

No. 706,387.

Patented Aug. 5, 1902.

J. A. CHAMBLISS.

STAMP DETACHING AND AFFIXING MACHINE.

(Application filed July 20, 1900. Renewed Jan. 18, 1902.)

(No Model.)

4 Sheets—Sheet 1.

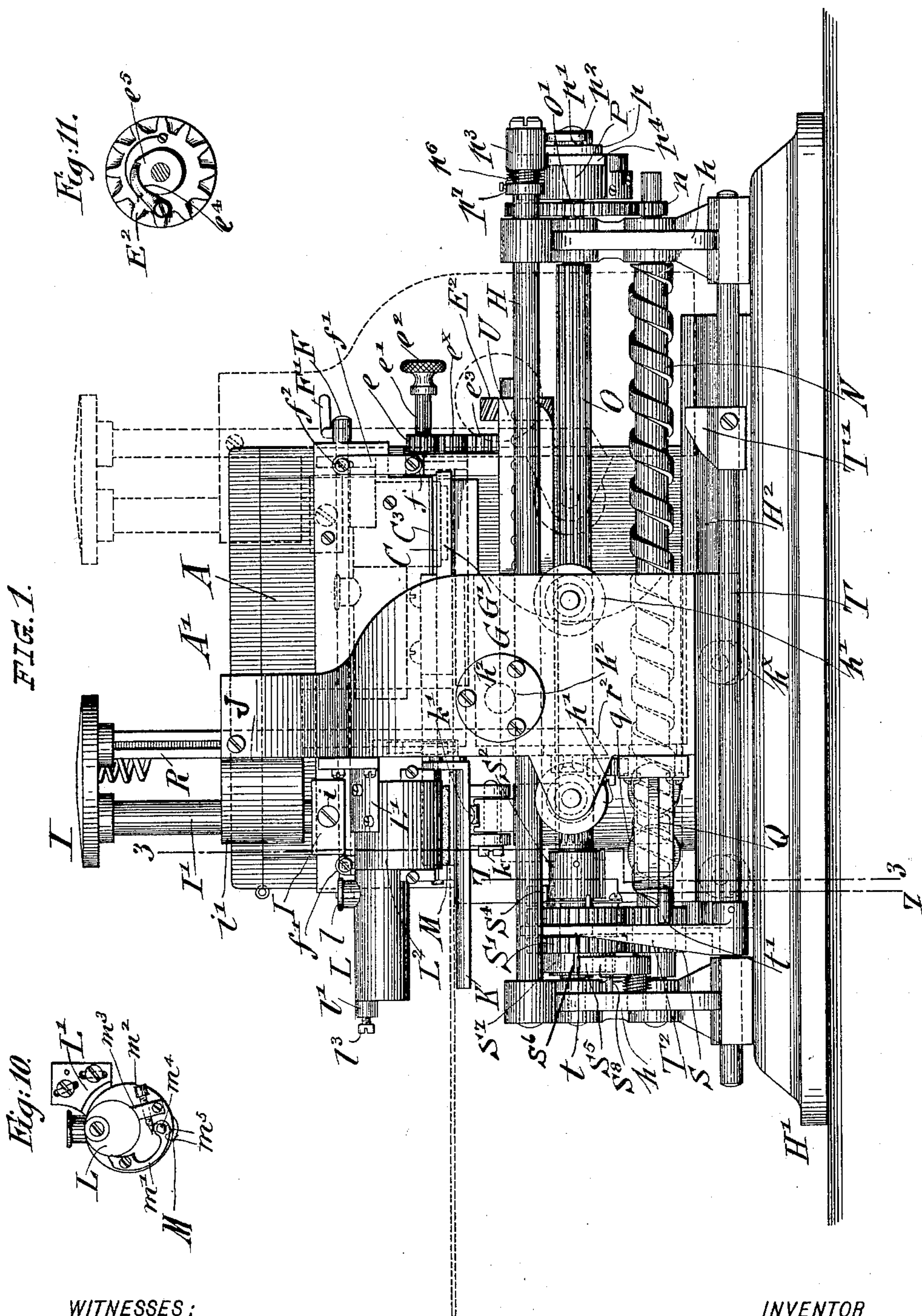
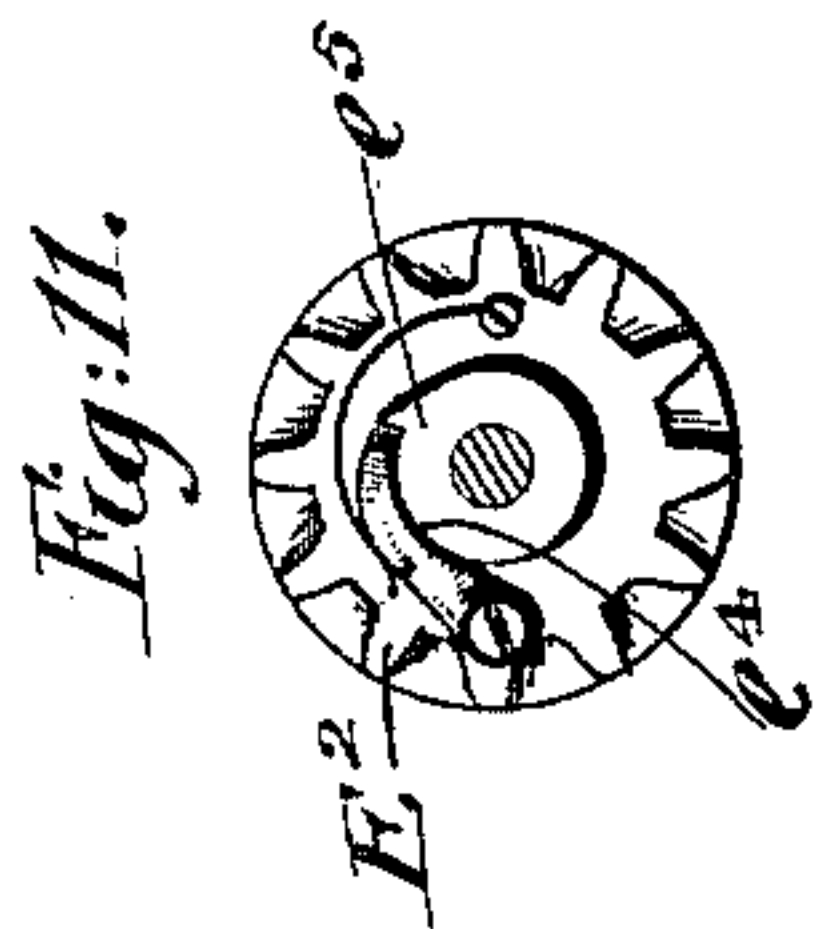


Fig. 10.

