

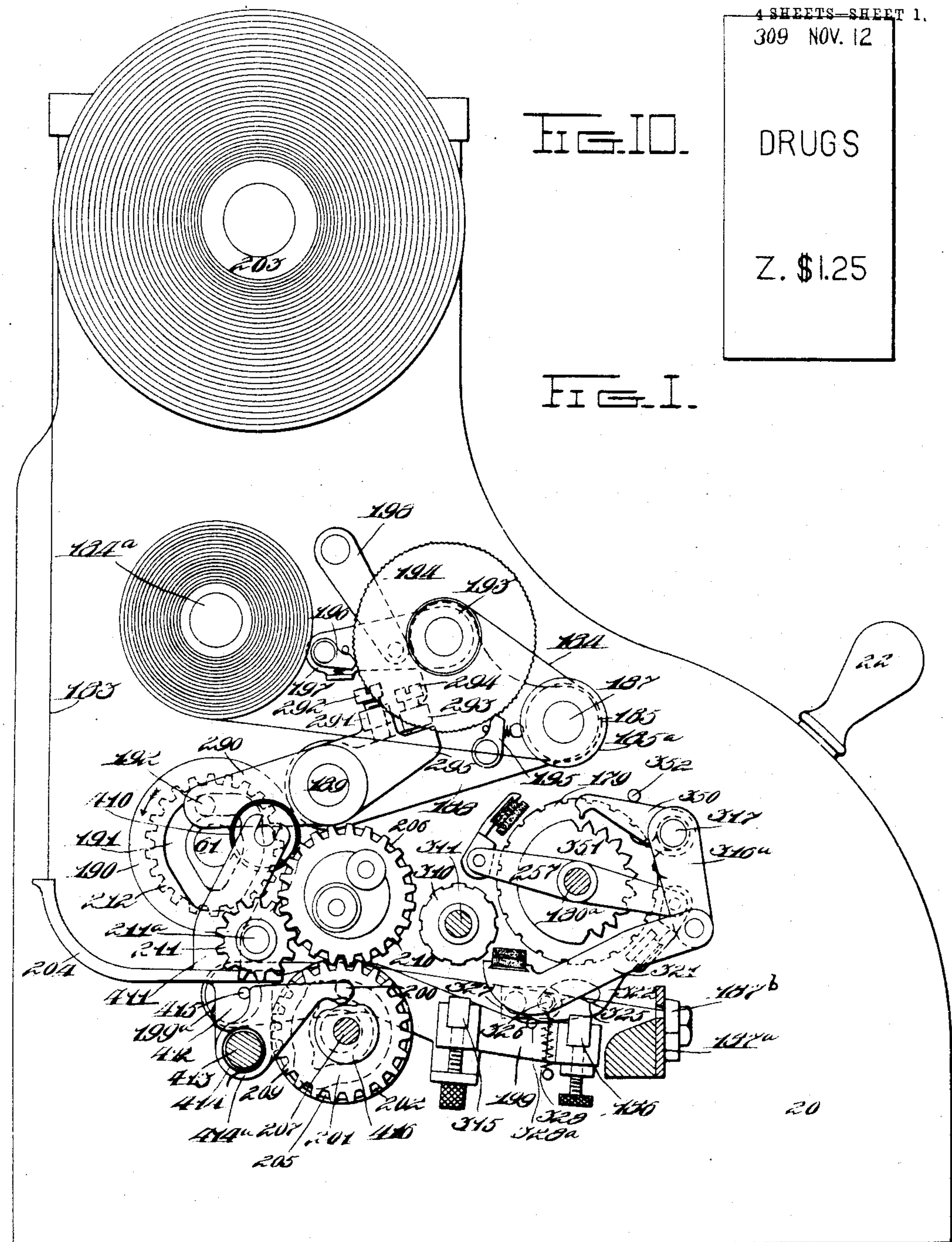
No. 792,194.

PATENTED JUNE 13, 1905.

T. CARROLL.  
CASH REGISTER.

APPLICATION FILED DEC. 22, 1902.

4 SHEETS—SHEET 1.  
309 NOV. 12



Witnesses

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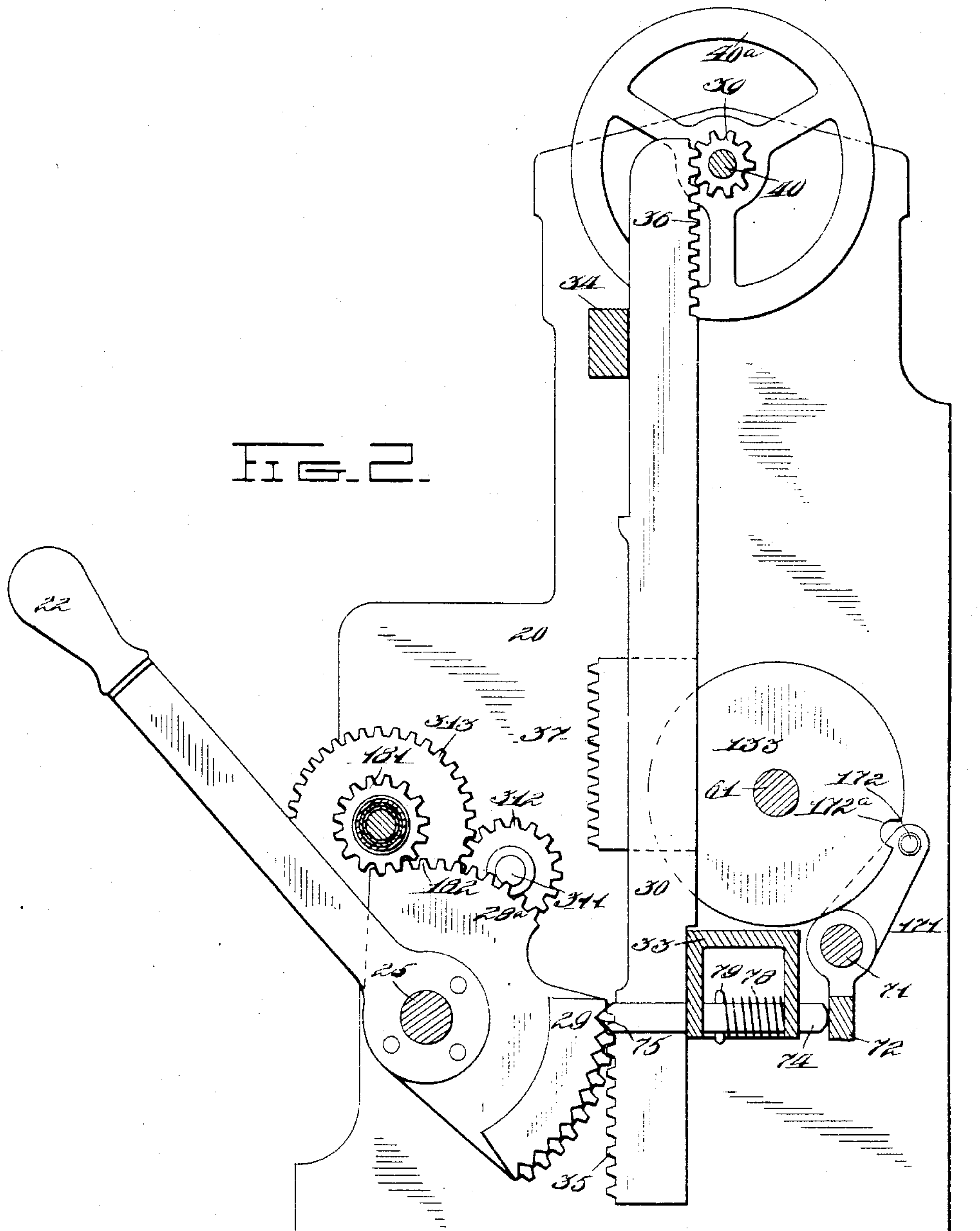
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

