April 19, 1966 C. M. GOODWIN 3,246,914

CLIP BOARD

Filed April 16, 1964 3 Sheets-Sheet 1

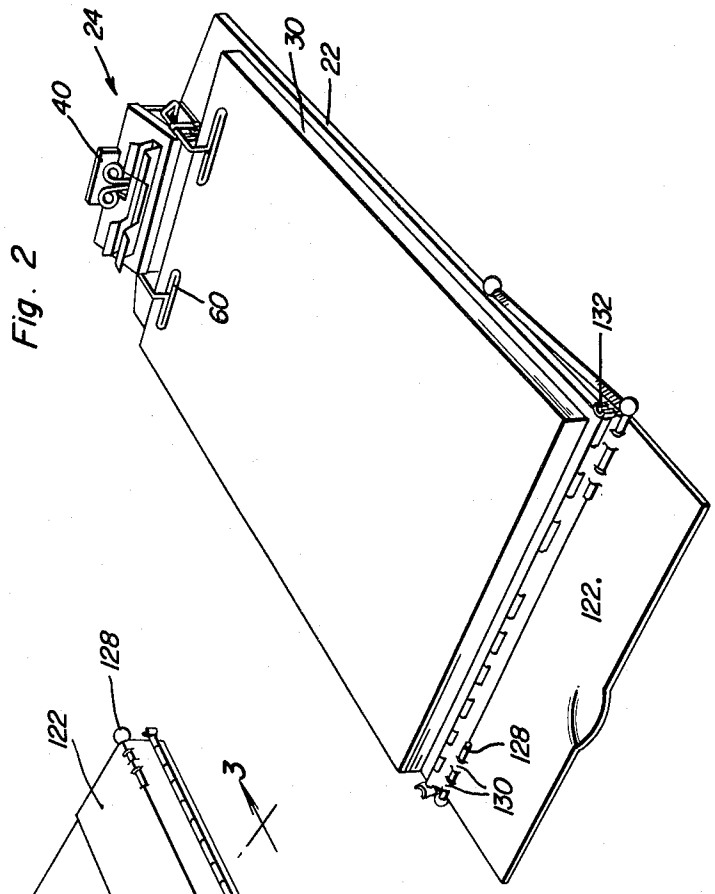


Fig. 2

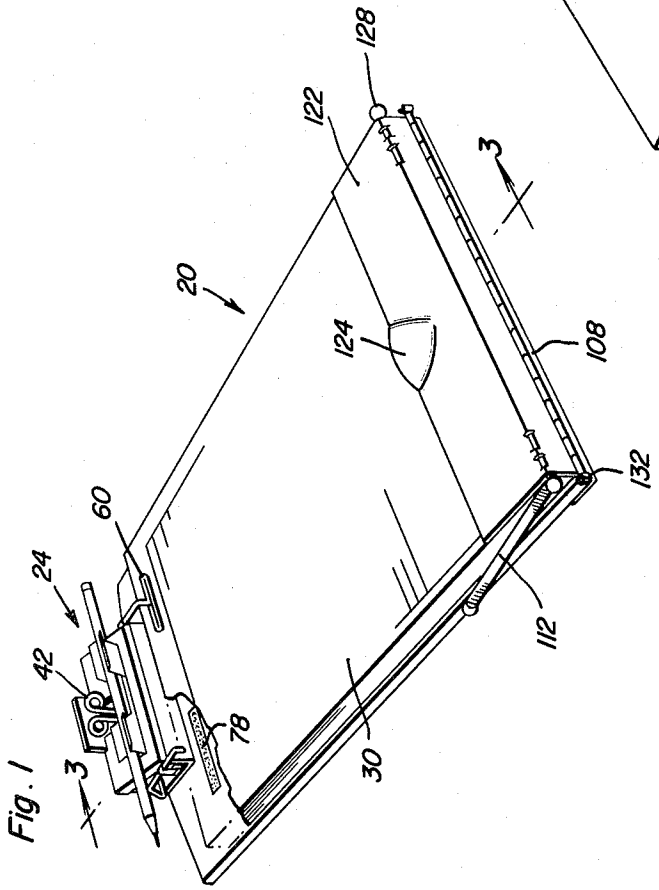


Fig. 1

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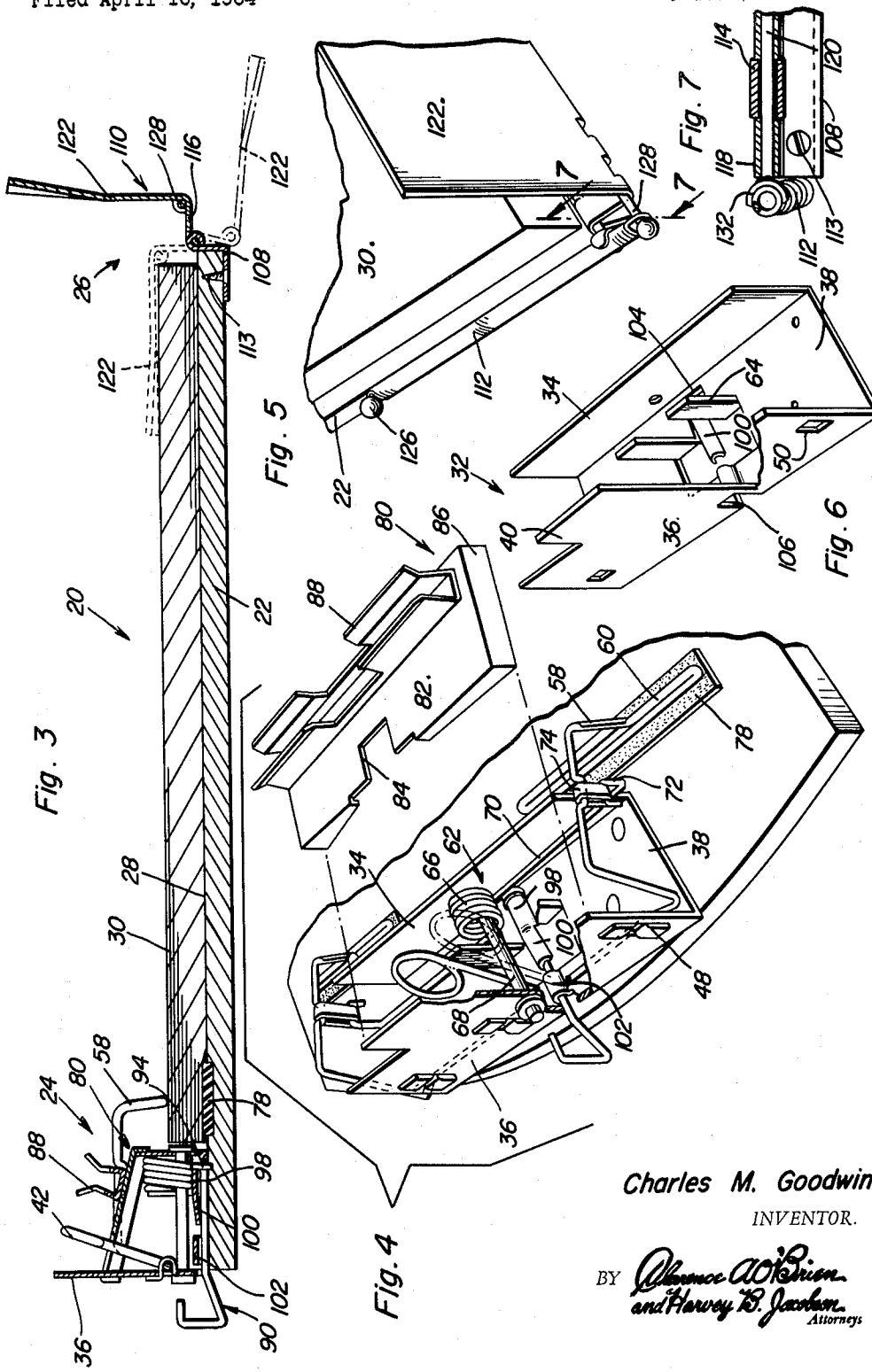
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April 19, 1966 C. M. GOODWIN 3,246,914

CLIP BOARD

Filed April 16, 1964 3 Sheets-Sheet 2



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April 19, 1966 C. M. GOODWIN 3,246,914

