

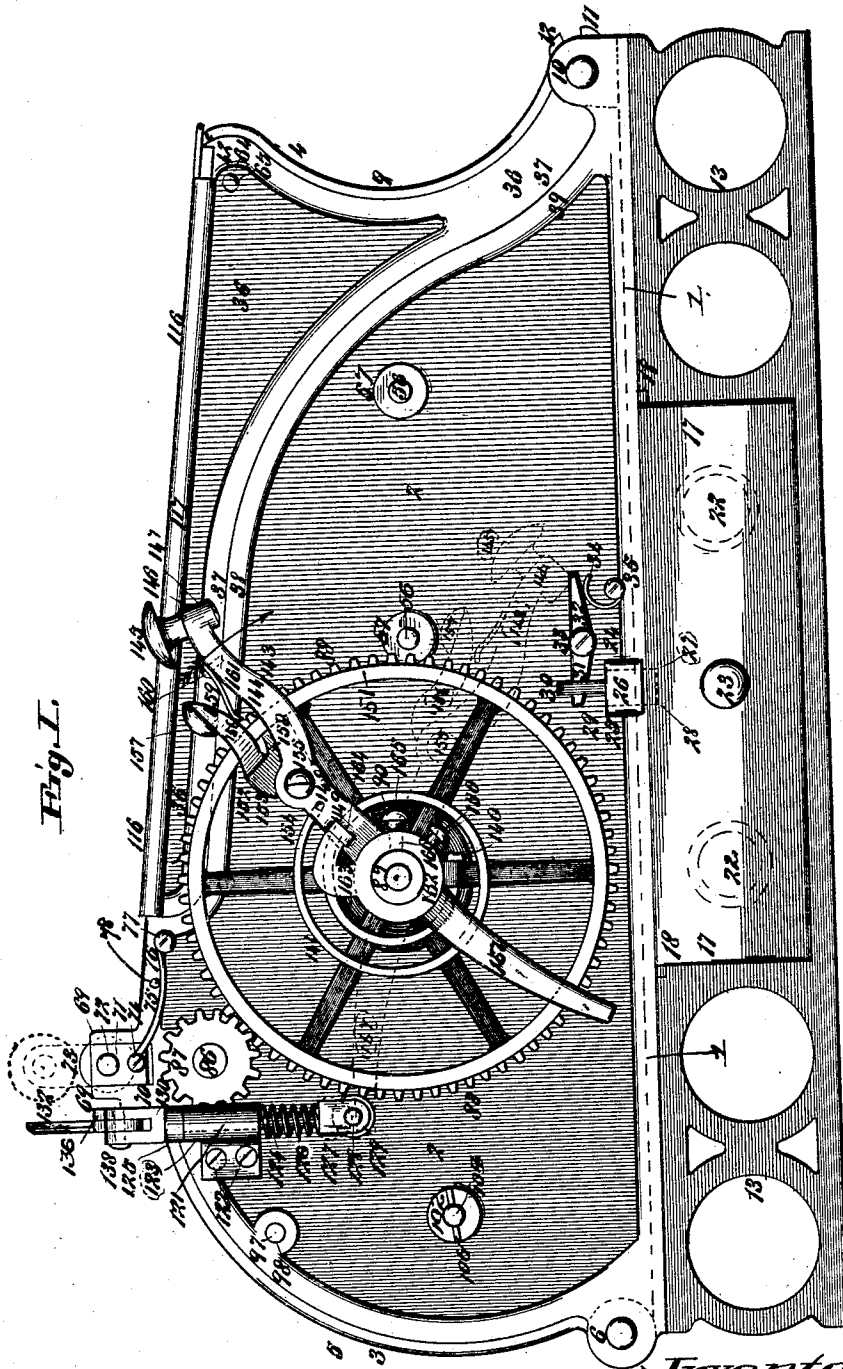
(No Model.)

3 Sheets—Sheet 1.

J. A. MARSH.
AUTOGRAPHIC REGISTER.

No. 520,022.

Patented May 15, 1894.



