C. H. NEWTON.

PRINTING MACHINE.

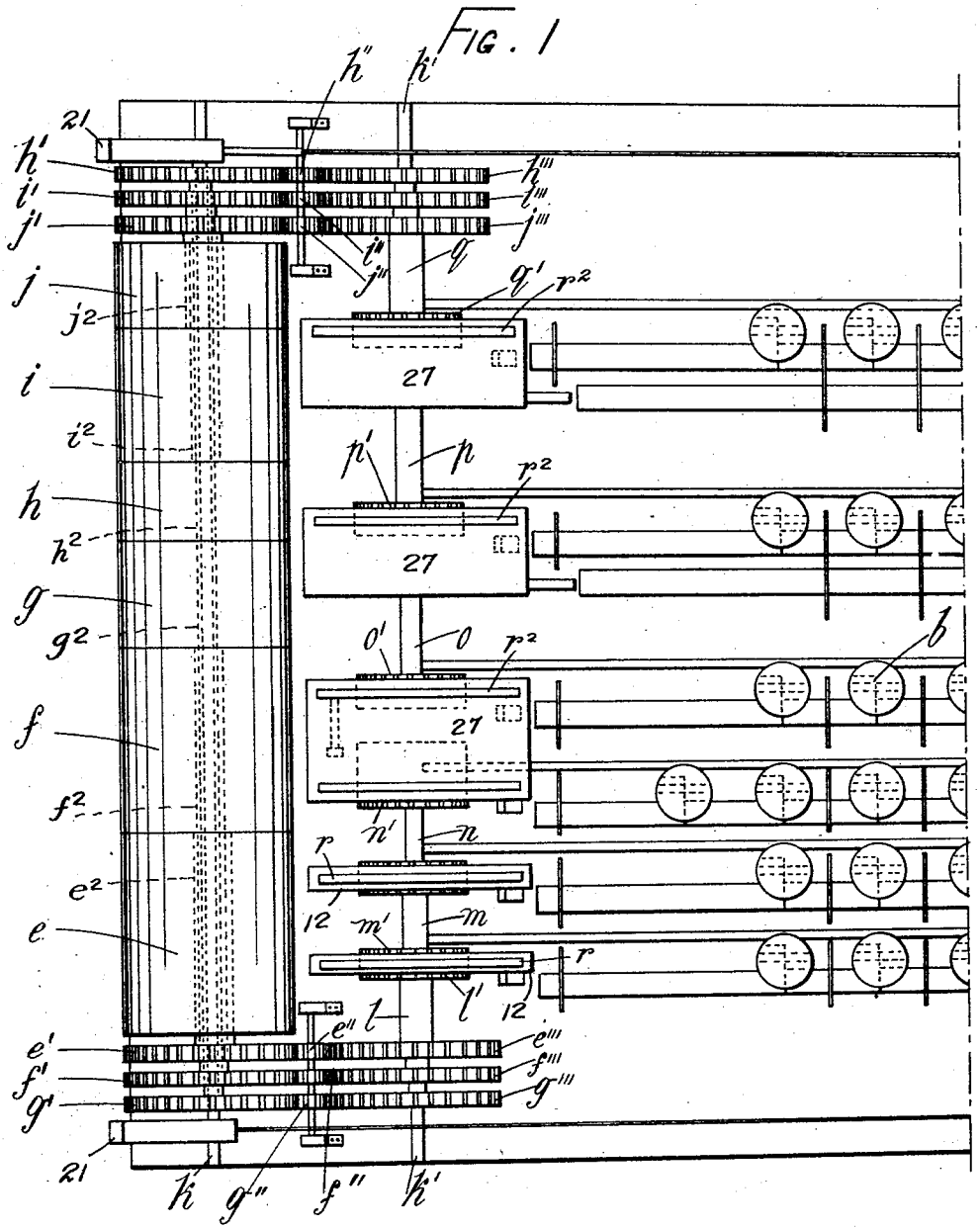
APPLICATION FILED SEPT. 4, 1920.

1,409,015.

Patented Mar. 7, 1922.