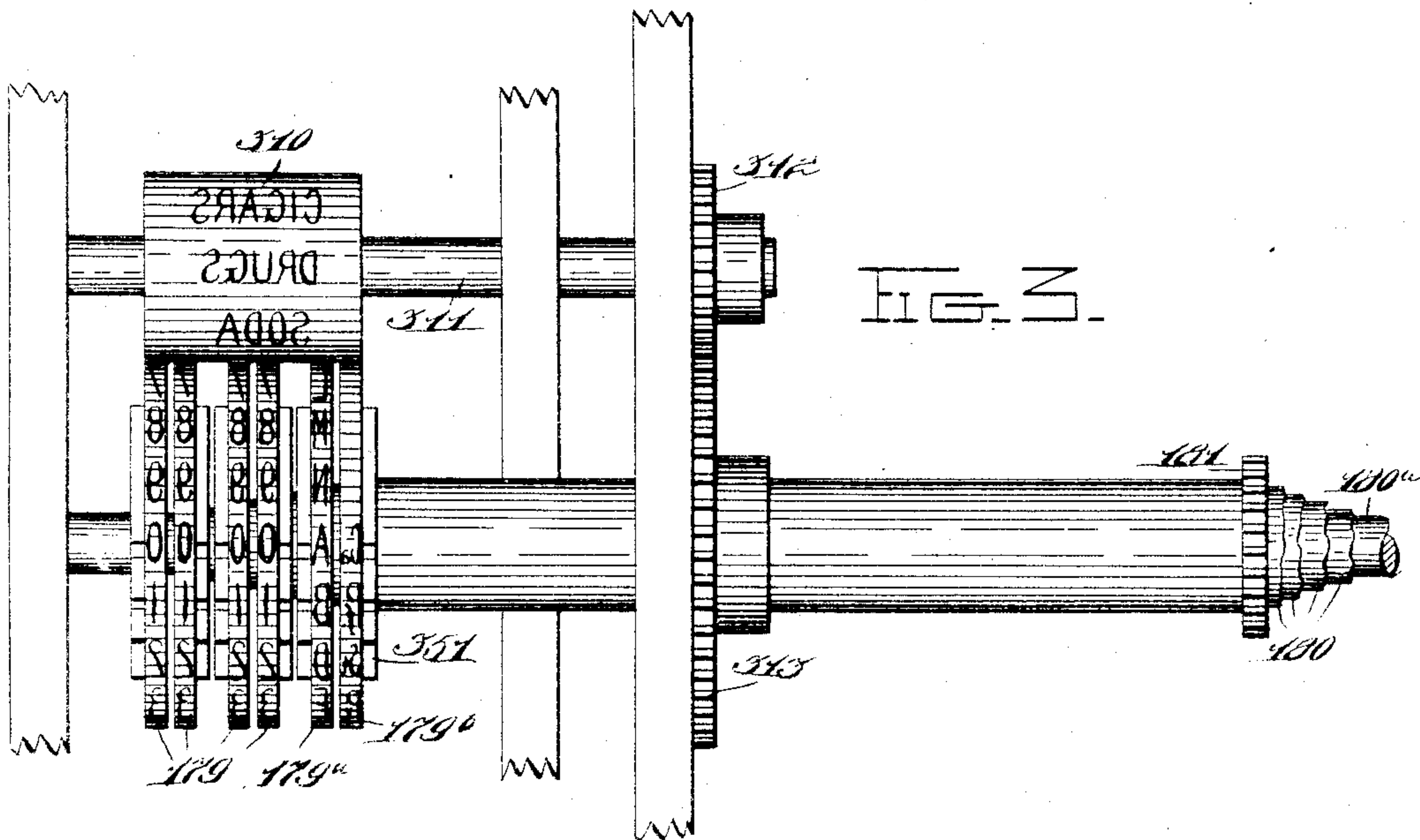


FIG. 4.

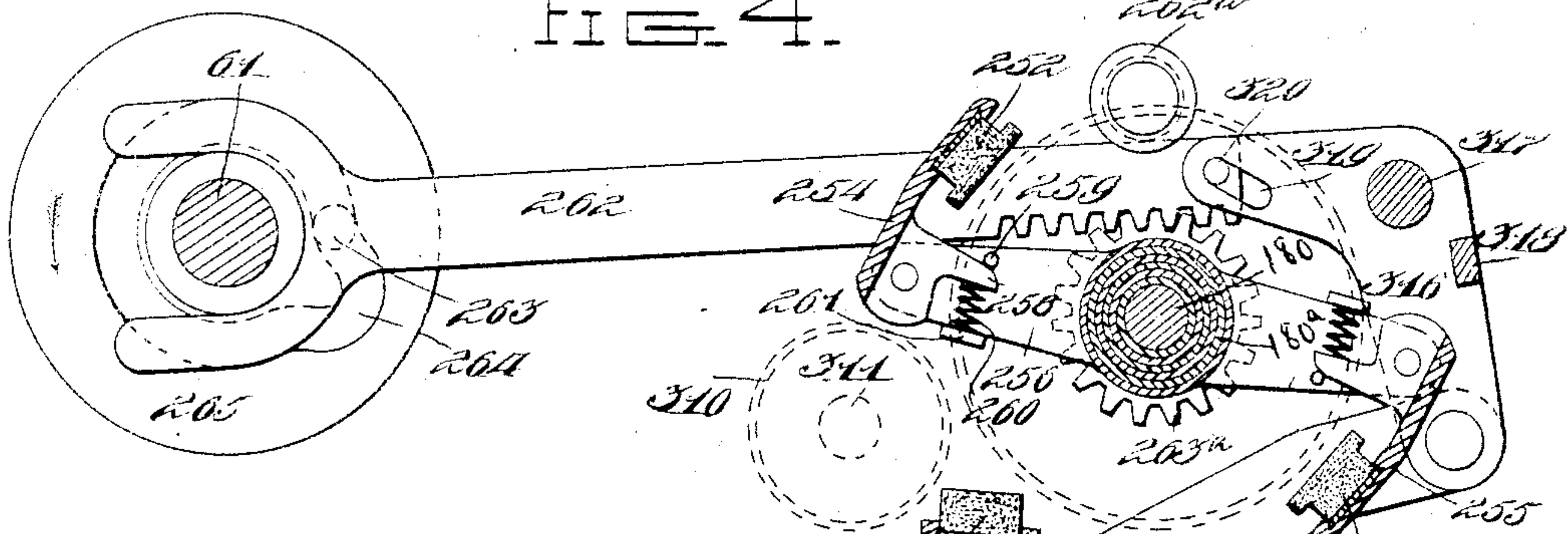


FIG. 6.