Fig. 1.



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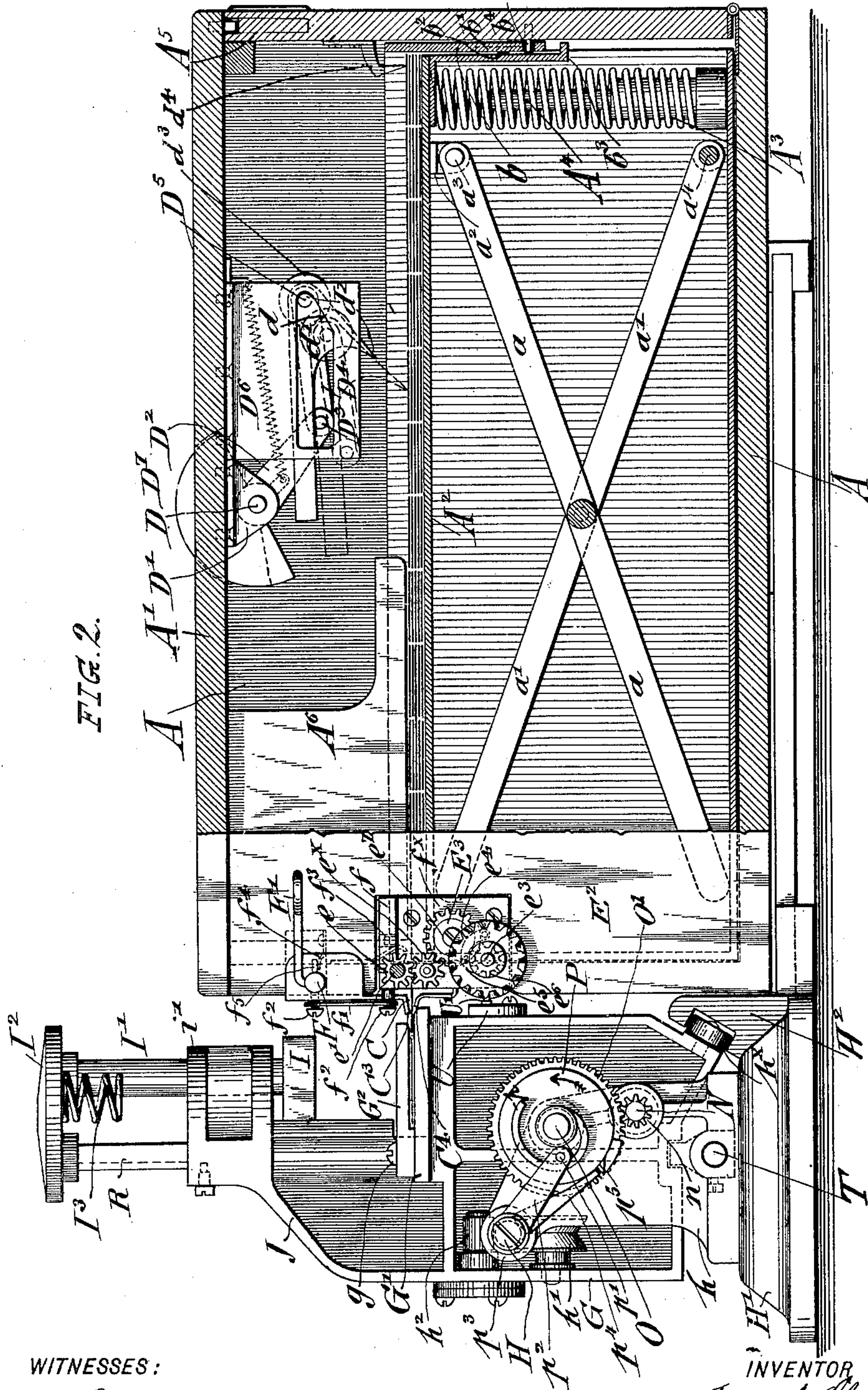
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(Application filed July 20, 1900. Renewed Jan. 18, 1902.)

(No Model.)