4 SHEETS—SHEET 1.

FIG. 1



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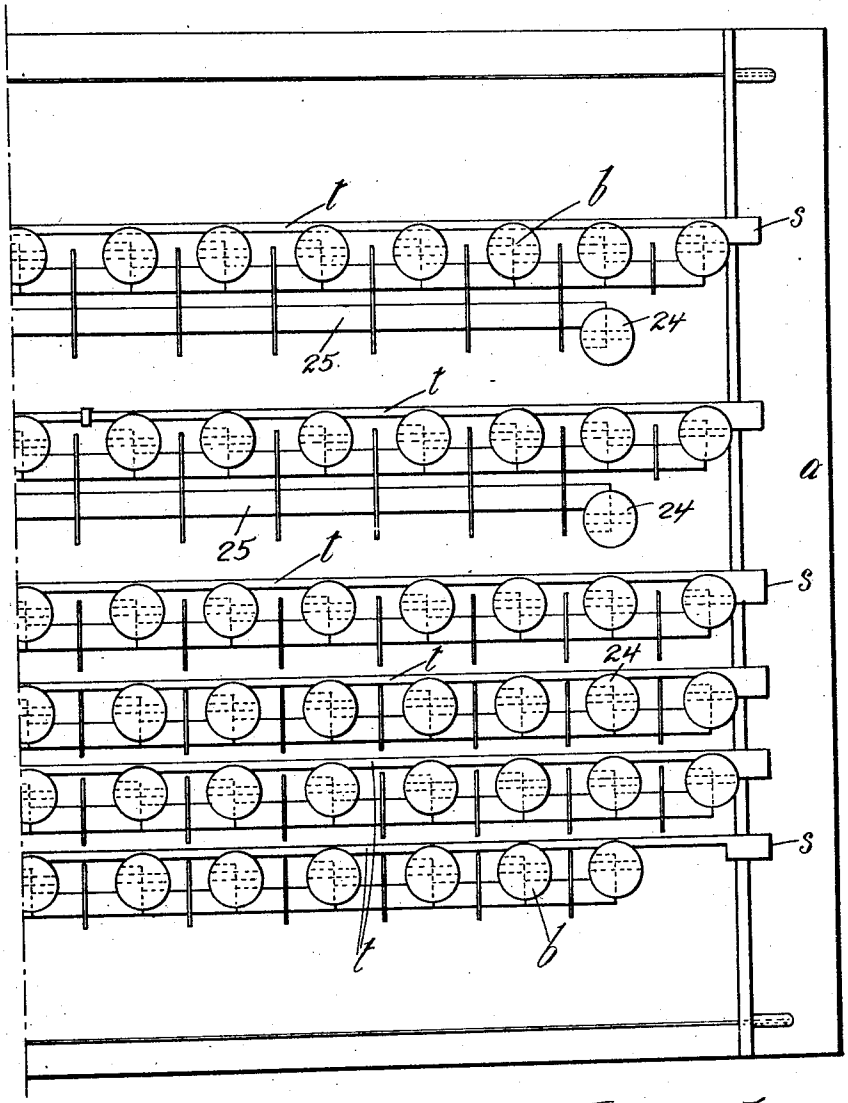
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4 SHEETS—SHEET 2.

FIG. 1A



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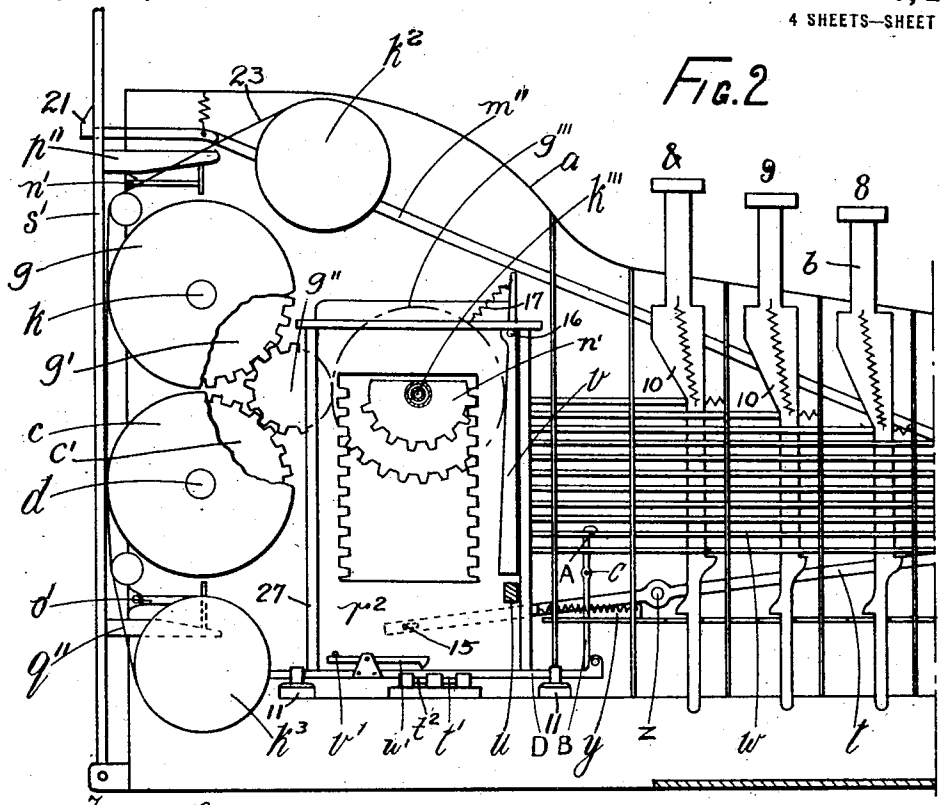
APPLICATION FILED SEPT. 4, 1920.

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4 SHEETS—SHEET 3.

