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J. A. B. SMITH

1,927,140

TYPEWRITING MACHINE

Filed April 7, 1930

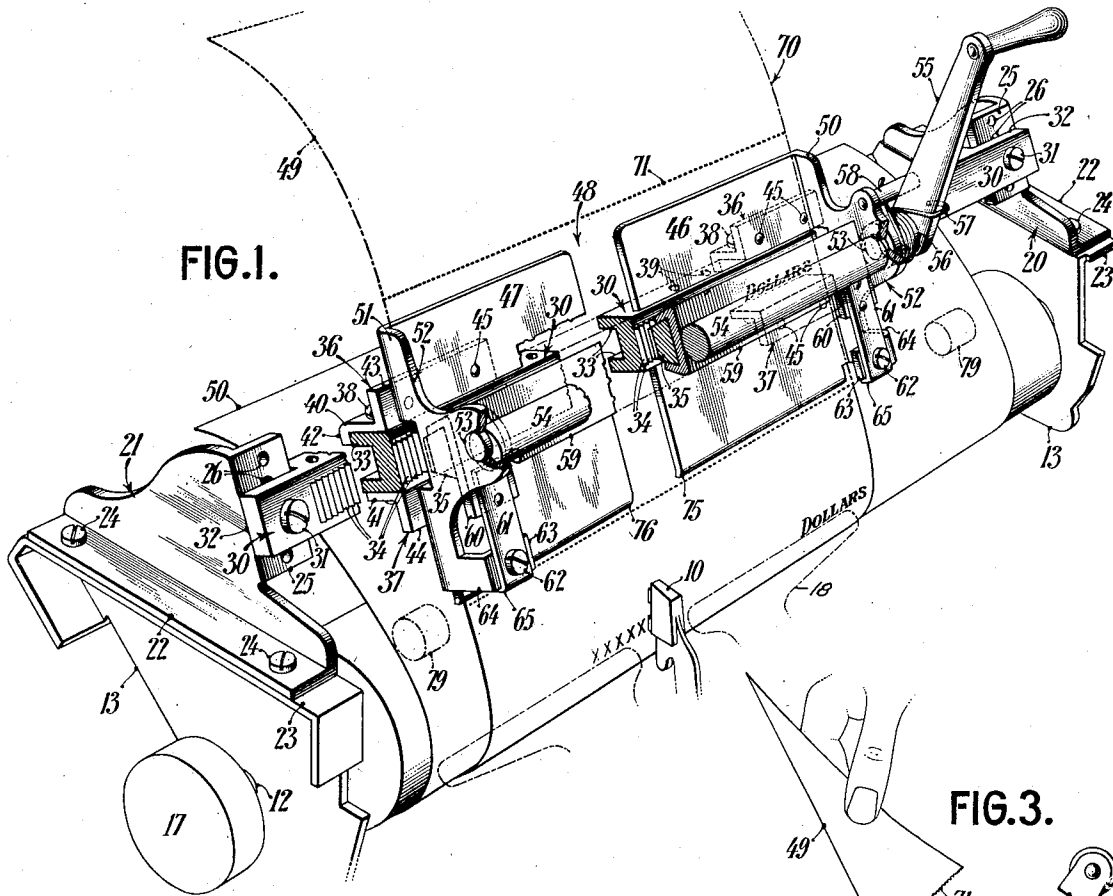


FIG. 1.

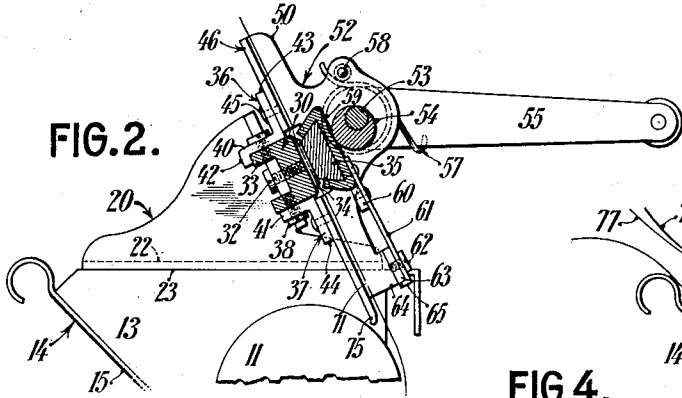


FIG. 2.

FIG. 4.

