Dec. 27, 1938. E. WATSON ET AL 2,141,577

MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

Filed May 28, 1937 6 Sheets-Sheet 1

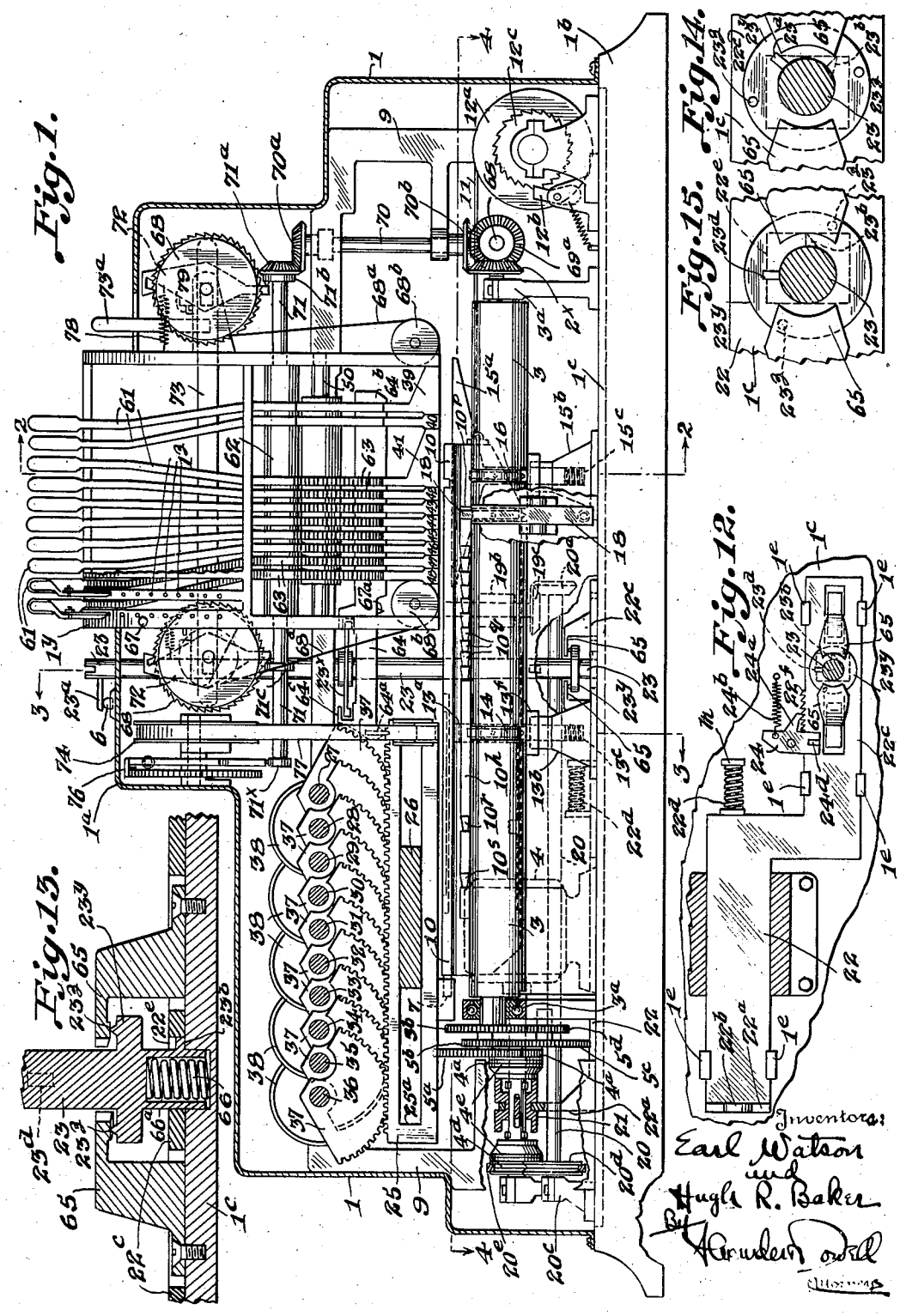


Fig. 1.

Fig. 15.

Fig. 14.

Fig. 15.

Fig. 12.

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MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

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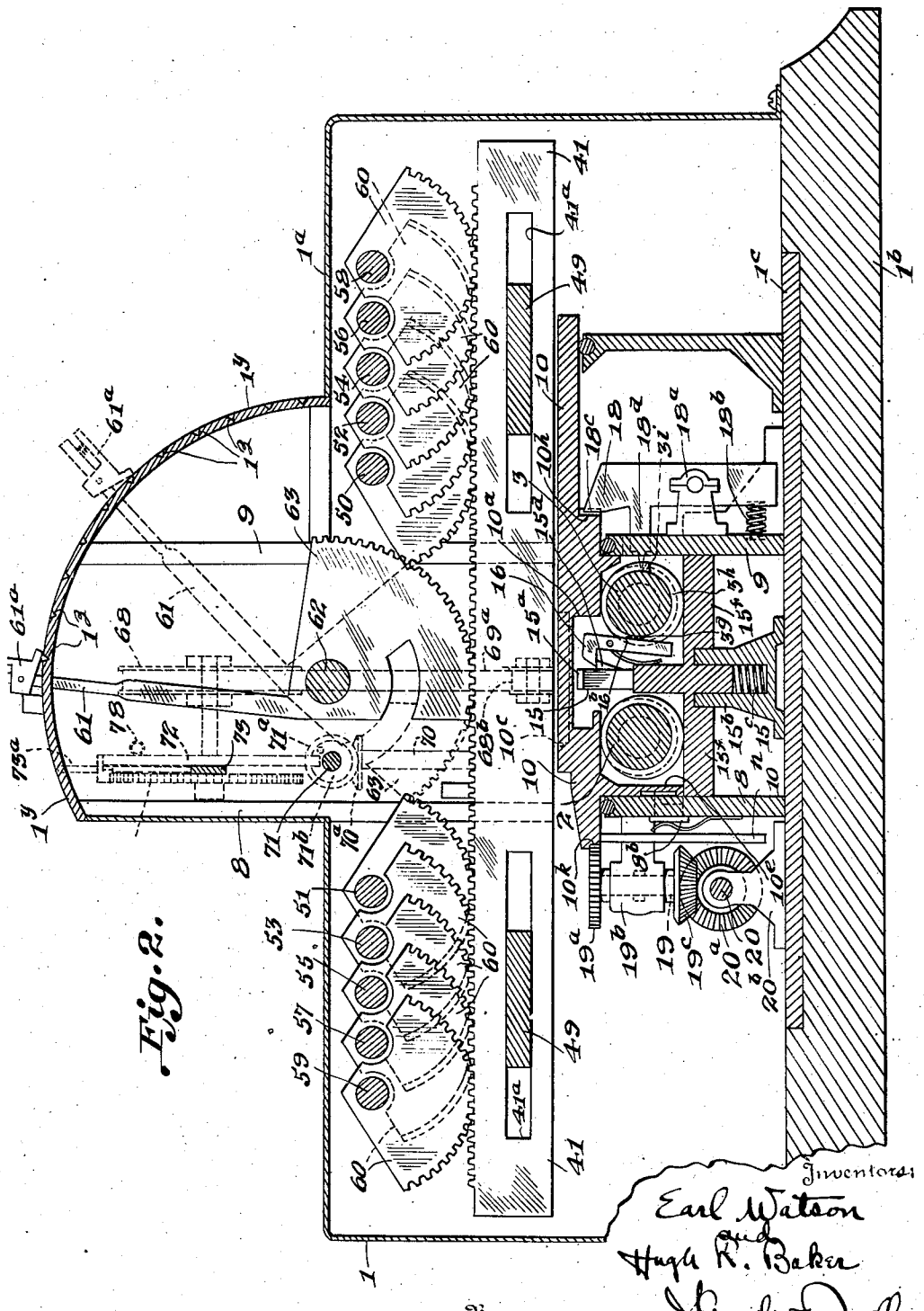


Fig. 2.