FIG. 2



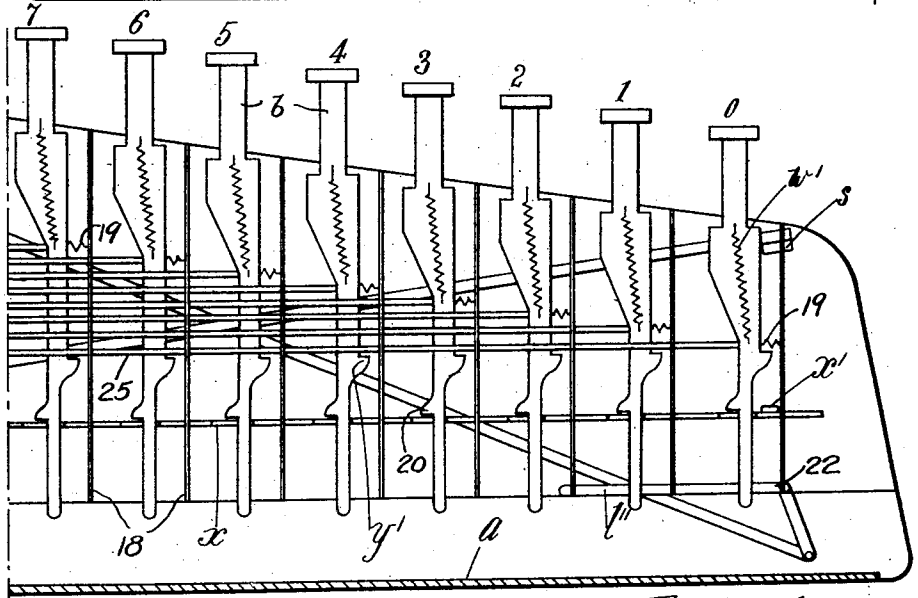


FIG. 2a

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APPLICATION FILED SEPT. 4, 1920.

1,409,015. Patented Mar. 7, 1922.

4 SHEETS—SHEET 4.

FIG. 3.

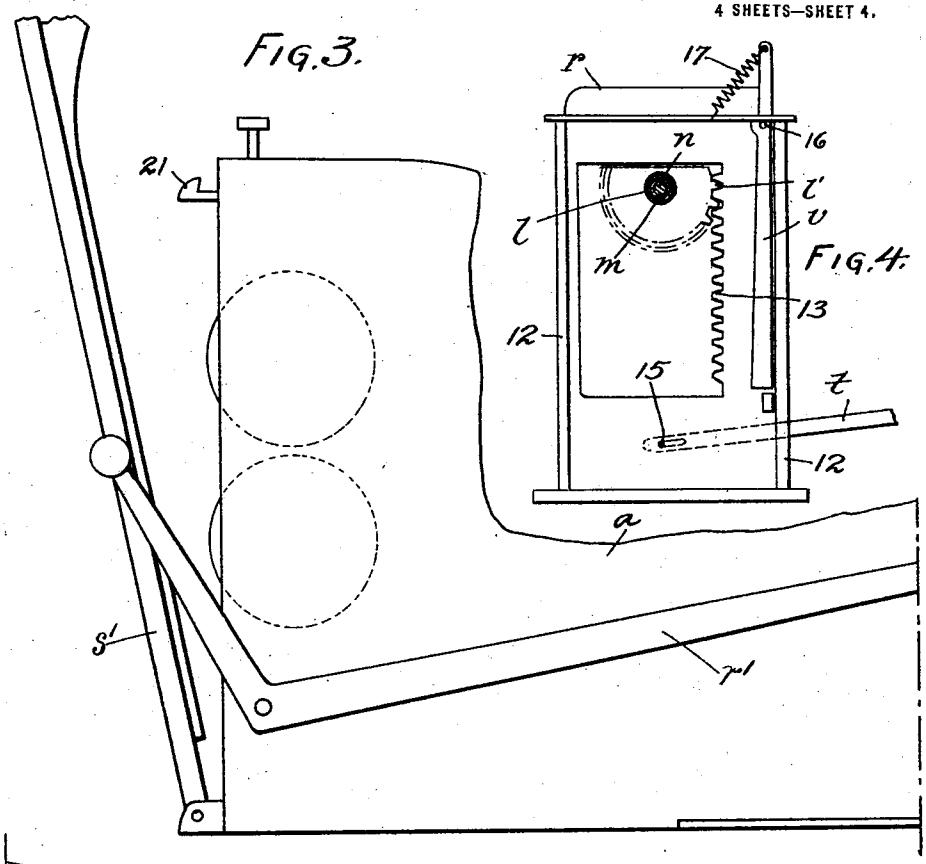


FIG. 4.

FIG. 3a.