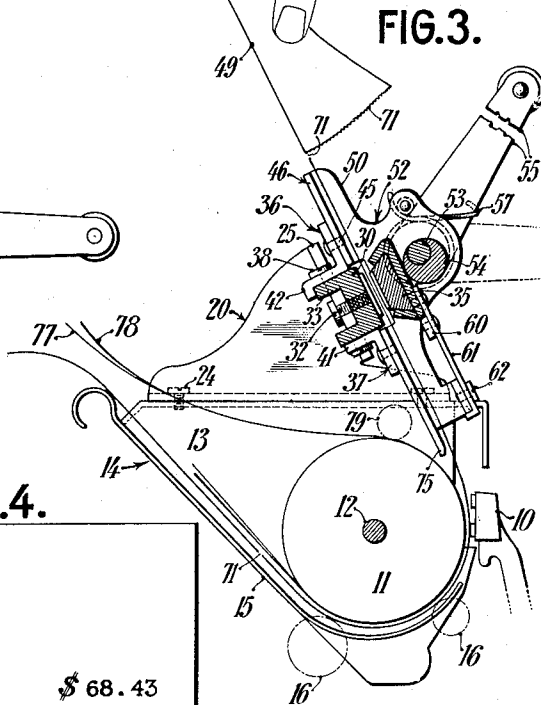


FIG. 3.

NEW YORK,

SECOND BANK,

PAY TO THE ORDER OF JOHN DOE, \$ 68.43

SIXTY-EIGHT & 43/100 DOLLARS

INVENTOR:

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UNITED STATES PATENT OFFICE

1,927,140

TYPEWRITING MACHINE

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9 Claims. (Cl. 197—180)

This invention relates to check typing and protecting machines.

It is customary to employ perforating types in a check-typing machine for the purpose of indenting the paper. Other check-protectors have type-dies which shred the paper.

The main aim of the present invention is to provide for simply and quickly protecting a check, without need for employing a machine which is capable of nothing else than check-writing. This invention employs a standard typewriting machine, which is illustrated as an Underwood typewriter; and the types used in this invention are standard types, as distinguished from perforating types.

The checks are attached in the form of a web, and, after the first check is typed, the web is advanced, and the typed check is thereby brought, with its typed amount line in register with a shredding die-mechanism that is provided upon the typewriting machine at the delivery side of the platen. A handle is then operated, and the dies are brought together upon the check to shred the same along its typewritten line. The check may be shredded for its entire width, ample check-protection being thereby secured.

The typing of the second check begins while the first check is advancing to the shredding position. Preferably when the second check is in position for typing the main amount thereon, the first check is in position to be shredded. The main amount is usually the last line that is typed on the check. After the shredding of the first check, it may be torn off, and then the web may be advanced for beginning typing of the third check.

A check-shredding table is mounted to extend upwardly and rearwardly from the platen above the printing line, and the emerging web travels over this table, in which is fastened one die-member. Above the table is secured a movable die-member, and the check-web is advanced between said die-members by means of the typewriter feed-rolls, which run upon the under side of the platen and press the check-web against the platen.

The dies are normally open, but are closed by means of a handle, thereby leaving each check in condition to be torn off from the web along a weakened line; although, if desired, a tearing-off knife may be provided upon said check-table, or the checks may remain intact until the entire web is typed.

The entire shredding device may be manufactured and sold as a unit for attachment to

an Underwood or other standard machine. This unit may be removed, if it is desired at any time to use the typewriting machine only for ordinary typewriting purposes.

There may be preserved a copy of the checks. This copy may be made upon a record-sheet by the aid of a carbon. The carbon and the record-sheet may feed out from the machine above the platen and below the check-perforating table. The record-sheet may be used in connection with a condensed record mechanism, if desired, so as to space the items closely upon the record-sheet.

An objection arises to the use of typewriters for check-typing purposes, because the machine is infrequently in use, as there are not many checks to be typed, and the entire old check-writing machine is useless for general typewriting, on account of the check-perforating types with which it is equipped. The present invention provides for using the machine at any time for ordinary typing, while it is serviceable as a check-protecting typewriter whenever desired. When the machine is used for ordinary typing, all the work-sheets may emerge from the machine over the platen and below the check-protecting device, so that the latter does not need to be removed.

The check-shredding dies are mounted to have the long axis of their work-field spaced from the printing field of the platen at a distance measured along the path of the check-sheet, equalling the distance between the lengthwise, parallel spaces of two adjoining check-forms provided for bearing the amounts of the checks in words. Then, when a check-slip of the check-sheet is positioned in the typewriting machine to have its amount in words typed in the usual space, the amount in words of the leading check is positioned between the check-shredding dies. After the amount of the next following check is typed, a movement of the handle will then shred the leading check, and, when the handle is released, the leading check is left free to be advanced to tearing-off position as the next following check is moved up to shredding position.