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MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

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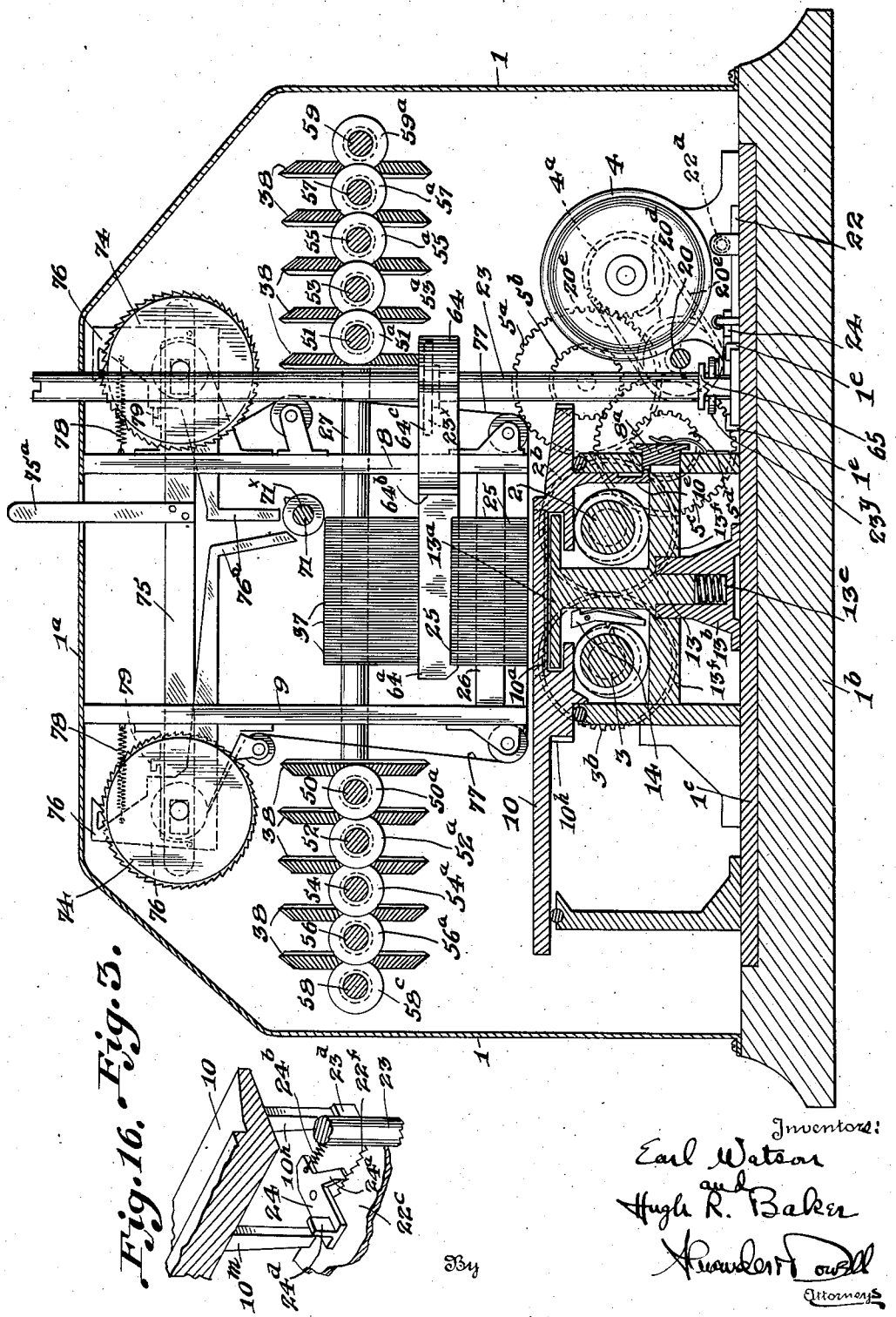


Fig. 16.

Fig. 5.

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MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

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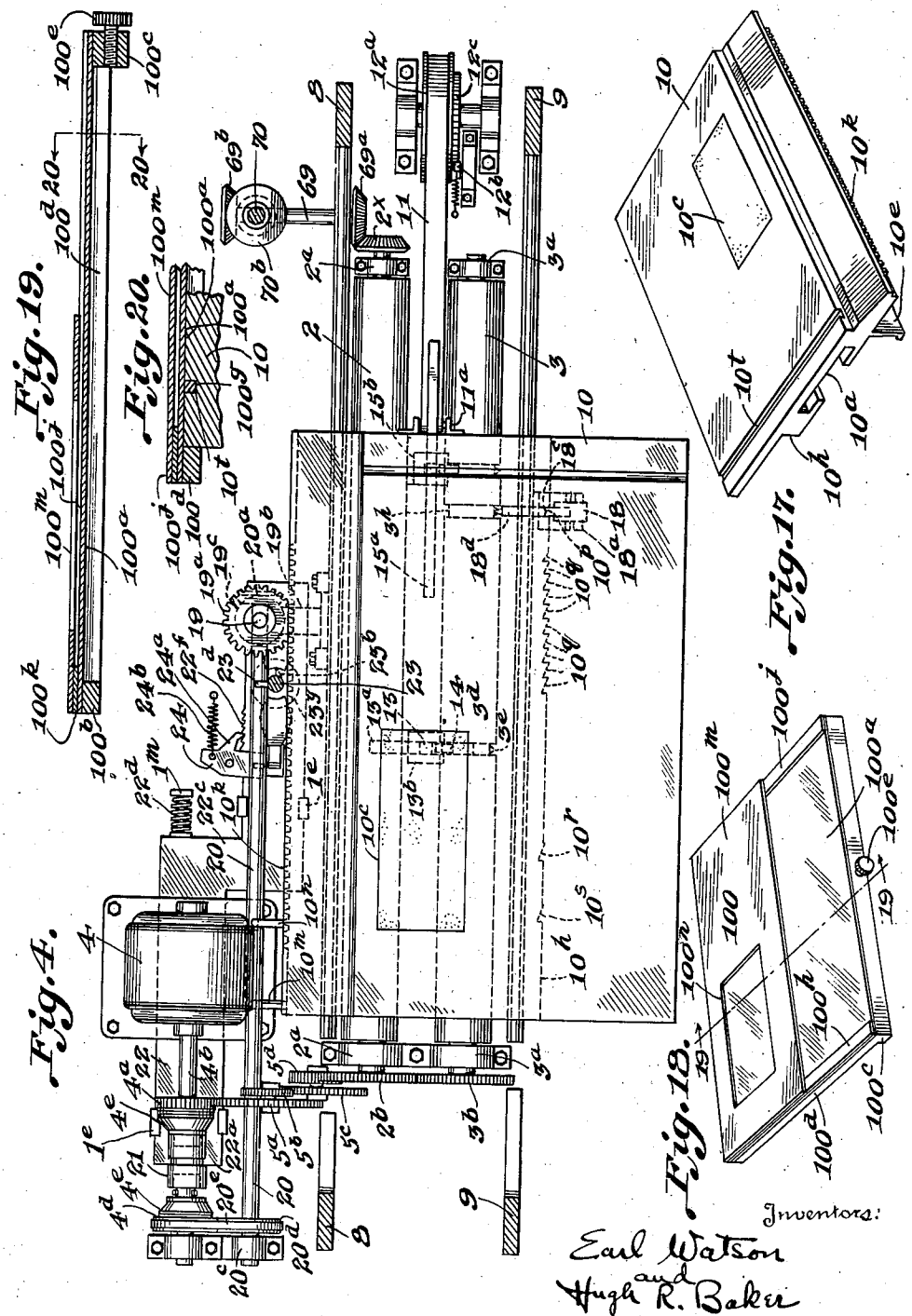


Fig. 4.

Fig. 19.

Fig. 20.

Fig. 17.

Fig. 18.

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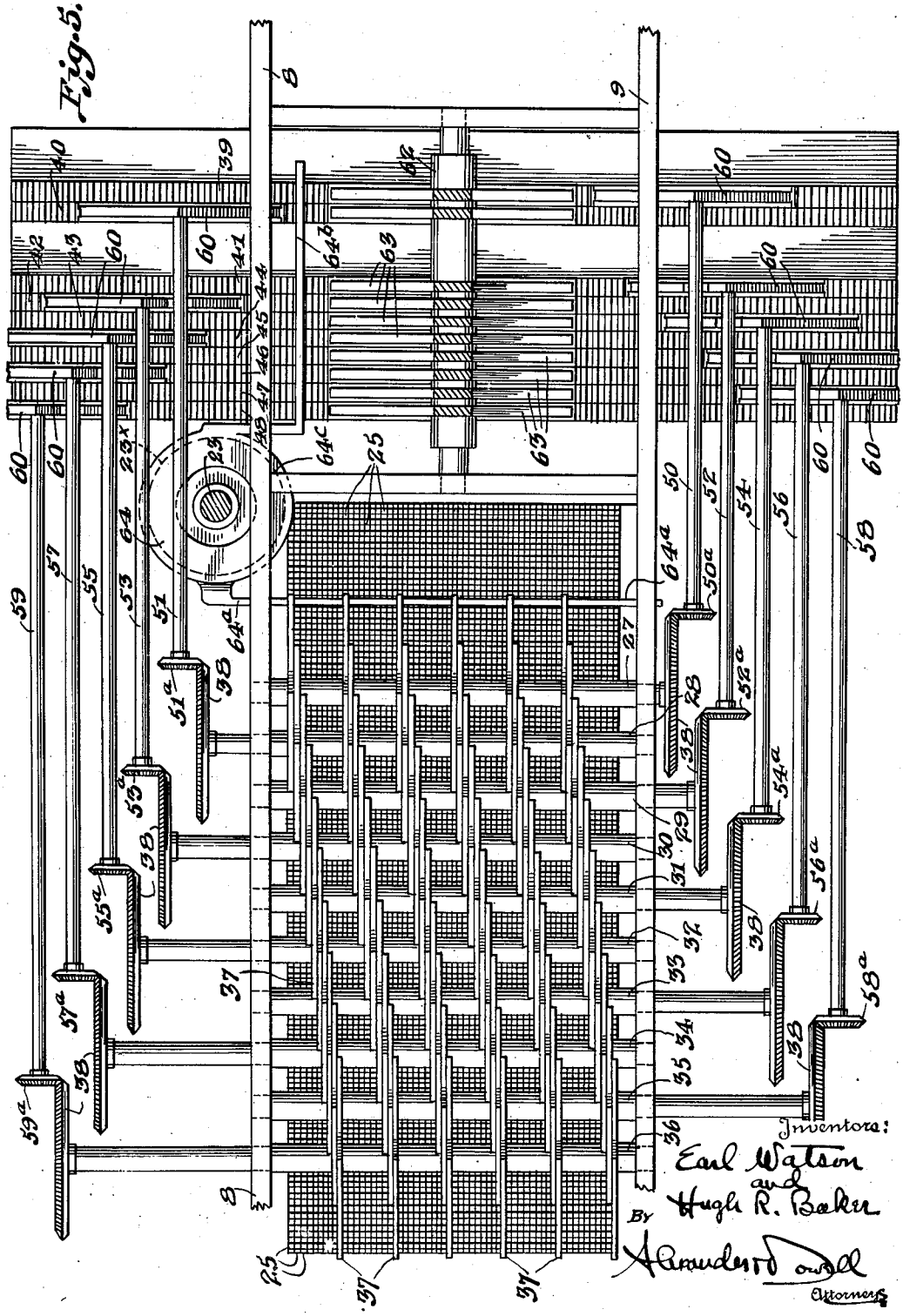
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Dec. 27, 1938. E. WATSON ET AL 2,141,577

MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

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Fig. 5.

