

P. B. BEGG.
DUPLICATING FLAT PAD.

No. 467,393.

Patented Jan. 19, 1892.

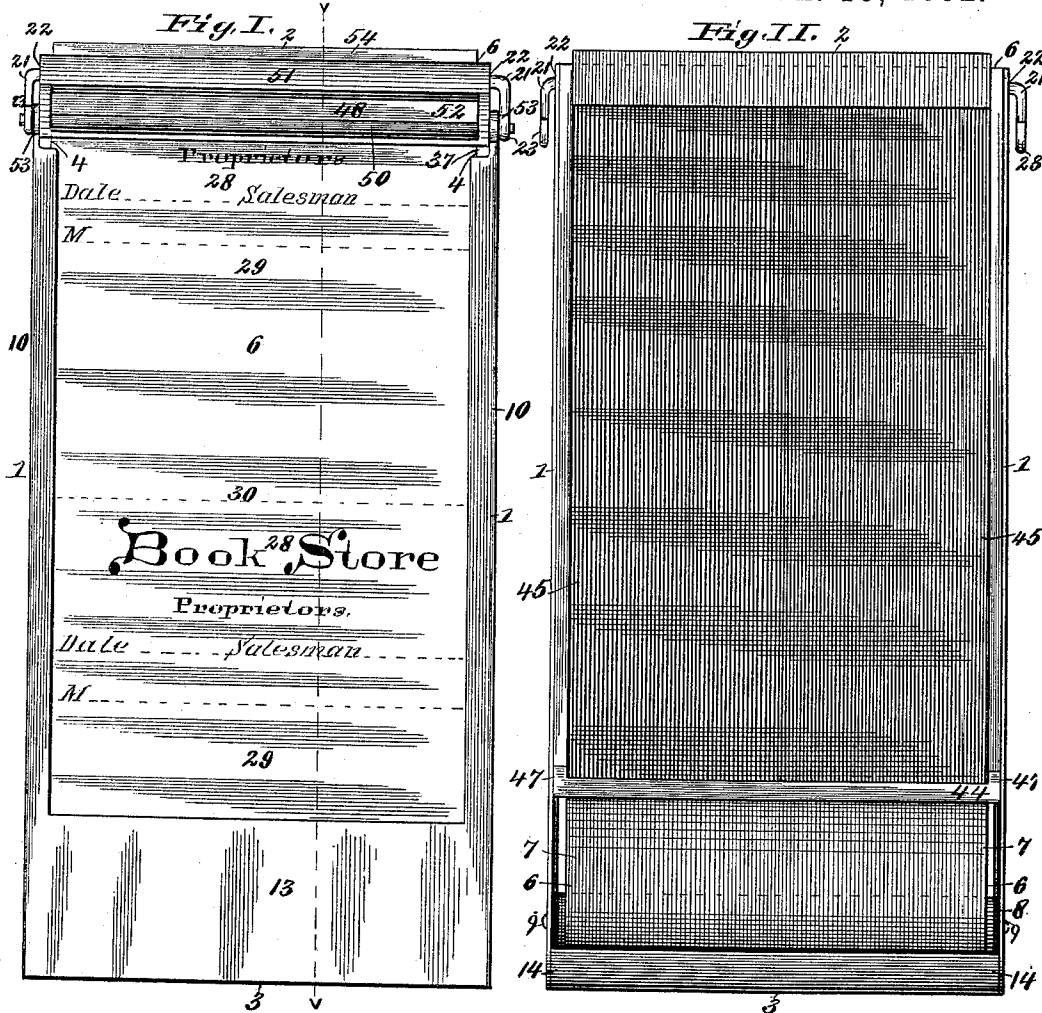
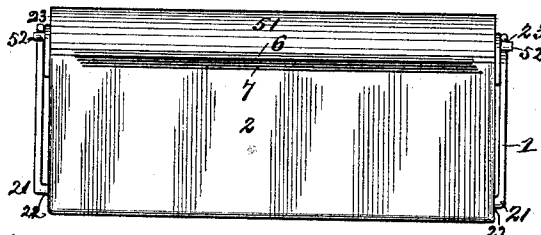


Fig. III.