It is a further feature of the present invention to provide for handling checks of different widths. This is accomplished by providing adjustable means for mounting the shredding dies in different work-positions relative to the printing field of the typewriting machine.

Still another feature of the invention resides in making use of an eccentrically-mounted roller extending lengthwise of a movable die, for applying uniform pressure to it throughout its length,

for moving it into engagement with the lower fixed die.

Other features and advantages will herein-after appear.

5 In the accompanying drawing,

Figure 1 is a perspective view of an embodiment of my check typing and protecting device broken away in part, which device is illustrated as including an Underwood typewriting machine, 10 which is also shown in part.

Figure 2 is a view showing a partial cross-section through the structure shown in Figure 1. In this view the parts are shown positioned as when performing the paper-shredding operation.

15 Figure 3 is a partial cross-sectional view through the structure shown in Figure 1. In this view the sheet of checks is shown advanced to bring the leading check, which has been previously shredded, to tearing-off position.

20 Figure 4 is a view of a partially filled in check, protected against being raised, which illustrates one way checks can be macerated or shredded in a device embodying my invention.

25 My check typing and protecting device is illustrated as embodying an Underwood typewriting machine. It can be readily seen as the description proceeds that my device can be easily modified to embody other makes of typewriters.

In an Underwood typewriting machine, types 30 10 strike against a platen 11 mounted on a platen-shaft 12, which is journaled in end plates 13 of a platen-frame generally designated as 14. For guiding work-sheets around the platen from the rear, a rear paper-table 15 extends between the end plates 13, and lower feed-rolls 16 are provided to engage against the lower side of the platen.

The platen 11 may be rotated by finger-wheels 17 on the platen-shaft 12 or by usual line-spacing 40 mechanism (not shown). For gaging a work-piece to typing position on the platen 11, use may be made of a pair of wing-scales 18, one of which is shown in Figure 1. The parts described above may be constructed the same as they are in a 45 standard Underwood typewriting machine.

The check-protecting mechanism of my device may include a right and a left mounting bracket 20 and 21, respectively, each having an out-turned horizontal flange 22 resting on usual out-turned flanges 23 of the end plates 13 and fastened thereto by screws 24. Each of the brackets 20 50 and 21 has an inreaching flange 25 which is provided with a row of tapped mounting holes 26, each hole in one flange having a paired relation with an opposite hole in the other flange.

55 A strong U-shaped metal cross-bar 30 extends between the flanges 25 to which it is rigidly fastened by screws 31 which pass through suitable holes provided in each end of the bar 30 and engage in a selected pair of the tapped holes 26. To permit a base portion 32 of the cross-bar 30 to fit squarely against the flanges 25 and give greater rigidity to the mounting of the cross-bar on the flanges, a short portion of transverse integral flange element 33 of the cross-bar at each 60 end thereof is cut away, as shown in Figure 1. The front face of the cross-bar 30, as mounted in the typewriter, has formed therein a row of die teeth or serrations 34 for shredding or macerating the portion of the bank-check slip on which 70 the amount of the check is written in words.

75 A second die 35 has integral teeth formed for co-operating with the teeth 34, and means for moving the second die into shredded engagement with the teeth include upper and lower

angle members 36 and 37 positioned adjacent each end of the cross-bar 30 and fastened to it by screws 38 which pass through holes in arms 40 and 41 of the angle members 36 and 37, respectively, to engage in tapped holes 39 in the flange 80 elements 33.

Each tapped hole 39 in one flange 33 has a paired relation with a tapped hole 39 in the other flange 33, and a plurality of pairs of the holes 39 may be provided for a purpose to appear hereinafter. To more securely fasten the angle member 36 to the flange-element 33, an integral flange-member 42 of the arm 40 may engage tightly against the outer end of its adjoining flange-element 33. 85

Angle-members 36 and 37 include arms 43 and 44, respectively, whose forward faces are disposed in a rearwardly-inclined plane. To these faces may be secured, as by rivets 45, right and left separated plate-members 46 and 47, respectively, 95 which form a paper-table, generally designated as 48, for a check-sheet 49 advancing from the platen 11. Each plate 46 and 47 has a middle section cut away to leave the teeth 34 exposed for engagement with a check-sheet lying on the 100 table 48. The plate-members 46 and 47 have integral forwardly-bent flange-portions 50 and 51, respectively, each of which terminates in a mounting lug 52, each lug being substantially disposed opposite the teeth 34. The flange-portions serve 105 as side-edge gages for the check-sheet advancing up from the typewriting machine to shredding position between the dies 34 and 35. Aligned holes are provided in the lugs 52 for receiving reduced axle-members 53 of pressure-roller 54 eccentrically mounted on the axle-members 53. 110

A handle 55 has a hub 56 for engaging a protrusion of the axle-member 53 extending past the right-hand lug 52, whereby the handle is disposed for operating the roller 54. To hold the roller 115 in released position, a spring 57 is coiled about the hub 56 and has one end hooked about the handle 55, and the other end about a pin 58 fastened in the adjacent lug 52.

