Dec. 9, 1958 A. N. HANNA 2,863,202

PAPER CLAMP OR THE LIKE

Filed Oct. 21, 1957

FIG. 1

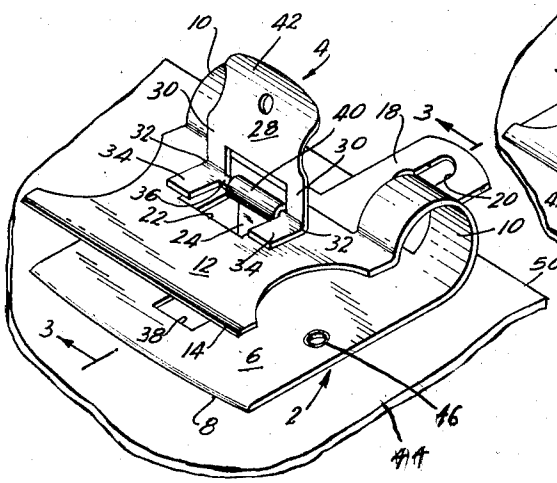
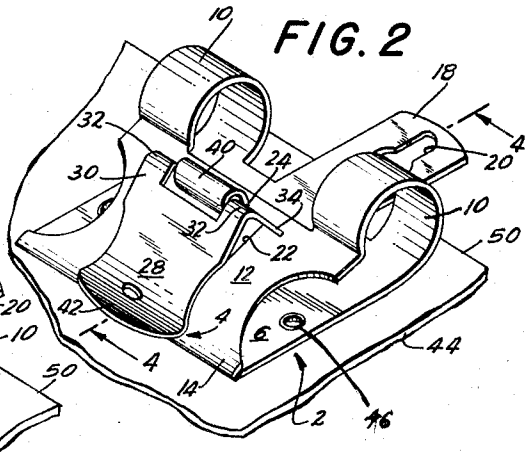


FIG. 2



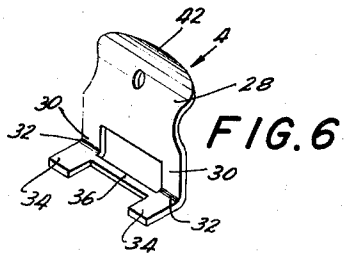


FIG. 6

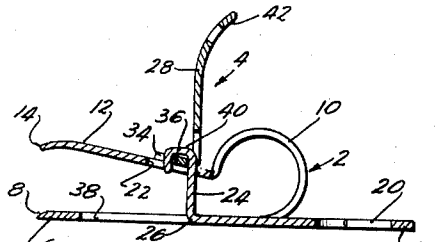


FIG. 3

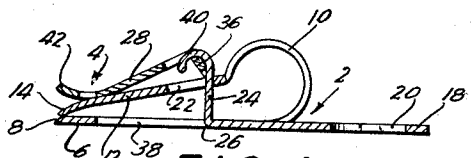


FIG. 4

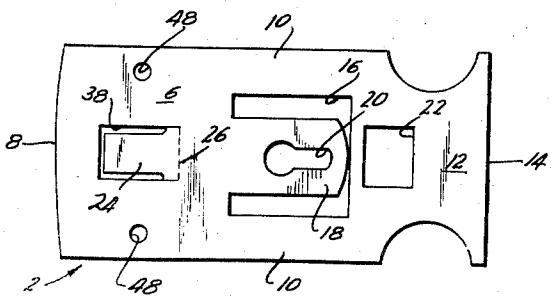


FIG. 5

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PAPER CLAMP OR THE LIKE

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8 Claims. (Cl. 24—258)

The present invention relates to a clamp adapted to hold and release sheets of paper or the like. It is disclosed embodied in that type of article commonly termed a clip board, but it can be used independently or in other surroundings.

The clamp construction here disclosed is characterized by extreme simplicity of construction and economy of manufacture. It nevertheless performs its designed functions in a manner no less satisfactory than the more complex prior art constructions which have been devised, and in addition exhibits certain advantageous functional features which derive from its unique construction.

The clamp is formed in but two pieces, one of which comprises the clamp proper and the other of which comprises the operating element which, when manually manipulated, causes the clamp to grasp or release the sheets of paper or other material which may be presented to it. Each of these parts may be inexpensively formed from sheets of appropriate material by conventional stamping and bending operations. The two parts may be assembled in an exceedingly simple manner well within the abilities of even the most unskilled labor. The clamp is so designed that it may be opened to an exceptionally large degree and closed with a high degree of security, thus permitting it to operate effectively to grasp a large number of sheets or even a single sheet. The structure is such as to provide, between the clamping jaws, a stop positioned rearwardly of the forward edge of the clamp and adapted to engage the sheets to be clamped and to limit their penetration into the clamp.