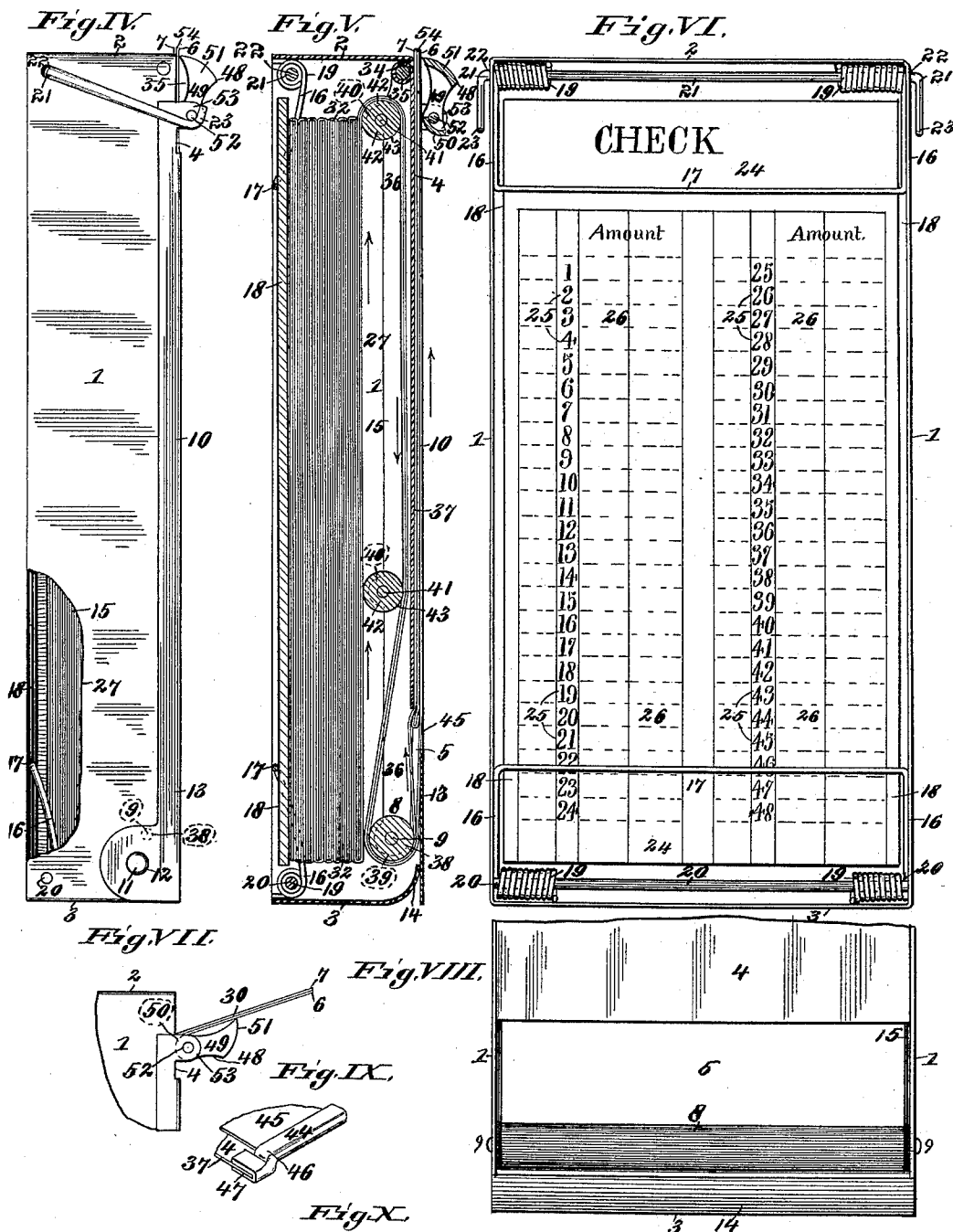
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UNITED STATES PATENT OFFICE.

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DUPLICATING FLAT PAD.

SPECIFICATION forming part of Letters Patent No. 467,393, dated January 19, 1892.

Application filed November 21, 1891. Serial No. 412,593. (No model.)

To all whom it may concern:

Be it known that I, PETER B. BEGG, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Duplicating Flat Pads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a flat duplicating-pad provided with a magazine-depository in which the prepared order-bill paper is placed in double layers in return-folds back and forth, making a magazine-block that is held from displacement against anti-friction rollers by a base-tablet and pressure-springs against said tablet, and which pad is provided with a duplex-action rocking clamp that holds the withdrawn order-paper both back of and at the line of severance.

