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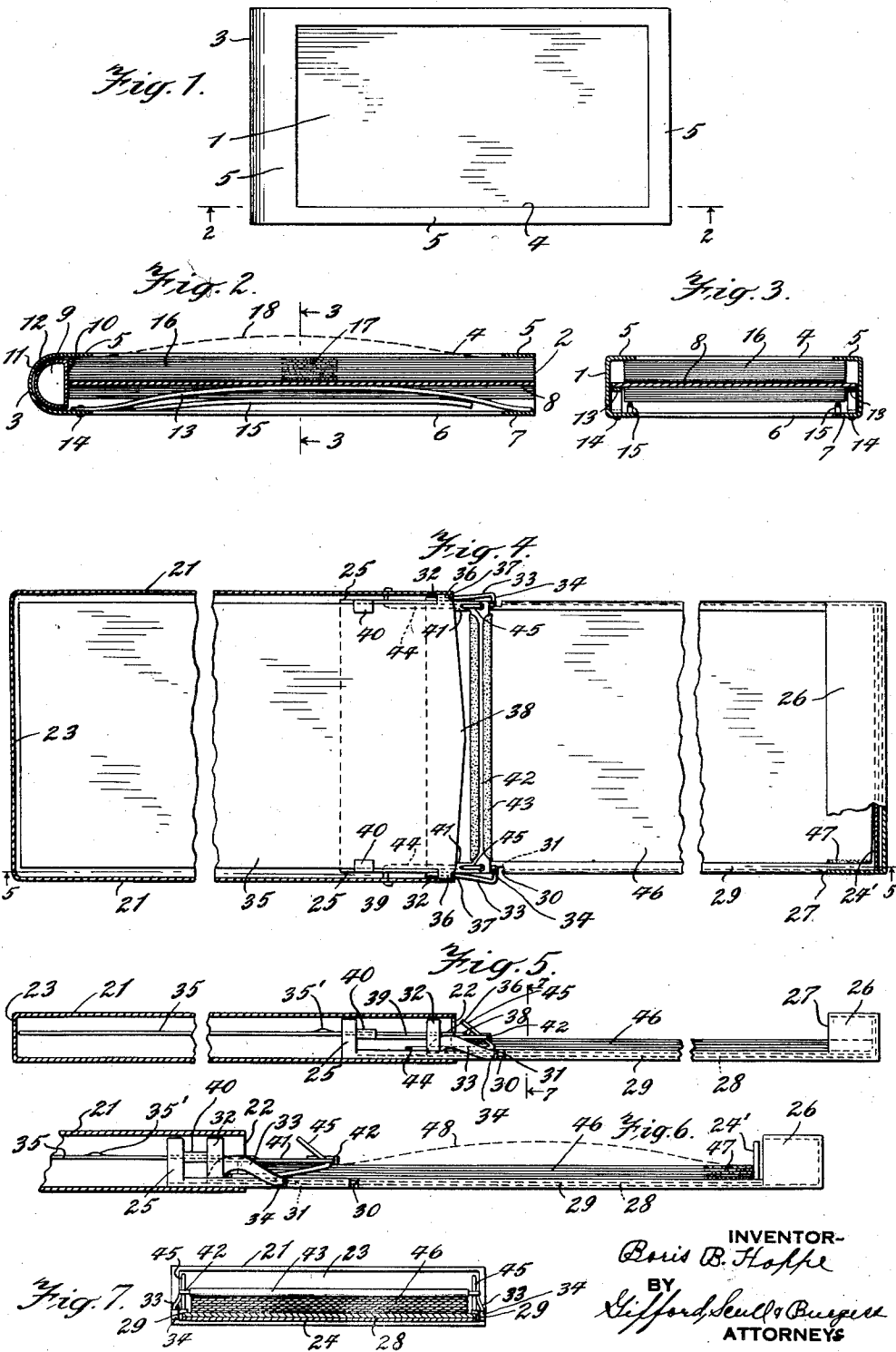
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1,971,684