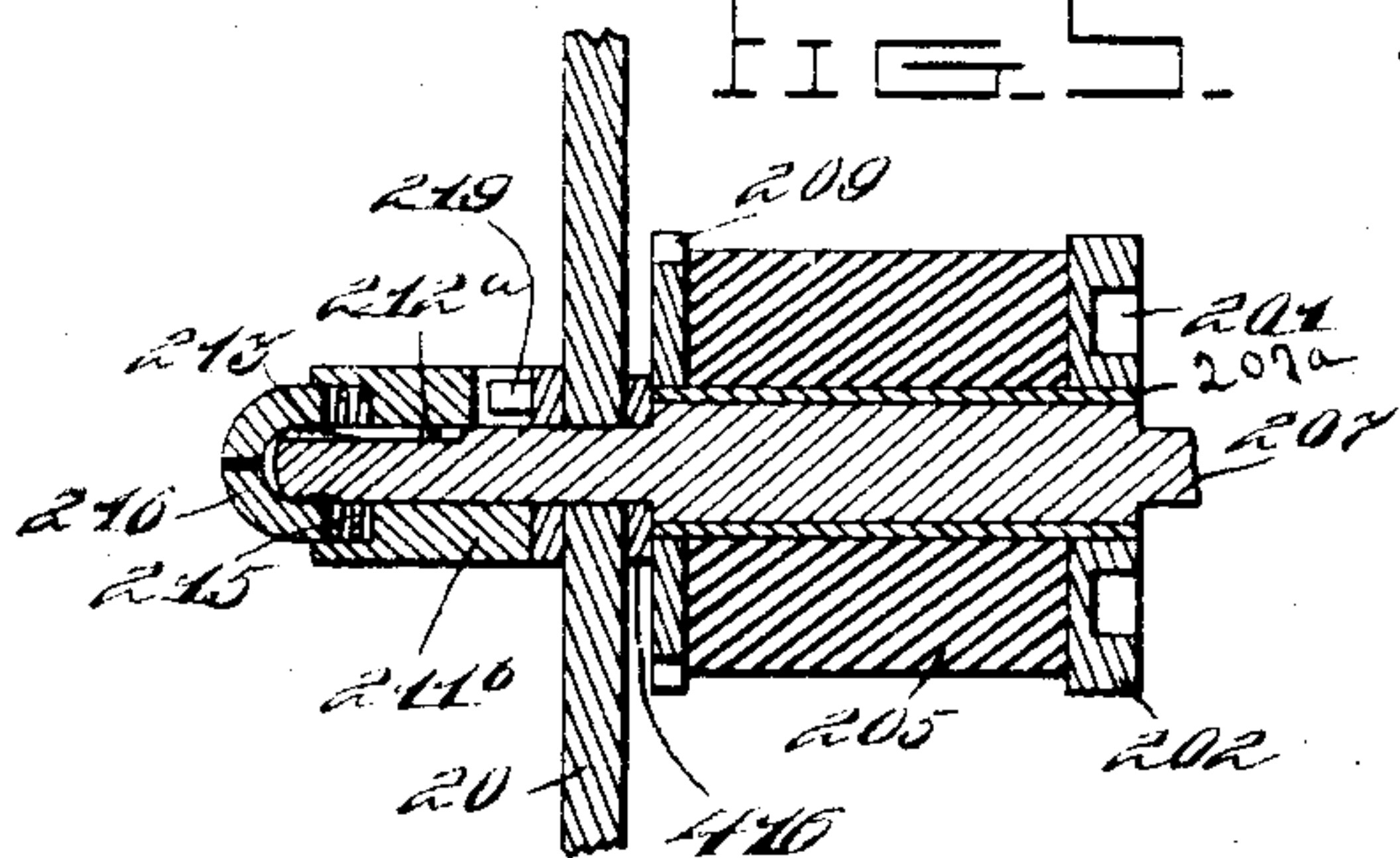
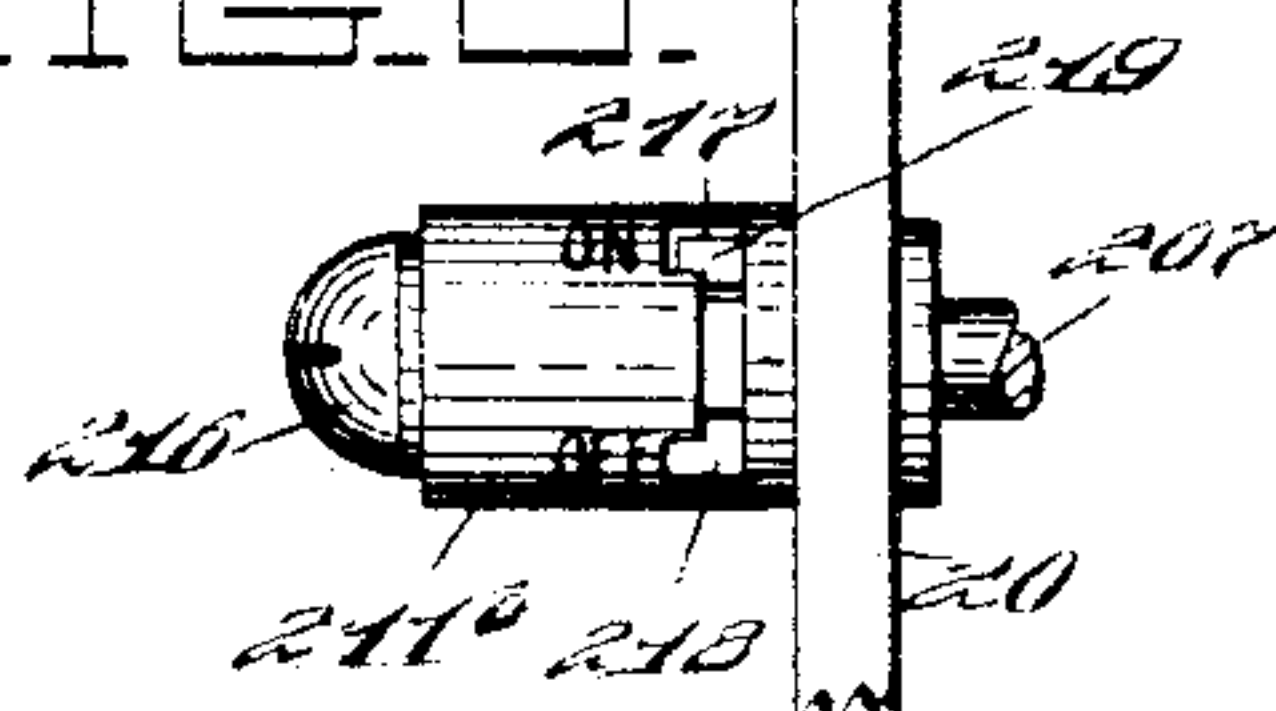


FIG. 8.