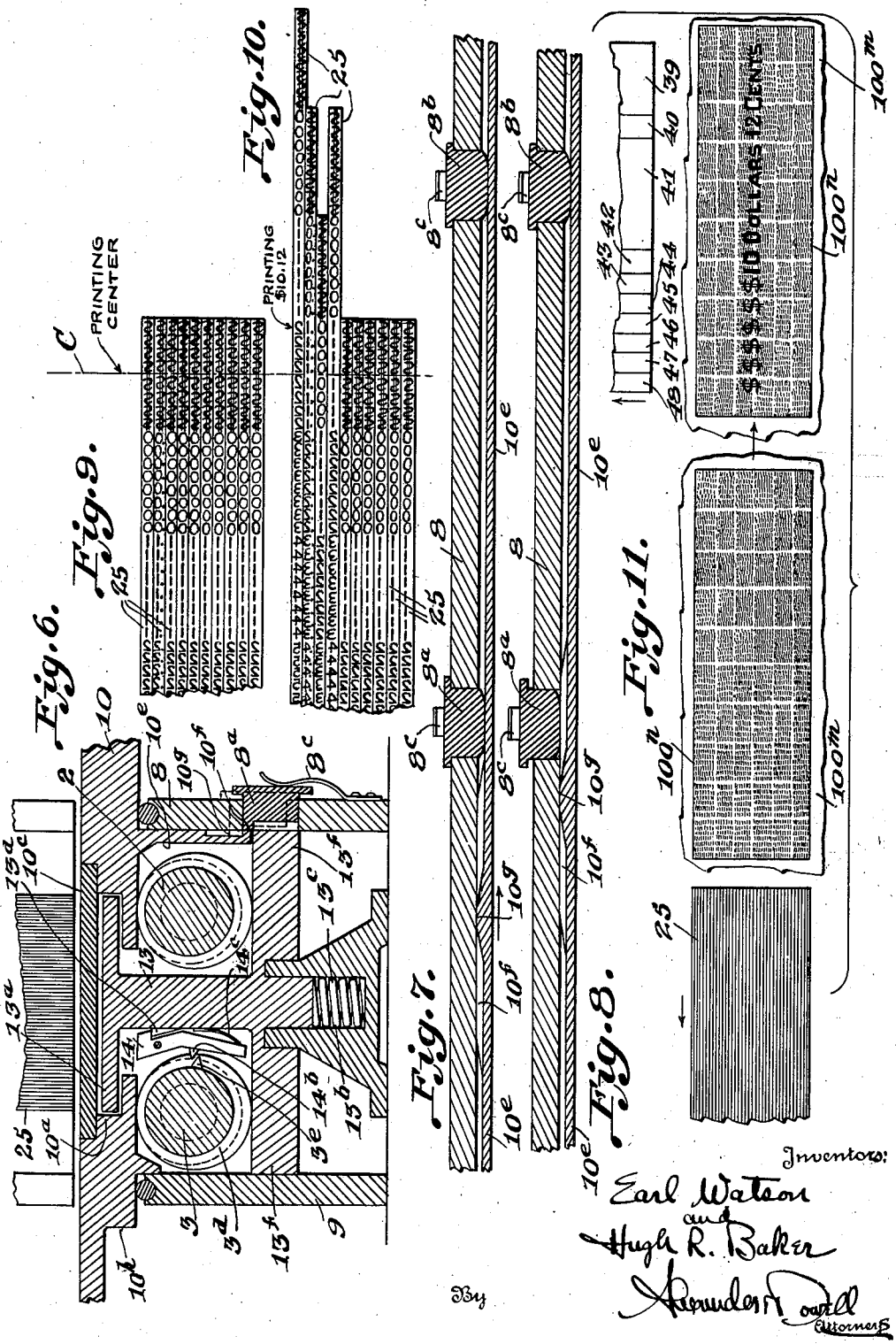


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MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

Filed May 28, 1937 6 Sheets-Sheet 6



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UNITED STATES PATENT OFFICE

2,141,577

MACHINE FOR PRINTING COMMERCIAL PAPER INSTRUMENTS

Earl Watson and Hugh R. Baker, Buffalo, N. Y.

Application May 28, 1937, Serial No. 145,344

57 Claims. (Cl. 101—93)

Our invention is a novel machine for printing commercial paper instruments, such as checks, drafts, bonds, certificates of deposit, letters of credit or the like, and the principal object thereof is to provide a machine which will print the monetary value on a check or the like in any amount, and by the same operation print a tint or background covering the entire check or any desired portion thereof, the tint comprising a plurality of rows of minute repetitions of the actual monetary value which is over-printed upon the tint, whereby said monetary value printed by our machine will automatically set up a self-verifying and self-attesting background or tint.

Other minor objects will be hereinafter set forth.

We will explain the invention with reference to the accompanying drawings which illustrate one practical embodiment thereof to enable others familiar with the art to adopt and use the same; and will summarize in the claims the novel features of construction, and novel combinations of parts for which protection is desired.

In said drawings:—

Fig. 1 is a side elevation of our machine with the adjacent face of the casing removed to expose the parts.

Fig. 2 is a section on the line 2—2, Fig. 1.

Fig. 3 is a section on the line 3—3, Fig. 1.

Fig. 4 is a horizontal section on the line 4—4, Fig. 1, taken immediately above the printing table of the machine.

Fig. 5 is an enlarged plan view showing the arrangement of the bank of type bars which print the tint, and the bank of type bars which print the over-writing; also the means for interconnecting the related type bars of each bank to bring same into printing positions simultaneously with the movements of the setting levers.

Fig. 6 is an enlarged cross-section through the table operating means and tint printing plunger.

Figs. 7 and 8 are enlarged detail sections.

Fig. 9 is an enlarged fragmentary plan view showing the underside of the bank of tint printing bars indicating the printing center, the bars being shown in normal position.

Fig. 10 is a view similar to Fig. 9 but showing the position assumed by the tint-printing bars when set to print groups of rows of "$$$$$$10.12" in the tint.

Fig. 11 is a diagrammatic view showing the tint panel of a check in its relation to the bank of tint printing bars, and indicating the area of the tint imposed upon the panel after the table has moved through its ten tint printing positions; also indicating the position assumed by the panel during over-printing, the over-printing bank being indicated as retracted after imposing the monetary value upon the tint.

Fig. 12 is a plan view of the clutch shifter and adjacent parts.

Fig. 13 is an enlarged vertical section through the lower end of the switch operating rod, and adjacent parts, and showing the cam tooth on the rod in position assumed when shifting the clutch into forward drive position.

Fig. 14 is an enlarged horizontal section through the switch operating rod showing the rod revolved into normal inoperative position.

Fig. 15 is a section similar to Fig. 14 but showing the rod in operative position.

Fig. 16 is a perspective view of the means on the printing table for revolving the switch rod and for releasing the clutch shifter pawl.

Fig. 17 is a perspective view of the printing table top.

Fig. 18 is a perspective view of the check holder, detached.

Fig. 19 is an enlarged section on the line 19—19, Fig. 18.

Fig. 20 is a section on the line 20—20, Fig. 19, and the adjacent part of the printing table top.

As shown, the machine comprises a substantially rectangular casing 1 having a top 1a, and a base 1b having in its upper face a metallic plate 1c insert thereon upon which the operating parts are mounted to secure rigidity and fixation of parts.

Parallel shafts 2 and 3 are journaled in bearings 2a and 3a respectively upon plate 1c, said shafts having intermeshing gears 2b and 3b at one end whereby the shafts are caused to rotate in the opposite directions but at the same speed. Gear 2b (Fig. 4) is driven from a clutch gear 4a on the shaft 4b of a motor 4 through suitable reducing gears 5a, 5b, 5c and 5d, the circuit of the motor 4 including a stopping switch 7 operated by the printing table 10 hereinafter referred to.

Beside the shafts 2 and 3 are supporting frames 8 and 9 having slots horizontally disposed therein through which the printing table 10 extends, same resting on antifriction means therein when the table is in lowered position. Table 10 is yieldably urged towards the right, Figs. 1 and 4, by a strap 11 secured to a bracket 11a at the end of the table, said strap running around the drum 12a of a spring winding mechanism mounted upon base plate 1c, the spring mechanism being automatically wound as the table is retracted to-

wards the left, Figs. 1 and 4, and retained in wound position by a spring actuated pawl 12b engaging a ratchet wheel 12c on the shaft of the drum. Any other form of spring winding mechanism may however be used.