WRITING PAD AND DEVICE

Filed May 10, 1932

2 Sheets-Sheet 1



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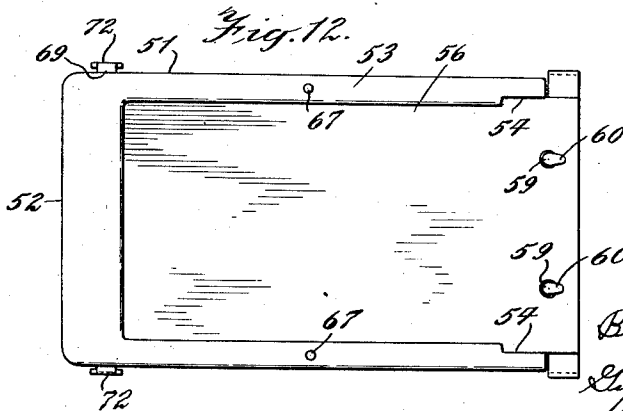
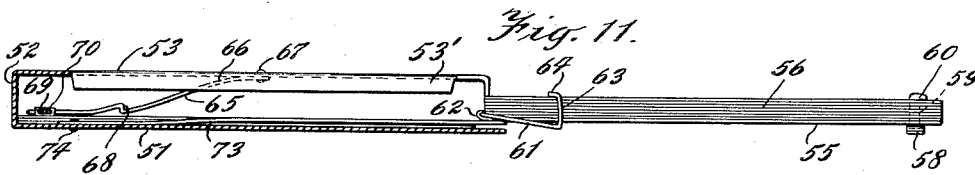
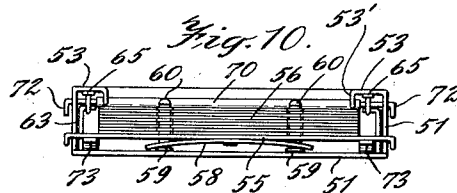
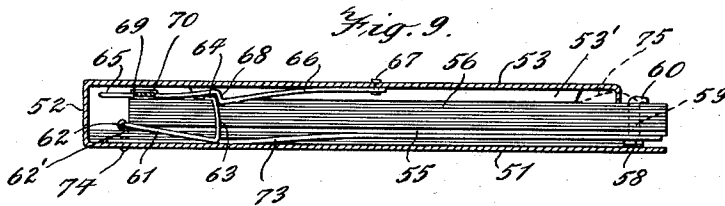
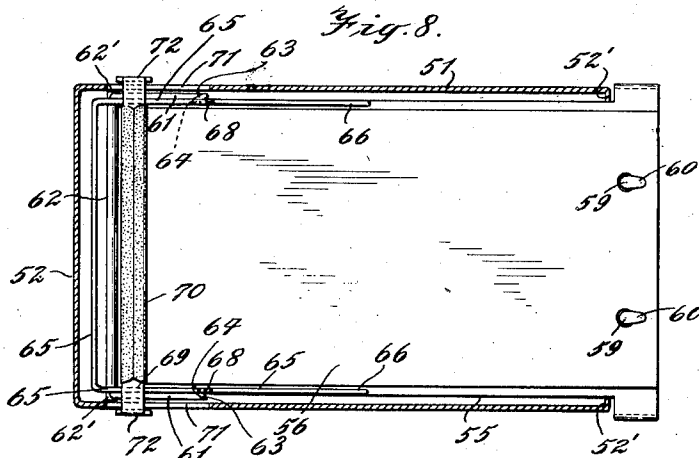
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1,971,684

WRITING PAD AND DEVICE

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Application May 10, 1932, Serial No. 610,400

10 Claims. (Cl. 281—44)

This invention relates to a writing pad and a device for manipulating it, the pad having removable sheets of paper which can be preserved or discarded at the option of the user in such a way that fresh sheets can be readily exposed for use. The invention is especially useful in connection with memoranda pads or the like, although it is also useful with loose sheets of paper piled on each other.

The invention will be understood from the description in connection with the accompanying drawings in which Fig. 1 is a plan view of an illustrative embodiment of the invention; Fig. 2 is a section along the line 2—2 of Fig. 1; Fig. 3 is a section along the line 3—3 of Fig. 2; Fig. 4 is a plan view of a modification with the device open; Fig. 5 is a section along the line 5—5 of Fig. 4 with parts broken away; Fig. 6 is a section similar to Fig. 5 on an enlarged scale; Fig. 7 is a section along the line 7—7 of Fig. 5; Fig. 8 is a plan view of another modification; Fig. 9 is a section along the line 9—9 of Fig. 8; Fig. 10 is an end view of Fig. 8; Fig. 11 is a section similar to Fig. 9 with parts in the open position and Fig. 12 is a plan view of the device with parts in the closed position.

Referring to Figs. 1 to 3 of the drawings reference character 1 indicates a box of rectangular shape that may be made of any appropriate sort of material such as metal, for example. The box 1 is also of rectangular shape in transverse vertical cross section as shown in Fig. 3. It has the end 2 open and the end 3 is closed and rounded. A rectangularly shaped opening 4 is provided at the top of the box leaving a rim or flange 5 all the way around and a corresponding opening 6 may be provided at the bottom of the box leaving a corresponding flange 7 all the way around.