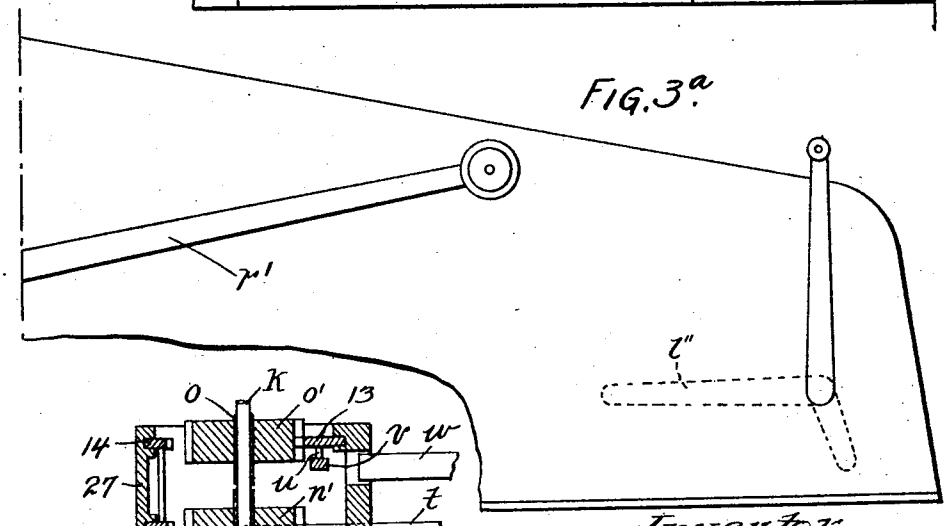


FIG. 5.

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By J. Thomas Atty

UNITED STATES PATENT OFFICE.

CHARLES HENRY NEWTON, OF LONDON, ENGLAND.

PRINTING MACHINE.

1,409,015. Specification of Letters Patent. Patented Mar. 7, 1922.

Application filed September 4, 1920. Serial No. 408,144.

To all whom it may concern:

Be it known that I, CHARLES HENRY NEWTON, a citizen of the United Kingdom of Great Britain and Ireland, and resident of 24 Penistone Road, Streatham, London, S. W., 16, England, have invented certain new and useful Improvements in Printing Machines, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like of the kind comprising two series of cylindrical type-holders one series being employed for printing words and the other for printing the corresponding numerals, the type-holders being mounted on parallel shafts and being simultaneously brought into position for printing.

In such machines the cylindrical type-holders have been mounted on sleeves each of which was provided with a toothed wheel in engagement with a rack whereby on the movement of the rack the cylindrical type-holders for printing the words and the numerals were simultaneously brought into position for printing so that the cheque or the like could be impressed with the words and also with the numerals.

The present invention has for its object to improve the construction of such machines whereby they can be easily operated and will be very efficient in operation.

To this end in accordance with the present invention the machine comprises a key-board and two series of cylindrical type-holders one for the words and the other for the corresponding numerals, the type-holders being simultaneously operated by a toothed sector in engagement with a toothed gate adapted to be operated by a lever on the depression of a key.

The keys of the key-board are arranged in columns and each column has a toothed sector and gate for actuating the type-holders.

Each gate is provided with a stop which is normally in engagement with a pivoted lever and each key on being depressed actuates a movable rod which turns the said lever on its pivot and permits the gate being operated until the stop thereon comes into contact with the movable rod.

A particular feature of the machine is that means as hereinafter described are provided for reverse working when it is required to print from ten to nineteen in, as for example, the printing of seventeen shillings and eleven pence.

The cheques, dividend warrants or the like to be printed are placed on a pivoted platen which is adapted to lock the type-holders in position during the printing operation.

The keys on being depressed are held in the depressed position by a locking bar which also prevents more than one key in a column being depressed the bar being operated to release the keys when the platen is being moved away from the machine.

The invention will now be described with reference to the accompanying drawing wherein—

Figs. 1 and 1ª constitute a plan view of the machine with the top removed.

Figs. 2 and 2ª illustrate one of the columns of the machine and also show how the type-holders or registering wheels are rotated.

Figs. 3 and 3ª illustrate a convenient way of operating the platen.

Fig. 4 shows a side elevation of the gate for the hundreds and thousands columns of the pounds and Fig. 5 shows a sectional plan of the mechanism for coupling together the type-holders for the tens and units of pounds.

On the drawings *a* is the case of the machine within which keys *b* are mounted the keys being arranged in columns corresponding to thousands, hundreds, tens, units of pounds shillings and pence.

Each column for the pounds, and the units columns for the shillings and pence has ten keys, with the exception of the thousand column of the pounds which has only nine, and these keys are numbered from 0 to 9, an additional key having "&" thereon, as clearly indicated in Fig. 2 being preferably arranged in the tens column of the pounds.

In the tens columns of the shillings and pence only one key 24 is provided.

The type-holders are located at one end of the machine and comprise a number of wheels one set being marked with words and the other with corresponding figures around their circumference. One of the type-holders is mounted on the spindle *k* and the other on a spindle *d*. The type-holder on the spindle *k* consists of a number of

wheels e, f, g, h, i and j which are connected to separate concentrically arranged sleeves e^2, f^2, g^2, h^2, i^2 and j^2 which can turn freely on the spindle k. The wheel e has marked around its circumference the words for thousands, the wheel f the words for the hundreds, the wheel "g" the words for the tens, and also a portion of the words from ten to nineteen, and the wheel h the words for the units and the remaining portion of the words from ten to nineteen. The wheel i has the words for the shillings from "one" to "nineteen," whilst the wheel j has the words for the pence from "one" to eleven.

On the spindle d are mounted a corresponding number of wheels with sleeves, one of these wheels being indicated at c in Fig. 2. The wheels on the spindle d however are marked with figures corresponding to the words on the wheels mounted on the spindle k.