4 Sheets—Sheet 2.



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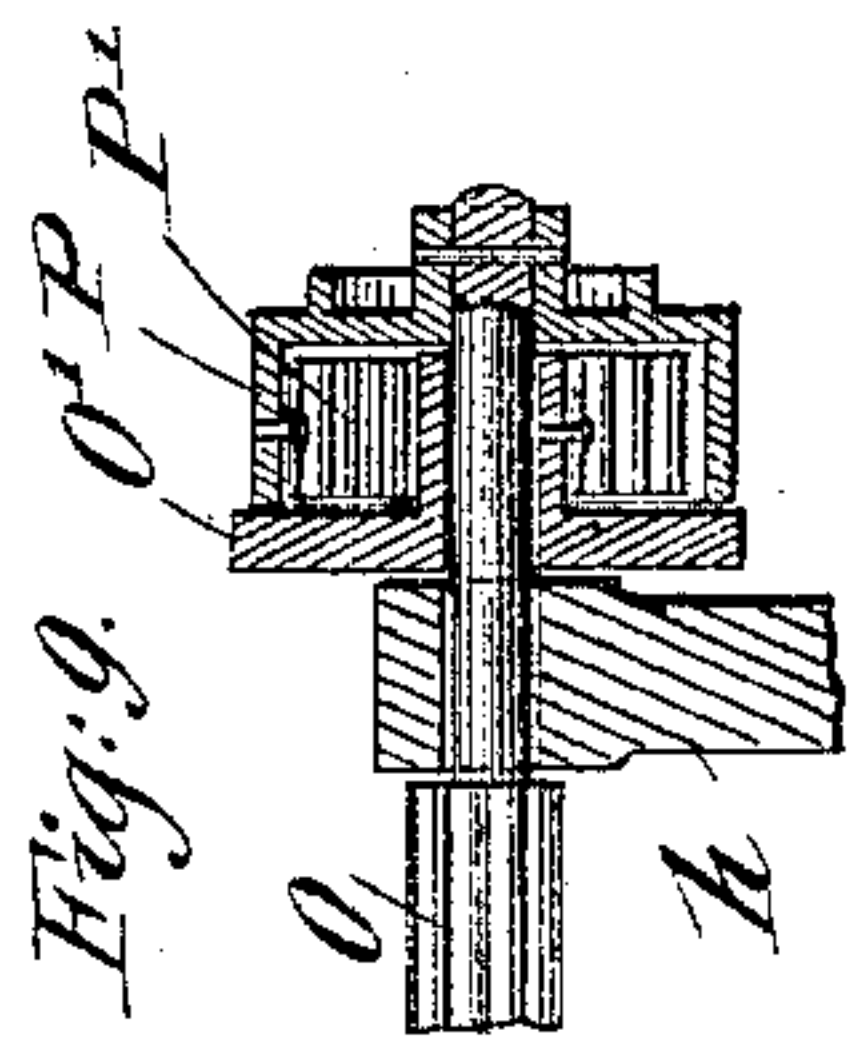
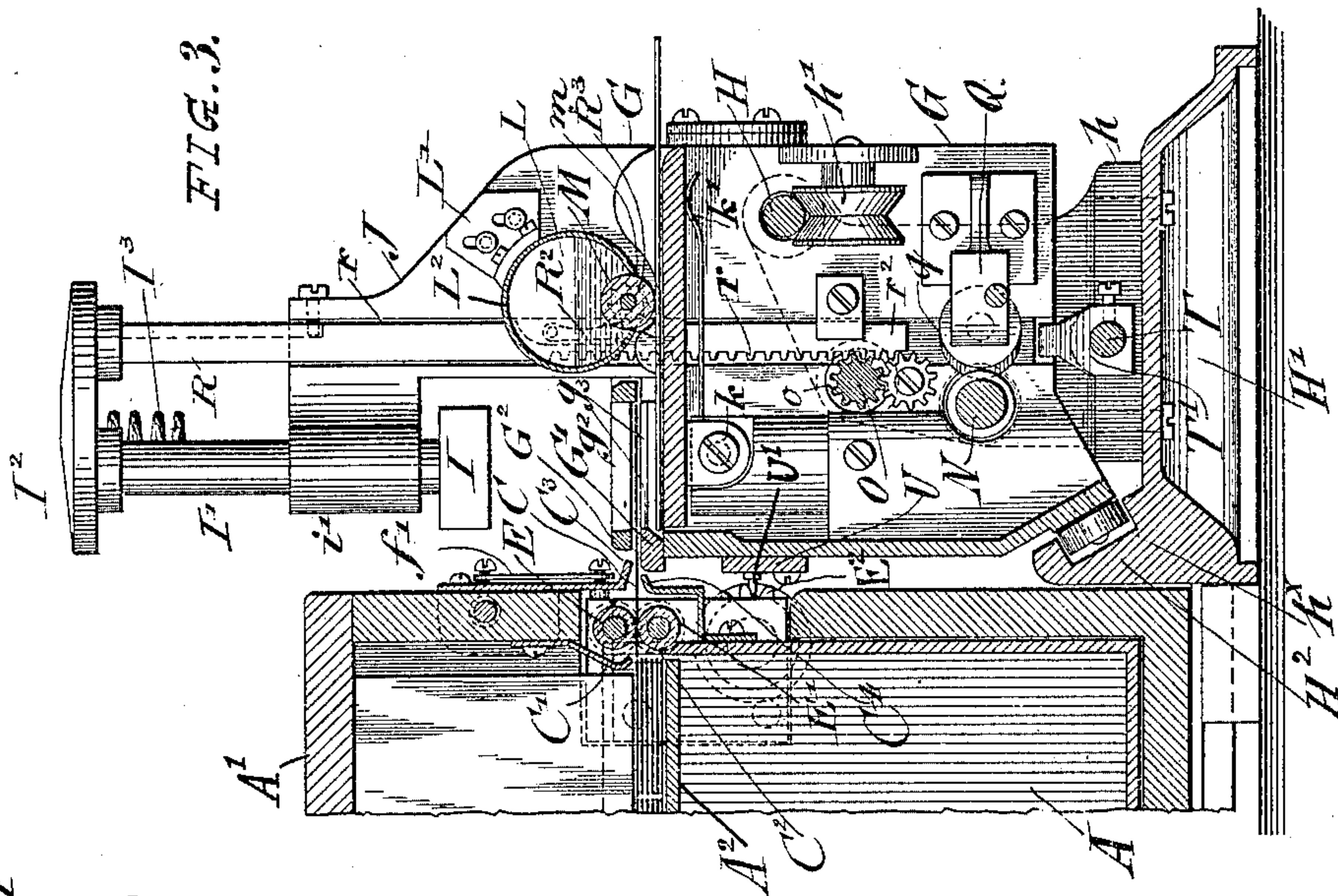
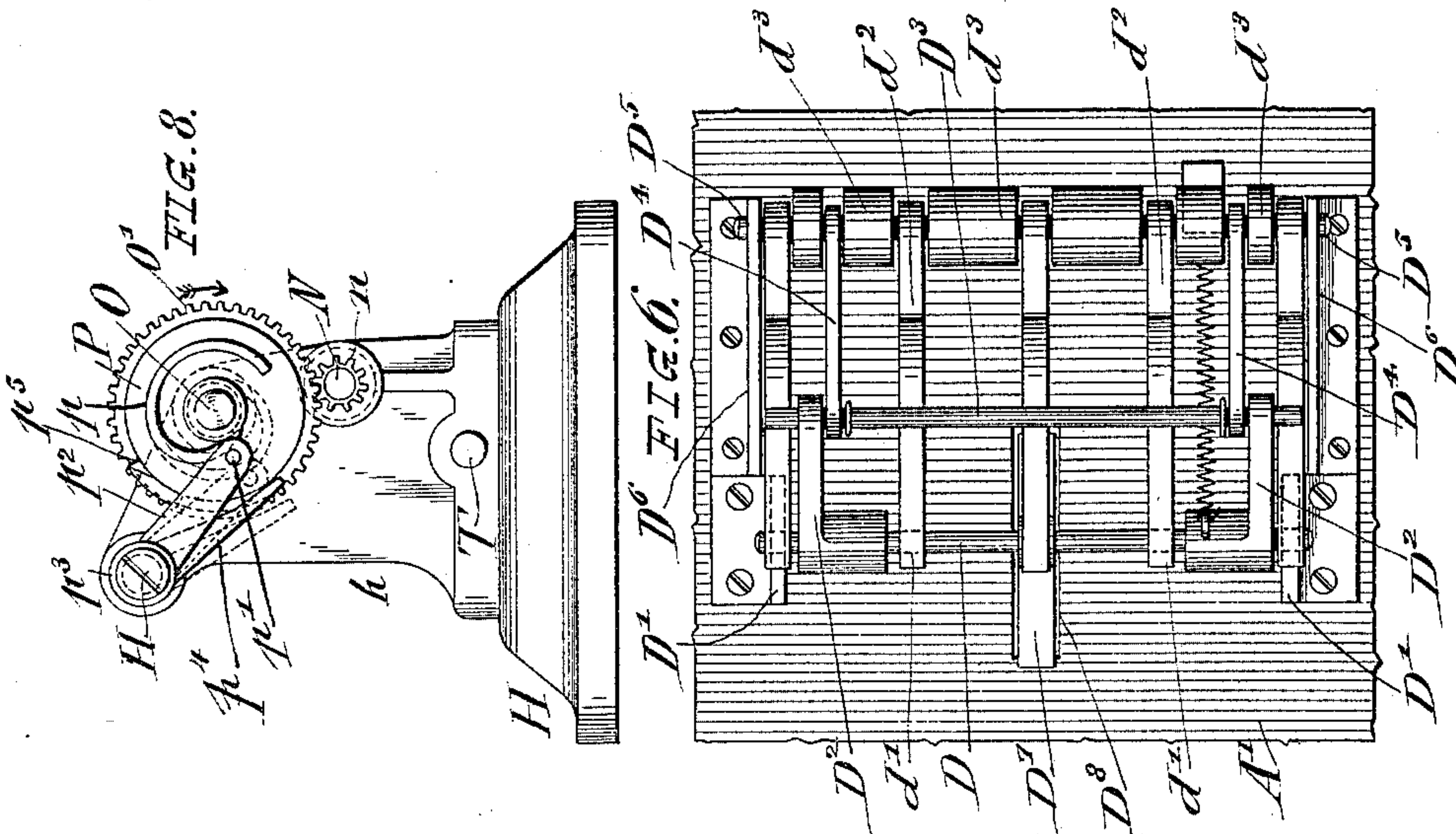