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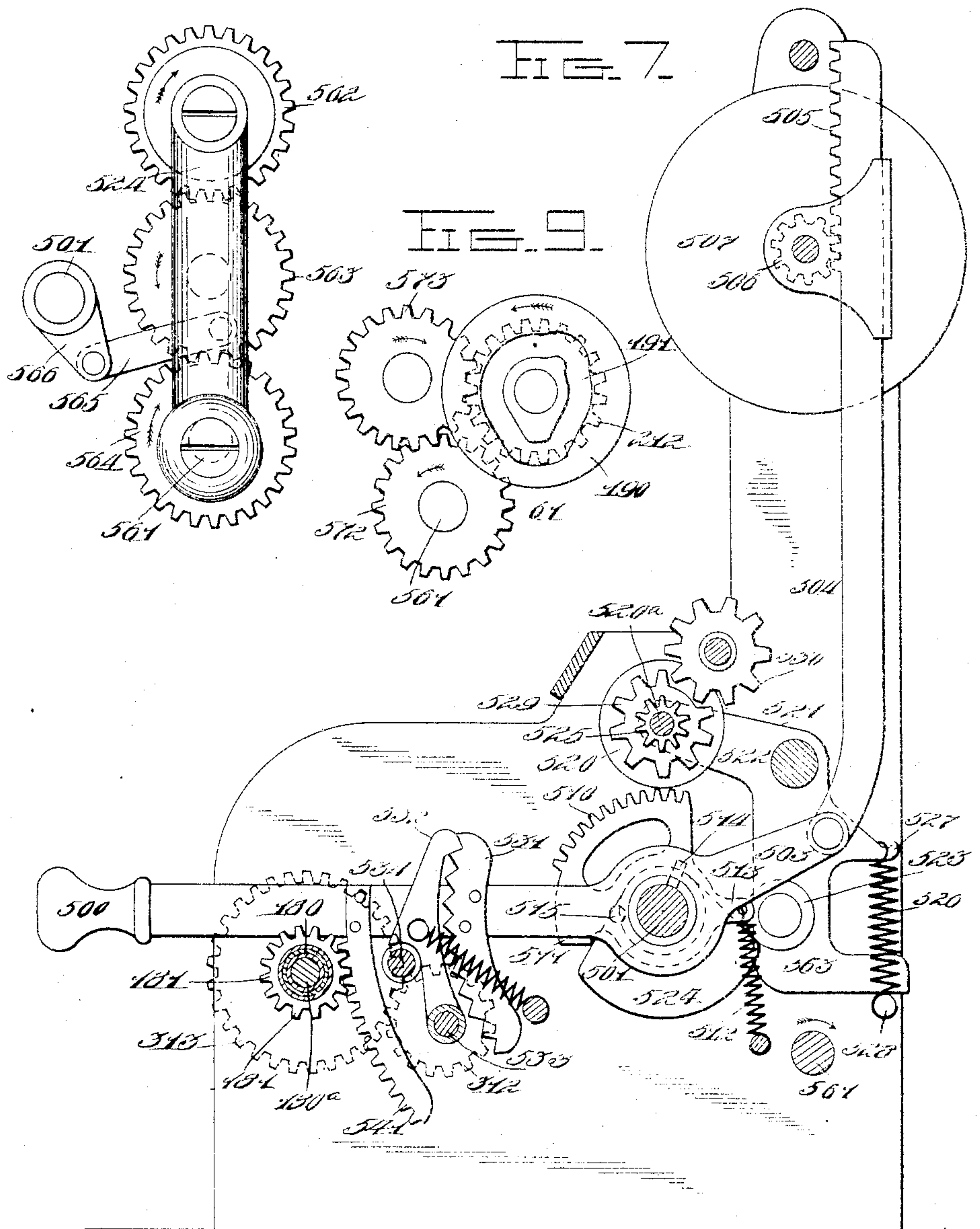
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4 SHEETS—SHEET 4.

FIG. 8.

FIG. 7.

FIG. 9.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 792,194, dated June 13, 1905.

Application filed December 22, 1902. Serial No. 136,164.

*To all whom it may concern:*

Be it known that I, THOMAS CARROLL, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Cash-Registers, of which I declare the following to be a full, clear, and exact description.

The present invention has for its object, generally stated, the production of a new form of printing attachment for the class or type of cash-registers in which the setting of parts for the purpose of registration and recording is effected by manipulation of hand-levers working along denominational scales and wherein a subsequent operation, such as the revolution of a crank-handle, effects the registration and recording the measure and character of which has been predetermined by the positioning of the hand-levers. Such a type of cash-register is illustrated in my copending application, Serial No. 72,018, filed August 14, 1901, and in the present instance I have shown my improvements as applied to this construction of machines in connection with which they were primarily developed; but I have also shown my said improvements applied to a different construction of machines, and the invention is to be understood as capable of embodiment in various forms of registers.

In cash-registers heretofore in which both the detail-strip and check are printed it has been customary to print upon a single line of the detail-strip the amount, the clerk's initial, and an abbreviated character to designate the special transaction, such as "Dr. Z. \$1.25," denoting that clerk "Z" has made a sale of drugs to the amount of one dollar and twenty-five cents, and an exact duplicate of this data is printed in one line on the check. When the printed check is delivered to the purchaser, these abbreviated special characters may be unintelligible to him, and the value of printing them on the check is greatly lessened. It is the purpose of my present invention to overcome this objection, and I have therefore devised improved means for printing such that instead of printing on the check an abbrevi-

ated character to denote the nature of the special transaction these special words will be printed in full on the check and on a different line from the clerk's initial and the amount. Thus the purchaser can easily read at a glance the exact nature of the transaction, such as "Drugs" (on one line) and "Z \$1.25," (on the line below,) denoting that clerk "Z" made a sale of drugs amounting to one dollar and twenty-five cents.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a sectionalized side elevation of a cash-register having my printing attachment. Fig. 2 represents a partial front and back vertical section of the machine. Fig. 3 represents a fragmentary top plan view of the type-carriers and coöperating parts. Fig. 4 represents an enlarged detail sectional view of the inking mechanism. Fig. 5 represents a detail longitudinal sectional view of the check-feeding roller and its adjusting-knob. Fig. 6 represents a detail plan view of the check-feed-adjusting knob. Fig. 7 is a view similar to Fig. 2, showing a different type of machine to which this printing attachment is applied. Fig. 8 represents a detail elevation of a driving means for said machine. Fig. 9 represents a detail elevation of the gear-wheels for transmitting motion from the driving-shaft to the printing attachment of said machine shown in Fig. 7. Fig. 10 represents a sample of the printed check.