The spindles d and k are suitably mounted, parallel one to the other, in the frame a of the machine.

If desired the wheels with the words marked around their circumference may be mounted on the spindle d and the wheels with the corresponding figures or numerals on the spindle k.

The wheels e, f and g are attached to sleeves e^2, f^2, and g^2, respectively, adapted to rotate one within the other, and to these sleeves are respectively secured toothed wheels e', f' and g' in gear with pinion e'', f'' and g''. These pinions are driven by operating wheels e''' f''' and g''' mounted on the spindle k', carried by the machine frame a. The wheel e''' is attached to a sleeve l, the wheel f''' to a sleeve m and the wheel g''' to a sleeve n.

The wheels on the spindle d corresponding to wheels e, f, g on spindle k are similarly connected to toothed wheels, one of which c' is shown in Fig. 2 and these toothed wheels also gear with the wheels e'', f'', and g'', so that the corresponding wheels for the words and figures on the two spindles d and k will be turned in synchronism.

The word wheels h, i and j are respectively attached to the sleeves h^2, i^2, and j^2 connected to toothed wheels h', i' and j' gearing with pinions h'', i'' and j''. These pinions are driven by the operating wheels h''', i''', and j''' also mounted on the shaft k' and attached to concentric sleeves o, p, and q respectively. The pinions h'', i'' and j'' also drive the corresponding wheels on the spindle d in synchronism with the word wheels h, i and j. When therefore the pinions e'', f'', g'', h'', i'' and j'' are driven they will turn the wheels on the spindles d and k to the same extent and therefore the type-holders will be set for printing a sum both in words and figures in the manner hereinafter described.

On the sleeves l, m and n are secured toothed sectors l', m' and n', similar sectors o', p' q' being secured to the sleeves o, p and q, the sectors being rigidly secured to their respective sleeves so that each sleeve will be rotated with its sector.

The sector n', as shown in Fig. 1 is made wider than any of the other sectors for a purpose as will be described hereinafter.

The sectors l', m' in the hundreds and thousands columns of the pounds are operated by gates r which are capable of vertical movement in frames 12 mounted in the machine. The gates are provided with racks 13 gearing with the sectors l', m' and are actuated in the manner hereinafter described.

The gates r^2 (Fig. 2) for operating the sectors n', o', p', q', are mounted in frames 27 which can be moved horizontally in brackets 11 secured to the base of the machine frame. The gates r^2 are provided with racks 13, 14 of which the rack 13 is normally in engagement with its corresponding sector, for example n' as shown in Fig. 2. In this figure the connection between the sector n' and its corresponding type-holders is shown diagrammatically in order to simplify the description of the operation.

A counterweight s is connected to each gate by means of a lever t pivotally mounted in the frame at z (Fig. 2) and connected to the gate by a pin and slot connection 15. The counterweight s tends to lift the gate but is prevented from doing so by a stop u provided on the gates r, r^2 and normally bearing against the lower end of a bar v. This bar v is pivoted to the frames 12 and 27 at 16 and is normally held in the position shown in Fig. 2 by a spring 17.

The bar v is adapted to be disengaged from the stop u, so as to enable the gate r to be raised by the action of the counterweight s, by any one of a set of rods w when this is pushed towards the rod v on the depression of its key. The rods w are arranged one above another in sets and are slidably mounted in frames 18, mounted in the frame a. The rods w are drawn towards the front of the machine by springs 19.

For the purpose of moving the rods w lengthwise of the machine, in order to disengage the rod v from the stop u, each key b is provided with an inclined portion 10 engaging with the end of its corresponding rod w. After disengaging the rods v from the stops u the rod which has been operated will project into the path of the stop u and thus limit the upward movement of the gate r. The various rods w are arranged at such levels, that when one of them is operated by its key it will determine the height to which the gate is raised and thus also limit the turning movement of the corresponding figure and word wheels on the spindles d and k. As the marking on the type-holders is ar-

ranged relatively to the position of the rods w it will thus be seen that when one of the rods w is operated the type-holders will be turned to bring into position for printing the words and figures corresponding to the key depressed.

A locking bar x is provided for preventing any of the remaining keys in a column from being depressed after one of the keys in said column has been depressed, the said locking bars being held in their normal position by a spring y. When a key is depressed the bar x is moved lengthwise against the action of the spring y by a projection y' on the key. The projection then passes beneath the bar x, and the spring y thereafter pulls the bar in the opposite direction thereby retaining the key in the depressed position, while at the same time preventing any of the other keys from being depressed.

As will be seen in the drawing each key b is provided with a projection 20 and their lower ends pass through slots in the bar x. When therefore a key has been fully depressed and the bar x has been drawn back by its spring y the bar x will not have been drawn back sufficiently far to enable the projection 20 of any of the other keys from passing through its slot so that none of the other keys can be depressed. The keys b are normally held in the raised position by means of springs w'.