To mount the die 35 so that it may be normally 120 disposed opposite the die-teeth 34 on the opposite side therefrom of the path of the check-sheet 49 and near enough to be easily moved into engagement with the die-teeth 34, is a feature of the present invention. In carrying out this feature, 125 the die 35 may be made from a steel bar having a cross-section of a trapezoid, the narrower one of its two parallel faces being disposed adjacent the die-teeth 34. A strip of metal-plate 59 is crimped about the forward converging sides of 130 the die, which fasten the plate securely to the die. Adjacent each end of the die an integral portion 60 of the plate is left flat in an uncrimped condition for extending downwardly to have fastened thereto, as by riveting, a short strip 61 135 of a resilient metal like spring steel. The lower end portion of each strip 61 is fastened by a screw 62 to an inreaching portion 63 of a forwardly-extending lug 64, which is integrally joined to the flange-member 52. To more securely fasten the 140 resilient strip 61 to the inreaching lug-portion 63, a lower end portion 65 of each strip is bent at right angles thereto for engaging against the lower edge of the lug-portion 63.

The arrangement of the parts supporting the 145 die 35 is such that the spring-strips 61 are initially stressed so as to normally urge the upper face of the strip 59, which is crimped over the die 35, against the roller 54 with a uniform pressure throughout the length of the roller. By simply 150

pulling the handle 55 downwardly from the Figure 1 to the Figure 2 position, the die 35 is moved rearward with sufficient strong pressure to shred and macerate a check-slip between it and the relatively fixed die-teeth 34. It will be noted by the above-described construction, that pressure on the die is applied uniformly over all its work-face which is desirable for securing uniform shredding results.

It is usual to print part of the data appearing on a check or check-slip 70, which may be of usual form, such as is illustrated in Figure 4. Among the other data usually printed is the word "Dollars", which is commonly positioned near the right edge of the check-slip and aligned with the usual space which is provided at the left for bearing the typed or written words which state the amount of the check.

For economy of labor in printing checks and for convenience thereafter in feeding them into a typewriting machine, a succession of like checks 70 are often printed on a sheet, one adjoining another, being usually separated by weakened or perforated dividing lines 71. Such a series of checks integrally joined, the top edge of one to the bottom edge of the preceding check, constitutes a check-sheet, such as the check-sheet 49. By this arrangement, the amount-bearing spaces on the several checks, each disposed opposite the word "Dollars", are spaced equal distances apart along the path of the check-sheet, as it advances from the typewriting machine to the check-protecting mechanism.

Advantage is taken in the present invention of the uniform spacing of the amount-bearing spaces of the checks on the check-sheet 49, whereby the need for gaging a typed check-strip 70 to shredding position is eliminated. This desirable result is accomplished by mounting the check-protecting mechanism on the platen-frame 14, so as to position the work-field of the mechanism, as determined by engagement of the teeth 34 and the die 35, a distance from the printing line of the platen, measured along the path of the check-sheet 49, equal to the distance between two amount-bearing spaces of two adjoining attached checks 70 when the amount-bearing space of one of the checks is in the printing field of the typewriting machine, and the other check is advanced beyond the platen 11 at the delivery side thereof.

Thus, when one check 70 is gaged by means, such as the wing-scales 18, to position it in the typewriting machine for having its amount in words typed in the space provided therefor, the next preceding check (already typed) is simultaneously disposed in shredding position between the die-teeth 34 and the die 35. The typed check is shredded preferably just after or before the amount in words is typed on the next following check whose amount-bearing space is then in the printing field. After a typed check has been shredded and the handle 55 released, the check is left in position to have its trailing edge advanced to tearing-off position (see Figure 3) slightly above the top edges of the plate-members 46 and 47 upon advancing the next unprotected check to shredding position.