Shafts 2 and 3 are eccentrically mounted with respect to their bearings 2a, 3a as indicated in Figs. 2, 3 and 6, so that the upper peripheries of both shafts move up and down simultaneously as the shafts are rotated; and the under side of table 10 is contacted by the eccentric shafts as same rotate whereby the table is also raised and lowered upon each revolution of the shafts.

The underside of the table is recessed as at 10a (Figs. 3 and 6), adapted to receive the transversely disposed head 13a of a tint printing plunger 13 vertically disposed in a cylindrical base 13b, a spring 13c being interposed between the lower end of the plunger and the bottom of the base adapted to forcibly elevate the plunger 13 as hereinafter described into printing position below the tint printing bars 25 hereinafter described, the head 13a preferably striking against a flexible rubber mat 10c (Figs. 6 and 17) inset in the upper surface of table 10 above the recess 10a, the plunger assuring that the check or other commercial paper instrument disposed on the table will be spring pressed against the underside of the tint printing bars 25 upon each actuation of the machine, to impart a uniform appearance to the impressions applied upon each actuation of the machine.

Plunger 13 is normally held in lowered position to compress spring 13c by means of a detent 14 (Fig. 6) pivoted in the casing and having a tooth adapted to engage a lug 13d (Fig. 3) on the side of plunger 13, the detent being interposed between the plunger and the shaft 3, and having a portion entering an annular recess 3d in the shaft 3, said recess having a tooth 3e therein adapted to strike a tooth 14b on the detent 14 when the table 10 is in its printing or upper position resting upon the tops of the shafts 2 and 3, thereby releasing the detent 14 and permitting spring 13c to cause the head 13a to forcibly contact the rubber pad 10c and carry the check upwardly against the tint printing bars 25 which have been set, as hereinafter described, in printing position. The eccentricity of the shafts 2 and 3 is such that when table 10 is in its uppermost position resting upon said shafts there will be a clearance of about five-thousandths of an inch between the table and the tint printing bars 25, and the action of the plunger 13, when released, raises the rubber insert 10c of the table through the necessary five-thousandths of an inch to make proper printing contact. Plunger 13 is returned to lowered position by means of the eccentric shafts 2 and 3 engaging lateral wings 13f on the sides of the plunger and forcibly lowering same and contracting the spring 13c into lowered position as the shafts rotate, whereupon the detent 14 will be permitted to snap over the lug 13d on the side of the plunger through the action of the detent spring 14c shown in Fig. 6 and the plunger will be retained in such position until the detent 14 is again released upon subsequent rotation of shaft 3.

Preferably recess 10c extends the full length of the table to accommodate the plunger head 13a for the various printing stations hereinafter described. Below table 10 at the printing position of the over-writing printing bars 39—48 is a second plunger 15 (Fig. 2) substantially identical with plunger 13, and adapted to raise the rubber insert 10c of the table to carry the check into engagement with the undersides of the over-writing bars 39—48. Plunger 15 is provided with a head 15a extending axially of shafts 2 and 3 and entering the recess 10a in the end of the table, said plunger 15 being mounted in a cylindrical base 15b having a spring 15c interposed between the lower end of the plunger and the bottom of the base, said plunger being normally retained in lowermost position by a pivoted detent 16 (Fig. 2) engaging a lug 15d on the side of the plunger, the detent 16 entering an annular recess in the shaft 3 provided with a tooth 3g engaging a tooth 16b on the detent 16 when the table is in upper or printing position, thereby releasing plunger 15 and permitting the spring 15c to force the rubber insert 10a of the table upwardly to bring the check into contact with the dies of the over-writing printing bars 39—48 hereinafter described. As eccentric shafts 2 and 3 continue rotation, plunger 15 will be forcibly depressed when the shafts contact the side wings 15f of plunger 15, thereby depressing the plunger into such position that detent 16 will again engage lug 15d and retain the plunger in depressed position shown in Fig. 2 until again released.

Means are provided for rendering plunger 15 inoperative while the table is passing through the tint printing stations, and for rendering plunger 13 inoperative while the table is at the over-writing printing station. In the side of the frame 8 beside shaft 2 are two plugs 8a and 8b (Figs. 2, 3, 6, 7 and 8), plug 8a being substantially disposed adjacent the tint printing station, and plug 8b substantially disposed opposite the over-printing station. Each plug extends through a bore in the frame 8 and has a lip portion on its inner end adapted to overlie the side wings 13f and 15f of plungers 13 and 15 when in depressed position and retain same in such position, the plugs 8a, 8b being yieldably maintained by springs 8c so that their lips project as aforesaid into wing engaging positions. On the underside of table 10 is an apron 10e lying closely adjacent the inner wall of frame 8 and at the lower end of the outer face of said apron is a cam surface 10f (Figs. 7 and 8) of length sufficient to embrace all the tint printing stations, the cam surface 10f engaging the lip of plug 8a and pushing same outwardly against the action of spring 8c, thereby rendering plug 8a inactive during all of the tint printing stations. The remaining portion of the lower end of the outer face of apron 10 is shaped to merely contact with the lip of plug 8a when in normal position without shifting same, whereby plug 8a may normally maintain the plunger 13 depressed. Above cam surface 10f on the outer face of apron 10e is a cam surface 10g (Figs. 7 and 8) at such elevation that it will not contact the lip of plug 8a but when table 10 has been shifted to the over-writing printing station, hereinafter described, cam surface 10g will engage the inwardly projecting lip of plug 8b and shift same outwardly through frame 8 to permit plunger 15 to be operated while the plunger 13 remains inoperative. Thus plunger 15 at the over-writing station is inoperative while the tint is being applied to the check through the action of plunger 13; and in like manner plunger 13 is inoperative while plunger 15 is applying the over-writing at the over-writing printing station.

Means are provided as shown in Figs. 1 and 4

for permitting the spring mechanism 12 to progressively advance the table from its retracted position to and through the tint and over-writing printing stations, said means comprising a vertical face 10h on the underside of table 10, in which are arranged ratchet teeth 10p, 10q, 10r, 10s, cooperating with a pawl 18 (Figs. 1, 2 and 4) pivoted as at 18a on brackets on the side of frame member 9 as shown in Fig. 2. A spring 18b normally tilts the pawl so that the tooth 18c engages one of said ratchet teeth in the face 10h. Pawl 18 is further provided with an extension 18d passing through a hole in the frame 9 and entering an annular recess 3h in shaft 3, said recess having a detent tooth 3i in its base whereby upon each rotation of shaft 3, tooth 3i will engage the outer end of the extension 18d and will shift the pawl 18 outwardly against the action of spring 18b to release the pawl, permitting spring mechanism 12 to shift the table 10 one ratchet tooth. As soon as tooth 3i has passed the extension 18d, pawl 18 will be snapped back into place in the next succeeding ratchet tooth and will hold the table in the next printing station.

The first ratchet tooth 10p in face 10h holds table 10 in a neutral position adjacent the first tint printing station for enabling the operator to place the check holder 100 (Figs. 18 to 20) on said table. Following ratchet tooth 10p is a series of ten evenly spaced ratchet teeth 10q which in succession hold table 10 in the ten tint printing stations upon the next ten successive revolutions of shafts 2 and 3. Following the series 10q is a single tooth 10r for holding table 10 in the over-printing sation; and beyond tooth 10r is a single tooth 10s which momentarily holds said table in neutral station in which the retracting mechanism for the table is brought into action.

The table reversing mechanism consists of a rack 10k (Figs. 2 and 4) at one side of table 10 meshing with a pinion 19a on a stub shaft 19 journaled in bracket 19b on the side of frame member 8, said shaft carrying a bevelled pinion 19c meshing with a bevelled pinion 20a on a horizontal shaft 20 disposed between motor shaft 4b and frame 8 and journaled in bearings 20b, 20c, mounted upon base plate 1c. Upon shaft 20, at the opposite end from gear 20a, is a pulley 20d (Fig. 4) disposed opposite a clutch pulley 4d on motor shaft 4b, and a belt 20e runs around pulleys 4d, 20d so that when pulley 4d is clutched to motor shaft 4b the shaft 20 will be rotated in a direction to retract table 10 into position shown in Fig. 1 to contact motor stopping switch 7.

Reversing clutch pulley 4d and the forward drive clutch gear 4a are loosely mounted on motor shaft 4b and a series of clutch plates 4e (Figs. 1 to 4) are provided beside the opposed faces of said pulley and gear adapted to be compressed thereagainst by a clutch collar 21 splined to the motor shaft which collar when shifted towards clutch gear 4a will lock said gear to the motor shaft and when shifted towards the clutch pulley 4d will lock said pulley to the motor shaft. Clutch collar shifter 22 (Figs. 4 and 12) has an upwardly flanged end 22a and provided with a fork 22b (Fig. 12) fitting an annular recess in clutch collar 21, and shifter 22 is slidably mounted upon the base 1c between pairs of over-hanging lugs 1e or the like so as to reciprocate in a direction parallel with the movement of table 10. The end of shifter 22 opposite fork 22b is offset as at 22c towards table 10 so as to lie directly under a switch operating rod 23 (Figs. 4, 12, 13, 14 and 15) which extends upwardly through the top 1a of the casing and having an arm 23a (Fig. 1) at its upper end adapted when rod 23 is rotated into the "starting" position to depress the motor starting switch 6 and thereby close the circuit of motor 4. A spring 22d interposed between the offset portion and a lug 1m on base 1c urges the shifter into position to lock clutch pulley 4d to motor shaft 4b to cause table 10 to be retracted to position shown in Fig. 1.