CLIP BOARD

Filed April 16, 1964 3 Sheets-Sheet 3

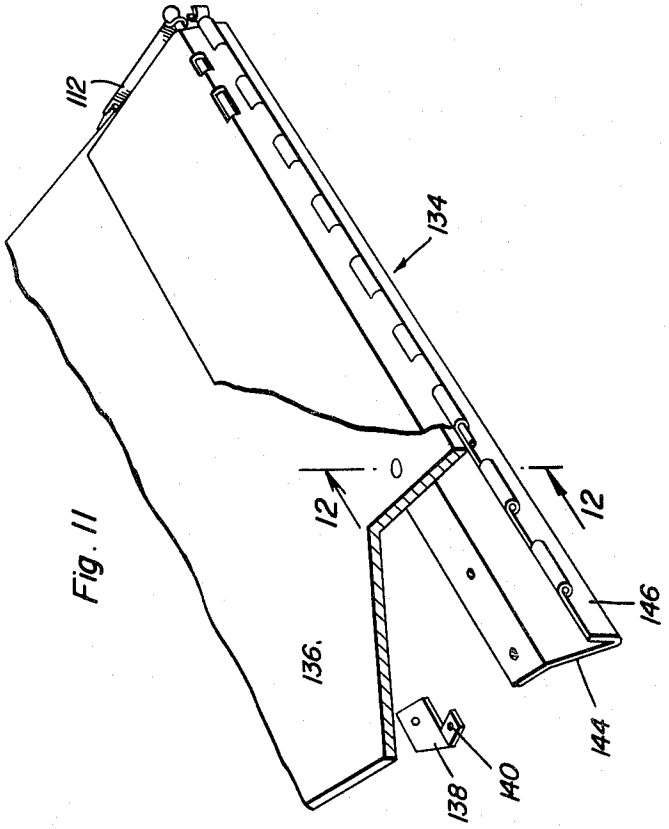


Fig. 11

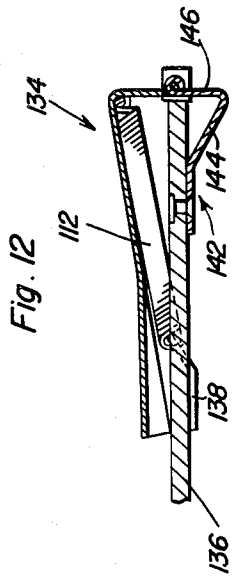


Fig. 12

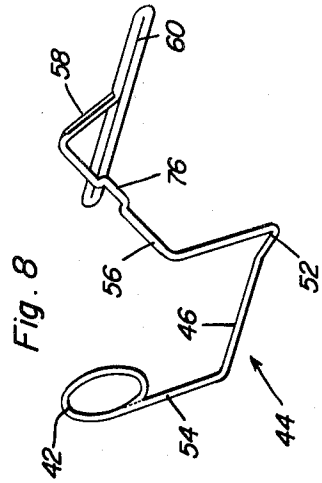


Fig. 8

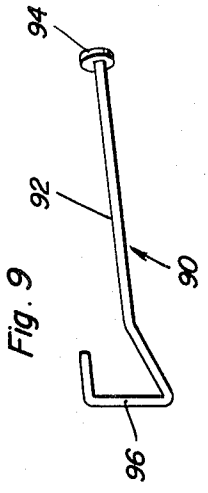


Fig. 9

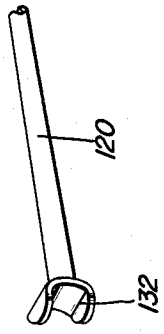


Fig. 10

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3,246,914

CLIP BOARD

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Filed Apr. 16, 1964, Ser. No. 360,257
7 Claims. (Cl. 281—44)

The present invention generally relates to clip boards, and is more particularly directed to a clip board incorporating novel means for fixedly retaining paper on the upper or writing surface thereof.

A primary object of the instant invention is to provide a means for enclosing and resiliently clamping the bottom portion of one or more sheets of paper to the upper surface of a clip board, this being done in conjunction with an independently releasable means for engaging and clamping the top portion of the paper.

Another significant object of the instant invention is to provide that the means for clamping the bottom of the paper be alternately useable as a means for aligning one or more sheets of paper, and further, as a hand rest extension on the lower end of the clip board for stabilizing the hand and arm when utilizing the upper surface of the board as a writing surface.

Furthermore, it is an object of the instant invention to provide means for resiliently retaining the bottom clamp means in each of its adjusted positions.