A flat plate 8 extends transversely along the interior of the box and is movable up and down. A hollow member 9 is fixed near the rounded end 3 of the box in proximity to the end of the plate 8. The hollow member 9 has a straight flat side 10 and a curved side 11 that is curved similar to the end 3 of the box 1 and spaced therefrom to leave a passageway 12 for sheets of paper, as will be described below.

Springs 13 are provided at the bottom of the box 1 and are bowed to press upwardly against the edges of the plate 8 to push the same upwardly. One end of each spring 13 is attached to the bottom of the box 1 as for example by the rivets 14, and these springs 13 are spaced far enough apart to permit the entry of the sheets of paper between them upon the bottom of the box.

Light wire springs 15 bevelled at their left-hand ends as shown in Fig. 2 are provided at the bottom of the box 1 for used sheets of paper to rest upon and these springs press the sheets upwardly against the bottom of the plate 8.

The operation is as follows:

A pad 16 of sheets of paper of the proper size preferably having their edges glued together slightly as indicated at 17 is placed in the box upon the plate 8 which by being pressed upwardly by the springs 13 keeps the sheets pressed upwardly so that the topmost one rests against the under side of the top of the box. The topmost sheet is exposed through the opening 4 so that it can be written upon. By pressing the topmost sheet toward the left with the thumb resting upon its upper surface it can be separated from the others and may assume the shape shown in dotted lines 18 in Fig. 2. It can then be pushed by downward and forward pressure toward the left through the space 12 so that it will ride along the springs 15 and be kept against the lower side of the plate 8, access to the sheet being available through the opening 6 to enable the user to carry it to the proper distance in the box. A similar operation is used for the next sheet so that the forward end of it will enter below the first removed sheet and can be moved into position between it and the springs 15. If it is desired to discard a sheet instead of keeping it in the box this can be readily done simply by withdrawing the sheet and throwing it away.

In the modification shown in Figs. 4 to 7 used sheets are removed by manipulation of the device. In this modification a box 21 is provided which is open at the end 22 and closed at the opposite end 23.

A sliding plate member 24 is provided with extensions 25 at one end and is adapted to be slid into the box 21. The outer end of the plate 24 is provided with a box-like handhold member 26 with its side 27 toward the box 21 open. A plate 28 upon which the pad or pile of papers rests is slidable to a slight extent on the plate 24, which has curved edges 29 extending around the edges of the plate 28 to form grooves in which the plate 28 slides. Slots 30 extend through the edges 29 and notches 31 are provided in the edges of the plate 28.

Upright arms 32 are carried at the inner end of the plate 28 near the sides of the box 21. Springs 33 are carried by the arms 32 and have inturned ends 34 to enter the slots 30 and notches 31.

A plate 35 which is moved up and down but is prevented from moving longitudinally is provided.

ed in the box 21 and has lateral extensions 36 near its outer end which rest against the inturned edges 37 of the side walls of the box 21 to keep the plate 35 in the box. The outer end 38 of the plate 35 is bevelled or sharpened. A yoke 39 is slidable along the lower side of the plate 35 near its outer end. Lugs 40 are provided along the edges of the yoke 39 and are bent over to slide along the upper side of the plate 35 to keep the yoke 39 supported on the plate 35. Arms 41 extend from the yoke 39 and are connected by a cross arm 42 having friction material 43 such as sand paper, emery cloth, or the like thereon.

Springs 44, such as wire, are provided on opposite sides of the box 21 with one of their ends anchored in the side walls of the box 21. The free ends 45 of the springs 44 are bent upwardly and backwards and extend through holes near the ends of the cross arms 42. The operation of the device shown in Figs. 4 to 7 is as follows:

The pad of paper 46 is placed upon the plate 28, while the cross arm 42 is in its raised position, the edges being preferably glued together as indicated at 47. The box can then be closed, thus enclosing the pad of paper 46. When the user desires to use a sheet he pulls outwardly on the member 26, thus exposing the topmost sheet of paper, as shown in Figs. 4 and 5. After he has written on this top-most sheet he pulls the member 26 outwardly farther to the position shown in Fig. 6. The plate 28 cannot move outwardly farther than the position shown in Figs. 4 and 5 because the arms 32 carried thereby have struck against the shoulders 36 on the plate 35. In the position shown in Figs. 4 and 5 the extensions 25 on the plate 24 have contacted with the lugs 40 and further movement of the plate 24 by pulling outwardly on the member 26 causes the plate 39 to move outwardly, whereupon the cross arm 42 moves the ends 45 of the spring 44 upwardly. This causes the friction material 43 to be pressed against the uppermost sheet near its inner end, whereupon movement of the cross arm 42 causes this sheet to be bent up into the position shown by the reference character 48 in Fig. 6.