The means for moving shifter 22 to lock the clutch gear 4a to motor shaft 4b comprises a cam 23b at the lower end of rod 23 (Fig. 13), housed within a rectangular or other shaped slot 22e (Figs. 14 and 15) in shifter 22c in such position that when rod 23 is rotated into starting position (Figs. 4 and 15) cam 23b will engage an end wall of slot 22e and move shifter 22 into position to cause clutch collar 21 to lock clutch gear 4a to motor shaft 4b thereby causing rotation of the eccentric shafts 2 and 3 through the gear train 5a—5d hereinbefore described, said rod 23 remaining in such position (Fig. 15) until table 10 has passed through all of the printing stations 10p, 10q, 10r, and enters station 10s.

In order to positively retain shifter 22 in its forward drive position a pivoted pawl 24 (Figs. 4 and 12) on base 1c has a tooth 24a (Fig. 16) adapted to engage ratchet teeth 22f on the adjacent edge of the shifter 22c, and a spring 24b normally urges tooth 24a into engagement with the said teeth so that in event rod 23 should accidentally be shifted from the forward drive position shown in Figs. 4, 12, and 15, tooth 24a will maintain shifter 22 in driving position until released as hereinafter described.

On the rod 23 below the bottom of table 10 is a lug 23d, and on pawl 24 is a lug 24d (Figs. 12 and 16) adapted to be engaged by arms 10n, 10m respectively depending from the underside of table 10, said arms being so disposed that when table 10 reaches the neutral station 10s, following all the printing positions, the arms 10n, 10m will rotate rod 23 into position shown in Fig. 14 to disengage cam 23b from the end of slot 22e and simultaneously shift pawl 24 against the action of the spring 24b, whereupon shifter 22 will be moved by spring 22d to declutch gear 4a and to clutch pulley 4d to motor shaft 4b thereby rotating table reversing shaft 20 and causing the table to be retracted into the position shown in Fig. 1 through the medium of the gear 19a meshing with rack 10k. As soon as table 10 reaches said position, stopping switch 7 is actuated by contact with the end of the table, and motor 4 ceases operation, the parts remaining in this position until the starting rod 23 is again rotated into driving position shown in Fig. 15 in which the starting switch 6 (Fig. 1) is depressed.

In the upper portion of casing 1 above table 10 is mounted a bank of sixty slidable tint printing type bars 25 adapted to print the background or tint on the check or other commercial paper carried by the holder 100 on table 10, the bars each having longitudinal slots 25a (Fig. 1) therein through which extend one or more supporting plates 26 mounted in the frames 8 and 9, said plates 26 passing through the entire bank of bars 25.

On the underside of each of the bars 25 are arranged series of groups of minute character forming dies, the groups reading from the inner ends of the bars in the following order, "$", "0", "1", "2", "3", "4", "5", "6", "7", "8", "9", the dies being disposed approximately one-thirty-second of an inch apart, and there being eight such

dies in each group as indicated in Figs. 9 and 10 which show a fragmentary portion of the underside of the bank looking at the inner ends of the bars. The dies and groups on all the bars, when in normal position, are disposed in parallel relation as shown in Fig. 9, so that when in normal position, the tint printing center C (Fig. 9) will bisect the "$" groups of the entire bank of bars 25 so that an impression taken from the bars in normal position will impose a section of the tint consisting of "$" symbols for each of the ten tint printing stations 10q of table 10, the ten printing stations thereby providing a tint throughout the entire area of the background or panel of the check consisting of rows of minute repetitions of "$" symbols, parallel and transversely of the panel. Since the width of the bank 25 is the same as the width of head 13a of the tint printing plunger 13, an impression of the dies of bars 25 in the printing center C will reproduce the same group of symbols or numerals on the check at each printing position. Thus in the example shown, eight linear rows of "$" symbols would be impressed upon the paper at each printing position, the printing positions being spaced apart a distance to cause subsequent impressions from the said group to fall in close succession as indicated in Fig. 11.

In the embodiment shown there are sixty bars 25 in the bank each having rack teeth at their upper edges. Above the bank are ten parallel shafts 27–36 journaled in the frames 8 and 9 respectively, each of the shafts carrying six toothed segments 37, meshing with the racks of the bars 25 in such manner that the first ten bars of the bank 25 are respectively connected successively with shafts 36–27 inclusive, and so on throughout the entire bank of sixty bars thus dividing the entire bank 25 into six groups, with ten adjacent bars in each group, the corresponding bars of each group being respectively connected to the same shaft 36–27 inclusive. Each of the shafts 27–36 inclusive carries a bevelled gear 38 at its outer end for the purpose hereinafter described.

Above the plunger 15 is a series of ten over-writing printing bars 39–48 inclusive (Figs. 1, 2, and 5) provided with slots 41a (Fig. 2) slidably receiving guide plates 49 mounted in the sides of the casing, whereby the ten bars 39–48 are disposed side by side to form a bank disposed at right angles to the bank of tint printing bars 25 beyond one end of bank 25. The outermost bar 38 of the bank is provided with ten dies reading from "0 Cents" to "9 Cents", inclusive, the word "Cents" appearing after each ordinal. The next adjacent bar 40 carries dies reading from "0" to "9" so that projection of the said two die bars 39–40 into printing position will give any impression reading from "0 Cents" to "99 Cents". The next adjacent bar 41 of the bank carries dies reading from "0 Dollars" to "9 Dollars", the word "Dollars" appearing after each ordinal. The remainder of the dies 42–48 bear dies reading in order "$", "0", "1", "2", "3", "4", "5", "6", "7", "8", "9", inclusive. Thus the dies 39–48 may be set to print any monetary value from "$$,$$$,$$0 Dollars 00 Cents" to "99,999,999 Dollars 99 Cents". The top of each of the bars 39–48 inclusive is provided with rack teeth (Fig. 5) and at each side of the bank of tint printing bars 25 are five parallel shafts 50–59 inclusive journaled in suitable bearings (not shown), said shafts carrying on one end a gear segment 60 meshing respectively with the rack teeth on one of the printing bars 39–48 inclusive, said shafts 50–59 also carrying bevelled pinions 50a–59a respectively meshing with their related bevel gears 38 on shafts 27–36 associated with the bank of bars 25 to simultaneously set the corresponding bars 25 of all six groups of the tint with the setting of the over-printing bars 39–48 inclusive. The hundredths-of-dollars bar 39 of the over-writing is thus connected by shaft 50 to set through operation of shaft 27 all six of the hundredths-of-dollars bars 25 through the tint printing bank 25; and the next adjacent over-writing bar 40 printing the tenths-of-dollars is connected by shaft 51 to set through operation of shaft 28 all the corresponding tenths-of-dollars bars 25 in each of the six groups of the tint printing bank, to print the same amount as the bar 40. Similarly, all the remaining over-writing printing bars 41–48 inclusive are connected through shafts 29–36 inclusive to automatically set their related tint printing bars 25 of each of the six groups in bank 25 to print the same numbers or symbols which are projected into printing position by the bars 41–48 inclusive.

On the exterior of casing 1 adjacent top 1a is an arcuate plate 1y (Figs. 1 and 2) containing a plurality of arcuate slots for receiving the ends of ten setting levers 61 which are mounted on a shaft 62 journaled in the casing, said levers 61 carrying on their lower ends toothed segments 63 respectively meshing with the central portions of the racks of the over-printing bars 39–48 inclusive. Beside each of the slots in arcuate plate 1y are spaced notches 1z (Fig. 1) numbered respectively from the top to bottom to indicate the setting of levers 61 for printing any number from "$$,$$$,$$0 Dollars 00 Cents" to "99,999,999 Dollars 99 Cents" inclusive, the said notches 1z being adapted to receive a pivoted pawl 61a (Fig. 2) on the end of each lever 61 for holding the levers in their "set" positions. Thus the one set of ten levers 61 will simultaneously set the machine to print any over-written monetary value on the check or instrument, and to simultaneously print the underlying tint in the same amount.

Means are provided for locking all the tint printing bars 25 and over-printing bars 39–48 inclusive in their "set" positions during the printing operations and until table 10 starts its retracting motion to normal position. As shown, a vertically movable hub member 64 (Figs. 1, 3, and 5) is provided around switch operating rod 23 having a led 64a vertically slidably mounted in the frames 8—9 and adapted to enter between aligned ratchet teeth on the tops of the bank of bars 25; also having another vertically movable leg 64b at right angles to leg 64a adapted to enter between aligned ratchet teeth on the tops of over-printing bars 39–48, said hub member 64 being vertically adjustable while being held against rotation. Within hub portion 64 is an undercut recess 64c rotatably receiving a disc 23x on rod 23, the disc normally supporting the hub 64 so that the legs 64a—64b are maintained above their respective ratchet teeth, but in position to enter between the aligned teeth when hub 64 is lowered.