Also, it is an object of the instant invention to provide a novel means for clamping the top portion of paper to the clip board utilizing a pair of pressure members capable of being simultaneously or independently released.

In addition, it is an object of the instant invention to provide means mounted on the writing surface itself which cooperate with the pressure members so as to prevent movement of the clamped paper.

Further, it is an object of the instant invention to provide paper retaining pressure members which are formed so as to allow for adjustment to minor surface irregularities.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the clip board of the instant invention with portions thereof broken away for purposes of illustration;

FIGURE 2 is a perspective view similar to FIGURE 1 with the flap at the lower end thereof orientated for use as a hand or arm rest;

FIGURE 3 is an enlarged cross-sectional view taken substantially on a plane passing along line 3—3 in FIGURE 1;

FIGURE 4 is an exploded perspective view of the clamp means provided at the top of the clip board panel;

FIGURE 5 is a partial perspective view illustrating the means utilized in retaining the flap in one of its adjusted positions;

FIGURE 6 is a perspective view of the mounting base for the top clamp with a portion thereof broken away for purposes of illustration;

FIGURE 7 is a partial cross-sectional view taken substantially on a plane passing along line 7—7 of FIGURE 5 with the paper removed;

FIGURE 8 is a perspective view of one of the pressure members or arms;

FIGURE 9 is a perspective view of the hanging hook;

FIGURE 10 is a perspective view of one end portion of the flap hinge rod having a cradle or saddle shaped head thereon;

FIGURE 11 is a partial perspective view, with portions broken away, of the bottom end of a modified clip board panel having a modified flap mounting means thereon; and

FIGURE 12 is a partial cross-sectional view taken substantially on a plane passing along line 12—12 in FIGURE 11.

Referring now more specifically to the drawings, reference numeral 20 is used to generally designate the clip board comprising the instant invention. This clip board 20 consists basically of an elongated generally rectangular panel 22, a clamping means 24 mounted adjacent the top end of the panel 22, and an adjustable flap means 26 mounted on the bottom end of the panel 22.

The clamp means 24 is to be fixedly mounted on the upper surface 28 of the panel 22 adjacent the top end thereof, this upper surface 28 being flat so as to provide a writing surface upon which one or more papers 30 are to be received and retained in position by both the clamp means 24 and the flap means 26. The clamp means 24 includes a generally U-shaped mounting base 32 including front and rear parallel walls 34 and 36 interconnected in spaced relation by a flat bight portion 38 integral with the lower edges of each of the walls 34 and 36. The rear wall 36, which is of a greater height than the front wall 34, includes a coplanar centrally located upwardly projecting rigid tab or grip 40 for use as a fixed point toward which the handle loops 42 of the pressure arms 44 are drawn when raising or releasing these pressure arms 44.

Each of the two pressure arms 44 includes an elongated portion 46 rotatably mounted on the forward face of the rear wall 36 by a pair of bearing straps 48 having the opposite ends thereof extending through apertures 50 in the rear wall 36 and subsequently being bent in opposite directions. The elongated portions 46 of each of the pressure arms 44 extend in opposite directions from approximately the center of the rear wall 36 to points beyond the corresponding edges of the mounting base 32 with the outer end portions 52 of the portions 46 being angularly bent so as to prevent longitudinal movement of the pressure arm 44 within the bearing straps 48. Each of the pressure arms 44 further includes, integral with the inner ends of the elongated portions 46, upwardly and inwardly angled portions 54 terminating in the aforementioned loop handles 42. The angularly bent outer end of portion 52 of each of the pressure arm portions 46 has integrally formed therewith a portion 56 angled upwardly at an angle similar to that of the portion 54 and subsequently forwardly to a point forward of the front wall 34. A depending portion 58 is integrally formed with the forward end of each of the portions 56 with the depending portion 58 terminating in an elongated flat looped pressure foot 60 which may be of any suitable length up to one-half of the width of the panel 22. Incidentally, it will be noted that the depending portion 58 includes a narrowed section which allows for a slight resilient accommodating of the pressure foot 60 to any surface irregularities which might be encountered when brought into clamping engagement.