While the plates 24 and 28 were being moved out of the box 21 the ends 34 of the springs 33 moved out of the slots 30 and notches 31 as soon as the ends of the springs 33 moved a short distance out of the box 21, thus permitting the plates 24 and 28 to move relative to each other.

When the user pushes the plate 28 inwardly by pressing on the member 26 the spring 44 which is under tension moves the cross member 42, thus sliding the left-hand end of the top sheet of paper 48 to the left causing its edge to ride over the sloping end of the plate 35. As soon as the slots 30 reach the ends 34 of the springs 33 these ends enter the slots and as soon as these slots become aligned with the notches 31 the ends 34 of the springs enter these notches, thus locking the plates 24 and 28 together. As the parts are pushed into the box 21 the topmost sheet slides along the top side of the plate 35 while the remainder of the sheets passes under this plate. The sharp edge of the plate 35 breaks the glue at the right-hand end of the pad, thus separating the topmost sheet from the others so that it will not be withdrawn when the others are again withdrawn by the operation that has been described above. The stop 24' at the end of the plate 24 prevents the pad from slipping off of the plate 24. A rounded rib or projection 35' is preferably provided on the plate 35 a short distance from its right-hand end so that the right hand end of the sheets that have

been passed into the compartment above the plate 35 will be raised slightly to permit entry of succeeding sheets below the raised ends of the sheets that have already been removed, thus accumulating sheets above the plate 35 at the bottom of the pile of removed sheets. The plate 35 gradually moves downwardly as sheets are removed from the pad 46 and even if its left-hand end moves downwardly when the pad 46 is drawn out, it will be raised when the pad is again pushed into the box 21.

In the modification shown in Figs. 8 to 12 the box 51 is closed at the end 52 and open at the opposite end with inturned edges 52' at the ends of the side walls. The top is open leaving flanges 53 along two sides and the closed end, the flanges along the sides being provided with downturned edges 53'. The side flanges 53 are made narrower near the open end of the box as indicated at 54.

A plate 55 is slidable into the box 51 and is as wide as the distance between the inturned edges 52'. The plate 55 is for supporting the pad or plurality of sheets of paper 56. The edges of the plate 55 are extended at its outer end and turned downwardly to form a handle or portion that can be grasped by the fingers of the user.

A flat spring 58 of bowed shape is riveted at its center near the outer end of the plate 55 and a pair of pins 59 each having an enlarged head extends through holes in the spring 58 and holes through the sheets of paper 56. The upper ends of the pins 59 are bent at right angles as shown at 60 to lie along the upper surface of the pad, the bent portion being bevelled along the upper side.

A U-shaped spring 61 is pivotally attached to the inner end 62 of the plate 55. Extensions 62' are formed along the edges of the plate 55 at its inner end to strike against the inturned edges 52' of the box 51, thus preventing the plate 55 from being entirely withdrawn from the box. The arms of the spring 61 are bent upwardly as indicated at 63 and thence inwardly and backwards at an angle as indicated at 64.

A spring 65 of U-shape is attached at the ends 66 thereof to the lower side of the side flanges 53 as indicated at 67. A bend 68 is provided at an intermediate portion of each arm of the spring 65 and these arms of the spring extend through transverse openings in a cross member 69 so that the cross member can be slid back and forth on the arms. The cross member 69 is preferably provided with a rough or abrasive material 70 such as sand paper or emery cloth. The ends of the cross member 69 extend through openings 71 in the side walls of the box 51 and are bent downwardly as shown at 72 for convenience in grasping by the fingers of the user.

A spring 73 is provided below the plate 55 near opposite edges thereof, these springs being spaced far enough apart to permit sheets of paper from the pad 56 to be placed between them. One end of each of these springs is riveted to the bottom of the box as indicated at 74 and these springs move the plate 55 upwardly as sheets of paper are removed from the pad 56.

The operation of the device shown in Figs. 8 to 12 is as follows:

A pad or plurality of sheets of paper 56 having holes through which the pins 59 will project is placed upon the plate 55 whereupon this plate carrying the pad is pushed into the box 51. The inturned ends 64 of the spring 61 come into contact with the downwardly sloping portion of the arms of the spring 65 (Fig. 11) thus raising this spring and the cross member 69 to permit the end

of the pad to pass below it. As soon as the int-
turned ends 64 reach the bends 68 the spring
snaps downwardly, thus permitting the cross
member 69 to be pressed against the upper sheet
of paper of the pad 56 as it rests thereon.