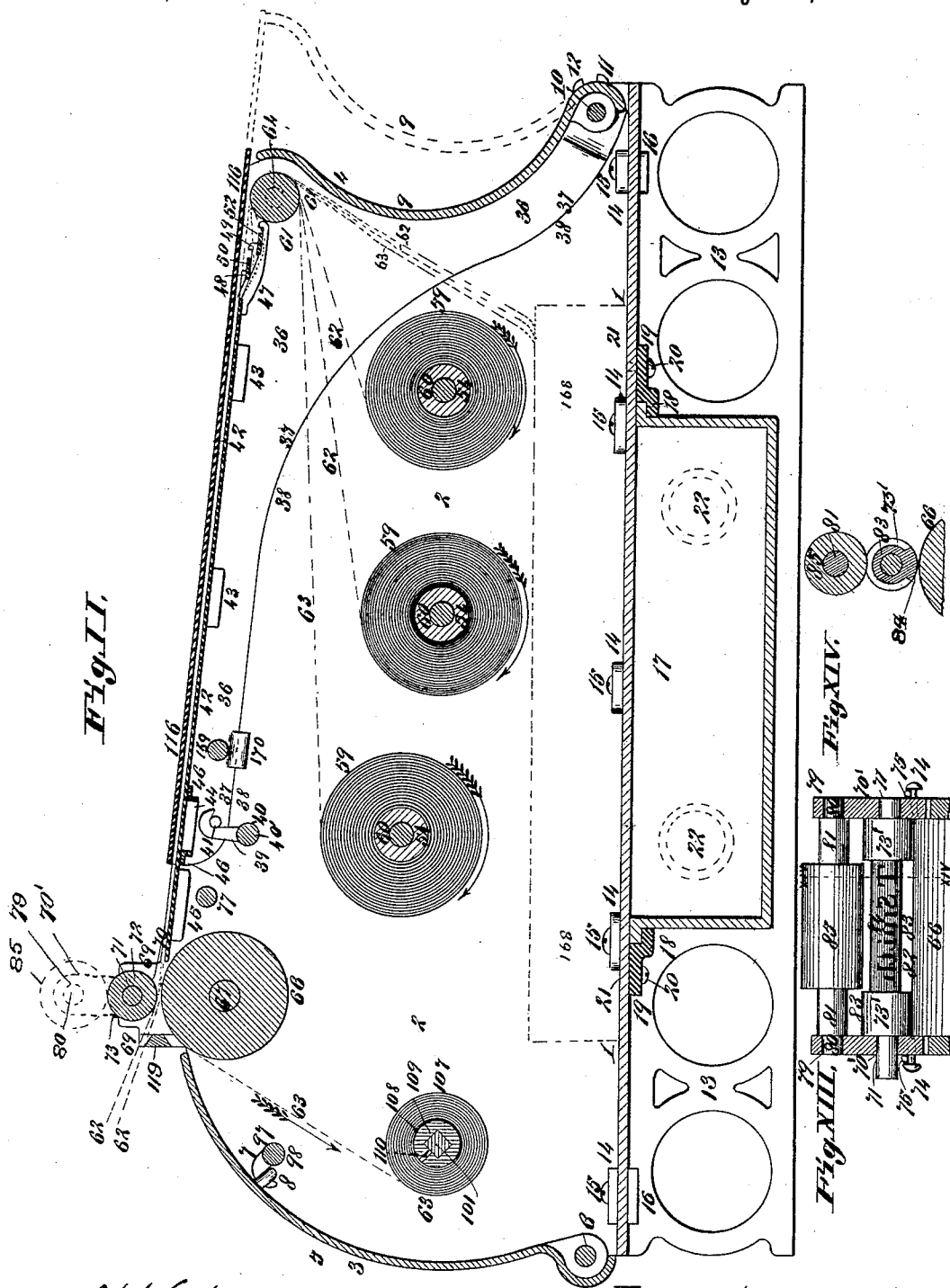
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Attys

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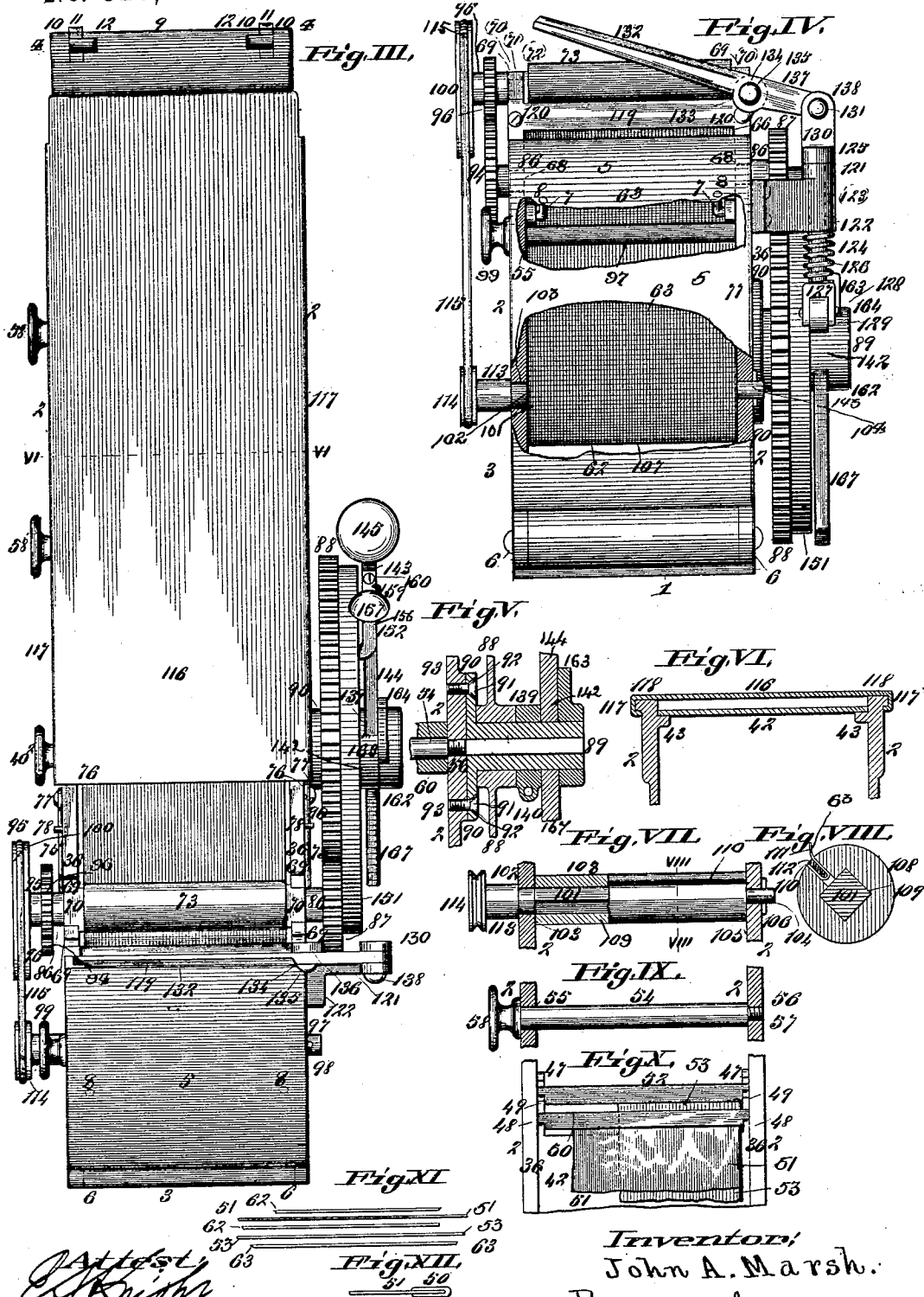
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UNITED STATES PATENT OFFICE.

