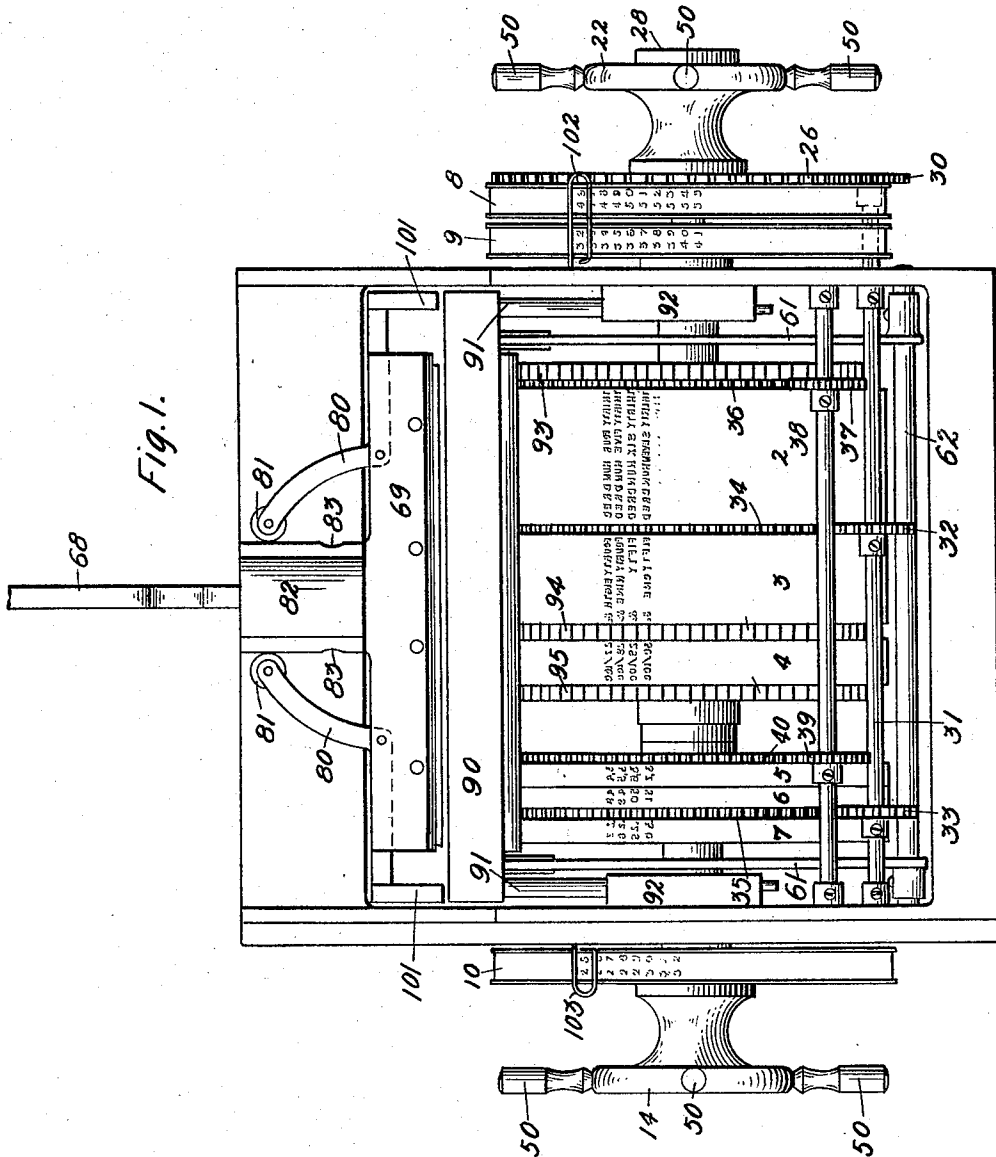


E. OCUMPAUGH.
CHECK WRITING MACHINE.
APPLICATION FILED AUG. 24, 1914.

1,160,646.

Patented Nov. 16, 1915.