To the accomplishment of the above, and to such other objects as may hereinafter appear, the present invention relates to the structure of a clamp for sheets of paper or the like as defined in the appended claims and as described in this specification, taken together with the accompanying drawings, in which:

Fig. 1 is a three-quarter perspective view of the clamp of the present invention embodied in a clip board, the clamp being shown in its open or releasing position;

Fig. 2 is a view similar to Fig. 1 but showing the clamp in its closed or clamping position;

Figs. 3 and 4 are cross sectional views of the clamp itself taken respectively along the lines 3—3 of Fig. 1 and 4—4 of Fig. 2;

Fig. 5 is a top plan view of the blank from which the main portion of the clamp is formed; and

Fig. 6 is a three-quarter perspective view of the operating element therefor.

The clamp comprises a clamp proper generally designated 2 and an operating element generally designated 4. The clamp proper 2 is formed from the blank shown in Fig. 5 and adapted to be stamped or otherwise formed from a larger sheet of appropriate structural material such as spring steel. It comprises a base portion 6 having a forward edge 8 which may, as shown, be bevelled. Extending rearwardly therefrom are a pair of arms 10 spaced laterally from one another which carry at their outer end the clamping member 12 having a forward or free edge

14. In the space 16 between the arms 10 is a projecting portion 18 having an aperture 20 formed therein, the aperture 20 being illustrated as of keyhole shape. The clamping member 12 is provided, longitudinally inwardly from its edge 14, with an opening 22. The base 6, over an area thereof axially inwardly spaced from its forward edge 8, is provided with a tongue or finger 24 cut from the body of the base 6 along its sides and end and connected to that body at its other end along line 26.

The operating element, shown in Fig. 6, comprises a manually graspable portion 28 from which a pair of spaced arms 30 extend, those arms being bent along the lines 32 so as to produce actuating portions 34 which extend substantially at right angles to the manually graspable portion 28. A bar 36 extends between the actuating portions 34 adjacent the lines 32.

To form the clamp from the parts 2 and 4 the tongue or finger 24 is bent up from the base 6 around the line 26, thereby leaving the space 38 in the base 6, and its end is curled over into open-bottomed hook form, as at 40. The clamping member 12 is then swung over so as to overlie the base 6, the arms 10 bending as illustrated, the upstanding finger 24 passing through the opening 22 in the clamping member 12. Since the material of which the blank 5 is formed is resilient, it will be apparent that the arms 10 will tend to urge the clamping member 12 upwardly to a position remote from the base 6. While the clamping member 12 is manually pressed down toward the base 6 so that the curved tip 40 of the finger 24 which passes through the opening 22 is positioned above the upper surface of the clamping member 12, the cross bar 36 of the operating element 4 is moved into the finger portion 40. The clamping member 12 is then released and the clamp is completely assembled.

The biasing tendency of the resilient arms 10 on the clamping member 12, intending to move the clamping member 12 upwardly away from the base 6, ensures that the operating element 4 is retained in position with its cross bar 36 held within the finger portion 40, the width of the operating element 4 being greater than the width of the clamping member opening 22.

When the operating element 4 is in its position shown in Figs. 1 and 3, in which the actuating portions 34 thereof lie atop and parallel to the clamping member 12, the clamping member 12 will be spaced rather widely from the base 6, thus permitting a large number of sheets or, if desired, even a single sheet, to be inserted between the clamping member 12 and the base 6. The extent to which sheets may be thus inserted is limited by the upstanding finger 24, located substantially centrally of the width of the clamp and constituting a positive stop for the sheets to be clamped. When the operating element 4 is swung to its position shown in Figs. 2 and 4 the actuating portions 34 thereof will extend downwardly from the cross bar 36 and will thus force the clamping member 12 downwardly against the action of the arms 10 toward and preferably into engagement with the base 6, thus firmly clamping between itself and the base 6 any sheets which may be interposed therebetween. In this position the manually graspable portion 28 will engage the upper surface of the clamping member 12, and may be provided with an upwardly curved tip 42 to facilitate manual grasping thereof. It will be noted that when the operating element 4 moves to its clamping position shown in Figs. 2 and 4 it does so in an overcenter manner, the actuating portions 34 thereof being moved in a counter-clockwise direction beyond the vertical, so that the resilient tendency of the clamping member 12 to rise serves to lock the operating element 4 in its clamping position. Moreover, since the clamping member 12 itself is resilient and is urged downwardly by means of the actuating portions 34 at points comparatively remote from its forward edge 14,