JOHN A. MARSH, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO PETER B. BEGG, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 520,022, dated May 15, 1894.

Application filed December 10, 1892. Serial No. 454,794. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MARSH, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Autographic Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a machine for counter and office use, that produces a duplicate or manifold copy of an autograph, for order, cash and other registers, with automatic means for the detachment of said registers, and a simultaneously automatic opening cash drawer, in combination with a recording register, for future reference; and the invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a side elevation of the machine, and shows the operating gear and feed wheels, the operative friction hold lever, the trip friction lever, the detaching spring shear knife, and the cash drawer with its trip spring lock. Fig. II is a vertical section and shows the manifold rolls that carry the duplicate and registering sheets, which rolls and the sheets they carry may be increased in number; it also shows in broken lines the course of said sheets to and around the turn roller to the friction draw rollers, and the course of the register sheet to its retention register or record roller, and it shows the hinged adjustable supporting bracket back and in broken lines its rear adjusted position and the slide table extended out and resting thereon. Fig. III is a top view and shows the elbow rest slide table, the operative feed gear, the upper friction feed roll, the upper sheet of paper *in transitu*, the clipping shear knife, and the friction band that rotates the register roll. Fig. IV is a front end view and shows the operative gear, the upper draw tension friction rolls, the sheets of paper *in transitu*, the band wheels and band. Fig. V is a cross detail section, and shows the screw attached end of the forward paper spool spindle, the roller case around the same, the main operative side of the machine, the perforate flange and the operator tube journal that carries the

gear, screw attached to said side of the machine, the hub and arms of the operating major gear wheel, the spring attachment collar, the actuating double lever, and the adjustable stay, but that arrests the action of said lever and gear. Fig. VI is a vertical detail section taken on line VI—VI Fig. III and shows the sides of the machine, the desk tablet and surmounting sliding table. Fig. VII is a longitudinal view of the square shafted spindle with its pipe core that carries the register spindle, with the pulley mounted on its drive end. Fig. VIII is a vertical section taken on line VIII—VIII, Fig. VII, and shows the square shaft and pipe core mounted thereon, that carries the register spool, with the end of the register sheet secured in its key-slot in said core. Fig. IX is a longitudinal view of one of the spindles that carry the paper spools. Fig. X is a rear end top view of the machine and shows the duplicate carbon papers, with their carrier bars secured in their slotted key seats. Fig. XI is an enlarged detail view of the autograph sheets and carbon papers in their respective positions. Fig. XII is a detail of the attachment end of one of the carbon sheets and shows the attachment clip bar on its end. Fig. XIII is a detail of an attachment for the friction rolls, and shows a type header pad in the middle of the upper friction roll and with an ink pad roll surmounting the same; and Fig. XIV is a vertical section of the same taken on line XIV—XIV, Fig. XIII.

Referring to the drawings: 1 represents the bottom of the machine, 2 its sides, 3 its front end and 4 its rear end.

5 is the arc drum-head at the front end, the base of which drum-head is pivotally secured to the main frame of the machine by the hinges 6, which allow said arc drum-head to swing respectively open and shut on its hinges. When said drum-head is closed it is secured by the pivoted drop hooks 7 mounted on the spindle in bearing 98 in the sides of the machine and turned by the knob 99 which hooks engage in the screw-eyelets 8, that are secured to and project inward from said arc drum-head.

9 represents a hinged end-gate at the rear of the machine, the base of which end-gate is

pivotally secured by the hinges 10 to the main frame of the machine.

11 are stationary stay-lugs that project rearward from the bed of the machine proper, or from the stationary sections of the hinges secured thereto, and 12 are similar lugs that project from the end-gate or from the movable sections of the hinges attached thereto, so as to be movable therewith, and which latter coming in contact with the lugs 11 limit the back throw of said hinged end-gate, from the normal position shown in full lines Fig. II when a short table is required, to the position shown in broken lines in the same figure when a lengthened table is required.