4 SHEETS—SHEET 1.



Witnesses:
F. Haese
D. E. Dammann

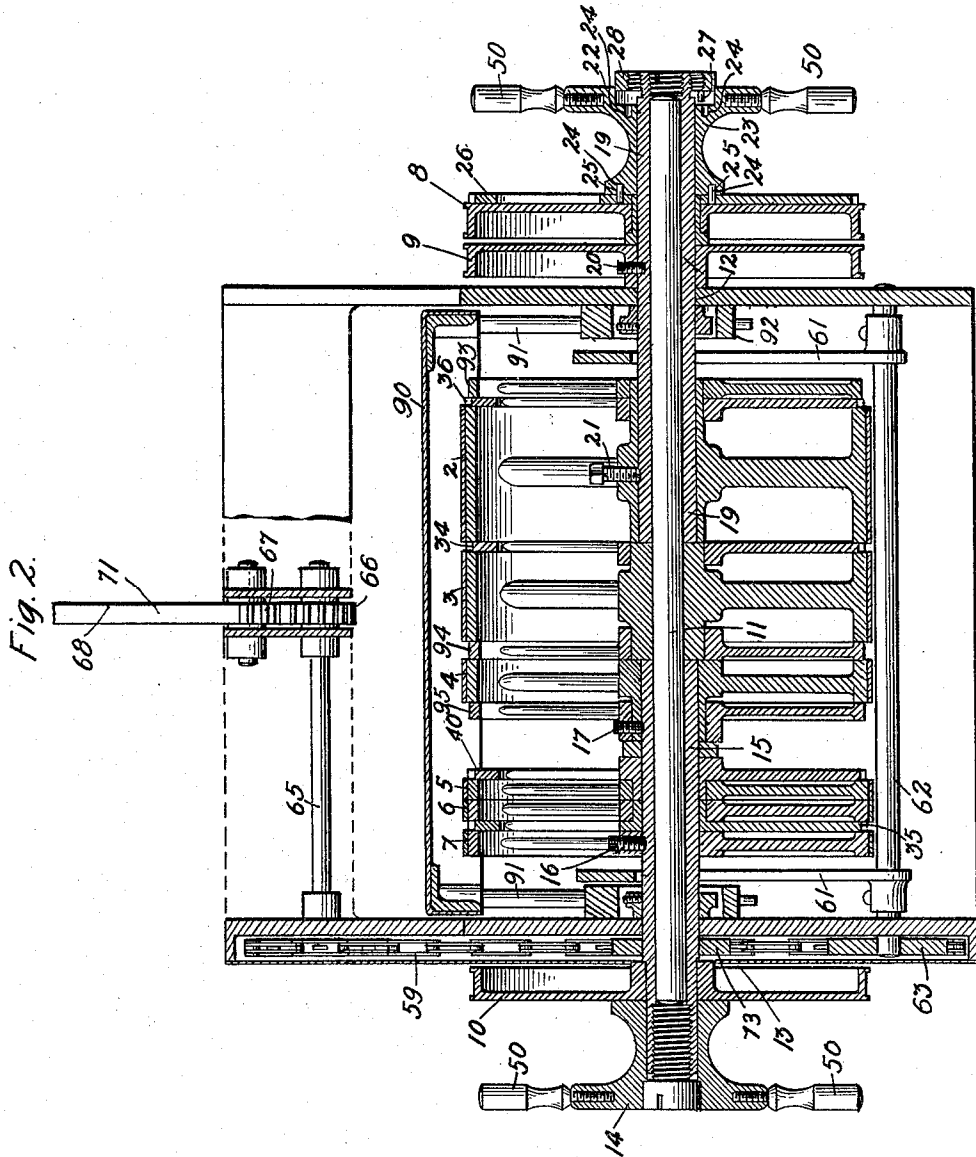
Inventor:
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4 SHEETS—SHEET 2.