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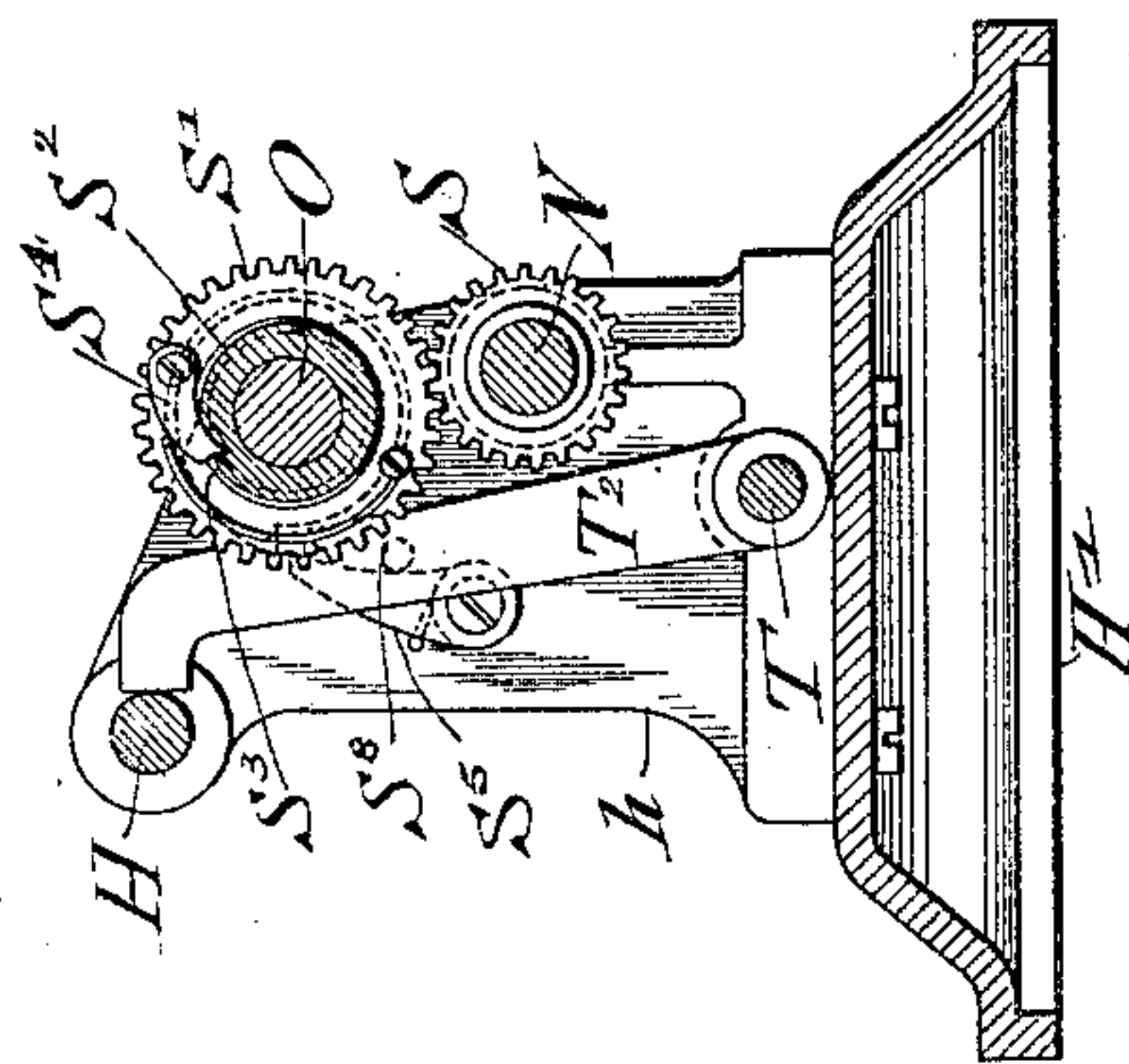
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FIG. 7.