Figure I is a top view of the pad and shows the perforate sectional headed forms on the writing-desk tablet ready for the clerk's inscription of the order. Fig. II is a top view with the hinged holder-frame and a portion

of the upper order-sheet removed to disclose the interlying carbon-sheet and the nip-holder that secures the same in position, the said holder itself held to the desk-tablet by the grip-lugs at its ends, which embrace the rear edge of said tablet. Fig. III is a front

end view and shows the clutch-margin of the the duplex order-strips, their previous line of severance sufficiently projected to provide a hold for the next draw. Fig. IV is a side view

with part broken away to show a detail of the base-tablet, the return-folded blank order-sheets supported thereon, and one of the pressure-springs that compress said tablet and paper block against the rollers against and

around which said blank order-sheets are drawn. Fig. V is a vertical section taken on line V V, Fig. I, and shows the case that holds the device, the pressure-springs, the base-tablet mounted on said springs, the blank order-sheet return-folded paper block mounted

on said base-tablet, the rollers against which said block is pressed and over which said order-sheets pass, the final forwarding-roller that delivers said sheets, the desk-tablet on

which they are delivered, and the duplex rocking clamp that holds said sheets at time of severance. It also shows the pivot hinged

attachment of the desk-tablet at the front end and one of its flanged sides with their pendent roller journal-bearers. Fig. VI is an inverted or bottom view and shows the base-tablet, the pressure-springs on which said tablet is mounted, and the tabulated form for the numerical record of the amount of the day's sales beneath said tablet. Fig. VII is a detail view and shows the withdrawn perforate order-sheets themselves rocking the duplex clamp to hold said sheets from further withdrawal by means of its lower member of said clamp and by means of its upper member holding said order-sheets at their perforate line to effect a straight severance. Fig. VIII is a detail top view of the pad and shows the rear end thereof with the hinged marginal nip-frame removed and shows the final forwarding-roller and the rear end of the desk-tablet on which said order-sheets lie for the inscription of the order. It also shows the flange sides of said desk-tablet, in the pendent lugs of which the rollers have their journal-bearings. Fig. IX is a detail of the carbon-sheet, the clamp-holder that grips said sheet, and the desk-tablet, the rear edges of which the lugs of said holder embrace; and Fig. X is a detail diagram of the return-folded blank order-sheets previous to compression into block.

Referring to the drawings, 1 represents the sides, 2 the front end, and 3 the rear end of the bottomless case of the pad.

4 represents the desk-tablet, which forms a hinged top to said pad-case, being hung by its loop end 34 on the journal-pin 35, whose ends are fast-seated in the front top corners of the sides of the outer pad-casing and its side flanges 36 shut down inside the sides 1 of said casing when said desk-tablet is closed down. The writing-table 37 of said desk-tablet extends from its hinged connection at the front end of the pad to within a short distance of the rear end of said pad, leaving a sufficient open space 5 at said rear end for the passage of the duplicate blank order-sheets, which are constituted of the original order-sheet 6, and the duplicate copy-sheet 7 from the interior of the case over the final forwarding-roller 8 to their seat on the writing-table 37, ready for the inscription in accordance with the order to be written by the order-

clerk. The journals 9 of said final forwarding-roller run in bearings 38 in the pendent lugs 39 at the rear ends of said side flanges 36, that are pendent from said desk-tablet.

40 represent two lugs that hang pendent from said side flanges 36 of the desk-tablet, and in the perforate bearings 41 in said lugs the journals 42 of the pressure forwarding-rollers 43 have their bearings. The use of said rollers will subsequently appear.

10 represents a skeleton margin bill-holder frame, whose pendent lugs 11 are hinged to the sides of the case near its rear end by the journal-pins 12. The said skeleton frame 15 when lowered on its hinges covers and retains a nip-hold of the margins of the order-sheet blanks to hold them steady on the writing-table of the desk-tablet while the clerk is making his entries of a duplicate record of the order. A cross-table 13 at the rear end of said skeleton frame constitutes a cover to the open space 5, that is uncovered by the writing-table of the desk-tablet 4. The top of the rear end piece of the case has an inward curvature 14, that approximately conforms to the curve movement of the duplicate check-sheets as they pass from the paper-depository 15 within the case and runs over the final forwarding-roller to the desk-tablet, and also alike conforms to the movements of the cross-table 13 of the skeleton frame to allow said frame to be turned on its hinges.

16 represent spring bail-clamps near the bottom at each end of the case, on whose pressure-bails 17 is mounted the loose pressure base-tablet 18 of the pad-case. The duplex spiral springs 19 of said bail-clamp at each end of the case are mounted on the respective bearer-rods 20 and 21, the first of which rods that carries the rear clamp is tight-riveted at the rear sides of the case near the bottom thereof, and the rod 21, on which the springs of the forward clamp are mounted, is loose-journaled in bearings 22 in the sides of said case near its front end and base thereof, and extensions at each end of said latter bearer-rod are bent at a right angle outside the case and terminate in hooks 23, whose use will hereinafter be specified.