The paper to be printed on is placed on to a pivoted platen s' which may be operated in any suitable manner, but I prefer to use a bell-crank lever r', one arm of which is adapted to contact with the platen and press it against the type wheels on the spindles k and d, when the other arm of the lever r' is operated, Figs. 3 and 3a. As the platen is moved forward it contacts with two members q'', p'' slidably mounted on the machine the said members being adapted to operate pivoted locking devices o', n' and cause them to engage the registering wheels and thus prevent any movement thereof during the printing operation.

The platen s' is engaged in the printing position by a hook 21 on a clearance rod m'' connected with a resetting lever l'', which is in the form of a bell crank lever, pivoted in the frame a at 22. The return movement of the platen operates said lever l'' as follows:—

When the platen is being moved away from the type-holders the clearance rod m'' is pulled with it. This causes the resetting lever l'' to turn on its pivot 22 and engage a knob x' on the bar x. The knob x' projects into the path of the lever l'', so that the bar x is moved against the spring y, and thus releases any key that may have been depressed.

The free end of the lever l'', when raised by the opening movement of the platen also raises the lever t with the counterweight s and thus lowers the gates positively.

On each gate r^2 is a second stop v' which in the normal position is in engagement with a pivoted locking bar u' and holds it inoperative. When a gate r^2 is raised, as therein before described, its stop v' is moved out of contact with the bar u' thereby permitting engagement of this bar with a fixed recess t^2 thus preventing any horizontal movement of the gate r^2 whilst it is being raised.

When the resetting lever r' restores the gate r^2 to normal (lowered) position, as hereinbefore described, the pin v' disengages the bar u' from recess t^2 thereby leaving the machine reset and ready for reoperation.

Ribbon spools k^2 k^3 are provided from which a ribbon 23 passes over the type-holders.

In order to set the type-holders for words and figures above nine (9) it is necessary to turn the type-holders in a reverse direction to that hereinbefore described. For this purpose the rack 14 is brought into engagement with its corresponding sector. In order to effect this movement keys 24, which are of similar construction to and controlled in the same manner as the keys b, are provided. Each key 24 operates a rod 25, slidably mounted in the frames 18 in a similar manner to the rods w, and normally held in its inoperative position by a spring 19. These rods 25 are provided with projections A and when one of them is moved lengthwise by the depression of its key 24 the projection A is adapted to push a short lever B and rock it upon its pivot C. The lower end of the lever B engages an arm D on the frame 27 of the gate r^2 and draws the gate sidewardly thus bringing the rack 14 on the opposite side of the gate into engagement with the corresponding toothed sector so that when the gate is lifted by its weighted lever the sector is rotated in the reverse direction. When the gate r^2 has been moved to the right the depression of any key b in the units column causes the bar v to be released from the stop u and allow the gate r^2 to be raised by the action of the weight s. The rod w, which has been actuated will then project into the path of the stop u and limit the vertical movement of the gate. In this manner the type-holders are caused to travel in the reverse direction thereby bringing figures and words for "tens" to "nineteen" corresponding to the key b depressed into position. When the gate r^2 commences its upward movement the bar u' will be released by the pin v' and will engage with the recess t'.

A similar arrangement is provided for setting the type-holders for figures and words from nine to nineteen in the pounds column, but as in this case the figures and words are affixed to two wheels (tens and

units) it is necessary to couple the driving mechanism for these two sets of wheels together. For this purpose the gates r^2 for the two sectors n', o' are both mounted in the frame 27 of double width so that both gates may be moved to the right simultaneously. As however, both gates can be raised separately when required in the normal position of operation, it is necessary to lock the two gates together. For this reason the sector n' is made wider than the other sectors and the gate r^2 for the sector o' is provided with an additional rack s'' which, when the frame 27 has been moved over so as to engage the racks 14 with the sectors, engages with the sector n' so that the sectors n' and o' and thus also their gates will be locked together. The "1" key in the tens column of the pounds, also indicated by the reference 24, operates the frame for the two gates for the sectors n' o' and in this case also disengages the bar v from the stop u of the gate for the sector n'. As this gate is now connected directly to the gate for the sector o' it cannot be raised by the action of its counterweight s as the gate for the sector o' is still locked by its bar v and stop u. In order that the word and figure wheels may now be set to the required number between ten and nineteen the key in the units column, corresponding to the unit in the number required, must be depressed. This key will then move its corresponding rod w lengthwise of the machine and this will disengage the bar v for the gate of the sector o' from the corresponding stop u and project into the path of the said stop u. The two gates for the sectors n' and o' will now be raised simultaneously by the action of their weights s and the upward movement will be limited by the rod w of the unit key depressed.

For example, if it is desired to produce seventeen pounds the "1" key (key 24) in the tens of pounds column is depressed which operates the gates in the manner described and locks the driving mechanism for the tens and units cylinders together.

When the "7" key in the unit column is depressed the cylinders are revolved in the reverse direction owing to the shifting of the gates by depression of the "1" key in the "tens" column thus bringing "seventeen" in figures and words into position for printing.

The arrangement for printing figures and words above nine in the case of the shillings and pence columns operates in a similar manner except that the figures and words representing ten to nineteen in the case of shillings and ten and eleven in the case of pence, are affixed to single cylinders instead of two.