Witnesses:

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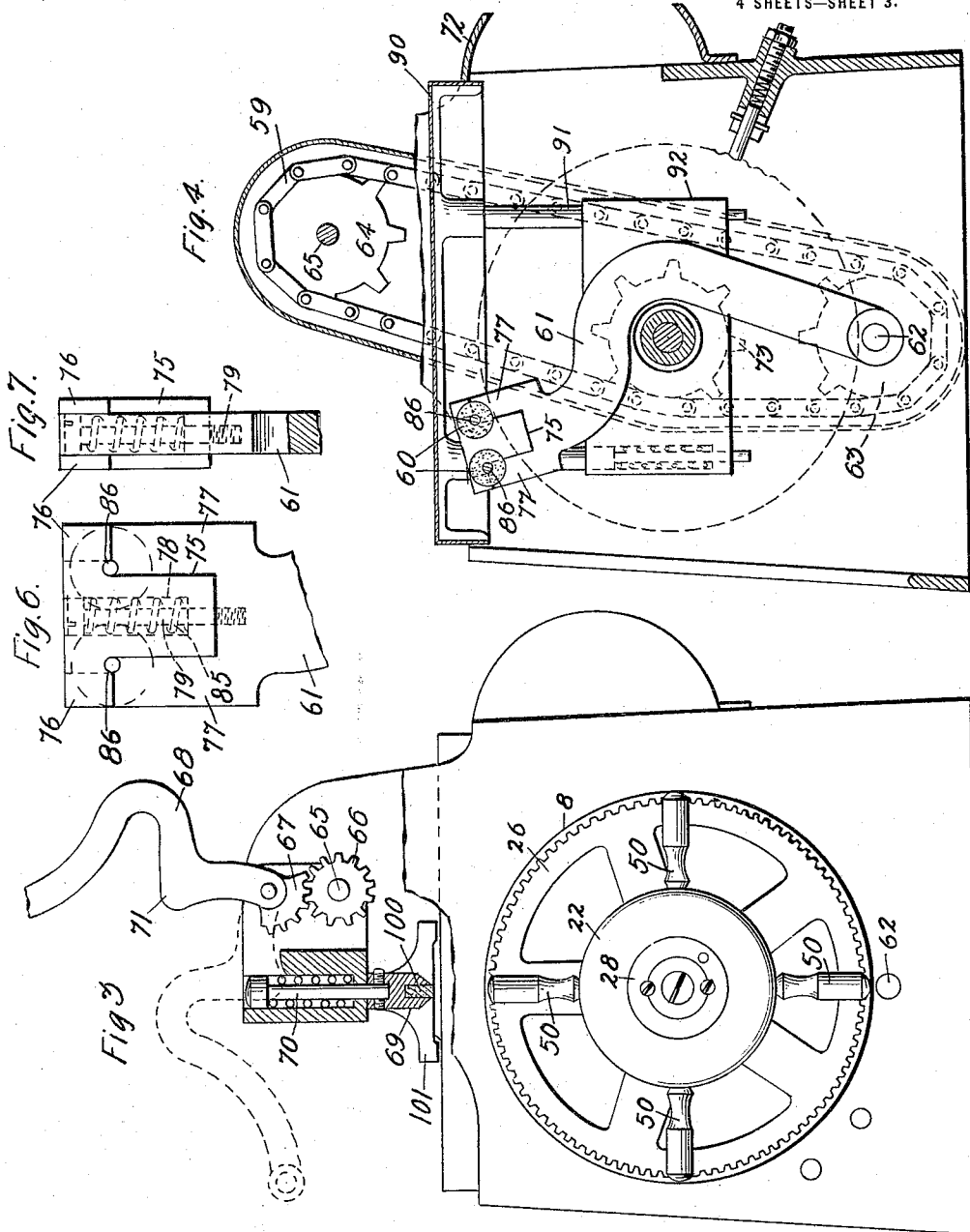
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4 SHEETS—SHEET 3.



