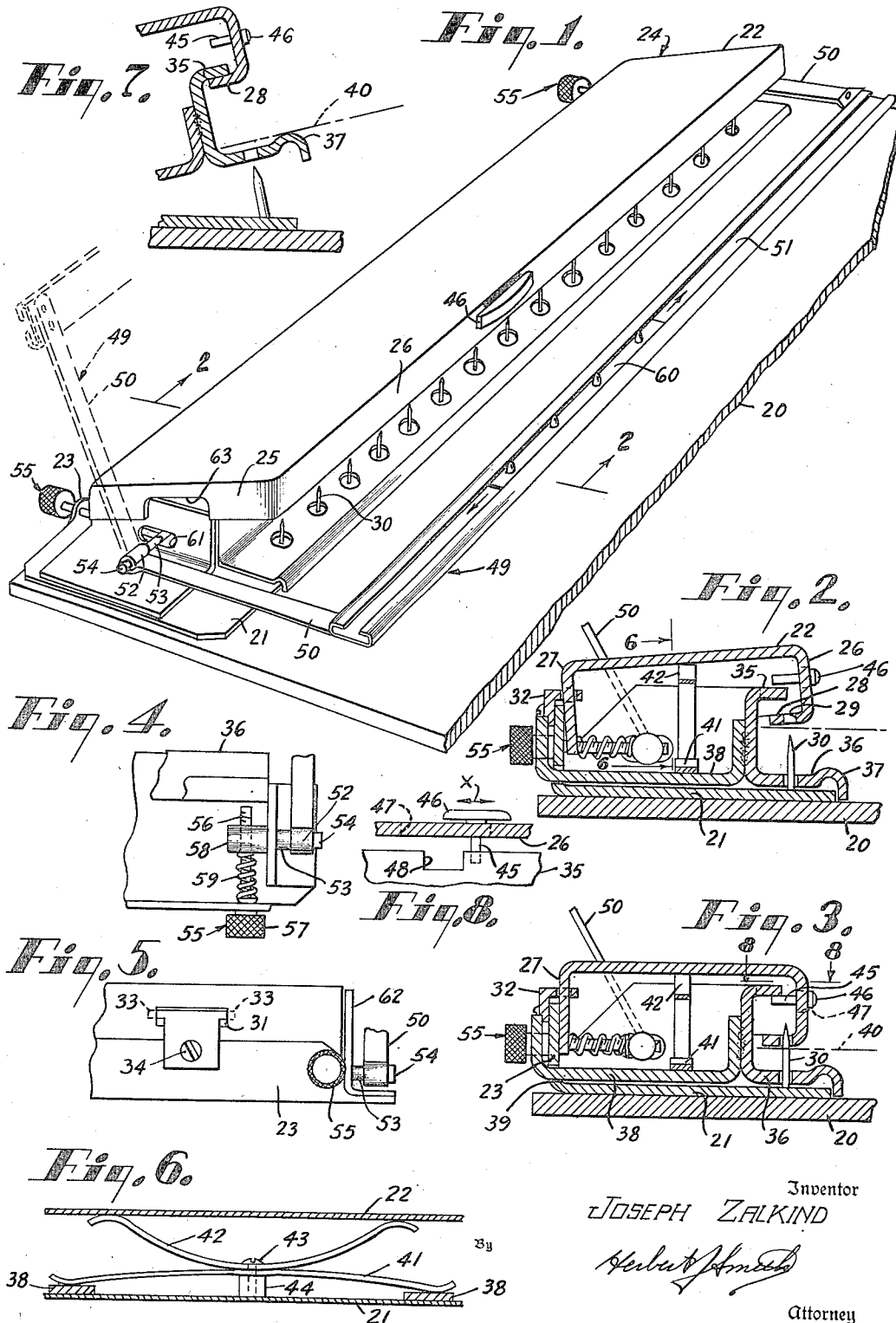


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J. ZALKIND
 ASSEMBLY AND WRITING DEVICE FOR
 ACCOUNTING METHODS AND SYSTEMS
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ASSEMBLY AND WRITING DEVICE FOR ACCOUNTING METHODS AND SYSTEMS

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9 Claims. (Cl. 282—29)

This invention relates to a machine which may be used in conjunction with accounting or recording, and is employed for holding and facilitating the pinning or pegging of various types and sizes of forms, as shown in my patent application S. N. 101,885, filed June 28, 1949, now abandoned.