24 represents a check-sheet, which is numerically tabulated at 25 for an index of the orders as received by the clerk who uses said pad, to which he appends the amount of the order on the coincident lines 26. This check-sheet is placed on the bottom of the base-tablet 18, and is there retained in position by the pressure-bails 17 of the spring-clamp 16 and constitutes a form for the diurnal record of the sales effected by said clerk who uses the pad, by whom, after appending his name or number and adding the record of the sum total of his day's sales, the said clerk passes said check-sheet into the office at the close of business for the day.

27 represents the paper block, which is mounted on said base-tablet 18 within said case. The peculiar conformation of said

paper block is as follows: Two continuous strips of paper are printed in usual form at sectional distances with the initial headings and form 28 for successive orders or bills of parcels, between which bills 29 a linear series of perforations 30 facilitate the detachment of the duplicate order-bills constituted of the original order-sheet 6 and its duplicate copy 75. The said duplicate sheets thus placed in double layer are folded back and forth in counter-running layers 31, as shown in the diagram Fig. X, with return-curves 32, and are pressed into the compact return layer-block 27 aforesaid. (Shown in Figs. IV and V.)

44 represents a double flanged clamp-holder, whose folds embrace and hold the carbon or ink sheet or cloth 45, that duplicates on the sheet beneath it the writing on the sheet above. The ends of said holder have bow-necks 46, that lead down to parallel nip-folds 47, which latter folds embrace the rear edge of the writing-table 37, and said carbon or ink paper held by said clamp lies between the duplicate layers of the paper.

48 represents a duplex rocker cam-holder, whose arms 49 couple the lower member 50 of said cam and the upper member 51 thereof, and said arms are loosely mounted on the rod 52, the ends of which rod are fast-mounted in and project from the lugs 53, that surmount at each side the forward end of the skeleton frame 10. The aforesaid hooks 23 on the angle-extensions of the bearer-rod 21, when said hooks are elevated, are made to engage with said projections of the rod 52 outside the lugs 53, and thus hold the skeleton frame down to its bed and at the same time hold the duplex rocker-clamp 48 to its work.

Referring back (to avoid repetition) to the explanatory statements that have accompanied the introductory description of the individual parts, I will now describe the operation of the device in connection therewith.

When the paper-depository is to be filled or refilled and adjusted in operative order, then the hooks 23 are thrown back from their hold on the projecting ends of the rod 52, which releases the skeleton frame 10, which frame is then elevated on its hinges at the rear of the pad and thrown back. The desk-tablet 4 is then turned upon its forward hinged connection with said pad, the said tablet carrying the rollers 8 and 43 with it, and thus opening up the inner area of the pad-case that constitutes the paper-depository 15. The paper block 27, that has been constructed of the twofold layers of paper strips, which have been folded and refolded back and forth, as shown in Fig. X, to constitute said block, as shown in Figs. IV and V, with its folds compressed into a compact block. The said paper block is then deposited on the aforesaid base-tablet 18 in the paper-depository 15 within the pad-case. The front ends of the double layer of sectional perforated order-blank paper is then drawn forward, unfolding its counter-layers in the block as it is