Witnesses:
F. Haase
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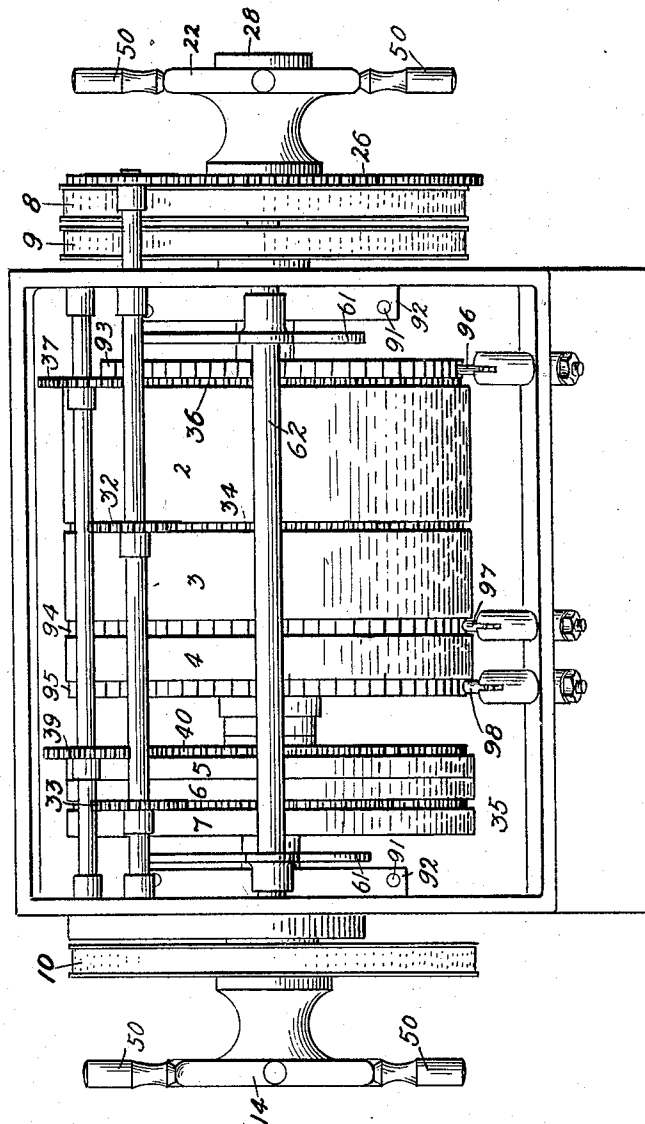
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4 SHEETS—SHEET 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

EDMUND OCUMPAUGH, OF ROCHESTER, NEW YORK, ASSIGNOR TO DEFIANCE MACHINE COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

CHECK-WRITING MACHINE.

1,160,646.

Specification of Letters Patent.

Patented Nov. 16, 1915.

Application filed August 24, 1914. Serial No. 853,391.

To all whom it may concern:

Be it known that I, EDMUND OCUMPAUGH, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Check-Writing Machines, of which the following is a full, clear, concise, and exact description.

This invention relates to check-writing machines, and has for its object the provision of a device of this class which will in a single operation write both in words and figures a check for any amount of dollars up to five digits and portions of a dollar. Among the features of this invention are the means provided for accomplishing the above object with the minimum number of type wheels consistent with a commercial device, and the means for rapidly and easily adjusting the type wheels for any desired writing.

Other features of the invention are the details of construction and combination of parts for inking the type, and for giving a positive and clear impression of the type upon the check.

In the drawings illustrating this invention—Figure 1 is a view in front elevation of a device embodying this invention; Fig. 2 is a vertical cross-sectional view of the parts shown in Fig. 1; Fig. 3 is an end view of the device shown in Fig. 1 with parts in section; Fig. 4 is a cross-sectional view of the device looking toward one end; Fig. 5 is a bottom view of the device embodying this invention; and Figs. 6 and 7 are enlarged drawings of the ink roller carrying mechanism.

In the illustrated embodiment of this invention, there are shown two sets of type wheels, each set comprising three wheels, the wheels of one set being designated by the numerals 2, 3 and 4, those of the other set by the numerals 5, 6 and 7. Upon the wheel 2 are the type for spelling out the amounts to be printed in hundreds of dollars, upon wheel 3 the amounts in tens and units, and upon wheel 4 appears in numerals the fractions of a dollar. Correspondingly, upon the wheel 5 are the numbers indicating the number of hundreds of dollars, upon the wheel 6 the tens and units, and upon the

wheel 7 the decimal fractions of a dollar or cents. All of these wheels are of the same diameter and mounted to rotate about a common axis.

Located at one end of the device are designation wheels 8 and 9 for determining the setting of the type wheels for a given number of dollars, while at the opposite end is located a designation wheel 10 for determining the setting of the type wheels to print the fractions of a dollar.