The pressure arms 44 are resiliently biased downwardly so as to bring the press feet 60 into clamping engagement with one or more papers 30 located upon the upper surface 28 of the panel 22 by spring means 62 located adjacent the rear face of the front wall 34 by a pair of spaced retraining tabs 64 struck upwardly from the bight portion 38 of the mounting base 32. This spring means 62 consists of a central coil 66 mounted on a cross pin 68 secured to the walls 34 and 36, and a pair of oppositely directed spring arms 70 terminating, at their outer ends, in downwardly opening hook portions 72. These hook

portions 72 are engaged with the forwardly directed portions 56 of the pressure arms 44 through loops or straps 74 which are retained in position on the portions 56 by means of a slight kink or depression 76 in the portion 56. In this manner, through the action of the coiled central portion 66, the spring means 62 acts so as to bias both pressure feet 60 downwardly into engagement with the material, generally paper 30, to be clamped. When it becomes desirable to release either or both of the pressure feet 60, this is accomplished by moving the loop handles 42 rearwardly toward the gripping tab 40.

The instant invention also contemplates the provision of a pressure pad 78 associated with each pressure foot 60 and secured to the panel 22 directly beneath the corresponding pressure foot 60 for use in conjunction therewith for retaining the paper 30. These pressure pads 78 are preferably as long as or slightly longer than the feet 60 and are of a friction creating material so as to prevent any tendency for the paper 30 to slide on the surface 28. Further, while these pads 78 have been illustrated as raised slightly above the writing surface 28, it will be appreciated that they can be formed either flush with or even slightly below the writing surface 28 if so desired.

A removable cover 80 is provided for the mounting base 32 and includes a flat upper panel 82 having portions 84 thereof removed so as to allow passage of the tongue 40 and loop handles 42 therethrough. Depending peripheral flanges 86 are also provided for resiliently engaging the walls 34 and 36 for retaining the cover 80 thereon. In addition, if so desired, an elongated pencil retaining clip 88, having parallel resilient walls can be provided, the construction of this clip 88 being obvious from the drawings.

The instant invention also contemplates the provision of means for mounting or suspending the entire clip board 20, this means being in a form of a suspension hook 90 consisting of an elongated shank 92 having an enlarged circular head 94 at one end thereof and a hook portion 96 at the other end thereof. The suspension hook 90 projects from the top end of the clip board 20 and has the shank portion 92 thereof rotatably received within a passage formed by arcuately deforming that portion of the bight portion 38 between the struck up retaining tabs 64. As will be appreciated from the drawings, this arcurately formed central portion is in effect three portions, a first portion 98 located forward of the struck up tabs 64, a second portion 100 defined by the struck up tabs 64 and having a free rear edge, and a third or rear portion 102 located rearward of the openings left by the struck up portions 64. The head 94 on the shank 92 is located just forward of the arcuately formed portion 98 in a slot 104 which allows the head 94, and consequently the entire suspension hook 92, to rotate freely while preventing longitudinal movement of the suspension hook 90. In order to resist rotational movement of the suspension hook 90 so as to prevent accidental dislocation or disorientation of the hook 90, it will be noted that the arcuately formed portion 100, this best being seen in FIGURES 3 and 4, is downwardly bent or angled so as to resiliently engage its free rear end with the shank 92, thereby providing a slight clamping of the shank 92 so as to, while allowing a rotation of the suspension hook 90, tending to resist this movement to a degree contemplated to prevent accidental movement. It will of course be appreciated that a suitable aperture 106 is provided in the rear wall 36 for the passage of the suspension hook therethrough.

Turning now to the flap means 26 mounted on the bottom end of the panel 22, it will be noted that this flap means 26 has been illustrated as extending across the full width of the bottom of the panel 22, this being preferred, however, if so desired, the flap means 26 can be of length less than the width of the panel 22. The flap means 26 consists basically of an elongated right angular hinge strap 108, a generally right angular flap 110, and a resilient position retaining spring 112. The right angular hinge strap 108 is secured to the bottom end of the panel 22 by suitable fasteners 113 with one leg thereof engaged flush against the lower surface of the panel 22 and with the other leg engaged flush against the bottom end of the panel 22, this leg having the upper edge thereof located substantially in the plane of the upper or writing surface 28 and formed so as to provide a series of hinge knuckles 114. The flap 110 includes a relatively narrow portion 116 having the free edge thereof formed so as to provide a plurality of hinge knuckles 118 interrelated or intermeshed with the knuckles 114 for the reception of a hinge pin 120 therethrough, and a relatively wide flap portion 122 having a centrally located finger receiving portion 124 for facilitating a grasping of the flap 110, especially when the flap portion 122 is located in the position illustrated in FIGURE 1 superimposed upon the paper 30.