The invention is of the general type set forth in United States patents issued to the present inventor, Joseph Zalkind, said patents being No. 2,398,487 for a Pegging and Aligning Means, issued April 16, 1946; Patent No. 2,316,209, for a Summary Form Means, issued April 13, 1943; and Patent No. 2,301,605 for a Machine for Pinning Record Forms in Shingled Formation, issued November 10, 1942.

Throughout the specification and claims, the words "forms" or "sheets" may be used, and it is to be understood that the forms or sheets may be of any suitable material such as printed forms in general, summary sheets, and the like, and may be used in conjunction with forms such as checks, vouchers, and the like.

The order and arrangement of the forms in conjunction with the machine of the present invention is possible of many variations, depending upon the particular accounting arrangement employed and the desired results.

It is an object of the present invention to provide a machine or device of the class set forth, which will facilitate the arrangement of the forms in the machine, exact positioning thereof, and removal therefrom, for the purpose of computation, accounting, tabulating processes, and other kindred operations.

A further object of the invention is to provide a device of the specified classification which will be of simplified construction to facilitate fabrication of the component parts and assembly thereof to permit manufacture of the device at a minimum cost.

A further object of the invention is to provide a pinning or pegging device of the stated category which will have means for pinning or pegging a multiplicity of forms therein and for locking said forms in position by a novel latching arrangement readily and easily operable.

A further object of the invention is to provide a pinning or pegging device usable in accounting or recording systems wherein the forms may be readily arranged on a pin base strip and held in position by a compressor bar with an adjustable peg strip which is swingable into an inoperative position and which may be moved to a position for carrying a form on a slidable peg strip, which peg strip may be moved continuously over a range embracing at least one form, such as a summary sheet, carried by the pin base strip.

A further object of the invention is the provision of a novel means for removal of the various forms which have been impaled on pointed pins or pegs by mechanically operating a portion of the device which is disposed underneath the impaled forms.

A further object of the invention is to provide a novel adjustment means for carrying a positionable peg strip for aligning of at least one of the forms used in the

accounting or recording process in conjunction with certain other of the forms impaled or carried by the pin base strip.

A further object is the provision of resilient means for normally positioning a form removal bar to maintain said form removal bar in a retracted position whereby said form removal bar may be operated to remove the impaled forms from the pointed pins or pegs, and for restoring same to its normal position under influence of said resilient means.

A still further object is to provide a resilient means for a compressor bar of the class set forth, which normally urges said compressor bar away from the pin base strip but permits said compressor bar to be urged toward said pin base strip to be locked in a position for maintaining the impaled forms in the desired position on the device.

Further and other objects of the invention may be and may become apparent to one skilled in the art, and it is to be understood that various changes and modifications may be made in construction and arrangement of parts without departing from the spirit of the subjoined claims. The present invention is by way of illustration only as a preferred form of the invention.

In the drawings:

Fig. 1 is a perspective view of the device of the present invention being mounted on a base board shown partially broken away, with the positionable peg strip holder partially shown dotted in an inoperative position.

Fig. 2 is a sectional view taken along lines 2—2 of Fig. 1, showing the device with the compressor bar unlatched and having a phantom form or sheet shown in position ready to be impaled upon downward actuation of the compressor bar, with the positionable peg strip holder shown in its inoperative position.

Fig. 3 is a sectional view taken substantially along lines 2—2 of Fig. 1, but with the compressor bar having been urged downwardly so that the phantom form is impaled on the pointed pins, and with the compressor bar being latched to prevent the form, shown in phantom, from being removed from the device.

Fig. 4 is a partial top plan view of one of the adjustment means, shown in Fig. 1, for adjusting the positionable peg strip holder, said view being taken with the compressor bar removed for clarity in the drawings.

Fig. 5 is a partial rear plan view of the adjustment means of the positionable peg strip holder shown in Fig. 1, and with the hinge means for movably connecting the compressor bar to the pin base strip.

Fig. 6 is a partial sectional view taken substantially along lines 6—6 of Fig. 2, showing the resilient means composed of two leaf springs secured to the pin strip base for maintaining the form removal bar in its normal downward or retracted position, and for urging the compressor bar upwardly so that the said compressor bar normally restores to a position spaced above the pointed pins carried by the pin strip base to permit insertion of forms in the device.