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No. 706,387.

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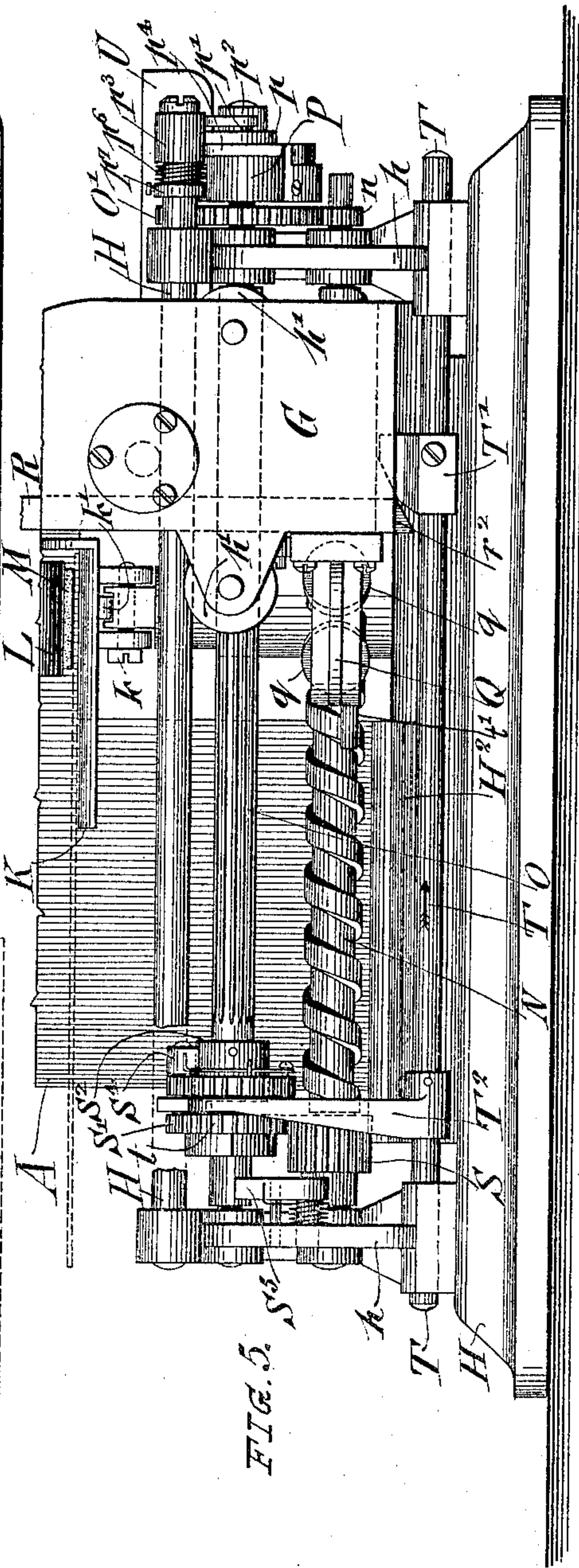
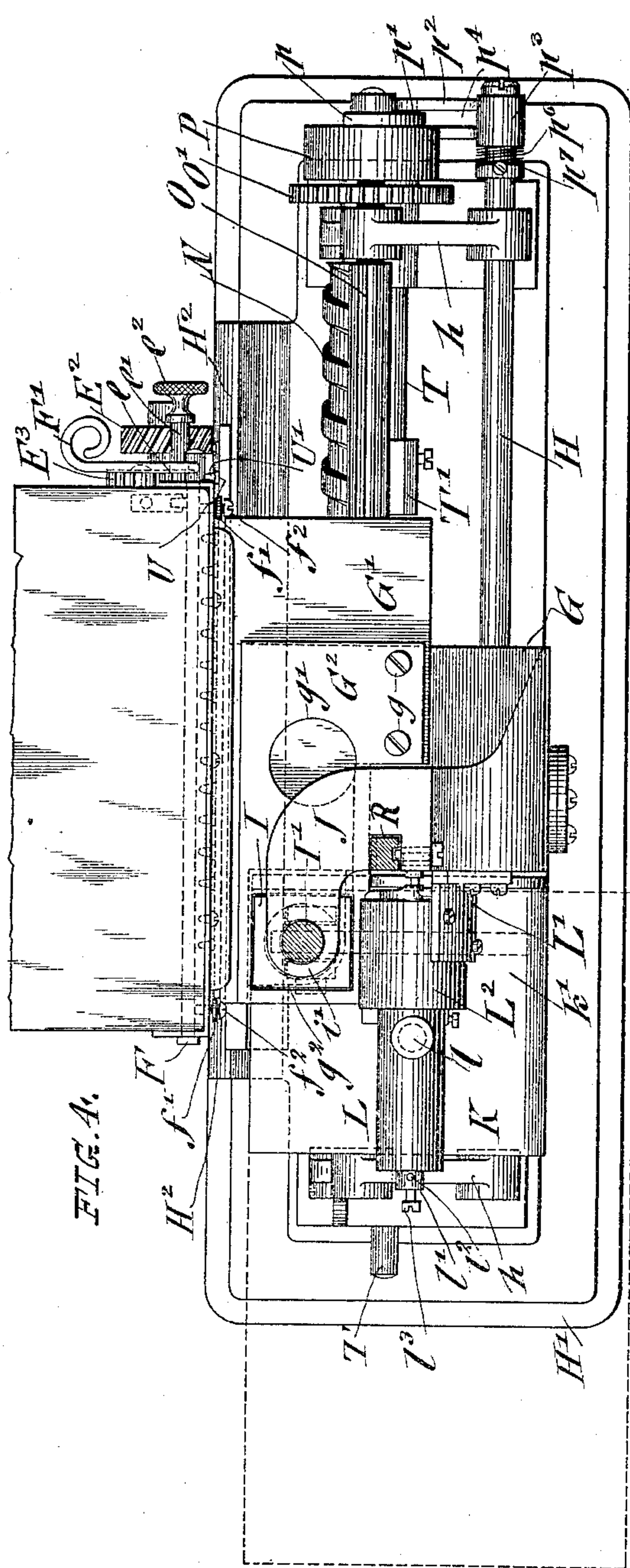
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STAMP DETACHING AND AFFIXING MACHINE.

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(No Model.)

4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

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STAMP DETACHING AND AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 706,387, dated August 5, 1902.

Application filed July 20, 1900. Renewed January 18, 1902. Serial No. 90,284. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. CHAMBLISS, a citizen of the United States, residing in the city of New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Stamp Detaching and Affixing Machines, of which the following is a specification.

This invention relates to postage, revenue, or other stamp detaching and affixing machines, the same being an improvement over the invention covered by my Patent No. 598,263, dated February 1, 1898, in which one stamp at a time is detached from a sheet of stamps and applied to the envelop, package, or other article to be stamped. In the said patented machine none of the movements are automatic; and the object of the present invention is to render the parts automatic, the steps of applying the moisture for securing the stamp, shifting the stamp-detaching parts from one stamp to the next, returning the carriage to starting position, and advancing another strip of stamps being all automatically performed until the entire sheet is used up.

A further object is to enable rapidity, so that the moment a sheet is started the automatic movement goes on as fast as the letters can be thrust in position and the plunger properly struck, there being practically no limit to the rapidity of the operation except in the expertness of the operator.

One of the striking features of the present invention is the moistening of the envelop or wrapper itself at the place where the stamp is to be applied in lieu of moistening the stamp directly, thus avoiding the gumming of any of the parts, including the moistener, so that the machine is maintained in neat and serviceable condition, whereby the facility for turning out the work in hand is increased.

To these ends the present invention consists of a stamp detacher and affixer which comprises means for holding a sheet of stamps, means for shifting the sheet progressively, a carriage, means for guiding the carriage, said carriage having an aperture or throat for receiving the articles to which the stamps are to be affixed, a plunger mounted on the carriage for detaching and affixing the stamps, means for supplying the necessary moisture, and means for automatically returning the

plunger and for automatically shifting the carriage progressively from one stamp to the next.