13 represents the base frame of the machine which is secured to the projecting perforate lugs 14 of the sides of said machine by the screws 15, that pass through said perforate lugs, through the bottom 1 and into screw perforate lugs 16 that project from the inside of said base frame. 17 represents a cash drawer, in said base frame, the projecting top side flanges 18 of which, are seated and work in the perforate slide brackets 19, which brackets are secured by screws 20, that pass through said slide brackets and engage in their screw perforate seats 21 in the bottom 1 of the surmounting machine.

22 represents spiral push springs that are secured to the inside of the base frame 13 and push against the cash drawer so as to open the same automatically when it is unlocked, and 23 is the handle of said drawer.

24 represents a spring latch lock that automatically locks the lock drawer whenever it is closed, and which is constituted of the following parts.

25 is a slotted boxing, that is integral with and projects from the bottom 1 of the machine proper, in the slot 26, of which boxing the bevel faced bolt 27 of the spring latch works and springs into its socket seat 28 in the front of the drawer when the same is locked. In the slot 29 of the head bar 30 of said latch, the drive point 31 of the spring rocker fulcrum lever 32 engages. The said rocker lever is pivoted on the screw journal 33, the screw tip of which is secured in its screw seat in the side of the machine. The curve spring 34 is secured in position by the screw 35, which also is screw-seated in the same side of the machine to which said rocker lever is secured.

36 represents a writing table bearer frame, which is pivotally mounted at its rear by the same hinges 10 on which the rear end-gate is hung to the rear of the base frame, and the lower curvilinear edges 37 of said table bearer frame rest securely on the upper curvilinear edges 38 of the sides of the main frame, when said bearer frame is closed down in its operative position for work, in which position it is firmly held by the hooks 39 mounted on spindles 40 in bearings 40', in the main frame and which hooks engage on the catch pins 41, that project inward from near the forward end of said writing table bearer frame 36.

42 represents the desk tablet, which rests on the bearer lugs 43, that project from the sides of said writing table bearer frames 36, and also on the cross tie bar 44 that ties together the sides of said bearer frame, as also on the cross tie bar 45, that ties together the top of the sides of the main frame of the machine. The said desk tablet is held from longitudinal displacement by the pendent lugs 46, that project from the under side of said tablet and embrace each side of said tie bar 44.

47 represents holder lugs which are secured to the rear corners of said desk tablet 42, which lugs are provided with forward slots 48 and rear slots 49, in which slots the respective clamp clip holder 50 of the upper carbon sheet 51 and the like holder 52 of the lower carbon sheet 53 are lock seated.

Now autographic register slips in some classes of trade are required to be longer than in others, inasmuch as in some trades the average sale to one customer at a given time consists of a larger number of items than in other trades. Therefore I provide diverse lengths of desk tablets, and of carbon-sheets; using such length tablet and sheets as the necessities of the trade call for. Each desk tablet has similar pendent lugs that embrace the same cross tie-bar, and rest on the same, or certain of the same supports, when in use. Thus when a change is desired in the length of the desk tablet and carbon-sheets, the ones in use are simply lifted from their seats and those of any diverse length required are seated in their place.

54 represents three stationary spindles, which pass through perforate bearings 55, in one side of the machine and their screw tips 56, engage in their perforate screw seats 57 in the reverse side of the machine, when turned into their set positions by their handle knobs 58. Three of said spindles have been shown and described, but the number may be either increased or diminished to agree with the number of paper rolls 59, which rolls are mounted on the core tubes 60 that are seated around said spindles. The said cores may be made of wood or of any other suitable material.

61 represents the return roller around which the three (more or less) paper sheets run on their way to the desk tablet on which the autographic impression is to be made. Two of said sheets are the duplicate autograph sheets 62, and the third is a registering sheet 63 for a retention record of the sales. The journals 64 of said roller run in the bearings 65, in the sides of the writing table bearer frame 36.

66 represents the major friction draw roller, the journals 67 of which run in bearings 68 in the sides of the main frame of the machine. Slot boxed pedestals 69 surmount the main frame, with which said pedestals are integral or are securely attached thereto. 70 are vertical slide bearer blocks, that work

in said slotted pedestals, and in the perforate bearings 71 of which the journals 72 of the minor friction draw roller 73 are mounted. 74 represents screws that are inserted in each end of said slide bearer blocks 70, from which they project sufficiently for the seating of the operative ends of the overbearing springs 75, the attachment loop-eyes 76 of which springs are secured by the screws 77 to the sides of the machine, in which said screws are seated, and bearer pins 78, also seated in said sides, hold down said springs to their tension on the aforesaid screws 74. An elastic pressure is thus maintained by the action of said springs, on said sliding bearer blocks 70 and on the minor friction draft roller 73 that is mounted therein. A friction draw is thus maintained on the three (more or less) autographic duplicate and register sheets, 62 and 63, as they pass between said rollers, which are rotated by the gear drive yet to be described.

70' are substitute elongated vertical slide bearer blocks, which are substituted for the aforesaid blocks 70, when it is desired to head print the upper autographic sheet. The said slide blocks are not only provided with the perforate bearings 71, as are the blocks 70, but are also provided with upper perforate bearings 79 in which the journals 80 of the ink pad roller 81 have their bearings.