In the aforesaid drawings, 20 designates the frame of the machine, and 22 the setting-levers. These setting-levers 22 (see Fig. 2) are pivoted upon a transverse shaft 25 and are six in number, representing, respectively, commencing at the right, units of cents, tens of cents, units of dollars, and tens of dollars. The fifth lever is a clerk's lever to denote which clerk operated the machine, and the sixth lever is the special-transaction lever to denote the nature of the transaction. At its inner end each lever carries a segmental rack-plate 28<sup>a</sup>, to which is secured a toothed aligning plate 29. The lower portion of each segment 28<sup>a</sup> meshes with rack-teeth 35 of one of



a series of vertically-slidable rack-bars 30. These bars are mounted in vertical grooves in guide-bars 33 and 34, securely mounted in the main frame. Each of said bars 30 is formed  
 5 upon its front edge, near the lower end, with rack-teeth 35 and on its rear edge, near its upper end, with rack-teeth 36. Each rack-bar is also provided at an intermediate point with a forwardly-facing counter-operating rack-  
 10 plate 37. It will thus be observed that when the lever 22 is set to the desired position its respective rack-bar 30 will be raised or lowered, and this movement of the rack-bar sets its rack 37 for the operation of the counter by  
 15 any suitable means, said counter not being shown, since it is no part of my present invention, and at the same time adjusts its respective indicator to indicate the proper amount. This latter adjustment is effected  
 20 by the rack-teeth 36, which mesh with a pinion 39, fast to the respective indicator-wheels. The indicator-wheels 40<sup>a</sup> are journaled upon a transverse shaft 40 and are provided with numerals from "0" to "9" or with the clerk's  
 25 initial or with an abbreviated character to represent the special transaction.

*Locking mechanism.*—In order to lock the levers from movement while the machine is being operated and also to lock the machine  
 30 from operation while the levers are being moved, there is mounted behind each lever a spring-pressed plunger 74. (See Fig. 2.) These plungers are mounted in the hollow slotted guide-bar 33. Each plunger has a  
 35 wedge-shaped forward end 75, which engages the teeth of the respective alining plate 29. Each of the plungers is normally forced forward by a coiled spring 78, mounted in the hollow bar 33 and engaging a lug 79, formed  
 40 on said plunger. Extending across the rear of all these plungers and bearing against them in their normal positions is a yoke-frame 72, which hangs on the rock-shaft 71, which extends transversely across the machine. Fast  
 45 upon this pendent yoke-frame 72 and pivoted about the same transverse shaft 71 is an arm 171, which extends upward and to the rear of a disk 133, which is fast upon the rotation-shaft 61. At the outer end of the arm 171  
 50 there is a laterally-projecting pin 172, adapted to enter the recess 172<sup>a</sup>, formed in the disk 133. The rotary shaft 61 may be operated by any suitable means, such as a crank-handle, and in the normal position of said shaft  
 55 61, just before the operation of the machine, the pin 172 is directly opposite the recess 172<sup>a</sup>. Therefore when any one of the levers is moved the plunger 74 is forced backward, rocking the yoke-frame 72 rearward and the arm 171 forward, carrying the pin 172 into the recess  
 60 172<sup>a</sup>. In this position the disk 133, and consequently the shaft 61, is locked against rotation. This locking occurs only when the lever is in a partially-moved position such  
 65 that the plunger is forced backward. When

the lever is in its proper position, the wedge-shaped end 75 of the plunger engages the alining plate 29 to its full extent, and the pin 172 is thereupon free from the recess 172<sup>a</sup>.  
 Now as soon as the shaft 61, bearing the disk 133, is partially rotated the edge of said disk immediately comes in contact with the pin 172, and since this pin cannot now move forward the yoke-frame 72 cannot be rocked backward. Therefore the plungers 74 are all  
 75 locked against movement, and the position of the levers cannot be changed until the main shaft 61 has made a complete rotation and the recess 172<sup>a</sup> is again opposite the pin 172.

*Printing mechanism.*—The printing device  
 80 comprises, primarily, the four amount-printing wheels 179, the clerk's-initial wheel 179<sup>a</sup>, the special-transaction wheel 179<sup>b</sup>, and the auxiliary printing-wheel 310. (Shown in Figs. 1 and 3.) The wheels 179, 179<sup>a</sup>, and 179<sup>b</sup> are  
 85 mounted rigidly on the respective outer ends of nested sleeves 180 and a shaft 180<sup>a</sup>, the latter being journaled in the frame and forming a support for said sleeves. The four amount-wheels 179 are formed upon their peripheries with printing-type arranged in duplicate sets from "0" to "9," whereby duplicate impressions may be taken from above  
 90 and below. The fifth wheel 179<sup>a</sup> is provided with letters in duplicate for representing the respective clerks for which this wheel is intended. The sixth wheel 179<sup>b</sup> is provided with a single set of abbreviated characters to represent the nature of the special transaction, and from this wheel a single impression  
 95 may be taken upon the detail-strip. The nested sleeves 180 are suitably journaled on the main frame and are of different lengths, so that their inner ends lie in proximity to the rack-plates 28<sup>a</sup> on their respective levers.  
 100 At its inner end each of these sleeves is provided with a pinion 181, said pinions meshing, respectively, with the rack-teeth 182, formed on the upper portion of the plates 28<sup>a</sup>. (See Fig. 2.) By this means the adjustments of  
 105 the levers 22 will move the printing-wheels 179, 179<sup>a</sup>, and 179<sup>b</sup> correspondingly, so as to bring the proper numerals and characters to the respective printing-lines.

The auxiliary printing-wheel 310 is mounted  
 115 upon a shaft 311, which is journaled in the main frame and is parallel with the shaft 180<sup>a</sup>. This wheel 310 bears upon its periphery the words in full which are to denote the nature of the special transaction—such as "Cigars,"  
 120 "Drugs," "Paid out," &c. Fast upon the inner end of shaft 311 is a gear-wheel 312, which meshes with a gear-wheel 313, fast upon the outermost nested sleeve 180, which nested sleeve bears the type-wheel 179<sup>b</sup>.  
 125 Thus when the special-transaction lever 22 is moved to set the type-wheel 179<sup>b</sup> to print a certain character the auxiliary wheel 310 is also moved, by means of the aforesaid gears 312 and 313, to bring the corresponding full  
 130



word into the printing-line on the under side ready to print this word in full upon the check.

The detail-strip is led over the upper side of the type-wheels 179, 179<sup>a</sup>, and 179<sup>b</sup>, as hereinafter described, and receives an impression in a single line from the said type-wheels. The check is led across the under side of these type-wheels, as hereinafter described, and receives two impressions—namely, a full word on one line from the auxiliary wheel 310 and on a separate line receives the impression of the amount and the clerk's initial from the type-wheels 179 and 179<sup>a</sup>. This produces a check such as shown in Fig. 10.

Having now described the printing-wheels, I will next describe the platens for producing the impressions upon the detail-strip and upon the checks.