Hub 64 is raised and lowered by and with rod 23, which rod carries adjacent its lower end a disc 23y (Figs. 13, 14 and 15) above the cam tooth 23b said disc having raised cam projections 23z diametrically positioned on its upper face adapted to contact the underside of overhanging cam members 65 mounted upon base plate 1c

above the recess 22e in clutch shifter 22c. By the above construction when rod 23 is turned into starting position shown in Figs. 1, 13 and 15, the projections 23z on disc 23y will cause rod 23 to be depressed by engagement with the cam blocks 65, thereby lowering rod 23 and hub 64 to enter the locking arms 64a—64b in the racks of the type bars of both banks. As soon as rod 23 however is retracted to reversing position rod 23 will be raised by spring 66 (Fig. 13) permitting the re-setting of the type bars, said spring 66 being housed within a casing 66a at the lower end of rod 23 and normally tending to maintain rod 23 in raised position, said spring being compressed when the pins 23z on the disc 23y are lowered by action of cams 65.

At one side of arcuate plate 1y is a small colored lamp 67 (Fig. 1) which is lighted when the locking members 64a—64b are brought into locking position, said hub 64 carrying on its lower end a contact 67a (Fig. 1) which closes a switch (not shown) whenever the members 64a—64b are lowered, the lamp 67 when lighted indicating that the machine is set and ready for operation.

The inking means for the over-writing type bars 39–48 comprises a pair of ribbon spools 68 (Fig. 1) carrying a ribbon 68a which underlies guides 68b and the over-printing bars 39–48 at their printing position, the spools 68 being intermittently rotated. On the end of the eccentric shaft 2 is a bevelled pinion 2x meshing with a bevelled pinion 69a (Figs. 1 and 2) on a shaft 70 which also carries a second bevelled gear 69b (Fig. 4) meshing with a bevelled gear 70b on a shaft 70 carrying at its upper end a bevel gear 70a (Fig. 1) meshing with a bevelled bear 71a on a horizontal shaft 71, said shaft carrying collars 71b, 71c thereon having detents on their opposed faces adapted to actuate the pawl levers 72 associated with the spools 68 respectively. Preferably spools 68 are carried in a frame 73 having a bar 73a projecting above the top 1a of the casing whereby the frame can be manually shifted to cause one or the other of the pawls 72 to be actuated by its respective cam 71b or 71c as the shaft 71 is rotated. Preferably the ribbon 68a for the over-writing prints in red or other color contrasting with the color of the tint or background.

The inking means associated with the tint printing bars preferably comprise a pair of spools 74 (Fig. 3) similarly mounted in a shiftable frame 75 having a setting arm 75a extending above the casing, said frame 75 also carrying the pivoted pawl levers 76 which actuate the spools 74, said levers 76 each having arms 76a terminating adjacent a cam 71x (Fig. 3) on the shaft 71, whereby upon each rotation of shaft 71 one or the other pawl lever 76 will be actuated to wind the ribbon 77 according to the shifting of the frame 75, the ribbon underlying the bank 25 at the tint printing position.

Each of the pawl levers 72 and 76 is yieldably urged in one direction by a spring 78 towards the center of the casing so that when the frames 73 and 75 are shifted in either direction the pawl which is to be inoperative will strike a stop 79 and thus maintain said pawl out of engagement with the ratchet of its related spool so as to permit the working pawl to wind the ribbon on its related spool.

In connection with table 10 is a check holder 100 (Figs. 18, 19 and 20) adapted to retain the check or the like fixedly positioned on the table as the latter passes through all of the stations 10p, 10q, 10r, 10s. As shown, the holder comprises a base sheet 100a of thin metal having a strip 100b at the back, and a strip 100c at the front, and a strip 100d at one end, said strips being mounted on the underside of the base 100a and overlying the table 10 at one end thereof. Through the front strip 100c is a knurled screw 100e adapted to bind against the adjacent side of the table to lock the holder thereon. The holder is positioned axially of the table by means of a transverse rib 100g (Fig. 20) on the lower side of base 100a at the end opposite from strip 100d, said rib being adapted to enter a transverse groove 10t (Figs. 17 and 20) in the top of table 10. On the top of base 100a are side strips 100h, 100j, and a back strip 100k forming spacers for a cover plate 100m having an opening 100n therein disposed over the rubber insert 10c of table 10 when the holder is positioned thereon, a space being thus provided at the front of the holder between base 100a and cover 100m for insertion of the check or the like.

In operation

The operator places a check or the like in holder 100 so as to expose the panel portion thereof through opening 100n which definies the area of the tint, and then attaches the holder in its proper position upon the top of the table 10 by means of the knurled screw 100e, the table 10 being then in retracted position contacting motor stop switch 7 (Fig. 1). The operator then adjusts the bank of levers 61 with respect to arcuate plate 1y so as to print the proper amount or monetary value on the check, such as "$$,$$$,$10 Dollars 12 Cents" (Fig. 11). The setting of levers 61 automatically simultaneously sets the bars in the tint printing bank 25 to print the same or correspondng amount in the rows of the tint, i. e., to print multiple repetitions of $$$$$$10.12 (Fig. 10) and thus the printed over-writing and the printed amount shown in each line in each row of the tint reads the same amount, except that the words "Dollars" and "Cents" are omitted in the tint. Decimal points however are preferably provided before the numerals on each of the bars 25 which print the tenths-of-dollars in the tint.

Having adjusted levers 61, the operator then partly rotates switch rod 23 depressing starting switch 6 and causing the motor 4 to rotate idly. Simultaneously switch rod 23 is lowered to depress the locking arms 64a, 64b into engagement with the rack teeth in the tops of the bank 25 and bank 39–48 inclusive, to maintain the bars against shifting. As the lock bar arms lower the signal lamp 67 becomes illuminated showing that the machine is now ready for operation. In this position of the rod 23 the cam tooth 23b is retracted from engagement with the outer wall of the slot 22e of the clutch shifter, and the clutch collar 21 is thus in neutral position with motor 4 rotating idly. Upon further rotation of switch rod 23 cam tooth 23b will engage the outer wall of slot 22e and clutch shifter 22 will be moved to clutch the gear 4a to motor shaft 4b thereby rotating the eccentric shafts 2 and 3 through the train of reduction gears 5a—5d.

The first rotation of the eccentric shafts 2, 3 will shift the table so that pawl 18 engages the neutral ratchet tooth 10p of the table to bring the table with the opening 100n of the holder 100 immediately in advance of the ten tint printing stations.

The second revolution of shafts 2, 3 will first

release the pawl 18 and the table will be shifted by the spring mechanism 12 into the first tint printing station 10q of the series, and during such revolution plunger 13 will be forcibly elevated by the spring 13c to bring the check into direct engagement with the undersides of the set tint printing bars 25 at the printing station C of the tint, which bars are inked by the ribbon 77, (carrying black ink) thus impressing six parallel groups of figures and symbols across the entire tint field each group consisting of eight lines each reading "$$$$$$10.12". There being sixty bars in the bank 25, and each bar making eight impressions at the tint printing station, the entire bank will print 480 minature figures or symbols on the tint field in each printing position. Upon the next nine subsequent revolutions of the eccentric shafts 2, 3, table 10 will be successively shifted so that the bank 25 will impress similar blocks of figures and symbols closely following at the end of each prior impression; and thus the entire tint will comprise 4800 minute impressions arranged to clearly show and verify the monetary value subsequently impressed by the over-writing bars 39–48 inclusive.

The next revolution of the eccentric shafts 2, 3, will bring table 10 into over-writing printing position by engagement of pawl 18 with ratchet tooth 10r, and the plunger 15 will during such revolution raise the check in the holder into engagement with the undersides of the over-printing bars 39–48 inclusive, the ribbon 69 (containing red ink) being interposed between the check and bars, thereby impressing directly upon the previously formed tint the monetary value of the check in conspicuous large figures corresponding with the figures in the tint, but in contrasting color. Each rotation of shaft 2 shifts the inking ribbons 68a and 77 as hereinbefore explained. While the tint is being impressed the plunger 15 is inoperative, and while the over-writing is being impressed the plunger 13 is inoperative as hereinbefore explained.

During the next revolution of eccentric shafts 2, 3, the pawl 18 engages ratchet tooth 10s, and simultaneously the arms 10n, 10m on the table will actuate rod 23 so as to free the tooth 23b from the shifter 22, and also shift locking pawl 24 permitting spring 22d to retract the clutch shifter 22 and lock belt pulley 4d to the motor shaft 4a, whereupon the shaft 20 will be rotated to retract table 10 to normal position shown in Fig. 1, in which end of the table operates the stopping switch 7, cutting off the motor, and leaving the machine ready for re-use, after removal of the check from holder 100.

We claim:—

1. In a machine of the character specified; a set of value printing type bars, a second set of value printing type bars adjacent the first set; means for setting the bars of each set to print a desired value; and means for successively taking impressions from the sets on a member, the impression of one set forming a tint, and the impression from the other being displayed within said tint, said means including member feeding means actuated between impressions.

2. In a machine as set forth in claim 1, the said bar setting means simultaneously positioning corresponding type bars in both sets at their respective impression positions.

3. In a machine as set forth in claim 1, the bars in one set being grouped in multiples of the bars in the other set; and said bar setting means simultaneously positioning the type bars in each group with the corresponding bars in the other set.

4. In a machine as set forth in claim 1, the bar setting means comprising racks on said bars; setting levers having gears meshing with the racks of the respective bars of one set; gearing interconnecting the racks of both sets; and means for maintaining the bars in both sets in operative position during the taking of impressions.