73' represents the substitute combined minor pressure and head type impression roller, which substitute replaces the aforesaid minor pressure roller 73, and its journals run into its vacated bearings 71. 82 represents a peripheral reduction in the middle of said substitute pressure roller 73', in which reduced area, part way round the same, is secured the are formed type plate 83, from which project the type 84 that print the head line or lines of the upper autographic slips. The said type are of a thin formation, so that the impressions they make may not be liable to blur. The projecting pad 85 of the inking roller 81, is slightly shorter than the length of said peripheral reduction 82 of said substitute type roller 73', so as not to ink the pressure ends of said roller, and as is shown in Fig. XIV, once in the course of a revolution said type is automatically inked by pressure against the ink pad. The circumference of said type carrier roller 73' is made to accord with the required length of the autographic slip.

86 represents enlarged journal extension ends, integral with the journals 67, of the major friction draw roller 66, which extensions project beyond the journal bearings 68 in the sides of the main frame. 87 is a pinion gear wheel that is fast mounted on that one of said journal extensions that is on the main operative side of the machine, and which pinion is driven by geared connection with the main drive gear wheel 88, that is mounted on the tube-journal 89, the attachment-flange 90 of which tube-journal 89 is se-

cured to that side of the machine by the screws 91 that pass through perforations 92 in said flange and into their screw seats 93 in said side of the machine, so as to form a secure journal bearing mount for said drive gear wheel 88, and for other operative parts yet to be named.

94 represents a gear wheel that is fast mounted on the reverse enlarged extension end 86 of the journals of the major friction roller 66, to that which carries the pinion wheel 87.

95 is an enlarged extension integral with the journal 72 at one end of the minor friction roller 73, on which extension the pinion gear wheel 96 is mounted, the cogs of which pinion mesh into connection with those of said gear wheel 94, so as to be driven by the same, and to secure a rotary grip action on the autographic paper sheets by said minor friction roller 73, in conjunction with its major drive friction roller 66. 100 represents a pulley wheel that is fast mounted on said enlarged journal extension 95, on which said pinion gear wheel 96 is also mounted.

101 represents a square spindle, the major journal 102 of which is mounted in the perforate bearing 103 in one side of the machine, and its minor journal 104 is mounted in the perforate bearing 105 in the other side of the machine, and is there retained by the key pin 106 inserted in its projecting end, and said spindle carries the retention registry roll 107, which is formed of the aforesaid lower registry sheet 63, that preserves a record of all registered sales.

108 represents a core made of papier-maché, rubber, or other suitable material, having a square, tubular opening 109, within it, which fits securely on the square spindle 101. The said core is provided with a slot 110, that extends the whole length from its periphery to its tubular center. The initial end 111 of the lower registry or undetached retention sheet 63 is secured in said slotted aperture by the key-plug 112. 113 represents an enlarged outwardly projecting extension of the journal 102 of said square spindle. 114 is a pulley fast mounted thereon, and 115 is a traction band that is mounted on said pulleys 100 and 114 and commands unison of movement of the same, so that, as the friction draft rollers 66 and 73 draw the autographic duplicate sheets 62, and record sheet 63 forward after the sale account has been registered thereon, the latter named sheet which remains intact, having its initial end secured in said core 108 of said square spindle 101, it is automatically wound around the same, and thus preserves a permanent record of all registered sales.

116 represents the slide table, the clutch turn edges 117 of which embrace around the projecting heads 118 on the top of the sides of the machine frame. The position of said slide table is adjustable to accord with the varied length of the autographic bill slips, so

as to the best advantage rest the elbow when in the act of writing. When long bill slips are being written, the end-gate 9 is preferably thrown back on its hinges from the position shown in full line in Fig. II to that shown in dotted line in said figure, when the lugs 12 at the base of said end-gate, will abut against the lugs 11 on the base of the frame, and thus securely hold said end-gate in its backwardly extended position, so as to support the rear end of the sliding table, when it is slid back as shown in broken lines in said Fig. II, or extended to a still farther distance when so required.

119 represents the knife member of the combination shear-knife, which knife is placed with its rear bevel edge up, and its flat face presenting forward, and is there secured by the screws 120 to the frame of the machine adjacent to, or slightly in advance of the friction draw rollers 66 and 73.

121 represents a tube bearer bracket that is secured to the side of the frame by the attachment screws 122, and 123 is the vertical tube bearing in said bracket, that projects from said frame sufficiently for the purpose about to be disclosed. 124 represents a vertical piston-rod, that works freely, having play for latitudinal readjustment in said tube bearing 123, and the enlarged surmounting shoulder 125 of said piston-rod, when in its normal inoperative position, rests on the top of said tube, being held down thereto by the spiral spring 126, that is mounted on the piston-rod between the base of said tube bracket, and on the perforate-forked foot 127, on said piston-rod, the pivot-bolt 128 is seated in said foot and carries the anti-friction roller 129, and said foot projects laterally sufficiently from the rod to constitute a base support and vantage ground for said operative spring. 130 represents the forked head that surmounts the shoulder 125 of said piston-rod, the said forks being provided with the perforate bearings 131.

132 represents the shear-blade, which is the secondary member of the combination shear knife 133, the perforate bearing 134, of which shear blade is mounted on the pivot bolt 135, the inner end of which bolt is fast seated in the perforate flat-head 136, of the aforesaid knife 119, and said shear-blade presents its flat or slightly concave side to clipping contact with the flat or slightly concave side of said knife, the blades of each being beveled on their other sides. The said combination shear-knife is mounted just sufficiently forward of the friction draw or traction rollers, and of the head printing device, that works in conjunction with said rollers, not to interfere therewith. The perforate end of the extension operative lever 137, of said shear-blade, is seated within the forked head in which are the bearings 131 of said head 130, and the operative drive pivot bolt 138, connects said lever to said head.