Provision is made for adjusting two type wheels of each set from one end of the machine, and the remaining wheel of each set from the opposite end of the device. As clearly shown in Fig. 2, there is provided a shaft 11 upon which are mounted, some loosely and others secured thereto, the type wheels 2, 3, 4, 5, 6 and 7 and the designation wheels 8, 9 and 10. Upon one end of the shaft 11 is loosely mounted a sleeve 15 to which is secured by means of set screws 16 and 17, the type wheels 7 and 4 respectively, the designation wheel 10 being also secured to rotate with this sleeve. Loosely mounted upon the sleeve 15, and adapted to rotate independently of each other, are the type wheels 5 and 6. Upon the opposite end of the shaft is a rotatable sleeve 19 to which is secured, by means of the set screws 20 and 21, the indication wheel 9 and the type wheel 2. The type wheel 3 is mounted directly upon the shaft 11 to rotate thereupon, while the indication wheel 8 is mounted loosely upon the sleeve 19.

Located at one end of the device is a hand wheel 22 having a hub 23, which is slidable upon the sleeve 19 and has provided in its opposite ends openings or recesses 24, 24 adapted in one longitudinal position of the wheel 22 to engage pins 25, 25 projecting from a gear wheel 26 secured to the indication wheel. In its other longitudinal position, it engages pins 27, 27 in a collar 28 secured to the outer end of the shaft 11. Thus it will be seen that when the handle 22 is rotated while in its inner position it will rotate the indication wheel 8, while in its outer position it will rotate the sleeve 19 and with it the indicating wheel 9 and the type wheel 2. The gear 26, which is secured to rotate with the indication wheel 8, meshes

with a pinion 30 carried by a shaft 31, upon which are also mounted pinions 32 and 33 meshing with gears 34 and 35 secured to the type wheels 3 and 6 respectively. Thus, the rotation of the indication wheel 8 will cause a corresponding rotation of type wheels 3 and 6. Secured to the type wheel 2 is a gear wheel 36 meshing with a pinion 37 carried by a shaft 38, upon which is also mounted a pinion 39 meshing with a gear wheel 40 secured to the type wheel 5, which will also be rotated by the rotating of the indicating wheel 9. At the opposite end of the shaft 11, the indicating wheel 10 and the type wheels 7 and 4, which are secured to the sleeve 15, are rotated by means of a handle 14 which is mounted upon the sleeve 15. By means of this arrangement two wheels of each set may be independently operated from a single handle located at one end of the shaft, while the remaining wheels may be operated by means of a handle located at the opposite end of the device.

It will be noted that the handles 14 and 22 are each provided with four pins 50, 50 projecting radially therefrom to facilitate the rotation of the type wheels. This has been found to be an advantage over the ordinary knurled or notched type of handle, inasmuch as it gives a better leverage without unnecessarily increasing the size of the portion to be grasped by the hand, and enables the operator to locate the indicating wheels 10 with accuracy and speed.

In Fig. 4 are shown inking rollers 60, 60 carried by arms 61, 61 mounted upon a shaft 62 to which is attached a sprocket wheel 63. A sprocket chain 59, which passes around the wheel 63, is operated by a second sprocket wheel 64 attached to a shaft 65 upon which is also mounted a gear wheel 66, as shown in Fig. 3. This gear wheel 66 meshes with a sector gear 67 carried by a handle 68, which handle is adapted to move a platen 69 for pressing the check to be printed upon the type wheels. As shown in Fig. 3, this platen is carried upon one end of a spring-pressed plunger 70, the opposite end of which is adapted to be struck by a knee 71 formed upon the handle 68, after said handle has been moved through an angle of approximately ninety degrees. While the handle is being moved from its vertical or normal position to its position of engagement with the plunger 70, however, it has, by reason of the gears 66 and 67, caused the rotation of the sprocket wheels 64 and 63, and thereby caused the inking rollers to be moved across the face of the type wheels and into a recess provided on one face of the apparatus formed by a curved cover plate 72, which is preferably made removable so that the rollers 60, 60 may be inked. This arrangement insures that the type will be thoroughly inked and the ink-

ing rolls entirely removed from the vicinity of the type before the blank is brought near to the printing surface, thus obviating all danger of causing a smear or blot by reason of the form to be printed coming into contact with the inking rollers in the movement of the platen. The chain 59 passes over an idle sprocket wheel 73 mounted upon the sleeve 15. The shaft 62, carrying the arms 61, 61, is mounted below and in line with the shaft 11 of the type wheels, and each of the said arms 61 is provided with a gooseneck 74, which passes over the shaft 11 and permits the free ends of these arms to move a sufficient distance upon both sides of the shaft 11, to insure the inking of a sufficiently large printing surface. In order to further facilitate the inking of the cylindrical surface, the inking rollers 60, 60 are mounted in flexible bearings, as more clearly shown in Figs. 6 and 7.