5. In a machine as set forth in claim 1, the bars in one set being grouped in multiples of the bars in the other set; and said bar setting means comprising racks on said bars, setting levers carrying gears meshing with the racks of the related bars of one set; and gearing connecting the corresponding bars of the two sets to simultaneously position the bars of each group in one set with the positioning of the bars in the other set.

6. In a machine as set forth in claim 1, said feeding means comprising a carrier for said member movable between the sets; and means for preventing impression until the carrier has properly positioned the member.

7. In a machine as set forth in claim 1, said impression means comprising a carrier for said member reciprocable between the sets, a driving member; means for actuating said driving member; means operated by the driving member for periodically shifting the carrier into impression taking position and means for retracting the carrier after the member has received impressions from both sets.

8. In a machine as set forth in claim 1, said impression obtaining means comprising a table below the sets; said member feeding means including means normally urging the table in one direction; a driving member; means for actuating said driving member; means operated by the driving member for periodically raising the table into impression taking position; means permitting the urging means to shift the table upon each lowering of the latter; and means for retracting the table after the member has received impressions from both sets.

9. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars of each set to print corresponding values; a table reciprocably mounted between the printing stations; means for positioning a sheet on said table; means for shifting the table to bring the sheet successively into position for printing contact with each set of type bar; and means for taking impressions from said type bars.

10. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars of each set to print corresponding values; a table; means for positioning a sheet on said table; means for shifting the table to bring the sheet successively into position for printing contact with the bars; and means for taking impressions from said type bars; the impression from one set of bars being superimposed upon the impression made from the other set of bars.

11. In a machine as set forth in claim 9, means for preventing the sheet from receiving an impression until the table has properly positioned the sheet opposite the bars.

12. In a machine as set forth in claim 9, said positioning means comprising a holder having a sheet receiving pocket provided with an opening

in its upper face; and means for securing the holder on the table.

13. In a machine as set forth in claim 9, said shifting means comprising a pair of cam supports for the table; and means for actuating the supports.

14. In a machine as set forth in claim 9, said advancing means comprising a member normally urging the table to advance in one direction; and means for arresting the advancing motion of the table while it is being shifted into printing position.

15. In a machine as set forth in claim 9, said advancing means comprising a member normally urging the table in one direction; a driving member; means operated by the driving member for retracting the table after the sheet has received the impression from the second set; and means for rendering the driving member inactive when the table is retracted.

16. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars of each set to print like values; a reciprocable table; means for positioning a sheet on said table; means for causing the table to move the sheet into position for printing contact with the bars; means normally urging the table in one direction; and means permitting the urging means to advance the table into position to obtain successive impressions on said sheet; and means for taking impressions from said type bars.

17. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars of each set to print like values; a reciprocable table; means for positioning a sheet on said table; type inking means; means to raise and lower the table to bring the sheet into position for printing contact with the bars; means normally urging the table to advance in one diirection; and means permitting the urging means to advance the table into position to take impressions on said sheet successively from the sets of bars, and means for taking impressions from said type bars, the impressions from one set of bars being superimposed upon the impression of the other set of bars.

18. In combination with a machine as set forth in claim 16, means for preventing the sheet from receiving an impression until the table is properly positioned opposite the bars.

19. In a machine as set forth in claim 16, said impression taking means including plungers mounted below the table and having heads; a flexible insert in said table adapted to overlie the plunger heads when the table is disposed in impression taking position opposite the bars; means to raise the plungers; means for depressing the plungers as the table is lowered; means normally locking the plungers in depressed position; and means for releasably locking the plungers in depressed position; and means for releasing the locking means when the table is raised.

20. In combination with a machine as set forth in claim 16, said impression taking means including plungers mounted below the table and having heads; a flexible insert in said table adapted to overlie the plunger heads when the table is disposed in impression taking position opposite the bars; means to forcibly raise the plungers; means for depressing the plungers while the table is being lowered; means normally locking the plungers in depressed position; means for releasing the locking means when the table is to be raised; and means for preventing actuation of each releasing means until the table has positioned the sheet in impression taking position.

21. In a machine as set forth in claim 16, said permitting means comprising a series of ratchet teeth in the table; a pivoted pawl; means yieldably urging the pawl into engagement with the ratchet teeth to arrest the advancing motion of the table; and means for releasing the pawl each time the table is lowered to advance the table step by step.

22. In combination with a machine as set forth in claim 16, a rotatable drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving members with the drive shaft; a clutch shifter actuating the clutch means; means connecting one driving member with the table raising and lowering means; a countershaft; means connecting the countershaft with the other driving member; means actuated by the countershaft for retracting the table; and a member adapted to shift the clutch shifter.

23. In combination with a machine as set forth in claim 17, a rotatable drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving members with the drive shaft; a clutch shifter actuating the clutch means; means connecting one driving member with the table raising and lowering means; a countershaft; means connecting the countershaft with the other driving member; means normally urging the shifter to connect said other driving member with the drive shaft; means actuated by the countershaft for retracting the table; and a member adapted to shift the clutch shifter to declutch said other driving member and connect the first driving member to the drive shaft.

24. In combination with a machine as set forth in claim 17, a rotatable drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving members with the drive shaft; a clutch shifter for actuating the clutch means; means connecting one driving member with the table raising and lowering means; a countershaft; means connecting the countershaft with the other driving member; means normally urging the shifter to connect said other driving member with the drive shaft; means actuated by the countershaft for retracting the table; a manually operated member adapted to shift the clutch shifter to declutch said other driving member and connect the first mentioned driving member to the drive shaft; and means for tripping the manual member after the sheet has received an impression from the second set to cause the table to be retracted.

25. In combination with a machine as set forth in claim 17, a drive shaft; means for rotating said drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving members with the drive shaft; a clutch shifter for actuating the clutch means; means connecting one driving member with the table raising and lowering means; a countershaft; means connecting the countershaft with the other driving member; means normally urging the shifter to connect said other driving member with the drive shaft; means actuated by the countershaft for retracting the table; a manually operated member adapted to shift the clutch shifter to declutch said other driving member and connect the first mentioned driving mem-

ber to permit the urging means to advance the table; means for tripping the manual member after the sheet has received an impression from the second set to cause the table to be retracted; and means for rendering the drive shaft rotating means inactive when the table is retracted.

26. In combination with a machine as set forth in claim 17, a drive shaft; means for rotating said drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving members with the drive shaft; a clutch shifter for actuating the clutch means; means connecting one driving member with the table raising and lowering means; a countershaft; means connecting the countershaft with the other driving member; means normally urging the shifter to connect said other driving member with the drive shaft; means actuated by the countershaft for retracting the table; a manually operated member adapted to shift the clutch shifter to declutch said other driving member and connect the first mentioned driving member to the drive shaft and permit the urging means to advance of the table; means for preventing tripping of the manual member until after the sheet has received an impression from the second set; means for tripping the manual member after the sheet has received the impression from the second set and cause the table to be retracted; and means for rendering the drive shaft rotating means inactive when the table is retracted.

27. In a machine as set forth in claim 17, a vertically shiftable rotatable rod; means normally maintaining the rod in raised position; a drive shaft; means for rotating the drive shaft; normally inactive clutch means connecting said drive shaft with said table raising and lowering means; means when the rod is rotated into one position for actuating the drive shaft rotating means; a locking member carried by the rod and having portions normally disposed above both sets of bars; means for depressing the rod when rotated into position to actuate the drive shaft whereby the portions will be lowered to lock the bars in set position; and means whereby further rotation of the rod will connect the clutch means.

28. In a machine as set forth in claim 17, the bars of both sets having teeth on their upper edges; a vertically shiftable rotatable rod; means normally maintaining the rod in raised position; a drive shaft; means for rotating the drive shaft; normally inactive clutch means connecting the drive shaft and the table raising and lowering means; means when the rod is rotated into one position for actuating the drive shaft rotating means; a locking member rotatably mounted on the rod and having arms normally disposed above the teeth of each set of bars; means for depressing the rod when rotated to actuate the drive shaft thereby lowering the arms to engage the teeth, and means whereby further rotation of the rod will connect the clutch means.

29. In a machine as set forth in claim 17, the bars of both sets having teeth on their upper edges; a vertically shiftable rotatable rod; means normally maintaining the rod in raised position; a drive shaft; means for rotating the drive shaft; normally inactive clutch means connecting said drive shaft with the table raising and lowering means; means when the rod is rotated into one position for actuating the drive shaft rotating means; a locking member rotatably mounted on the rod and having arms normally disposed above the teeth of the bars of each set; means for depressing the rod when rotated to actuate the drive shaft whereby the arms will engage the teeth and lock bars in set position; a signal adapted to be actuated when the bars are locked; and means whereby further rotation of the rod will connect the clutch means.

30. In a machine as set forth in claim 17, the bars of both banks having teeth on their upper edges; a vertically shiftable rotatable rod; means normally maintaining the rod in raised position; a drive shaft; means for rotating the drive shaft; normally inactive clutch means connecting said drive shaft and the table raising and lowering means; means when the rod is rotated into one position for actuating the drive shaft rotating means; a locking member rotatably mounted on the rod and having arms normally disposed above the teeth of the bars of each set; means for depressing the rod when rotated to actuate the drive shaft whereby the arms will engage the teeth and lock the bars in set position; means whereby further rotation of the rod will connect the clutch means; means for retracting the table; and means whereupon further rotation of the rod will raise the rod and actuate the table retracting means.