I will first describe the platen for the detail-strip (see Fig. 1) and its operating mechanism. This platen 185 is in the form of a resilient roller which is journaled upon a stud 187 upon a lever 188, which lever is pivoted on the main frame at 189. Side by side with this lever 188 and also pivoted at 189 is a two-armed lever 290. The forwardly-extending arm of this lever 290 has a laterally-projecting shoulder 291, which carries a set-screw 292, bearing upon the upper edge of the lever 188. The lever 188 has a similar laterally-projecting shoulder 293, carrying a set-screw 294, which bears upon a seat 295 on the upper edge of the forward arm of the lever 290. It is evident that these projecting shoulders and set-screws hold the lever 188 in contact with the lever 290, and by means of said set-screws the lever 188 can be raised or lowered to adjust the platen to give the necessary impression. On the rearward-extending arm of the lever 290 is mounted a pin 192, which projects into a cam-groove 191, formed in a disk 190, which is fast upon the rotation-shaft 61. This cam-groove serves to impart the motion to the lever 290, and consequently to the platen 185, and the formation of this cam-groove 191 is such that the lever 188 is rocked twice upon its fulcrum during one revolution of the cam. The first rocking movement is for forcing the ink-pad against the type, as hereinafter described, while the second movement, which is greater than the first, forces the detail-strip 184 against the inked type-wheels. This detail-strip is supplied from a supply-roll 184<sup>a</sup>, mounted on the main frame, passes about the platen-roller 185, and is wound upon the feed-roller 193, which is mounted upon the upper end of the lever 188, so as to move therewith. A toothed wheel 194 is fast to one end of the roller 193 and is engaged by a spring-pressed retaining-pawl 195 on the lever 188 and also by a spring-pressed feeding-pawl 196, mounted on the outer end of an arm 197, which is pivoted to lever 188. The arm 197 is pivotally connected to a link 198, pivoted on the main frame. It results from the above-de-

scribed construction that when the lever 188 is rocked on its fulcrum the arm 197 will be raised and lowered at its rear end, and thus cause the pawl 196 to feed the wheel 194 and feeding-roller 193.

The check-platen is duplex in form, consisting of two platens 186 and 315, mounted on the forward end of the lever 199, which lever 199 is pivoted upon the main frame at 199<sup>a</sup>. The platen 186 is for producing an impression from the type-wheels 179, 179<sup>a</sup>, and 179<sup>b</sup>, and the platen 315 is for producing an impression from the auxiliary type-wheel 310. The lever 199 is provided with a stud 200, which projects into a cam-groove 201, formed in a cam-disk 202. The formation of the cam-groove 201 is similar to that of the cam-groove 191, so that the lever 199 is reciprocated twice during each operation of the machine.

The check-strip 183 passes from the supply-roll 203, mounted on the main frame, down through a guiding-chute 204, between a feed-roller 205 and printing-roller 206, over the platens 315 and 186, and between the knives 187 and 187<sup>a</sup>. The feed-roller 205 is journaled upon an enlarged portion 207<sup>a</sup> of the shaft 207, said enlarged portion being eccentric to the bearings of the shaft 207, which bearings are journaled in the main frame, so that when said shaft is rocked in its bearing the roller 205 will be moved down away from the roller 206, and thus stop the feed of the check-strip. As the cam-disk 202 is fast to the roller 205 and moves therewith, it will also be moved downward, so that when rotated it will not give sufficient throw to the lever 199 to operate the platens to give an impression. The roller 205 receives its rotary movements through a gear 209, fast to one end thereof and meshing with a gear 210 on the roller 206. The gear 210 meshes with an intermediate pinion 211, which is fast to a transverse shaft 211<sup>a</sup>, carrying a similar pinion at its inner end, that meshes with the gear 212, fast to the rotation-shaft 61. The teeth of the gears 209 and 210 are of sufficient length to remain in mesh even though the gear 209 be depressed, as before described.

The rotation of the shaft 207 to effect the above-described adjustment for stopping the check-feed is accomplished by a sleeve 211<sup>b</sup>, (see Figs. 5 and 6,) mounted loosely upon the outer end of said shaft 207 and provided with an internal pin 212<sup>a</sup>, which projects into a longitudinal groove 213 in said shaft. The sleeve is normally held against the portion of the frame 20 by a coiled spring 215, mounted in a recessed end and held in place by a screw-cap 216, applied to the end of the shaft. The inner end of the sleeve is notched at 217 and 218 to engage the pin 219, mounted on the frame 20, and thus hold the sleeve and shaft in the position to which they are turned. To disengage the sleeve from the pin 219, the sleeve is drawn out against the tension of its



spring. It is then turned and finally allowed to snap in again and become latched, which operation is well known in the art.

The printing devices of the roller 206 may be of any arrangement desired; but I preferably provide the same with dating-types and consecutive-numbering types and operate the same in any manner at present well known in the art.

After the check-strip leaves the lower plates it passes through the stationary knife 187<sup>a</sup>, suitably mounted in the main frame, and over a movable knife 187<sup>b</sup>, which may be operated by any suitable means from the main shaft.

*Inking devices.*—The inking devices for the regular type-wheels 179 and 179<sup>a</sup> and 179<sup>b</sup> and the auxiliary wheel 310 are shown in Fig. 4. Journaled upon the outermost sleeve 180 and the shaft 180<sup>a</sup> are two two-armed levers 256 and 257. Pivotally mounted between the upper ends of these levers is the plate 254, and pivotally mounted between the lower ends of these levers is the plate 255. These plates carry absorbent ink-pads 252 and 253, respectively, which ink-pads are detachably mounted in dovetail grooves formed in said plates. Each of the plates 254 and 255 is provided with a lug or arm 258, which is adapted to abut against a stop-pin 259, mounted on its lever 256, and be held normally in this position by a coiled spring 260, interposed between said arms 258 and a lug 261, formed on the lever 256. This peculiar construction allows the pads 252 and 253 to be forced into engagement with the types in printing position by the first movements of the platens, which engage the plates 254 and 255. The levers 256 and 257 are rocked to move the inking-pads into an outer inking position by means of a rack-bar 262, which meshes at one end with a pinion 263<sup>a</sup>, fast on the hub of the lever 256. This bar 262 is held in mesh with pinion 263<sup>a</sup> by a guide-roller 262<sup>a</sup>, mounted upon the main frame. The rear end of the bar 262 is slotted and embraces the main rotation-shaft 61. Said bar is also provided with a pin 263, which projects into a cam-groove 264, formed in a cam-disk 265, fast to said rotation-shaft. The formation of the groove 264 is such that the bar 262 will be reciprocated and first move the ink-pads into inking position, where these pads will remain until the first movement of the platens to impress the pads against the type, and then the pads will be moved back out of the path of the platens to allow the latter to force the detail-strip and the check-strip into contact with the inked types.

In order to ink the auxiliary type-wheel 310, I have provided two levers 316 and 316<sup>a</sup>, pivoted upon the shaft 317, mounted in the main frame. These levers are connected by the transverse bar 318. The inner lever 316 is made bell-crank in shape and has formed in its rearwardly-extending arm a slot 319, in

which moves a pin 320, mounted upon the forward end of the rack-bar 262. Pivoted to the levers 316 and 316<sup>a</sup> are two parallel arms 321 and 322, which arms are connected at their outer ends by the plate 323, which plate bears an absorbent ink-pad 324, detachably mounted in a dovetailed groove in said plate. The arm 322 is adjacent to the main frame, and there is formed in said arm a cam-slot 325. In this cam-slot moves a pin 326, which is mounted upon a swivel-plate 327, attached to the main frame, which swivel-plate is held in its downward position by a spring 328 and is limited in its downward movement by abutting against the pin 328<sup>a</sup>. It is thus seen that on the forward movement of the rack-bar 262 the bell-crank lever 316 is rocked upon its shaft 317, and the arms 321 and 322, carrying the ink-pad 324, are forced rearward. At the same time the pin 326 moving in the slot 325 guides the ink-pad downward and under the type on the wheel 310, but not touching the type. Then on the first upward movement of the platen-lever 199 the platen 315 strikes the plate 323 and forces the ink-pad against the type working against the tension of the spring 328 on the swivel-plate 327. After inking the ink-pad is withdrawn from its inking position on the backward movement of the rack 262, as before described, allowing the printing from the auxiliary type-wheel on the next upward movement of the platen 315.

