the character described constructed in accordance with claim 1 wherein said walls are made laterally resilient so that said toggle member is yieldingly held in clamping position by the spring action thereof.

5. A holder of the character described constructed in accordance with claim 1 wherein said toggle jaws are made longitudinally resilient so that said toggle member yieldingly holds itself in clamping position.

6. A holder of the character described constructed in accordance with claim 1 wherein said toggle member is provided with an upwardly extending handle.

7. A holder of the character described constructed in accordance with claim 1 wherein said toggle member is provided with an upwardly extending handle element pivotally connected therewith coincidentally with the pivotal connection of said jaws and whose width is greater than the distance between the tops of said side walls; wherein one of said members is made resilient so that said toggle member is yieldingly held in clamping position by the spring action thereof, and wherein said handle is held clamped downwardly against the portions of said material extending over the tops of said walls by said spring action.

8. A holder of the character described constructed in accordance with claim 1 wherein one of said members is made resilient so that said toggle member is yieldingly held in clamping position by the spring action thereof, and wherein each toggle jaw is made with an upwardly extending handle-section which is disposed alongside of the corresponding handle section of the other jaw when said toggle member occupies its

clamping position thereby to provide an upstanding handle for the holder.

9. A holder of the character described constructed in accordance with claim 1 wherein said toggle member is provided with an upwardly extending handle element pivotally connected therewith coincidentally with the pivotal connection of said jaws, and wherein one of said members is made resilient so that said toggle member is yieldingly held in clamping position by the spring action thereof.

HILMER A. SODERBERG.