drawn, and said double layer of paper is passed over the combined pressure and forwarding rollers 43 and under and around the final forwarding-roller 8, and the desk-tablet, with its pendent rollers, is then closed down into its working position. The two layers of paper are then separated in the open space 5 in front of said final forwarding-roller 8 and the lower layer is passed forward beneath the double-flanged clamp-holder 44 and beneath the carbon or ink paper, and the upper layer at the same time is passed forward over said clamp-holder and over said carbon or ink paper and after said lower and upper layers pass said carbon or ink paper at near the forward end of the writing-table 37, at which place the two layers constituting the order-sheet and duplicate sheet come together again in close layer and are together drawn a little forward of the front of the pad. The skeleton hinged frame 10 is then closed down over said duplicate-layer sheets and the hooks 23 hitched to the ends of the rod 52, the side flanges of said frame tightly pressing the side margins of said sheets on the writing-table of the desk-tablet, and thus said order-sheets are firmly held while the order of the purchaser is being written on the upper layer of the blank and duplicated on the lower layer. In the meantime by the closing down of the skeleton frame the upper or forward member 51 of the duplex rocker-cam 48 is brought down in contact with said double-layer sheets sufficiently back of their front edges to allow a catch hold of said edges 54. After the order has been written by the clerk on the upper sheet and duplicated by the carbon or ink paper on the lower sheet the clerk takes hold of the projecting edges 54 of the two sheets and draws them forward sufficiently to withdraw the order and its duplicate, when by elevating the paper from the position shown in Figs. I, IV, and V to that shown in Fig. VII the member 51 of the duplex rocker-clamp is elevated, and thereby through its connecting-arm it exercises a compress leverage on the coadjutant member 50 of said clamp, which presses on the sheets and firmly holds them from further withdrawal. In the meantime the perforate line 30 across between the sectional order-blanks has been brought in coincident position with the front edge of the member 51 of said duplex cam, and the clerk then tears off at the perforate line 30 the order and its duplicate, it being seen that the lower member 50 of the rocking clamp holds the sheets from further withdrawal, while the front edge of the upper member 51 of said clamp tightly impinges against the sheets at the perforate line of severance. After the severance of the duplicate order-sheets the forward edges of the remaining sheets and the member 51 of the duplex rocker-clamp drop down again onto the desk-tablet with a sufficient projection of said forward edges of the paper to constitute the

catch-hold 54 for renewing the process in the detachment of the next duplicate order-bill.

I do not confine myself to the use of carbon-paper for the duplicate transfer of the order, for it is evident that ink-duplicating paper or carbon or ink cloth may be used and have substantially the same effect; also, while I have described duplicate sheets as used in the above-specified pad, yet I do not confine myself to the use of duplicate sheets, for it is evident that where more than one copy is required triplicate or quadruple or any other required number of sheets can be used without any departure from the essential features of my invention. Again, while the invention may be, as described above, especially adapted for use as an order-pad, it may easily be adapted for use as a desk, pocket, or other pad.

I claim as my invention—

1. In a duplicating-pad, the combination of the bottomless case, the spring bail-clamps 16, the base-tablet that rests on said clamps, the double return-fold order and duplicating paper block, and the desk-tablet above said block, substantially as described.

2. In a duplicating-pad, the combination of the bottomless case, the spring bail-clamps 16, the base-tablet that rests on said clamps, the double-layer order and duplicate perforated sectional sheets refolded back and forth into the paper block 27, the said block seated on said base-tablet, the desk-tablet, the combined compress and forwarding rollers 43, and the final forwarding-roller 8, that delivers the double layer of paper onto said tablet, substantially as described.

3. In a duplicating-pad, the combination of the bottomless pad-case, the spring bail-clamps 16, the base-tablet mounted on said bail-clamps, the return-folded double-sheet perforate sectional paper block 27, the desk-tablet hinged at one end of said pad-case, the compress and forwarding rollers 43 and 8, the carbon or ink sheet 45, and the clamp-holder 44, that holds said sheet between said duplicate layers of paper, substantially as described.

4. In a duplicating-pad, the combination of the bottomless pad-case, the spring-held base-tablet within said case, the return-folded double-sheet perforate sectional paper block 27, the desk-tablet hinged at one end of said pad-case, the compress and forwarding rollers 43 and 8, the carbon or ink sheet 45, the clamp-holder 44, that holds said sheet between the duplicate order-sheets, and the skeleton frame 10, hinged at one end of said tablet, substantially as described.

5. In a duplicating-pad, the combination of the pad-case, the return-folded double-sheet perforate sectional paper block 27, the desk-tablet hinged to said pad-case, the rollers 43 and 8, that hang pendent from said desk-tablet, the carbon or ink sheet 45, the double-fold clamp that holds said sheet between the

duplicate sheets of paper, the skeleton frame 10, hinged to said pad-case, and the duplex rocker-cam holder 48, that holds the sheets from further withdrawal when ready for severance and impinges against them at the line of severance, substantially as described.

6. In a duplicating-pad, the combination of the pad-case, the return-folded double-sheet and perforate sectional paper block 27 within said case, the desk-tablet hinged to said case, the carbon or ink sheet 45, the clamp that holds said sheet between the duplicate sheets of paper, the skeleton frame 10, hinged to

said case, the duplex rocker-cam 48, that holds the sheets from further withdrawal at the time of severance and impinges against said sheets at the line of severance, the perforate line to aid severance, the hooks 23, that hold said skeleton frame to its closure, and the check-sheet 24, that enumerates the day's sales by the user of the pad, substantially as described.

PETER B. BEGG.

In presence of—

BENJN. A. KNIGHT,

A. M. EBERSOLE.