The alinement of the type-wheels 179, 179<sup>a</sup>, and 179<sup>b</sup> is produced by means of spring-pressed pawls 350, Fig. 1, which are fast upon a common sleeve journaled upon the shaft 317. Each type-wheel has upon it a toothed alining-plate 351. The alining-pawls project above the type-wheels, and on the downward movement of the platen 185 the outside rim 185<sup>a</sup> of this platen, which rim projects below the surface of the roller, comes in contact with the outermost pawl and thereby forces all the pawls below the level of the type and into engagement with their respective plates 351, and the type-wheels are thereby locked in position. The alining-pawls are limited in their upward movement by the pin 352.

The ink-roller 410 for the printing-roller 206 is mounted upon two upwardly-extending arms 411, which are fast upon the check-chute 204, and also fast upon this chute 204 is a downwardly-extending arm 412, which is pivoted upon the shaft 413. This arm 412 is held spring-pressed in its forward position by a coiled spring 414 carried on the shaft 413. By means of this spring the ink-roller 410 is held pressed against the type on the roller 206. In order to provide for throwing the ink-roller 410 out of contact with the type when the check-feed is thrown out of operation, I have mounted upon the shaft 413 a pawl 414<sup>a</sup>, which has a shoulder abutting



against a pin 415, mounted on the arm 412. The nose on the forward end of this pawl bears upon a cam-disk 416, which is fast upon the shaft 207. When the shaft 207 is turned upon its bearing by means of the sleeve 211<sup>b</sup> in order to throw the check-feed out of operation, as hereinbefore described, this cam-disk 416 forces the pawl 414<sup>a</sup> upward, and the shoulder of this pawl bearing against the pin 415 forces backward the arms 411, which carry the ink-roller.

I have shown and described my invention as applied to the particular type of cash-registers described in my pending application before mentioned; but I do not intend to restrict myself to any particular type of machine, for it is obvious that my improvement may be attached to any similar class of machines, such, for example, as shown in Fig. 7. Here the setting-levers 500 are journaled upon the transverse shaft 501, which shaft is oscillated from the rotation-shaft 561 by means hereinafter to be described. Each lever 500 has a rearwardly-extending arm 503, to which is pivoted a vertical rack-bar 504, which bar has at its upper end teeth 505, which mesh with a pinion 506, fast upon the indicator-wheels 507. Adjacent to each lever 500 and journaled upon the same rock-shaft 501 is a registering rack-segment 510. Projecting laterally from each of these racks is a lug 511, which engages with its respective lever 500, and this lug is held in contact with its lever by means of a spring 512, attached at one end to the main frame and at the other end to an arm 513 on the opposite side of the segment-rack. This spring-pressed segment-rack is therefore made to follow the setting-lever 500 in its upward or downward movement. After the lever 500 is set to the required position the segment-rack 510 is returned to normal position by means of a lug 514, mounted on the oscillatory shaft 501, which lug bears against the pin 515, mounted on the segment-rack 510. Before the rack-segments 510 are returned to normal position the registering-counter is thrown into mesh therewith by the following devices: The registering-wheels 520 are mounted upon a transverse shaft 520<sup>a</sup>, which shaft connects the forward arms of bell-crank levers 521, pivoted on the transverse shaft 522. The lower arm of one of these bell-crank levers 521 has mounted upon it a roller 523, which is engaged by a cam-plate 524, fast upon the rock-shaft 501. Upon oscillation of this rock-shaft 501 the cam-plate 524 forces backward the roller 523, carrying the upper arms of the bell-crank levers 521 downward until the pinions 525 are in mesh with the respective segment-racks 510. After the registering-wheels have been rocked into engagement with the segment-racks in the manner described the segment-racks are then returned to their nor-

mal position, as before mentioned, thus effecting the registration. The registering-wheels are normally held out of mesh by means of a spring 526, fast at one end to the main frame and at the other end to a projecting arm 527 on the lower end of the lever 521, and the upward movement of the counter is limited by the stop-pin 528. Each registering-wheel 520 also has fast upon it a pinion 529, in which one tooth is cut away. This pinion meshes with another pinion, 530, the purpose of which is to reset the registering-wheels to zero in a manner well known in the art.

Each lever 500 has fast upon it a curved alining-plate 531, which is engaged by a spring-pressed pawl 532, pivoted at 533. Extending transversely behind all these pawls is a bar 534. This bar has grooves formed in it, which grooves are opposite the alining-pawls 532 in the normal position of the machine, and the pawls are thus allowed to move backward during the movement of the lever 500; but on the oscillation of the rock-shaft 501 the bar 534 is shifted laterally by any suitable means operated from the shaft 501, so that the grooves are no longer opposite the alining-pawls, and the alining-pawls are thus prevented from backward movement and are therefore locked to the alining-plate 531, whereby the lever 500 is locked in its set position. Each lever 500 also bears a curved rack-plate 541, which rack-plates mesh with pinions on the inner ends of the nested sleeves 180. These nested sleeves have fast upon their outer ends the printing-wheels, as hereinbefore described.

The rotation-shaft 561 receives its rotation as shown in Fig. 8. A crank-handle 524 is made fast at its inner end to the gear 562, and this gear transmits a rotation to the gear 564, fast upon the shaft 561, by means of an intermediate gear 563. Since the operation of the registering-wheels in this type of machine is produced by the oscillation of the shaft 501, as before described, this oscillatory movement is effected by means of a link 565, attached at one end to the gear 563 and at the other end to an arm 566, fast to and extending downward from the rock-shaft 501. It is evident that on the rotation of the gear 563 in the direction shown by the arrow the shaft 501 is first rocked forward to return the segment-racks to their normal positions and is then rocked backward.

In order to transmit from the rotary shaft 561 to the gear-wheel 212 of the printing attachment, I have made fast upon the outer end of the shaft 561 a gear-wheel 572, which meshes with an intermediate gear-wheel 573, which wheel 573 in turn meshes with the gear 212, fast upon the same disk 190, which has formed in it a groove 191 for operating the detail-strip platen 188, as hereinbefore described.