the clamp can accommodate either a single sheet or a thick stack of sheets of paper or the like. In the latter instance the clamping member **12** may itself bend about the points where the actuating portions **34** engage it, and the consequent positioning of the operating element **4** in a position pivoted somewhat in a clockwise direction from that shown in Fig. 4 will, because the actuating portions **34** will extend down from the finger portion **40** to a somewhat greater extent, provide for additional clamping force to be exerted beyond the thick stack of sheets.

The clamp may be used by itself, and may be hung on a wall by causing a nail or the like to pass through the aperture **20** in the projecting portion **18** or, as disclosed in Figs. 1 and 2, the base **6** may be secured to a backing board **44**, as by rivets **46** passing through apertures **48** in the base **6**. In this latter case the projection **18** will preferably extend beyond the rear edge **50** of the backing board **44** so that the entire "clip board" may be suspended if desired.

From the above it will be appreciated that the structure here disclosed, while exceedingly simple and inexpensive, will nonetheless function efficiently as a clamp, that it may be used effectively either with a single sheet or with a thick stack of sheets, and that by preventing excessive insertion of the sheets into the clamp it ensures that a maximum area of the sheets is available for inspection or to be written upon.

While but a single embodiment of the present invention has been here disclosed, it will be apparent that many variations may be made therein, all within the scope of the invention as defined in the following claims.

I claim:

1. A paper clamp comprising a base, a clamping member positioned above said base, movable between positions relatively close to and remote from said base, and connected to said base by a resilient arm biasing it to its position remote from said base, said clamping member having an opening spaced rearwardly from the forward edge thereof, said base having a finger extending up therefrom through said opening, said finger comprising a loop above said clamping member, and an operating element articulately mounted on said finger above said clamping member, operatively connected to said clamping member and effective when moved to cause said clamping member to move from one position thereof to the other, said operating element comprising a part rotatably received within said loop, an actuating portion extending from said part into engagement with said clamping member, and a manually graspable portion extending from said part at an angle to said actuating portion.

2. The paper clamp of claim 1, in which said base extends beneath said clamping member, and said finger is spaced rearwardly from the side edge of said base and is located substantially midway of the width of said clamping member.

3. The paper clamp of claim 2, in which all of said clamp except said operating element is formed from a unitary sheet of resilient material.

4. A paper clamp comprising a base, a clamping member spaced above said base, connected thereto by a pair of laterally spaced curved resilient arms, and movable between positions relatively close to and remote from said base, said arms biasing said clamping member to its position remote from said base, a projection from and substantially in the same plane as said base located between said arms, said projection having an aperture through which a suspending element is adapted to be received, said clamping member having an opening spaced rearwardly from the forward edge thereof, said base having a finger extending up therefrom through said opening, said finger comprising a loop above said clamping member, and an operating element articulately mounted on said finger above said clamping member, operatively connected to said clamping member and effective when moved to cause said clamping member to move from one position thereof to the other, said operating element comprising a part rotatably received within said loop, an actuating portion extending from said part into engagement with said clamping member, and a manually graspable portion extending from said part at an angle to said actuating portion.

5. The clamping member of claim 4, in which said base extends beneath said clamping member and said finger is spaced rearwardly from the forward edge of said base and is located substantially midway of the width of said clamping member.

6. A blank from which a portion of a paper clamp may be formed, said blank comprising a sheet of resilient material having adjacent one end a tab severed from said sheet along three sides and connected to said sheet along its fourth side, said sheet having adjacent its other end a first opening in line with and of a width greater than said tab, said sheet having lengthwise thereof between said tab and said first opening a second opening substantially centrally of the width of said sheet, the sides of said second opening being defined by comparatively narrow portions of said sheet, a portion of said sheet projecting longitudinally into said second opening in a direction toward said first opening, said sheet portion being adapted to engage with a suspending element.

7. The paper clamp of claim 4, in which all of said clamp except said operating element is formed from a unitary sheet of resilient material.

8. The paper clamp of claim 5, in which all of said clamp except said operating element is formed from a unitary sheet of resilient material.

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