The invention consists, further, of means for causing the automatic return of the carriage to normal or starting position and means for simultaneously and automatically feeding forward a row of stamps.

The invention consists also of a box or case in which the sheets of stamps are secured and means acting on the uppermost sheet for feeding it forward to the feed-rolls.

The invention also consists of certain more or less important details and combinations of parts, to be hereinafter described and then claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved machine for detaching and affixing stamps. Fig. 2 is a side elevation, the stamp-holding box being partly in section. Fig. 3 is a vertical transverse section on the line 3 3, Fig. 1, only a portion of the stamp-holding box being shown. Fig. 4 is a plan view, partly in section, of carriage and automatic feed mechanism. Fig. 5 is a front elevation of the machine, the upper portions being broken away, showing the end position of the carriage when it is just starting to return to normal position. Fig. 6 is an under side detail view of the pusher mechanism for moving a sheet of stamps to the feed-rollers. Figs. 7, 8, and 9 are details of the carriage-feed mechanism, Fig. 7 being on line 7 7, Fig. 1. Fig. 10 is an end elevation of the moistener, enlarged; and Fig. 11 is a sectional detail of the spring-drum for acting on the carriage-feed mechanism.

Similar letters of reference indicate corresponding parts throughout the drawings.

I will describe the parts of the machine in sections according to the function which they perform to attain the ultimate result—that of fixing a stamp on an envelop or the like.

The stamp-holding box or case.—This comprises an oblong box-body A, (see Figs. 1 to 3,) which is provided with a lid A', that is hinged to one side of the same and is preferably locked thereto, so as to guard against the removal of the stamps from the box by any unauthorized person, the box being opened only for the purpose of charging the box again after an entire pile of sheets has been used

up. In the box-body A is arranged a spring-cushioned platform A^2 , which conforms to and fits nicely yet movably in the same and upon which platform the sheets of stamps are placed. Pivoted within the box, below the platform A^2 , is a pair of lazy-tongs $a a'$, member a being pivoted to a projection a^2 on the rear end of the platform at a^3 and member a' being pivoted to the box at a^4 below pivot a^3 . The other forward ends of the lazy-tong members $a a'$ are free and bear slidably upon the bottom of the box and against the under side of the platform A^2 , whereby the latter is always caused to have a position parallel with the bottom of the box, so that it cannot bind therein. For cushioning the platform only one spring A^3 is needed, which spring is confined between the rear end of the platform and the bottom of the rear end of the box and is coiled about a centering-pin A^4 , projecting upward from the box-bottom. An end plate b extends across the rear of the inside of the box and is provided with a hole b' , into which is adapted to snap a locking-pin b^2 , projecting from a spring b^3 , which extends down from the platform A^2 , said pin holding the platform down while the sheets of stamps are being placed in position. The pin b^2 is released by means of a releasing-pin b^4 , which projects from the hinged rear end or door A^5 of the box A, said releasing-pin striking the said pin b^2 when the door A^5 is closed and pushing it out of the hole b' , whereupon the platform A^2 rises under the actuation of the spring A^3 and moves the sheets of stamps up against a presser-shoe A^6 , fixed on the under side of the lid A' , so that the stamps are held between the said parts lightly, but yet with a certain pressure. At the front end of the box the same is provided with a transverse aperture C, on opposite sides of which are fixed the converging guide-lips $C' C^2$, located inside the box, and converging guide-lips $C^3 C^4$, located outside the box, so that the top sheet of stamps may be suitably fed through said aperture to the outside of the box and one row of stamps at a time projected beyond the upper and outer guide-lip C^3 .

The sheet-feeding mechanism.—This mechanism consists of two parts, the first for imparting an initial movement to the upper sheet of stamps of the pile and the second (the main part) for projecting a row of stamps from the box, so that one stamp after another may be stripped from said row, to which ends there are arranged a feeding device on the lid A' and a pair of feed-rolls in the aperture C of the box. Referring to Figs. 2 and 6, D is a rock-shaft journaled in suitable bearings D' on the under side of the lid A' , and from which project arms D^2 , which are connected by a rod D^3 , to which are pivoted the links D^4 , which are connected by a rod D^5 , the ends of which rod are guided in slots d of fixed guide-plates D^6 on the under side of said lid. Pivoted to the rod D^5 is a series of suitable spaced pushers d' , provided with down-

wardly-projecting spur-points d^2 , which are held in proper relative position to each other and to the top sheet of stamps by resting the free forward ends of the pushers on the cross-rod D^3 . The said pushers are separated from each other by spacers d^3 , arranged on the cross-rod D^5 . Shaft D is rocked by means of a segment D^7 , fixed thereon and protruding through a longitudinal slot D^8 in the lid A' . By sweeping the fingers along the lid or pressing back on the protruding portion of the segment, which is milled for the sake of easy action, the segment and the shaft D are rocked and the spurs of the pushers caused to lightly take onto the uppermost sheet of stamps and move it a short distance forward, the lower sheets being retarded by a claw d^4 , fixed to the hinged end or door A^5 , the spurs d^2 of the pushers tearing the upper sheet away from said claw, but not disturbing the lower sheets. The sheet of stamps is not injured by claw d^4 , as the rear ends of the sheets have parts of the border-strip remaining.

Arranged so that their contact-surfaces meet in the apertures C of the box A is a pair of feed-rollers $E E'$, which are preferably clothed with rubber or other soft material, as shown in Fig. 3, so as not to abrade the stamps and to have a certain grip thereon. To these feed-rollers $E E'$ the top sheet of stamps is delivered by the initial feed mechanism, Fig. 6, so that the consecutive rows of stamps may be projected thereby through the holding-box. The feed-rollers and their operating gear are shown in Figs. 1 to 4. Inter-meshing pinions $e e^x$ are mounted on the shafts of the rollers $E E'$, and the shaft e' of the upper roller is extended and provided with a milled head or knob e^2 , whereby the roller may be turned by hand, so that the first row of stamps can be projected, the remaining rows of the sheet being projected progressively and automatically. The automatic motion of the feed-rollers $E E'$ is imparted through the medium of the return movement of the carriage, to be described subsequently, which carriage is provided with a rack that engages a worm-wheel E^2 , mounted on a journal-pin e^3 , projecting from the box A below the feed-rollers, and which worm-wheel carries at one side a spring-actuated pawl e^4 , Fig. 11, which takes against a shoulder e^5 on the hub of a pinion e^6 , that meshes with an intermediate gear-wheel E^3 , mounted on a journal-pin e^7 , projecting from the box A, said gear-wheel meshing in turn with the lower pinion e^x of the feed-rollers. When the worm-wheel E^2 turns in one direction, the pawl thereon has no action on the gear, so that the feed-rollers remain stationary; but when the worm-wheel turns in the opposite direction the said pawl takes against shoulder e^5 and turns the feed-rollers sufficiently to project one row of stamps.