The spring 112, one generally being provided at each end of the flap means 26, is an elongated tension spring having one end thereof secured to the side of the panel 22 rearward of the hinge strap 108 by any suitable means such as a headed driven fastener 126 and the forward end thereof secured to the flap 110 in the vicinity of the joint between the portions 116 and 122 by means of a headed pin 128 having the shank thereof clamped within a bore provided by cut out and deformed portions 130 of the flap 110. The end of the spring 112 fixed to the panel 22 is orientated in a plane which will be below the plane of the opposite end of the spring 112 when the flap is orientated in a first position overlying the bottom ends of the paper 30, as illustrated in FIGURE 1, and above the plane of the other end of the spring 112 when the flap is orientated so as to project outwardly from the bottom end of the panel 22, as seen in FIGURE 2. In this manner, a resilient elongation of the spring 112 is necessary when moving the flap from one position to the other, thereby resulting in a resilient retention of the flap in these positions. In the first mentioned position, it will of course be appreciated that a clamping of the bottom end of the paper 30 is effected, while in the second position an extension is provided for use as a hand or arm rest when writing on the paper, this being particularly desirable as the bottom end of the paper 30 is approached. The instant invention also contemplates a third or intermediate position for the flap 110, this position being illustrated in full lines in FIGURE 3 and consists of the flap portion 122 projecting perpendicularly from the plane of the writing surface 28 so as to provide a ledge or surface against which the paper 30 can be abutted so as to align a stack of papers, or support the papers freely while the clamp means 24 is being adjusted. The flap 110 is resiliently and releasably retained in this position through cradle or saddle shaped heads 132 provided on the opposite ends of the hinge pin 120, these cradles 132 being of a size so as to releasably receive the springs 112 as the flap 110 is moved into the full line position of FIGURE 3, the spring 112 along each edge of the panel 22 flexing outwardly over the high point of the corresponding cradle 132 and subsequently into the cradle recess as the flap portion 122 assumes the perpendicular position. Further movement of the flap 110 in either direction is prevented until a sufficient force is applied so as to cause the spring 112 to move over the cradle defining raised portions of the cradle 132. With reference to FIGURE 7, it will be noted that the flap knuckles 118 fixedly receive the hinge pin 120 while the hinge strip knuckles 114 loosely receive the hinge pin 120, thereby providing for a rotation of the hinge pin 120 and saddles 132 with a movement of the flap 110, this rotation of the cradles 132 tending to facilitate the introduction of the springs 112. As will be appreciated from a comparison of FIGURES 1, 2 and 5, the cradles 132 are, in the two extreme positions located so as to orientate the recesses therein perpendicularly to the panel 22, while in the intermediate

position the recesses are orientated parallel to the panel **22** for reception of the springs **112** therein. Incidentally, as will be appreciated from FIGURE 3, when the flap **110** is in its rest forming position, the narrow flap portion **116** is engaged against the upwardly extending leg of the hinge strap **108** which forms in effect an abutment for properly orientating the flap **110** so as to extend outwardly in a plane generally parallel to the panel **22**.

Referring now to FIGURES 11 and 12, it will be noted that a slightly modified form of flap means **134** has been illustrated therein. This particular flap means **134** is specifically formed for mounting on extremely thin panels **136**, such as for example aluminum panels, as compared to the more conventional wood panels as illustrated in FIGURE 3. One of the differences in the flap means **134** as compared to the flap means **26** is the provision of a cleat **138** fixed to the lower surface of the panel **136** so as to project laterally therebeyond, the cleat **138** including an upwardly angled tab **140** to which the end of the tensioning spring **112** is secured. Another difference resides in the modified hinge strap **142** which is riveted to the lower surface of the panel adjacent the bottom edge thereof and includes an angularly directed portion **144** so as to provide a relatively wide portion **146** engaged against the bottom end of the panel **136** and capable of providing a substantial abutment surface so as to maintain the flap in a position corresponding to the position of the flap in FIGURE 2 so as to act as a hand or arm rest. In other words, inasmuch as the panel **136** is in itself too narrow to provide a proper abutment surface, the hinge strap **142**, rather than conforming directly to the panel **136** includes an additional angularly related portion **144** therein between that portion which engages flush against the under surface of the panel **136** and that portion which engages flush against the bottom end of the panel **136** so as to in effect increase the width of the bottom edge engaging portion **146**.