As shown in Figs. 6 and 7, the free ends of the arms 61, 61 are forked and have mounted therein a movable T-shaped block, comprising a body portion 75 and arms 76, 76, which are grooved to slide over the arms 77, 77, of the forked ends of the arms 61, 61. The body portion 75 of the T-shaped block is adapted to slide between the arms 77, 77 and is provided with an opening 78, centrally thereof to receive a screw 79, the lower end of which is secured in the arm 61. A spring 85 having one end bearing against the head of the screw 79 is contained within the opening 78 and bears at its other end against the lower end of said opening to normally press the T-shaped members downwardly. The arms 77, 77 of the forked portions are reduced in size near the upper ends and are hollowed out to form a bearing surface for the shaft. Correspondingly, the under sides of the T-shaped block are hollowed out to form bearings, the corresponding hollowed-out portions fitting together in the normal positions of the parts to form circular bearings for spindles 86, 86, upon which the inking rollers are carried. By reason of this construction, the inking rollers may be caused to engage the cylindrical type surfaces at a considerable distance upon either side of the center line thereof, thus insuring a complete inking of the type which are in printing position. Moreover, due to the fact that the inking rollers are moved across the face of the type at each downward movement of the handle 68, the type will be freshly inked at each printing operation, without any special attention or extra work on the part of the operator.

Another improvement in this device, which has been found to be of great advantage, is the means provided for applying a sudden pressure to the platen at the instant of the printing operation. As shown

in Fig. 1, there are mounted upon the platen two pivotal arms 80, 80 carrying rollers 81, 81, which are pressed against the opposite sides of a supporting member 82, in which the platen plunger 70 moves. Near the lower end of this supporting member 82 are provided oppositely disposed notches or depressions 83, 83, into which the rollers 81, 81 drop just at the end of the movement of the platen and at the moment when it is desired to press the platen through the opening in the table 90 so as to force the blank to be printed into engagement with the type. The sudden removal of the resistance offered by the pressure of these rollers to the downward movement of the platen, causes the operator to involuntarily bring the platen into printing engagement with an increased and sudden pressure, which will be sufficient to insure a clean-cut production of the matter to be printed.

The table 90 upon which the blank to be printed rests, is carried upon spring-pressed plungers 91, 91 reciprocally supported in blocks 92, 92. This table 90 is in the normal position of the parts a sufficient distance above the peripheries of the type wheels to permit free movement of the inking rollers 60, 60, but is adapted to be moved into printing position in the movement of the platen. In addition to the advantage the location of this table has with respect to the movement of the inking rollers, it also has the advantage of coöperating with the parts 101 to grip the blank to be printed and hold it in place before and during the printing operation. The members 101, being carried at the ends of the pivoted levers 80, have a slightly outward movement just prior to the printing operation, that is, at the time the rollers drop into the depressions 83. This movement of the members 101 stretches the paper taut before printing, and aids in stripping it loose from the type after the printing operation. The upward movement of the platen with respect to the table at the moment the rollers 81 leave the depressions 83 after printing, also strips the paper from the platen. The face of each of the members 101 may be covered with a thin layer of rubber, or other similar friction material, or may be slightly roughened to more firmly grip the blank. The impression portion 100 of the platen 69 is preferably of rubber, but may be of other material, such as knurled or roughened metal, where it is desired to cut as well as mark the checks.

Toothed wheels 93, 94 and 95 secured to the type wheels 2, 3, and 4, respectively, are engaged by spring-pressed plungers 96, 97 and 98, respectively, to maintain the several type-wheels against rotation during the adjustment of the others to printing position.

The accurate setting of the type-wheels for making a desired writing is facilitated

by means of sights 102 and 103 located over the indicating wheels 8, 9 and 10, through which the matter to be printed may be viewed.