Fig. 7 is a partial sectional view showing the form removal bar in operation to remove one of the forms, shown in phantom, from the row of pointed pins while the compressor bar is latched to the form removal bar for raising said form removal bar against the action of its leaf spring.

Fig. 8 is a sectional view taken substantially along lines 8—8 of Fig. 3, to show the operation of the compressor bar in relation to the form removal bar.

Referring to the drawings and more particularly to Fig. 1, there is shown a base board 20 which may be made of fibre, wood, plastic, composition board or other material upon which the pin base strip 21 may be secured in any convenient manner, such as by screws or rivets. The purpose of the base board is to provide a large work-

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ing surface on which a summary sheet or other form may rest to act as a writing platen therefor.

A compressor bar 22 is hinged to a back wall 23 formed by turning upwardly one edge of the pin base strip 21 throughout substantially the length of the compressor bar 22 of the accounting device 24. The compressor bar 22 has end portions 25 on opposing ends thereof and a front and back portion 26 and 27 respectively.

An aperture strip 28 has a multiplicity of apertures such as 29 formed therein, said aperture strip being bent inwardly from one edge of the front portion 26 of the compressor bar 22. The apertures are formed in the aperture strip 28 with one aperture being formed to permit one of the complemental impaling pins 30 to be inserted through each of said apertures 29, the size of apertures being sufficient to readily pass the impaling pins there-through, and when said compressor bar is urged downwardly it permits the various forms to be impaled by the various pins within the range of the impaling pins of the device.

The back portion 27 of the compressor bar 22 has a pair of slots such as 31 formed therein. A T-shaped bracket 32 has a flange 33 formed on either side of one end thereof, and said bracket is adapted to be inserted through the slots 31 so that the flanges remain on the inside of the compressor bar 22 with the remaining portion of said brackets each being bent to form an angle so that said brackets may be secured to the back wall 23 by screws such as 34.

The aperture strip 28, when in assembled position as shown in Fig. 2, will be positioned below the longitudinal flat portion 35 which is formed substantially of equal length of the aperture strip 28 and is part of the form removal bar 36 which has a bead 37 substantially the length of the form removal bar, to facilitate insertion of the forms in the device by providing an inclined surface which may engage the forms as they are inserted through the device.

A pair of hinge brackets 38 (Fig. 6) is secured to the form removal bar 36 in any convenient manner, such as by spot welding or rivets or the like. Said brackets extend through complemental slots 39, and are bent upwardly to extend on the outside of the back wall 23. These hinge brackets 38 are not secured, thereby permitting the form removal bar to hinge on said brackets to permit said form removal bar to be raised upwardly when engaged by the aperture strip 28 when contacted by the longitudinal flat portion 35 of the form removal bar.

The compressor bar 22 is hinged on the pair of T-shaped brackets 32 so that said compressor bar may be moved upwardly to permit the aperture strip 28 to engage said longitudinal flat portion 35 which engagement, and continued upward motion of the compressor bar on the front edge thereof, will cause the form removal bar to pivot upwardly along the front edge thereof. When this operation takes place, the form removal bar will engage the lower form such as the form 40, shown in phantom, as represented in Fig. 7, thereby causing all of the forms impaled by the impaling pins 30 to be raised upwardly, thereby being free of said impaling pins to permit removal of said forms from the device.

A removal bar leaf spring 41 extends to engage each of the hinge brackets 38. A compressor bar leaf spring 42 has the free ends thereof curved and adapted to engage the underneath surface of the compressor bar. A screw 43 has a spacer 44 that fits thereon as shown in Fig. 6. Said pair of leaf springs 41 and 42 is held by the screw in a predetermined position on the pin base strip 21, which screw is threadedly connected therein.