If the uppermost sheet has been written upon
and it is desired to retain it in the box and expose
the next sheet for writing thereon, the user first
grasps the portion 72 of the member 69 and pushes
it to the right whereupon the abrasive material
70 on this member causes the topmost sheet 56 to
be pushed toward the right. The side flanges 53
prevent this sheet from bending upwardly except
at its outer end at the recessed portions 54 as
shown at 75 (Fig. 9). The bending of this sheet
near its end causes it to slip off of the ends 60 of
the pins 59 and straighten out. The plate 55 is
then pulled out by grasping the handle 57 in one
hand and the bent ends 72 of the cross member 69
in the other hand. The cross member 69 moves
toward the left to the end of the slot carrying with
it the topmost sheet which has been discarded
from the pins 59 while the remainder of the pad
is drawn toward the right with the plate 55. As
soon as the cross member 69 passes off of the left-
hand end of the pad 56 it is sprung downwardly
against the bottom of the box as shown in Fig. 11
holding the removed sheet between the springs 73.
Because of the fact that the springs 73 press the
plate 55 upwardly the removed sheet will lie en-
tirely beneath the plate 55 when it is returned
into the box after having been pulled out as far
as it will go. The same operation occurs for re-
moval of successive sheets from the top of the pad
55, the plate 55 being gradually raised higher by
the springs 73 as sheets are removed and placed
in the bottom of the box between the springs 73.
The spring 58 also gradually curves as sheets are
removed, thus keeping the outwardly bent ends 60
in firm contact with the topmost sheet of the pad
56. The intumed ends 64 of the spring 61 do not
interfere with the cross member 69 holding the
topmost sheet as the plate 55 is being withdrawn
because its backwardly sloping position enables
the arms to be sprung apart slightly as they strike
the vertical portion of the bend 68, thus permitting
this spring 61 to pass toward the right without
loosening the cross member 69 from the sheet
that it is holding.

While the removal of the sheets of paper in the
embodiment of the invention described in Figs. 1
to 3 has been described as being manual, and the
removal of the sheets in the other embodiments
has been described as being by mechanical means,
the removal of the sheets in the device shown in
Figs. 1 to 3 may also be by mechanical means and
the removal of the sheets in the other embodi-
ments of the invention may be manual.

I claim:

1. In a device of the class described, a plurality
of compartments, means for holding a plurality
of sheets of paper and reciprocating means for
initially moving the topmost sheet in one direc-
tion and then moving it in the opposite direction

and transferring it into a compartment separate
from the others.

2. In a device of the class described, a plurality
of compartments, means for holding a plurality
of sheets of paper longitudinally and reciprocating
means for initially moving the topmost sheet in
one direction and then moving it in the opposite
direction and transferring it into a compartment
separate from the others.

3. In a device of the class described, means for
holding a plurality of sheets of paper and recipro-
cating means for initially moving the topmost
sheet in one direction and then moving it in the
opposite direction and transferring it into a posi-
tion below the others.

4. In a device of the class described, a plurality
of compartments, means comprising a housing
for holding a plurality of sheets of paper and re-
ciprocating means for initially moving the top-
most sheet in one direction and then moving it in
the opposite direction and transferring it into a
compartment separate from the others.

5. In a device of the class described, a plurality
of compartments, means for holding a plurality
of sheets of paper, reciprocating means for ini-
tially moving the topmost sheet in one direction
and then moving it in the opposite direction and
transferring it into a compartment separate from
the others, and means for moving the remaining
sheets perpendicular to the surfaces thereof as
other sheets of the plurality of sheets are removed.

6. In a device of the class described, a plurality
of compartments, means for holding a plurality
of sheets of paper and reciprocating means com-
prising a guide member initially moving the top-
most sheet in one direction and then moving it in
the opposite direction and transferring it into a
compartment separate from the others.

7. In a device of the class described, a plurality
of compartments, means for holding a plurality
of sheets of paper and reciprocating means com-
prising a slidable member initially moving the
topmost sheet in one direction and then moving
it in the opposite direction and transferring it
into a compartment separate from the others.

8. In a device of the class described, a box, a
spring pressed member in said box adapted to
support a pad of paper, and means for removing
sheets of paper from one side of said member to
the other side thereof.

9. In a device of the class described, a box, a
spring pressed member in said box adapted to
support a pad of paper, and means operated by
reciprocating said spring-pressed member for re-
moving sheets of paper from one side of said
member to the other side thereof.

10. In a device of the class described, a box, a
spring pressed member in said box adapted to
support a pad of paper, and means for removing
sheets of paper from one side of said member to
the other side thereof by reciprocating said spring
pressed member, said means comprising a friction
member bearing against the uppermost sheet.

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