Although this invention is shown and described with reference to details comprising a covered embodiment, it is to be understood that these details may be altered, many modifications being possible by one skilled in the art without departing from the spirit or scope of my invention.

I claim:

1. In a check writing device, in combination a plurality of type wheels, a shaft upon which said type wheels are mounted to rotate independently of each other, a reciprocating hand grip mounted upon one end of said shaft and means operated by said hand grip when in one position of reciprocation for adjusting a plurality of said type wheels independently of the other type wheels and additional means operated by said hand grip when in its other position of reciprocation for adjusting other ones of said plurality of type wheels independently of the first mentioned ones, and a second hand grip for adjusting still others of said type wheels independently of the ones adjusted by the first mentioned hand grip.

2. In a check writing device, in combination a plurality of type wheels, a shaft upon which said type wheels are mounted to rotate independently in pairs of individual wheels which are separated by intervening wheels of other pairs, a longitudinally movable adjusting means for said type wheels located upon one end of said shaft, and clutch mechanism brought into operative relation with said adjusting means in one of its longitudinal positions to cause the rotation of a certain pair of said type wheels and other mechanism brought into operative relation with said adjusting means in another of its longitudinal positions to cause the rotation of another pair of said type wheels.

3. In a check writing device, in combination a plurality of adjustable type wheels arranged in pairs, the individual wheels of each pair being separated by wheels of the other pairs, movable adjusting means located at one end of said device and mechanism by which said adjusting means is adapted in one position to adjust certain of said type wheels and in another position to adjust certain others of said type wheels, and means operable from the opposite end of said device for adjusting the remainder of said type wheels.

4. In a check writing device, in combination two sets of type wheels all rotatable about the same axis each comprising three wheels, means operable from one end of the group of type wheels for independently adjusting two wheels of each set, and means

operable from the opposite end of the group of type wheels for adjusting the remaining wheel of each set.

5 In a check writing device, a plurality of pairs of independently adjustable type wheels, indicating wheels for determining the adjustment of the several pairs of said type wheels, two of said indicating wheels being located at one end of said device and 10 another at the other end thereof, means operable from one end of said device for rotating independently of each other two pairs of said type wheels and their associated indicating wheels, and means operable from 15 the opposite end of said device for rotating independently of the others a third pair of type wheels and its associated indicating wheel.

6. In a check writing device, a plurality 20 of pairs of independently rotatable type wheels, an indicating wheel for each pair of said type wheels, a gear connection between one of said indicating wheels and its corresponding type wheels, a gear and sleeve connection between another of said indicating 25 wheels and its type wheels, and a sleeve connection between the third of said indicating wheels and its corresponding type wheels, and adjusting means for said indicating 30 wheels whereby said type wheels may be moved with their corresponding indicating wheels to printing position.

7. In a check writing device, a printing 35 surface, a platen, means for moving said platen into printing engagement with said printing surface, a supporting member for said means having oppositely disposed recesses therein, and spring-pressed rollers carried by said platen and engaging opposite 40 faces of said supporting member, said spring-

pressed rollers being adapted to drop into said recesses at the period when said platen is about to engage the printing surface.

8. In a check writing device, a cylindrical type surface, a platen, means for moving 45 said platen into engagement with a portion of said type surface, inking rollers, and means controlled by said platen moving means for causing said inking rollers to pass over the portion of said type surface en- 50 gaged by the platen and to a distance on either side thereof at each movement of the platen and a movable check carrying table under which said inking rollers travel, and provided with a slot through which a check 55 is pressed against the inked portion of the type surface by said movable platen.

9. In a check writing machine, the combination with a table having a slot therein, of a platen adapted to press the check through 60 said slot for printing, and means adapted to engage the check beyond each end of the slot and move slightly away from the slot so as to stretch the check taut just prior to the printing operation. 65

10. In a check writing machine, the combination with a table, adjustable type on one side thereof and a platen on the other side thereof, and means engaging a check to be 70 printed slightly before the printing operation, said means being arranged to move relatively to the surface of the table and just prior to the printing operation so as to insure the check being stretched taut.

In witness whereof, I hereunto subscribe 75 my name this 13 day of August, A. D. 1914.

EDMUND OCUMPAUGH.

Witnesses:

S. E. MOSHER,

F. V. FITZSIMMONS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."