From the position of the leaf springs shown in Fig. 6, it will be seen that the leaf spring 42 normally urges the compressor bar upwardly from the pin base strip 21 so that when the device is ready for use the longitudinal flat portion 35 will be in engagement with the aperture

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strip 28, leaving a space between the aperture strip 28 and the top of the impaling pins 30 to permit the forms to be positioned in the device ready for impaling on said pins. The leaf spring 41, which normally engages the hinge brackets 38, holds the form removal bar 36 downwardly against the pin strip base 21 as shown in Figs. 2 and 3. When the form removal strip is desired to be operated to remove the forms from the impaling pins, the compressor bar is lifted upwardly so that the brackets 38 are pivotally moved to further actuate the leaf spring 41 and permit the form removal bar to move away from the pin strip base during the removal of the form from the device.

A latch 45 has a head 46 connected thereto, with the latch being movable within a slot 47 formed in the front portion 26 of the compressor bar 22. The latch 45 will slide in the slot 47 so that it may ride through the notch 48 formed substantially in a central area of the longitudinal flat portion 35. When the latch is in the proper position to pass through the notch 48, and the compressor bar is urged downwardly, the head 46 may be moved in one direction of the arrow X as shown in Fig. 8, to lock said compressor bar so that the apertures 29 pass over the free ends of the impaling pins 30 as shown in Fig. 3, so that the forms such as 40 will be clamped in position on the impaling pins to prevent removal therefrom. Movement of the latch to the left, as indicated by arrow X in Fig. 8, will cause the compressor bar to be unlatched, and under influence of leaf spring 42, to be urged upwardly so that the said longitudinal flat portion 35 and the aperture strip 28 are in engagement, thereby permitting removal of the forms from the device.

A positionable peg strip holder 49 has a pair of brackets 50 with a channel 51 secured to said brackets at one end thereof, with the other end of said brackets each having a loop 52 formed thereon to movably engage a stud 53, which stud has a headed portion, which may be a screw 54 for maintaining the brackets 50 on the stud 53. Adjustment screws 55 each have a threaded portion 56 on one end thereof and a head 57 on the opposite end thereof, which head engages one surface of the back wall 23. The stud 53 has an enlarged threaded portion 58 which is adapted to be connected to the threaded portion 56. An expansion spring 59 engages the inside surface of the back wall 23 and also engages the threaded portion 58 of the stud 53, thereby always urging the stud away from the back wall, and consequently urging the respective brackets 50 forwardly. When one of the adjustment screws 55 is rotated in one direction, the corresponding bracket 50 will also be moved. Therefore, it will be seen that since the adjustment screws are independently operable, the positionable peg strip holder 49 may have either end thereof moved for longitudinally aligning said peg strip holder with the row of impaling pins 30.

Peg strip 60 is slidably mounted in the channel 51 to permit longitudinal movement of said peg strip so that the form carried by the peg strip may be moved longitudinally in relation to the form or forms held by the impaling pins 30.

While the impaling pins 30 are shown mounted vertically in certain of the figures of the drawings, Fig. 7 shows the row of impaling pins being definitely inclined rearwardly. The purpose of this definite inclination of the impaling pins 30 is to facilitate insertion of the forms in the device so that when the forms are moved into position on the device, the engagement of the forms with the inclined impaling pins will permit the forms to slide upwardly of the impaling pins and over the pointed edges of said impaling pins. This facilitates loading of the machine and acts in much the same manner as the bead 37 on the form removal bar 36, namely to facilitate loading of the accounting device. While the pins may be mounted either vertically as shown in Fig. 2 or at

an incline as shown in Fig. 7, it is pointed out that the preferred arrangement of the present invention is to use the inclined impaling pins.

It will be noted in Figs. 1 and 5 particularly that the stud 53 passes through a slot 61 formed in a bracket 62, which slot 61 acts as a guide for the stud. Each of the end portions 25 has a recess 63 formed therein to permit the compressor bar to be moved downwardly without obstruction from the stud 53.

From the foregoing it will be seen that the accounting device has a compressor bar which may be latched into position to hold the impaling forms on the impaling pins. Further, it will be seen that the compressor bar may be unlatched, and may be urged upwardly until it engages the form removal bar which is movable by means of its supporting brackets, to be simultaneously moved with the compressor bar for removal of the forms from the impaling pins.

Further, the positionable peg strip holder 49 when positioned substantially as shown dotted in Fig. 1, will be out of the way during the loading operation of the forms on the impaling pins. However, the positionable peg strip holder may be moved to the position shown in solid lines of Fig. 1 when required.