139 represents a collar ring which tightly clamps around the aforesaid tube-journal 89,

immediately alongside the main drive gear wheel 88, that is mounted on the same journal, and 140 is a perforate integral lug that projects from said collar, and in the perforation of said lug the inner end of the spiral reactionary spring 141 is fast seated. 142 represents a parallel collar to 139, which collar 142 is loose mounted on said tube journal 89, and 143 is a compound lever integral with said collar 142, the drive operative moiety 144 of which compound lever is surmounted with the pressure knob, 145, the stem 146, of which is fast seated in the socket 147, at the commander end of said lever. 148 represents an attachment angle-hook on the outer end of said spiral reactionary spring 141, which hook engages fast in the perforation 149 in said compound lever, and 150 is a set-screw that is located in its perforate seat in said collar 142, that carries said spring, and which set-screw when screwed home sets said collar in its required position for the respective increase or decrease of the tension of said spiral spring, as also to adjust said pressure knob 145 to its most convenient location for manipulation. 151 represents a laterally and outwardly extending circumferential flange integral with the main gear-wheel 88, that extends laterally into close proximity to said compound lever 143.

152 represents a friction clamp lever, the screw perforate butt attachment 153 of which is pivotally secured to the perforate bearing 154 of the operative moiety 144, of the compound lever 143, by the journal screw 155, that is journal seated in said perforate bearing and screw-seated in said screw perforate butt. 156 is the operative lever end of said clamp, which is surmounted by the pressure knob 157, and 158 is an angle return clamp arm that projects backward from the butt of said pivoted lever, and when in its operative position, its rear end has a friction hold engagement with the inside of said circumferential flange 151 that is integral with the main gear wheel 88. 159 is a strap spring, the perforate end of which is secured by the screw 160, in its screw seat 161, in said compound lever, and the active end of said spring engages with the under side of said clamp lever 156, to enforce its clamp hold of said circumferential flange 151, and thus necessitate the rotation of said main gear wheel 88, when said compound lever is pressed down. The said enforced action of the gear under the conjoint action of said compound lever (as stated in the description of said gear action), works the aforesaid friction feed rollers that draw the three-ply duplicate and record autographic sheets from their rolls, at each downward pressure of said compound operative lever. On the return movement of said lever, the knob of the clamp lever is pressed down, which releases its clamp hold of said circumferential flange, and through it of its integral gear-wheel, so that by the return of said lever the gear is not returned

backward, and the sheets thus are unwound when cutting. 162 represents an adjustable set collar, which collar exercises the double function of holding said operative compound lever to its seat, and carries its integral butt-stay elbow arm 163, the abutting end of which, when engaged, comes in contact with the stay-lug 161 that projects integrally from the face side of said compound lever and limits its spring propelled return action. The set-screw 165, when turned home in its screw-seat 166, in said adjustable set collar, sets the adjustment of said abutting elbow arm, to agree with a respective long or short action of said compound lever, that accords with the required length of the autographic registry bill slips. 167 represents the driven end of said compound-lever, which, when said lever is pressed into the position shown in broken lines in Fig. I, comes in contact with the anti-friction roller 129 that runs in the foot 127 of the spring piston-rod 124, and by the pivotal connection of the head 130 of said piston-rod, with the operative lever 137 of the shear-blade, the said blade is made to descend on the duplicate autographic register bill slips or sheets 62, and thus automatically severs the same, while, in the meantime the retention record sheet 63 intact, carrying a duplicate register, is being (as heretofore specified) automatically wound on the retention registry roll 107, to the bed core of which roll its initial end has been, as stated, secured. The vertical piston-rod 124, as stated, in its introduction has a certain loose side movement in its tube bearing 123, the purpose of which freedom is to enable the slight draw action of the driven end 167 of said compound lever 143 (which has passed the horizon of its center bearing), to turn the edge of the shear-blade slightly toward its work close home against that of the knife blade, and thus to effect a cleaner cut. The driven pressure knob end of said compound lever, at the identical time that it reverses and effects the severance of the bill register, strikes the rear end of the spring rocker lever 32, which, rocking on its fulcrum bearing, elevates the lock latch 24 of the cash drawer 17, to the stem of which latch the reverse end of said rocker lever is connected; thus enabling the push springs 22 to eject said drawer, for the insertion of the cash, in connection with the sale that has been effected, and registered on the autographic bill slip. After the deposit of the cash the drawer is pushed back by a pressure of the hand on its knob.

When it is preferred, the cash drawer, which is shown in Figs. I and II, opening from the side of the machine, and so described, may be made to spring propelled from one of the ends of said machine by the same means, in which case the spring lock may be made to engage with one corner of the rear end of said drawer, instead of its front, but the side insertion shown is generally preferable.