From the foregoing, it will be appreciated that a highly novel clip board has been defined, this clip board incorporating unique means for clamping both the top and bottom ends of paper so as to provide a stability to the paper which has heretofore not been available in clip boards and which can be highly desirable under adverse conditions. In addition, the instant invention has provided a means for clamping the bottom end of the paper which can alternately be used as a means for aligning the paper or retaining the paper while the upper clamp is being adjusted and as a hard or arm rest while writing on the paper positioned on the clip board panel. Incidentally, while the piano hinge construction in FIGURE 3 has been shown slightly above the writing surface, it will be appreciated that this joint can be orientated flush with or even slightly below the writing surface. Further, while only a single hinge pin **120** has been described, it will be appreciated that two separate hinge pins, each having one of the cradles thereon, can alternately be used.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A clip board comprising a rigid generally rectangular panel having the upper surface thereof adapted for use as a writing surface, clamp means mounted on the panel adjacent one end of the panel, said one end constituting the top end of the panel, said clamp means being adapted to releasably retain paper on the writing surface by engaging the paper adjacent the top thereof and clamping the paper between the clamp means and the panel writing surface, flap means, means pivotally mounting the flap means on the other or bottom end of the panel for movement between a first position overlying the bottom end portion of the panel, in a manner so as to retain paper therebetween, and a second position projecting outwardly from the bottom end of the panel in a plane generally parallel to the plane of the writing surface, means for resiliently retaining the flap means in both the first position and the second position, said flap means being positionable in an intermediate position projecting upwardly from the plane of the panel generally perpendicularly thereto, means for releasably retaining the flap means in said intermediate position, said flap means extending across substantially the entire bottom end of the panel, said flap means being generally right angular in cross-section forming two flap portions, the free edge of one of said flap portions being located adjacent the bottom end of the upper or writing surface, said means mounting the flap means engaging said free edge for pivoting of the flap means about said free edge, an abutment on the bottom end of the panel below the upper surface and in a plane generally perpendicular thereto, said abutment limiting the pivotal movement of the flap means upon engagement of said one flap portion thereagainst, said means resiliently retaining the flap means consisting of at least one elongated tension spring, said spring having one end thereof fixed to the panel between the top and bottom ends along one edge thereof and the other end fixed to the flap means at the joint between the flap portions, said other end of the spring being located above the plane of the writing surface when the flap means is in said first position and below the plane of the writing surface when the flap means is in said second position, the movement of said flap means between the first and second positions requiring an elongation of the spring, said clamp means including a mounting base fixed to the panel, said base including front and rear spaced parallel walls projecting upwardly from the writing surface adjacent the top of the panel, a pair of oppositely directed pressure arms, each arm having a first portion thereof extending along the rear wall generally parallel to the writing surface from an inner end at approximately the center thereof to an outer end slightly beyond one side edge thereof, means rotatably mounting said first portion on the rear wall, an inner end portion extending upwardly and forwardly from the inner end of the pressure arm, an outer end portion extending upwardly and then forwardly from the outer end of the pressure arm to a point forward of the forward wall, a depending portion on the outer end of the outer end portion, a laterally enlarged pressure foot on the lower end of the depending portion extending transversely of the panel, and means resiliently biasing said pressure foot downward toward the writing surface.

2. A clip board comprising a rigid generally rectangular panel having the upper surface thereof adapted for use as a writing surface, clamp means mounted on the panel adjacent one end of the panel, said one end constituting the top end of the panel, said clamp means being adapted to releasably retain paper on the writing surface by engaging the paper adjacent the top thereof and clamping the paper between the clamp means and the panel writing surface, flap means, means pivotally mounting the flap means on the other or bottom end of the panel for movement between a first position overlying the bottom end portion of the panel, in a manner so as to retain paper therebetween, and a second position projecting outwardly from the bottom end of the panel in a plane generally parallel to the plane of the writing surface, said clamp means includes a mounting base fixed to the panel, said base including front and rear spaced parallel walls projecting upwardly from the writing surface adjacent the top of the panel, a pair of oppositely directed pressure arms, each arm having a first portion thereof extending along the rear wall generally parallel to the writing surface from an inner end at approximately the center thereof to an outer end slightly beyond one side edge thereof, means rotatably

mounting said first portion on the rear wall, an inner end portion extending upwardly and forwardly from the inner end of the pressure arm, an outer end portion extending upwardly and then forwardly from the outer end of the pressure arm to a point forward of the forward wall, a depending portion on the outer end of the outer end portion, a laterally enlarged pressure foot on the lower end of the depending portion extending transversely of the panel, and means resiliently biasing said pressure foot downward toward the writing surface.