Provision is made for feeding exactly one row of stamps to proper position by arranging the shaft e' of the upper feed-roller so

that it may turn loosely. To this end the bearing-boxes for shaft e' are made with movable upper portions f , which are connected at their forward ends by means of links f' and studs f^2 with an oscillatory shaft F, journaled in suitable bearings in the box A and which at one end is provided with a small handle F' for rocking it. The movable bearing portions f are maintained in proper position by means of pins f^3 , (see dotted lines, Fig. 2,) which project from the fixed box or bearing portions f^x and enter suitable holes in the bearing portions f . Said movable bearing portions f are held against the fixed portions f^x by means of a suitable spring f^4 , (see dotted lines,) which bears constantly upon a lug f^5 , projecting from shaft F, and acts on the links f' , so as to force the movable bearing portions f toward the fixed portions f^x , and hence cause the feed-rollers E E' to bite or positively grasp the sheet of stamps for enabling the hand or automatic feeding of the same. Now when the first row of stamps is projected to proper position by the hand turning of the feed-roller the driving-gear must be adjusted and set so that after the stamps of said first row are detached the next row will be automatically projected to the proper distance for being detached. This is effectuated by reversing the direction of movement—that is, contrary to the forward feed of the feed-rollers—and turning the shoulder e^5 against the pawl e^4 , which limits the motion in that direction. While turning the feed-roller back the positive grip of the same on the sheet of stamps must be loosened by depressing the handle or lever F', and thereby raising the movable bearing portion f , the operator at the same time catching hold of the projecting row of stamps. The feed-rollers can now be turned back without tightly gripping upon the sheet of stamps, and upon the automatic feed of the sheet each row will be projected to proper position until the entire sheet is used.

Stamp-detaching mechanism.—This comprises a carriage G, (see Figs. 1 to 5,) which is preferably made of a suitable cored metallic casting and is guided at the front of the machine on a transverse guide-rod H, which is mounted in parallel brackets h , which extend from a front base-plate H', to the rear of which the stamp-holding box is fixed in any suitable manner. The carriage G is also guided at its lower end by means of guide-rollers h^x , which run in a transverse channel-rail H², projecting from the back of the base-plate H', said carriage being also provided with a pair of grooved rollers h' h' and a roller h^2 , which rollers travel on opposite sides of the guide-rod H, all three rollers h' h' h^2 being arranged triangularly, as shown in Fig. 1, so as to act conjointly with the lower rollers h in securing the steady travel of the carriage. Fixed to the top of the carriage by means of suitable set-screws g in a plane approximately that of the aperture C of the box A is a plate G', so that when a row of stamps is projected

it will rest on said plate. The set-screws g also pass through and secure a top plate G², (plate G' may hence be termed the "bottom" plate,) which is provided with a round orifice g' to receive the finger of the operator, so that pressure may be applied to the sheet of stamps when adjusting the feed-roller-driving gear, and said top plate is also provided with an oblong opening g^2 , into which the stamp-detaching plunger I, to be referred to later, moves. Just below and in line with the plunger-opening g^2 the hardened-steel plate G' is formed, as shown in Fig. 3, with two cutting or beveled die edges g^3 , which in conjunction with plunger I detach the stamps. The carriage is so positioned relatively to the machine and its movements so defined as that the plunger I, opening g^2 , and cutter-die g^3 all register with the first stamp and successively with the remaining stamps of a projecting row as the carriage is intermittently reciprocated across the front of the stamp-holding box. Plunger I consists, preferably, of an oblong block of steel, which is secured by means of a side set-screw i to the lower end of a reciprocatory rod I', which is provided at top with a large hand contact disk, knob, or head I² and is guided in a bearing i' , located above the plunger-opening g^2 and formed in an angular guide portion or arm J, extending upwardly and inwardly from the carriage G. At the under side of the knob I² there is fixed a spiral spring I³, which serves to cushion the plunger when depressed.

A work-table K is supported on the carriage, below the plunger I and stationary cutter-die g^3 , in such position as that when the corner of an envelop which is to be stamped is pushed along the table under the said detaching devices it will receive the detached stamp, moistened as hereinafter described, at the proper point. The said work-table K is mounted yieldingly on the carriage by pivoting it at its rear end at k and subjecting it to the action of a spring k' , which is fixed to the carriage and projects forwardly, so that its free end bears on the forward under side of the said table. This yielding and spring-cushioning of the work-table permits the same to accommodate itself to various thicknesses of envelops or packages which may be thrust in to be stamped.

Table K is arranged under a suitable moistening device, and its yielding movement is mainly to permit different thicknesses of envelops or other articles to be thrust under the moistening device into the throat or aperture between the top plate G² and the work-table.

The moistening device.—Carriage G also supports a moistening device, which consists of a cylindrical water-reservoir L, supported by means of an angle-bracket L', secured to the upper part of the carriage. (See Figs. 1, 3, 4, and 10.) The reservoir L projects horizontally parallel with the guide-rod H, or, in other words with the line of movement of the

carriage, and is provided with a filling-orifice closed by a screw-cap l . At its outer end the reservoir is provided with a perforated nipple l' , having a vent l^2 , which is controlled by a screw-valve l^3 for letting in more or less air or for closing the vent entirely. The inner end of the reservoir L is formed with an enlargement L^2 , having a bottom oblong opening or slot m , in which a moistening-roll M , of felt, is arranged to snugly turn, a portion of said roll protruding through said slot m , so that the upper right-hand corner of the envelop or other article which is thrust into stamping position will be moistened by contacting with and rotating said roll, no moisture whatever being applied by the machine directly to the stamp, thereby avoiding gumming, dirtying, or clogging of the machine by the mucilage or gum on the stamps coming off upon it or by the stamps sticking to each other or to any part of the machine. The moisture applied to the corner of the article to be stamped is sufficient for the stamp, which is detached from the sheet and pressed by plunger I onto the said article. Said moistening-roll M has its shaft mounted in springy hangers m' , arranged on the reservoir and which may be depressed by set-screws m^2 , which turn in suitable screw-bearings m^3 , (see Fig. 10,) so that the moistening-roll may be adjusted to take up wear or shrinkage and also, in the first instance, to serve in fitting said roll to the surrounding edge of the opening. To permit the roll's adjustment, its shaft m^4 passes through short slots m^5 in the reservoir, as indicated in said figure in dotted lines.