I have shown, and prefer to use, rolls 59, for the carriage of my registry sheets 62 and 63, but should a block of said sheets at any time be on hand, folded with return folds, in blocks 168, or if from any cause it is preferred to use return fold blocks, said sheets, it being understood, being in triple return fold, or the number of sheets in the return fold of said block agreeing with the number of the autographic sheets required; then, while using said blocks, the rolls 59, with their spindles 54, may be for the time laid aside, and the return fold block 168, is then placed on the bottom 1, inside the machine, as shown in broken lines in Fig. II. In said modified use, the registry sheets 62 and 63 will respectively pass from the triple re-fold of said block to the return roller 61, in like manner as they pass from the rolls. The supply paper rolls 59 with the spindles 54 on which they are mounted and the return manifold paper blocks, may be either used together in conjunction or separately; the said duplicate and retention record sheets traveling the same course to the friction draw rollers. When both said rolls and blocks are used, that one of the retention record sheets 63 that is supplied by the block may be severed by the shears with its accompanying sheets 62 as the one record sheet from its roll is sufficient to be wound on the retention roll. When, however, the return manifold block is used without the spindle rolls, the sheet 63 should not be cut but its initial end is fastened as previously described to the core that carries said retention record roll and is wound thereon by the means heretofore described.

The operation of the numerous working elements of the machine have been sufficiently described in the introduction of its several parts; but it may be added that when a larger number of autographic sheets than three are used, as when the rolls 59 and the multiple return fold paper block 168 are conjointly used the number of carbon sheets with their holder attachments as described above are also numerically increased.

I claim as my invention—

1. In an autographic register machine, the combination of the multiple spindles 54, the friction draw rollers, the gear wheels that drive said rollers, comprising a main wheel, turning on an axis in line with one of the spindles, having a circumferential flange and the compound lever that actuates said gear, substantially as described.

2. In an autographic register machine, the combination of the spindles 54, lower friction-roller 66 having gear wheel 87 upper friction roller 73, the tube journal 89, the main drive gear wheel 88, the circumferential flange 151, the compound lever 143, and the friction clamp lever 152; substantially as described.

3. In an autographic register machine, the combination of the multiple spindles 54, the friction rollers that draw the sheets from said paper rolls, the gear wheels that actuate said

rollers, the circumferential friction flange 151, integral with the main drive gear wheel, the compound lever that actuates said gear, and the clamp lever 152 pivoted to said compound lever and that exerts a friction hold on said circumferential flange; substantially as described.

4. In an autographic register machine, the combination of the multiple spindle 54, the friction rollers that draw the sheets from said paper rolls, the gear wheels that actuate said rollers, the circumferential flange 151 integral with the main drive gear wheel 88, the compound lever 143 that actuates said gear, the clamp lever 152 pivoted to said compound lever, said clamp lever having the angle return clamp arm 158, and the actuating spring 159 that enforces the friction hold of said clamp lever on said circumferential flange, substantially as described.

5. In an autographic register machine, the combination of the multiple spindles 54, the friction draw rollers 66 and 73, the gear wheels that actuate said rollers, the circumferential flange 151 integral with the main drive gear wheel 88, the compound lever that actuates said gear, the clamp lever 152 pivoted to said compound lever, the exterior journal 89, on which said main gear wheel and said compound lever are mounted, the spring carrier collar 139 fast mounted on said journal, and the reactionary spiral spring 141, secured to said collar and to said compound lever; substantially as described.

6. In an autographic register machine, the combination of the body of the machine, the spindles 54, the friction draw rollers 66 and 73, the square spindle 101, and the core 108 provided with the square opening 9; substantially as described.

7. In an autographic register machine, the combination of the multiple spindles 54, the friction draw rollers 66 and 73, the spindle 101, the combination shear knife 133, the tube journal 89, the main drive gear wheel 88, mounted on said journal, the pinion gear wheel 87, mounted on the journal of said roller 66 and the compound lever 143, that actuates said gear, substantially as described.

8. In an autographic register machine, the combination of the main sections of the body of the machine, composed of the rigidly connected bottom 1 and sides 2, and the adjustable hinged sections of said body, arranged to open up for view and manipulation of the interior parts of the machine, the said adjustable hinged sections composed of the pivoted arc drum-head 5, the pivoted rear end-gate 9, and the rearwardly downwardly inclined writing desk and table bearer frame 36; the multiple spindles 54, and the spindles 101, and the friction draw rollers that draw the multiple sheets from said rolls 59; substantially as described.

9. In an autographic register machine, the combination of the fixed sections of the body of the machine, the hinged adjusting end sec-

tions pivoted to the bottom of said body, and the top hinged to the bottom of the body and arranged to open up for view and manipulation of the interior of the parts of the machine, the cross tie-bar 44 and projecting lugs, 43, of said top hinged section, the desk tablet 42 having the pendent lugs 46 that rest on and engage with said tie-bar and lugs, the holder lugs 47 secured to the rear end of said desk-tablet, said lugs provided with the retention slots 48 and 49, and the carbon holder clips 50 and 52 seated in said slots, substantially as described.

10. In an autographic register machine, the combination of the fixed sections of the body of the machine, the hinged adjusting end and top sections thereof, arranged to open up for access to the interior of the machine, the pivoted hooks 7 and 39, with their catches 8 and 41, within the interior of said body, the journal spindles 40 and 97 on which said hooks are mounted, the knobs 40² and 99 on external ends of said spindles, by which said internal hooks are manipulated from the outside, and the sliding table top 116, that is adjustable on said bearer hinged top section; substantially as described.