3. The structure of claim 2 wherein said depending portion is laterally resilient so as to allow an accommodation of the pressure foot to surface irregularities.

4. The structure of claim 3 including means on said writing surface below the pressure feet cooperating with the pressure feet for retaining paper therebetween.

5. The structure of claim 2 including means for resiliently retaining the flap means in both the first position and the second position, said means comprising at least one elongated tension spring, said spring having one end thereof fixed to the panel between the top and bottom ends along one edge thereof and the other end fixed to the flap means at the joint between the flap portions, said other end of the spring being located above the plane of the writing surface when the flap means is in said first position and below the plane of the writing surface when the flap means is in said second position, the movement of said flap means between the first and second positions requiring an elongation of the spring.

6. A clip board comprising a rigid generally rectangular panel having the upper surface thereof adapted for use as a writing surface, clamp means mounted on the panel adjacent one end of the panel, said one end constituting the top end of the panel, said clamp means being adapted to releasably retain paper on the writing surface by engaging the paper adjacent the top thereof and clamping the paper between the clamp means and the panel writing surface, flap means, means pivotally mounting the flap means on the other or bottom end of the panel for movement between a first position overlying the bottom end portion of the panel, in a manner so as to retain paper therebetween, and a second position projecting outwardly from the bottom end of the panel in a plane generally parallel to the plane of the writing surface, an abutment on the bottom end of the panel below the upper surface and in a plane generally perpendicular thereto, said abutment being engaged by said flap means in said second position and preventing further movement of the flap means therebeyond, and means for resiliently retaining the flap means in both the first position and the second position, said flap means being generally right angular in cross section forming two flap portions, the free edge of one of said flap portions being located adjacent the bottom end of the upper or writing surface, said means mounting the flap means engaging said free edge for pivoting of the flap means about said free edge, said means resiliently retaining the flap means consisting of at least one elongated tension spring, said spring having one end thereof fixed to the panel between the top and bottom ends along one edge thereof and the other end fixed to the flap means at the joint between the flap portions, said other end of the spring being located above the plane of the writing surface when the flap means is in said first position and below the plane of the writing surface when the flap means is in said second position, the movement of said flap means between the first and second positions requiring an elongation of the spring.

7. A clip board comprising a rigid generally rectangular panel having the upper surface thereof adapted for use as a writing surface, clamp means mounted on the panel adjacent one end of the panel, said one end constituting the top end of the panel, said clamp means being adapted to releasably retain paper on the writing surface by engaging the paper adjacent the top thereof and clamping the paper between the clamp means and the panel writing surface, said clamp means including a vertical member projecting upwardly from the writing surface adjacent the top of the panel, a pair of oppositely directed pressure arms, each arm having a first portion thereof extending along the vertical member generally parallel to the writing surface from an inner end at approximately the center thereof to an outer end slightly beyond one side edge thereof, means rotatably mounting said first portion on the vertical member, an inner end portion extending upwardly and forwardly from the inner end of the pressure arm, an outer end portion extending upwardly and then forwardly from the outer end of the pressure arm to a point forward of the vertical member, a depending portion on the outer end of the outer end portion, a laterally enlarged pressure foot on the lower end of the depending portion depending transversely of the panel, and means resiliently biasing said pressure foot toward the writing surface and second clamp means mounted on the second end of the panel, said second clamp means being adapted to releasably retain paper by engaging the paper adjacent the bottom thereof.

References Cited by the Examiner

UNITED STATES PATENTS

869,508	10/1907	McCaskey	282—8.1
2,175,950	10/1939	Brock	281—44 X
2,225,264	12/1940	Farrior	281—44 X
2,950,821	8/1960	Hoofer	24—66 X

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