Any suitable form of type can be used on the registering wheels, but I prefer to use the pin-prick type.

It will be understood that various constructional modifications may be made in the machine and I do not desire to restrict myself to that shown and described but reserve the right to make any modification therein falling within the scope of the following claims.

What I claim and desire to secure by Letters Patent is:—

1. A machine for simultaneously printing figures and words comprising a frame work, two shafts mounted in said frame, parallel one to the other, a plurality of separately rotatable type-holders for printing words mounted on one of said shafts, a plurality of separately rotatable type holders for printing figures mounted upon the second shaft, a plurality of toothed wheels attached one to each type-holder and rotatable therewith, a plurality of pinions, one of each of which is in mesh with one wheel of the figure type-holder and also in mesh with the corresponding wheel of the word type-holder, a plurality of toothed wheels gearing one with each pinion, a plurality of racks in driving engagement one with each toothed wheel gearing with the pinions and adapted to turn each of said last mentioned toothed wheels, weights connected to the said racks, means normally preventing the lifting of the racks by the weights, a plurality of depressible keys, means operable by said keys for releasing the racks, thereby permitting the weights to lift their respective racks and cause them to rotate the type-holders through the medium of the toothed wheels and pinions, means for holding a form, for example a check, and of bringing the form into contact with the type-holders, and means for returning the racks to their lowered positions against the action of the weights.

2. In a machine for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like the combination with two series of cylindrical type-holders one series being employed for printing words and the other for printing numerals, the type-holders being mounted on parallel shafts and being simultaneously brought into position for printing of a key board, a plurality of toothed sectors, mechanism between each of said toothed sectors and a type-holder for printing words and the corresponding type-holder for printing figures, a plurality of rising and falling gates, one of said gates being provided for each sector, a weight connected to each of said gates and adapted to lift same, a plurality of keys on said key board, and mechanism between each of said keys and the gates, each of said keys when depressed

being adapted to release the gate and permit it to be actuated by the weight.

3. In a machine for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like the combination with two series of cylindrical type-holders one series being employed for printing words and the other for printing numerals, the type-holders being mounted on parallel shafts and being simultaneously brought into position for printing of a key board, a plurality of toothed sectors, mechanism between each of said toothed sectors and a type-holder for printing words and the corresponding type-holder for printing figures, a plurality of rising and falling gates, one of said gates being provided for each sector, a weight connected to each of said gates and adapted to lift same, a plurality of keys on said key board, and mechanism between each of said keys and the gates, each of said keys when depressed being adapted to release the gate and permit it to be actuated by the weight; and removable means for locking the type-holders when turned to any desired extent.

4. A machine for simultaneously printing figures and words comprising a frame work, two shafts mounted in said frame, parallel one to the other, a plurality of separately rotatable type-holders for printing words mounted on one of said shafts, a plurality of separately rotatable type-holders for printing figures mounted upon the second shaft, a plurality of toothed wheels attached one to each type-holder and rotatable therewith, a plurality of pinions, one of each of which is in mesh with one wheel of the figure type-holder and also in mesh with the corresponding wheel of the word type-holder, a plurality of toothed wheels gearing one with each pinion, a plurality of racks in driving engagement one with each toothed wheel gearing with the pinions, and adapted to turn each of said last mentioned toothed wheels, weights connected to the said racks, means normally preventing the lifting of the racks by the weights, a plurality of depressible keys, means operable by said keys for releasing the racks, said means comprising horizontally displaceable rods at varying levels, means for holding a form, for example a check, and of bringing the form into contact with the type-holders, and means for returning the racks to their lowered positions against the action of the weights.

5. A machine for simultaneously printing words and figures comprising a frame, a plurality of depressible keys mounted on the frame, a plurality of movable rods, one adjacent to each key, said rods being arranged in sets and each being adapted to be displaced by one of the keys, springs attached to said rods and holding them in their inoperative positions, a weight-controlled gate adjacent to each set of rods, teeth on each gate, a stop secured to each gate, a bar pivotally mounted adjacent each gate and normally in engagement with said stop, said bar being adapted to be disengaged from the stop by any one of the rods of each adjacent set of rods, a series of toothed members one adjacent to each gate and adapted to be actuated by the teeth of the gate, a plurality of type-holders adjacent to and corresponding in number with the series of toothed members, mechanism connecting the type-holders to the sectors, means for holding a sheet of paper and of bringing it into contact with the type-holders, means for locking and unlocking the type-holders, and means for preventing the improper sequence of movement of the type-holders when the keys are operated.

6. In a machine for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like of the kind referred to the combination with a key-board of two series of cylindrical type-holders one for the words and the other for the numerals, a toothed sector and mechanism connected to the type-holders the type-holders being simultaneously operated by the toothed sector, a toothed gate in engagement with said toothed sector, and a rod operating said gate on the depression of a key.