11. In an autographic register machine, the combination of the sectional machine body constituted of unadjustable and adjustable hinged sections, the externally attached journal 89 having the perforate integral flange plate 90; the screws by which said flange is secured to the side of the machine, the main drive wheel 88, mounted on said journal, the circumferential integral flange 151 of said drive wheel, the collar ring 139, mounted on said journal, the set screw 150 that adjustably secures said collar, the perforate integral lug 140 that projects from said collar, the reaction spring 141, the collar 142, the compound lever 143, integral with said collar, having the pressure knob 145, the friction clamp lever 152, the adjustable collar 162, the set screw 165, the butt stay elbow arm 163, and the projecting stay-lug 164; substantially as described.

12. In an autographic register machine, the combination of the pivoted sectional body of the machine, the multiple spindles 54, in said body, the major and minor friction draw rollers, the externally attached journal 89, the main drive gear wheel 88, mounted on said journal, the minor pinion gear wheel that drives said major friction roller, the compound lever 143, mounted on said journal 39, and having the operator end 144 and the driven end 167, the combination shear knife, the tube bearer bracket 121, the piston rod 124, having the forked head 130, and the forked foot 127, the said head pivotally engaging with and operating said shears, the reactionary spring 126 on said piston rod, and the anti-friction roller 129 mounted in its forked foot; substantially as described.

13. In an autographic register machine, the combination of the unadjustable sections of

the body of the machine, constituted of bottom and sides, the adjustable hinged sectional ends and top thereof, that allow access to the interior of the machine, the interior catch hooks 7 and 39, and their catches 8 and 41, the spindle journals on which said hooks are mounted, the external knobs of said spindles by which said internal hooks are operated from the outside, the desk tablet 42 the holder lugs 47, the duplex carbon sheet clips secured in said holder lugs, the spindles 54, the core tubes 60 on said spindles, the return roller 61, the major and minor friction rollers, the pinion gear wheel 87, the externally attached journal 89, the main drive gear wheel mounted on said journal, the compound lever 143, the stationary knife blade, the fulcrum pivoted shear blade, the bracket 121 provided with the tube bearing 123, the piston rod that works in said bearing to effect the cut of said shears, and the reactionary spiral spring 126, mounted on said piston rod, substantially as described.

14. In an autographic register machine, the combination of the body of the machine, the multiple spindles 54 and the spindle 101 in said machine, the base frame 13, the cash drawer 17 having the spring latch lock 24, and the propulsion springs 22 that eject said drawer; substantially as described.

15. In an autographic register machine, the combination of the sectional folding body of the machine having the hinged arc drum-head 5, the drop hook 7 and catch 8 that fastens said drum-head, the rear end-gate 9 and the rearward downwardly inclined desk tablet and table bearer frame 36, the combination hinges 10 on which said end gate and desk and table bearer frame are mutually pivoted, the catch hook 39, the stationary lugs 11 on the bottom of the frame, the lugs 12 on said end gate that abut against said lugs 11, when the end gate is thrown back, the tie rod 169 that reinforces the connection of the sides of said bearer frame, and the lugs 170 on the sides of the machine that embrace said bearer frame 36; substantially as described.

16. In an autographic register machine, the combination of the multiple spindles 54, the spindle 101, the friction draw rollers, the actuating gear 87, 88, 94, and 96, the clamp flange 151 the pulleys 100, and 114, the traction band mounted thereon, and the friction clamp lever 152; substantially as described.

71. In an autographic register machine, the

combination of the multiple spindles 54, the spindle 101 the major and minor draw rollers, the journals on which said rollers are mounted, the outwardly attached journal 89, the main drive gear wheel 88, the pinion gear 87, the gear wheel 94, the pinion gear wheel 96, the pulley wheels 100 and 104, the traction band 115, the flange of the main drive wheel, the compound lever 143, and the friction clamp lever 152, having the clamp arm 158; substantially as described.

18. In an autographic register machine, the combination of the body of the machine, the multiple spindles 54, the spindle 101, the cash drawer 17, the latch lock 24 having the slotted head bar 30, the rocker fulcrum lever 32, having the point 31 that engages in the slot 29 of said head bar 30, the screw journal 33, the reactionary spring 34 that returns said latch lock to its normal position when said drawer is closed, and the spiral push springs 22, that expel the drawer when the latch is elevated by said spring rocker fulcrum lever; substantially as described.

19. In an autographic register machine, the combination of the body of the machine, the multiple spindles 54, the spindle 101, the friction draw rollers, the shear knife 133, the actuating cog and pulley gear, that operates said rollers, the cash drawer 17, the latch lock 24 having the slotted head bar 30, the spring rocker lever 32 the screw journal 33, the reactionary spring 34, that returns said latch lock to its normal position when said drawer is closed, the spiral push spring 22 that expels the drawer when the latch is lifted, and the compound actuating lever 143, that operates the gear, the shear knife and the latch lock of the cash drawer; substantially as described.

20. In an autographic register machine, the combination of the sectional folding body of the machine having the hinged arc drum-head 5 the drop-hook 7; and catch 8, the rear end gate 9, and the rearwardly, downwardly inclined desk tablet, and table-bearer frame 36, the hinges 10 on which said end-gate 9 and bearer-frame 36 mutually work, the return roller 61, and the draw rollers 66 and 73, the spindle 101; substantially as described.

JOHN A. MARSH.

In presence of—

BENJN. A. KNIGHT,
ED. S. KNIGHT.