31. In a machine for printing values on negotiable instruments, a set of type bars for printing on the instrument in large characters the total sum for which the instrument is negotiable, a second set of type bars for printing on the instrument adjacent to the said sum numerous repetitions of said sum in much smaller characters; means for simultaneously setting the type bars; and means for feeding the instrument between impressions from one set to the other.

32. In a machine for printing values on instruments, a set of type bars for printing on the instrument in large characters the total sum for which the instrument is negotiable, a second set of type bars for printing on the instrument adjacent to and surrounding the said sum numerous repetitions of said sum in much smaller characters, the impressions made by the respective means being of contrasting colors, means for simultaneously setting the bars; and means for feeding the instrument between impressions from one set to the other.

33. In a machine for printing values on negotiable instruments, a set of type bars for printing on the instrument enlarged characters the total sum for which the instrument is negotiable, a second set of type bars for printing on the instrument numerous repetitions of said sum in much smaller characters, the large characters being impressed upon the field made by the numerous impressions of the small characters, means for simultaneously setting the bars; and means for feeding the instrument between impressions from one set to the other.

34. In a machine for printing values of negotiable instruments, a set of type bars for printing on the instrument enlarged characters the total sum for which the instrument is negotiable, a second set of type bars for printing on the instrument numerous repetitions of said sum in much smaller characters, the impressions made by the respective means being of contrasting colors, and the large characters being impressed upon the field made by the numerous impressions of the small characters; means for simultaneously setting the bars, and means for feeding the instrument between impressions from one set to the other.

35. In a machine of the character specified; a

set of value printing type bars having a printing station; a second set of value printing type bars adjacent the first set and having a printing station; the bars in the first set being grouped in multiples of the bars of the second set; bar setting means simultaneously positioning corresponding type on the corresponding bars of each group in the first set with the positioning of the corresponding bar in the second set, means for successively taking impressions from the sets, and means for feeding an impression receiving sheet between impressions from one set to the other.

36. In a machine as set forth in claim 35, said setting means comprising racks on said bars; a set of setting levers carrying gears meshing with the respective racks of their respective bars of the one set; and gearing interconnecting the racks of the corresponding bars of the groups of the first set with their corresponding bars of the second set.

37. In a machine as set forth in claim 35, said setting means comprising racks on said bars; a set of setting levers carrying gears meshing with the racks of their respective bars of the second set; and gearing interconnecting the racks of the corresponding bars of the groups of the first set with their corresponding bars of the second set; and locking means cooperating with the racks for locking the bars in each set position.

38. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars; a carrier for an impression receiving sheet movable between the sets; means for laterally shifting the carrier into printing contact with the bars of each set; means normally urging the carrier to advance longitudinally to obtain successive impressions of said sets on the sheet; a rotatable driving member; means operated by the driving member for periodically shifting the carrier; means permitting the urging means to advance the carrier between each shifting period; and means operated by the driving member for retracting the carrier after the sheet has received the last impression.

39. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set, each set having separate printing stations; means for setting the bars; a carrier for an impression receiving sheet movable between the stations; means for laterally shifting the carrier into printing contact with the bars of each set; and means for advancing the carrier to obtain successive impressions of the said sets; and means for preventing printing contact of the sheet against the bars when the carrier is shifted until the carrier has advanced the sheet to a position opposite a set.

40. In combination with a machine as set forth in claim 39, a rotatable driving member actuating the lateral shifting means; and said advancing means comprising a member normally urging the carrier towards the sets; means permitting the urging member to advance the carrier between each shifting period; and means operated by the driving member for retracting the carrier after the sheet has received the last impression.

41. In combination with a machine as set forth in claim 39, a rotatable driving member actuating the lateral shifting means; and said advancing means comprising a member normally urging the carrier towards the sets; means permitting the urging member to advance the carrier between each shifting period; means operated by the driving member for retracting the carrier after the sheet has received the last impression; and means for rendering the driving member inactive after the table is retracted.

42. In a machine of the character specified; a set of value printing type bars; a table movably mounted with respect to said set; and a holder for an impression receiving sheet; said holder having a pocket provided with an opening in its upper face; and means for clamping the holder on the table.

43. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; a sheet carrying table reciprocably mounted between the sets; a member normally advancing the table to obtain successive impressions on said sheet; and means for arresting the advancing movement while the sheet is receiving an impression.

44. In a machine as set forth in claim 43, means for shifting the table into printing contact; comprising a pair of eccentrically mounted shafts below the sets upon which the table is movably mounted; and means for simultaneously rotating the shafts to raise and lower the table.

45. In a machine as set forth in claim 43; means for shifting the table into printing contact comprising a pair of eccentrically mounted shafts below the sets upon which the table is movably mounted; means for simultaneously rotating the shafts to raise and lower the table; and means actuated by the shafts for permitting the advancing means to move the table upon each lowering of the table.

46. In a machine of the character specified; a set of value printing type bars having a printing station; a second set of value printing type bars adjacent the first set and having a printing station; a sheet carrying table reciprocably mounted below the stations; means for raising the table into position for printing contact at the stations and for lowering the table after an impression; means advancing the table between the stations upon each lowering of the table; plungers mounted below the printing stations respectively and having heads; a flexible insert in said table adapted to overlie the plunger heads when the table is disposed opposite the stations; means tending to forcibly raise the plungers; means for depressing the plungers when the table is being lowered; means normally locking the plungers in depressed position; and means for releasing the locking means when the table is to be raised.

47. In combination with a machine as set forth in claim 46; means for preventing actuation of the releasing means of each plunger until the table has positioned the sheet opposite the related printing station.

48. In a machine of the character specified; a set of value printing type bars having a printing station; a second set of value printing type bars adjacent the first set and having a printing station; a sheet carrying table reciprocably mounted between the printing stations; means tending to yieldably advance the table to obtain successive impressions on said sheet at the printing stations; a series of ratchet teeth on the table; a pivoted pawl; means yieldably urging the pawl into engagement with the ratchet teeth to arrest the advancing motion of the table; and means for intermittently releasing the pawl whereby the table is advanced step by step.

49. In a machine of the character specified; a

set of value printing type bars; a second set of value printing type bars adjacent the first set; a pair of eccentrically mounted shafts below the sets; a sheet carrying table reciprocably mounted on said shafts and adapted to be raised thereby into position for printing contact with the sets and lowered out of such position; means normally urging the table to advance between the sets; means actuated by the shafts for permitting the urging means to advance the table upon each lowering of the table; a rotatable drive shaft; a pair of driving members loosely mounted on said drive shaft; clutch means for connecting the driving member with the drive shaft; a clutch shifter for actuating the clutch means; means connecting one driving member to rotate the eccentric shafts; a countershaft; means connecting the countershaft with the other driving member; means normally urging the shifter to connect the said other driving member with the drive shaft; means actuated by the countershaft for retracting the table; and a member adapted to shift the clutch shifter to declutch the said other driving member and connect the first mentioned driving member to the drive shaft to permit the urging means to advance the table.

50. In a machine as set forth in claim 49, means on the table adapted to trip the said member after the sheet has received the last impression and thereby cause the table to be retracted.

51. In a machine as set forth in claim 49, means for rendering the driving shaft inactive when the table is retracted.

52. In a machine as set forth in claim 49, means for preventing tripping of the said member until after the sheet has received the last impression.

53. In a machine of the character specified; a set of value printing type bars; a second set of value printing type bars adjacent the first set; means for setting the bars of each set; a sheet carrying table reciprocably mounted between the sets; means for shifting the table to bring the sheet into printing contact with the bars; and means for advancing the table to obtain successive impressions on the sheet of said sets; a vertically shiftable rotatable rod; means normally maintaining the rod in raised position; a drive shaft; means for rotating the shaft; normally inactive clutch means on said drive shaft for actuating the table shifting and advancing means; means when the rod is rotated into one position for actuating the drive shaft rotating means; a member rotatably mounted on the rod and having portions normally disposed above each set; means for depressing the rod when rotated into position to actuate the drive shaft rotating means and thereby lower said portions into locking engagement with said bars; and means whereby further rotation of the rod will connect the clutch means.

54. In a machine as set forth in claim 53; means for retracting the table; and means whereby still further rotation of the rod will raise the rod and actuate the table retracting means.

55. In combination with a machine as set forth in claim 53, a clutch shifter having a slot receiving the rod; and said clutch connecting means comprising a tooth on the rod engaging a wall of the slot.

56. In combination with a machine as set forth in claim 53; a clutch shifter having a slot receiving the rod; said clutch connecting means comprising a tooth on the rod adapted to engage a wall of the slot; and said rod depressing means comprising a lug on the rod adapted when rotated to engage a fixed cam surface adjacent the rod.

57. In a machine as set forth in claim 53; a clutch shifter having a slot receiving the rod; said clutch connecting means comprising a tooth on the rod adapted to engage a wall of the slot; said rod depressing means comprising a lug on the rod adapted when rotated to engage a fixed cam surface adjacent the rod; and said drive shaft actuating means comprising a switch in an electric circuit including the drive shaft rotating means adapted to be closed when the rod is depressed.

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