7. A machine for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like of the kind referred to comprising a key-board in which the keys are arranged in columns, two series of cylindrical type-holders, one for the words and the other for the numerals, a plurality of toothed sectors and gates arranged one for co-operation with the keys in each column, mechanism between the sectors and the type-holders for operating said type-holders simultaneously and a plurality of rods one for each key, said rods being adapted to actuate the corresponding gate when a key in the column is depressed, each column having a toothed sector and gate for actuating the type-holders.

8. A machine for simultaneously printing amounts in figures and words on checks, dividend warrants, receipts and the like of the kind referred to comprising a key-board in which the keys are arranged in columns, two series of cylindrical type-holders, one for the words and the other for the numerals, a plurality of toothed sectors and gates arranged one for co-operation with the keys in each column, mechanism between the sectors and the type-holders for operating said type-holders simultaneously and a

plurality of rods one for each key, said rods being adapted to actuate the corresponding gate when a key in the column is depressed, each column having a toothed sector and gate for actuating the type-holders; a stop on each of said gates, a pivoted bar normally in engagement with said stop, the said bar being adapted to be moved on its pivot and disengaged from the stop by one of the rods on the depression of a key.

9. A machine for simultaneously printing words and figures comprising a plurality of depressible keys arranged in sets, a sliding rod for each key, said bars being also arranged in sets, a sliding rack opposite each set of rods, a weight controlled lever for lifting the racks, a stop on said rack, said stop preventing the lifting action of the said lever, means whereby the sliding bars can, when moved by the keys, release the rack and allow the weighted lever to raise the rack or racks so released, two sets of opposite arranged teeth on the racks, a gear for engagement with the said teeth, rollers carrying letters and figures, toothed wheels on said rollers, said toothed wheels being in mesh with the said gear, so that the rollers will be driven simultaneously and mechanism capable of shifting the rack to bring one set of teeth thereon out of engagement with the gear and to bring the other set of teeth into gear for the purpose of reverse rotation of the gear.

10. A machine for simultaneously printing figures and words comprising a plurality of separately rotatable type-holders for printing words, and a plurality of separately rotatable type-holders for printing figures, a pair of parallel shafts on which the type-holders are mounted, a toothed wheel attached to and rotatable with each type-holder, a plurality of pinions one of each of which is in mesh with one wheel of the figure type-holder and also in mesh with the wheel of the corresponding word type-holder, a toothed wheel in mesh with each of the pinions, a rack capable of to and fro motion and applied to and adapted to turn each wheel engaging one of the pinions, weights connected to the racks and adapted to lift the said racks, stops on said racks, pivoted bars against which the stops rest to prevent the lifting of the racks by the weights, depressible keys representing different words and figures, means between the keys and the pivoted bars for disengaging the bars from the stops and freeing the weights, thereby permitting the weights to lift their respective racks and cause them to rotate the type-holders through the toothed wheels, means for holding a form, for example a check, and of bringing the form into contact with the type-holders, means for returning the racks to their lowered positions against the action of the weights, and means whereby the racks can be shifted to rotate the toothed wheels in a reverse direction.

11. A machine for simultaneously printing figures and words comprising depressible keys, sliding rods actuated by the keys, springs attached to the rods and holding them in their normal position, a gate having on it two racks of teeth oppositely arranged, a toothed member between the said racks and adapted for engagement with one or the other of said racks, means for shifting the gate to bring, at will, either of the racks into engagement with the toothed member, means for locking the gate when moved from one position to another, rollers bearing letters and figures, gear between the toothed member and the rollers, means for holding a sheet of paper and bringing it into engagement with the said letters and figures, and means for supplying ink to the letters and figures.

12. A machine for simultaneously printing figures and words comprising gates having two sets of rack teeth on them, means for lifting the gates, stops on the gates and movable bars adjacent the gates adapted to co-operate with the stops on the gate to hold the gate against the lifting means, depressible keys, spring actuated means adjacent the keys and movable by the keys against the action of springs for shifting the movable bars to free the gates, toothed members adapted to engage the teeth on the gates, rollers carrying raised letters and figures gearing between the rollers and the toothed members, means for shifting the gates to bring either set of teeth into engagement with the toothed members, for reverse rotation of the said members means for locking the gates when so shifted, means for supporting a sheet of paper and for bringing it into contact with the letters and figures, and means for supplying ink to the letters and figures.

13. A machine for simultaneously printing words and figures on checks, and other paper forms, said machine consisting of a frame, means for holding paper forms, rollers carrying letters and figures, means for inking the letters and figures, means for bringing the paper forms into contact with the letters and figures, toothed gear for rotating the said rollers, some in one direction of rotation only and others in both directions of rotation, movable gates having teeth in permanent engagement with some of gear for rotating the rollers and others having two sets of teeth either of which can, by shifting the gates, be brought into engagement with the other of the gear and by which the said gear can be turned in oppo-

site directions, means for shifting the gates having two sets of teeth, means for locking the gates when so shifted, means for holding the gates against rotation of the gear and key-operated devices for removing the holding means and means such as weighted levers for lifting the gates when freed from the holding means and thereby causing the gates to variably operate the gear according to the selected key-operated means.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CHARLES HENRY NEWTON.

Witnesses:

HERBERT EDWIN GRANT,

HENRY FRANCIS HANBURY.