By inspection of Figures 2 and 3, it will be seen that lower extremities 75 and 76 of the plates 46 and 47, respectively, are slightly bent toward the platen 11. This construction facilitates advancing check-sheets 49 over the plates. It will be further noted that the bent extremities 75 and 76 terminate a short distance from the periphery

of the platen 11. This arrangement permits a check-sheet 49, a record-sheet 77 and a carbon-sheet 78, overlying the record-sheet 77, to be inserted together around the platen 11 and permits the check-sheet 49 to be passed over the table 48 and between the die-teeth 34 and the die 35, while the record-sheet and the overlying carbon-sheet are passed beneath the extremities 75 and 76 and under two usual pressure-rollers 79, which engage against the upper side of the platen 11.

By this construction, a record can be easily made of checks while they are typed and protected in a device embodying my invention. Moreover, the record-sheet 77 and carbon-sheet 78, after passing beneath the extremities 75 and 76, are safe against being caught between the die-teeth 34 and the die 35 and damaged.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work lengthwise thereof and mounted at the delivery side of the platen and parallel therewith, operating means for the jaws, means for guiding into the machine and around the platen and away therefrom and advancing between said jaws and past the same, a work-web divided into a succession of separable printed checks, and means wholly out of the path of the advancing web for supporting said jaws, the latter being mounted clear of the platen and types, and located in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, the separation of the printing line from the jaws being equal to the height of the check.

2. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, operating means for the jaws, means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, and line-gaging means effective to locate the web accurately for typing the amount-line upon one check and for actuating the protecting jaws upon the preceding check.

3. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, operating means for the jaws, and means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and

having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, said work-table having an opening for the fixed lower shredding jaw, and its said side supports carrying the movable upper jaw, a crank mounted upon said work-table and having a handle, and a movement-reducing device operated by said crank and forcing the movable jaw towards the fixed jaw.

4. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, operating means for the jaws, means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, and a bar extending lengthwise of the platen and carrying said fixed jaw, said work-table being adjustable along said bar.

5. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, operating means for the jaws, means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, a bar extending lengthwise of the platen and carrying said fixed jaw, said work-table being adjustable along said bar, and means supporting said bar at its ends for up-and-down adjustment relatively to the printing line on the platen.

6. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, and means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing

the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, said work-table having an opening for the fixed lower shredding jaw, and its said side supports carrying the movable upper jaw, a crank mounted upon said work-table and having a handle, and a movement-reducing device operated by said crank and forcing the movable jaw towards the fixed jaw, said movable jaw being mounted upon said work-table by means of springs 61, and said movement-reducing device being in the form of an eccentric 54 pivotally supported upon said table and bearing against said movable jaw.

7. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, said work-table having an opening for the fixed lower shredding jaw, and its said side supports carrying the movable upper jaw, a crank mounted upon said work-table and having a handle, and a movement-reducing device operated by said crank and forcing the movable jaw towards the fixed jaw, and adjustable means for varying the positions of said jaws up and down relatively to said printing line on the platen.

8. The combination with a typewriting mechanism having a platen and types to spell out the amount of a check, of co-operative check-protecting jaws extending across the work and mounted at the delivery side of the platen and parallel therewith, means for guiding into the machine and around the platen and away therefrom and between said jaws a work-web divided into a succession of separable printed checks, said jaws being mounted clear of the platen and types, in position to protect one check while the next check is at the typing field, affording opportunity to inspect and correct each typed check before closing the protecting jaws thereon, said guiding means including a work-table extending upwardly and rearwardly at the delivery side of the platen and having supports at its sides, between which supports the check-web is guided, one of said protecting jaws being mounted at its ends upon said supports, and a platen-frame from which said supports rise, said work-table having an opening for the fixed lower shredding jaw, and its said side supports carrying the movable upper jaw, a crank mounted upon said work-table and having a handle, and a movement-reducing device operated by said crank and forcing the movable jaw towards the fixed jaw, and adjustable means for

5 varying the positions of said jaws up and down relatively to said printing line on the platen, said table movable up and down together with said adjusting means, and said table being mounted upon said adjusting means for independent lateral adjustment.

10 9. In combination, a typewriter platen, brackets supported at each end of the platen, a check protecting device having a bar rigidly attached to the brackets and forming a frame, with the bar held parallel to the platen, said check protecting

device having a second bar supported on the frame and resiliently held spaced from the rigidly held bar, and means supported on the frame operative to press the resiliently held bar towards the stationary bar, said bars having oppositely disposed faces with check protecting means on at least one of the faces and the faces being normally held in position to receive a check between them as it is fed from said platen.

JESSE A. B. SMITH. 85

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