In describing the construction of the special type-wheel 179<sup>b</sup> I have stated that this wheel bears upon its periphery only a single set of abbreviated characters to represent the nature of the special transaction, so that only a single impression may be taken from this wheel upon the detail-strip; but it is to be understood that it is equally well within the spirit of my invention to have this type-wheel 179<sup>b</sup> bear duplicate sets of abbreviated characters such that this abbreviated special-transaction character could also be printed on the check in addition to having the corresponding word in full printed upon the check by means of the type-wheel 310. Such an arrangement will be desirable where a stub-check is used consisting of a main portion which is to be retained by the customer and may be called the "customer's check" and a stub portion which is detached from the main portion and is retained by the cashier or proprietor. In such an application of my invention the amount, clerk's initial, and abbreviated special-transaction character would be printed upon the detachable stub to be retained by the proprietor, while the word in full would be printed upon the customer's check. However, it might be advisable to have the amount and clerk's initial printed upon the customer's check as well as upon the stub. This might be accomplished by various devices well known in the art, and for one special instance of such a device reference may be made to Patent No. 683,882 to J. C. Munday, dated October 1, 1901, wherein two successive impressions are taken from a single set of type-wheels. With this modified form of construction, as herein described, there would be printed upon both the stub and the customer's check the amount, clerk's initial, and abbreviated special-transaction character, and there would in addition be printed upon the customer's check the word in full denoting the special transaction.

It is to be understood that while the forms of means here illustrated are well adapted to the fulfilment of the object primarily stated, yet the invention can be embodied in other forms, and hence I do not confine myself in the following claims to the details of construction herein shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a printing attachment for cash-registers, the combination with a series of type-carriers for printing on a detail-strip and a check, and means for setting said series of type-carriers; of an auxiliary type-carrier controlled by one of said setting means and set to different degrees corresponding with one of said series of type-carriers whereby to print an additional line on the check, substantially as described.

2. In a printing attachment for cash-regis-

ters, the combination with a series of type-carriers for printing on a detail-strip and a check, and means for setting said series of type-carriers; of an auxiliary type-carrier connected with and set by one of said setting means whereby to set said auxiliary carrier different degrees corresponding with one of said series of carriers for printing an additional line on the check.

3. In a check and detail-strip printing attachment, the combination with a series of type-wheels, certain of them having duplicated sets of peripheral characters and one of them having a single set of characters and means for setting said wheels; of an auxiliary type-wheel geared to the single character-wheel and bearing a corresponding single set of characters together with means for feeding the check and detail-strip over opposite sides of said set of type-wheels and by said auxiliary wheel, and impression-platens for said type-wheels and auxiliary wheel.

4. In a printing attachment for cash-registers, the combination with a series of type-wheels, certain of them having duplicate sets of peripheral characters and one of them having a single set of characters, of an auxiliary type-wheel geared to the latter, and bearing a corresponding single set of characters, together with means for feeding a check and a detail-strip over opposite sides of said set of type-wheels, and a duplex platen for operation on one side of said wheels and a single platen for operation on the other side thereof.

5. In a printing attachment for cash-registers, the combination with a series of type-wheels, certain of them having duplicated sets of peripheral characters and one of them having a single set of characters, of an auxiliary type-wheel geared to the latter, and bearing a corresponding single set of characters, together with means for feeding a check and a detail-strip over opposite sides of said set of type-wheels, and a duplex platen for operation on one side of said wheels and a single platen for operation on the other side thereof, and a type-wheel-alining pawl operated by one of said platens.

6. In a printing attachment for cash-registers, the combination with a series of type-wheels in alinement coaxially arranged for printing on a detail-strip and a check, one of the same bearing abbreviated characters; of means for setting the same independently; a laterally-elongated type-wheel connected with and set to corresponding degrees by the setting means for said abbreviated character type-wheel and bearing printed designations in full corresponding to said abbreviated characters and arranged to print an additional line on the check, substantially as described.

7. In a printing attachment for cash-registers, the combination with an impression-roller, a type-roller and an inking-roller, and



an eccentric bearing for said impression-roller, of means for adjusting said bearing to move said roller into and out of operative relation with said type-roller, and coöperative means for positioning said inking-roller.

8. In a printing attachment for cash-registers, the combination with a type-roller, of an ink-roller, and a spring-pressed arm carrying the same, an impression-roller, an eccentric bearing therefor, and a cam fast upon said bearing and coöperating with said spring-pressed arm to displace the same, substantially as and for the purpose described.

9. In a cash-register, the combination with a register, of setting-levers, a series of type-wheels and indicators connected therewith, a special type-wheel connected with one wheel of the said series and set by one of said setting-levers to different degrees corresponding with the aforesaid type-wheel with which it is connected, a rotary driving-shaft, platens adapted to be operated thereby, oscillatory register-actuating devices, and connections between said register-actuating devices and said rotary shaft.

10. In a cash-register, the combination with a register, of setting-levers, type-wheels and indicators connected therewith, an auxiliary type-wheel adapted to be moved by one of said setting-levers and to be set thereby to different degrees corresponding with one of said type-wheels, a rotary shaft, printing mechanism adapted to be operated thereby, means for rotating said shaft, oscillatory register-actuating devices, and connections between said register-actuating devices and said rotary shaft.

11. In a cash-register the combination with setting-levers and type-carriers connected therewith arranged to print on both a detail-strip and a check, of an auxiliary type-carrier adapted to be moved by one of said setting-levers, platens coöperating with the type-carriers, a feeding device for the check, and devices for rendering the check-platen and check-feed device inoperative at will.

12. In a cash-register, the combination with a register, of setting-levers and type-carriers connected therewith arranged to print on both a detail-strip and a check, an auxiliary type-carrier adapted to be moved by one of said setting-levers, a feeding device for the check, platens coöperating with the type-carriers, devices for rendering the check-platen and check-feed device inoperative at will, a rotary shaft, connections between said rotary shaft and the printing mechanism, oscillatory register-actuating devices and connections be-

tween said register-actuating devices and said rotary shaft.

13. In a cash-register, the combination with a register; of setting-levers and type-carriers connected therewith arranged to print on both a detail-strip and a check; an auxiliary type-carrier adapted to be moved by one of said setting-levers for printing an additional line on the check; with provisions for setting said auxiliary carrier different degrees corresponding with one of the aforesaid type-carriers platens coöperating with the type-carriers; oscillatory register-actuating devices; an operating mechanism; and connections between the same and the said register-actuating devices and platens.

14. In a printing attachment for cash-registers, the combination with a series of type-carriers, an inking mechanism and a platen therefor, of a feed-roller and manipulative means for disabling the feed-roller, the inking mechanism and the platen, substantially as and for the purpose described.

15. In a cash-register, the combination with a series of type-carriers, of an ink-pad carrier pivoted concentrically to the axis of the type-carriers, a pinion connected to said ink-pad carrier, and a reciprocating rack-bar engaging said pinion.

16. In a cash-register, the combination with printing-types, of an operating mechanism, a movable member formed in two sections one of which is connected with the operating mechanism, a platen mounted on the remaining section, and means for adjusting the relative position of the two sections.

17. In a cash-register, the combination with an operating mechanism, of type-carriers, a movable member formed in two sections one of which is connected to the operating mechanism, a strip-feeding roller mounted on the remaining section, and adjusting devices for adjusting the relative positions of the two sections.

18. In a cash-register, the combination with an operating mechanism, of a series of type-carriers, a movable member formed in two sections one of which engages the operating mechanism, means for connecting the two sections whereby their relative positions may be adjusted, and a platen and strip-feeding device mounted on one of said sections.

In testimony whereof I affix my signature in the presence of two witnesses.

THOMAS CARROLL.

Witnesses:

CHAS. R. GILLIES,  
G. H. EDGETER.