By way of example in one use of the accounting device, a large summary sheet form may be inserted in the machine as indicated by the phantom sheet 40 of Fig. 2, in its desired position. Thereafter, the compressor bar is urged downwardly until the summary sheet rests against the form removal bar 36. Thereafter, an entire series of checks may be placed in the machine one at a time, starting toward the bottom of the accounting device. The first check is placed in the device over the impaling pins after certain indicia on the check are aligned with certain indicia on the summary sheet. Thereafter, the next check is placed in position in shingled relation to the previous check and properly aligned as aforesaid. This operation continues until all of the checks for the particular accounting operation are properly aligned on the device of the invention. After each insertion of the summary sheet and checks, the compressor bar is moved downwardly to secure the summary sheet and checks in fixed relation to the particular impaling pins. Thereafter, the compressor bar may be moved downwardly and latched into position as shown in Fig. 3, to prevent the forms from being removed. The positionable peg strip holder may then be swung in operative position, as shown in solid lines of Fig. 1.

A record sheet having perforations therein, adapted to engage the pegs on the peg strip 60 may be placed with the perforations in registry with the pegs of the peg strip 60. The adjustment screws 55 may be then adjusted so that the positionable peg strip holder 49 may be moved to align the form carried by the peg strip so that the horizontal lines of the record sheet will be aligned with the horizontal lines of the summary sheet and checks. By moving the peg strip 60 up and down, it will be possible to also move the record sheet to the desired perpendicular position in relation to the summary sheet. Consequently, with the proper forms, which have suitable carbon paper provided, a single writing on the record sheet carried by the peg strip will permit simultaneous writing on the various checks and the summary sheet, thereby reducing the possibility of error in copying by making multiple notations with a single writing.

The present invention, by employing the impaling pins, eliminates the necessity for having perforations formed in certain of the sheets such as the summary sheet and the checks. By elimination of these perforations in the forms, the operator of the device can set up the necessary forms on the machine by simple inspection as the machine is loaded, thereby avoiding one of the existing possibilities

of misalignment of the forms when employing the conventional perforated forms. The device also permits the use of unperforated forms to be secured on the impaling pins, which may be used in conjunction with perforated forms when employing the adjustable peg strip.

While one illustration of the device is presented herein by way of example, it is to be understood that it has many applications for various accounting arrangements and operations.

I claim:

1. A device of the class described comprising a base carrying a multiplicity of aligned impaling pins to receive at least one form thereon, bar means for urging the form relative to said impaling pins to position said form thereon, said bar means being secured for relative motion with respect to said pins, and a peg strip means comprising a guide element and a peg strip slidable therealong, including a bracket means secured to said base and to said guide element and operative to provide swinging clearance thereof over and beyond said impaling pins and said bar means.

2. A device, as set forth in claim 1, including means for adjustably translating said bracket means with respect to said aligned impaling pins.

3. A device of the class described, comprising a row of spaced pins, a base to which said pins are affixed, and a pair of movable elements having perforations registering with the spacing of said pins, one of said elements being movable to position whereat said pins protrude through said apertures prior to disposing paper forms on said pins and the other of said elements being movable against a margin of said forms to compel impaling thereof on said pins, wherein said one element is reversely movable to lift the impaled margin of said forms away from said pins so as to remove said paper forms from said device.

4. A device as set forth in claim 3 including means for engaging said members for moving them in unison in removing said forms.

5. A device of the class described, comprising a base, a row of aligned pins on said base, a member having a series of perforations registerable with respective pins, and mounting means movably securing said member to said base whereby said member may be actuated relative to said pins so as to be superimposed thereover with said pins protruding through respective perforations and extending upwardly therethrough, to pass through perforations in a paper sheet superimposed on said member.

6. A device as set forth in claim 5, said mounting means comprising at least one pivotal link element secured intermediate said base and said member.

7. A device as set forth in claim 5, including an additional member having perforations alignable with the perforations in said first-mentioned members so as to be superimposed thereover, said pins being accommodated in the perforations of said additional element, and resilient biasing means normally biasing said members away from each other.

8. A device as set forth in claim 7, including latch means for securing said members to each other against the force of said biasing means.

9. A device as set forth in claim 7 wherein said members are channel-shaped, the interiors of said channels facing each other, and said biasing means being secured within said channel interiors.

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