The carriage-feeding mechanism.—This is the last portion of the invention as described and comprises devices mounted on the base-plate H' and on the carriage G .

N indicates a feed-worm, which is journaled in bearings in the brackets h of base-plate H' and is parallel with the guide-rod H , and O is a winding-shaft journaled also in bearings of the said brackets parallel with worm N and on one end of which is firmly attached the cylindrical spring-barrel P , as shown clearly in Figs. 1 to 5 and 8 and 9. The feed-worm N has its right-hand end extended under the spring-barrel to receive a small pinion n , which meshes with a larger gear-wheel O' , mounted loosely on the winding-shaft O and confined between bracket h and the barrel P . Confined within the barrel P is a coiled spring P' , one end of which is fixed to the hub of said gear-wheel O' (see Fig. 9) and the other end of which is fixed to the inner surface of said barrel, the tendency of said spring when under tension being to rotate the feed-worm N . Carriage G is caused to travel in one or the other direction by means of the feed-worm, the said carriage to that end bearing at its lower part a horizontal extension Q , which supports two antifriction-rollers q , which are mounted at an angle to each other, so as to mesh and travel in the

spiral groove of the feed-worm. Guided in a suitable vertical way or groove r in the carriage G is a toothed actuating-bar R , which is fixed at its upper end to the knob or disk of the plunger I , and the teeth r' of which mesh with teeth-like ribs o on the winding-shaft O , so that the depression of the plunger produces simultaneously the rocking of the winding-shaft on its axis and the rotation of the barrel P in one direction, its spring turning it back in the other direction and causing the plunger to rise, as hereinafter described.

Inasmuch as the spring in the barrel P is wound up step by step by the repeated depressions of the plunger I , some provision must be made for preventing the unwinding of the spring until the reaction thereof is needed for returning the carriage to original position. To this end the side of the barrel has thereon a volute cam p , along both sides of which there is arranged to work a pin p' , projecting inwardly from the end of a controlling-arm p^2 , which is fixed loosely on the extended right-hand end of the guide-rod H , the hub p^3 of said arm also having a projecting detent p^4 , which takes at its extremity against the squared side of a tooth p^5 on the periphery of the barrel P . A spring p^6 , fixed to a collar p^7 , bears at its free end on the detent p^4 , so as to force the arm p^2 toward the cam p .

At the left-hand end of the feed-worm N and the winding-shaft O is arranged, as shown more clearly in Fig. 7, a pair of intermeshing gear-wheels S S' , the former being rigidly fixed on the worm N and the latter being loose on the winding-shaft, said gear S' being confined between the bracket h and an enlarged cylindrical hub S^2 , fixed on the winding-shaft, so as to have a definite amount of play on the same. The hub S^2 has a portion of its periphery removed, so as to provide a square shoulder or tooth S^3 , against which takes the toe of a spring-actuated pawl S^4 , pivoted to one side of the loose gear-wheel S' , so that the said hub S^2 , the loose gear-wheel S' , and its pawl S^4 will form a sort of clutch, the said gear-wheel forming the shiftable member and the hub the fixed member thereof. When the winding-shaft O is turned from right to left, Fig. 7, which is due to the depressing of the rack-bar R , it has no positive action on the gear S' ; but when the said shaft O is turned in the reverse direction by the action of the spring P' in the barrel P , as hereinafter described, the shoulder or tooth S^3 bears directly on the end of the pawl S^4 , and the gear S' is also turned. Pivoted to the inner side of the left-hand bracket h is a spring-actuated pawl S^5 , the upper end of which is adapted to take against a tooth S^6 on the hub S^7 of the loose gear-wheel S' , the inward movement of the pawl being limited by a stop-pin S^8 , which projects from the said bracket.

The object of the pawl S^5 and tooth S^6 is to

prevent overrotation of the gear S' , due to the reverse motion of the feed-worm N , said worm causing the gear S' to rotate in opposite direction to that caused by the winding-shaft O .

On fully pressing down the plunger, and hence the actuating-bar R , a rotary movement is imparted to the winding-shaft O and barrel P in the direction of the arrow on Fig. 2, which movement releases the pin p' of the controlling-arm p^2 from behind the volute cam p and causes the outer surface of the said cam to bear upon the pin p' and move the arm p^2 from the position shown in full lines, Fig. 8, to that shown in dotted lines, at the same time moving the detent p^4 out of the path of the tooth p^5 , as shown, so that when the downward pressure on the actuating-bar is removed the reverse rotation of the barrel will not cause the tooth p^5 to engage with the pawl until one full rotation has been completed. During the described forward rotation of the barrel P the actuating-spring P' therein is coiled tighter and cannot react on the gear-wheel O' , owing to its geared connection with the feed-worm; but when the downward pressure on the bar R is removed the actuating-spring turns the barrel P and shaft O in reverse direction, it rotates the intermeshing gears S' S by reason of the engagement of the shoulder or tooth S^3 and the pawl S^4 , it rotates the feed-worm N , causing the carriage to advance to the next position, and by the pinion n at the end of worm N it gives a slight turn to the gear-wheel O' in the same direction as the barrel P , so that the tension of the actuating-spring P' is but partially let off, the said spring being locked in tension by the reengagement of the detent p^4 with the tooth p^5 on barrel P and by reason of the toothed actuating-bar R having reached the limit of its upward movement. Each full depression of the plunger shifts the carriage in the described manner to the next position and stores up still further power in the actuating-spring P' . The detent p^4 and tooth p^5 positively and accurately define and limit the movement of the barrel P and form a positive stop against further rotation of the said barrel, which is far preferable to relying on the limit of upward movement of the toothed actuating-bar, which might be used for such purpose.

For automatically returning the carriage to first position there is arranged under the same a longitudinally-shiftable slide-rod T , guided in the brackets h , and to which is adjustably fixed in a position which will be under the actuating-bar R in the last position of the carriage a cam projection T' , against which the beveled lower end r^2 of the bar R is adapted to strike to shift said rod T . The left-hand end of the slide-rod T carries an upwardly-projecting finger T^2 , the upper end of which takes constantly into an annular groove t in the clutch member or gear-wheel S' . On the carriage extension Q is a contact

pin or abutment t' , which in the left-hand position of the carriage is in contact with finger T^2 . When the carriage has been moved by the repeated depression of the rack-bar R until it arrives at the end of its movement to the right, Fig. 5, the final depression of said rack-bar forces its beveled lower end r^2 against the cam-piece T' and shifts the slide-rod T in the direction of the arrow and correspondingly causes the finger T^2 to shift the gear-wheel or movable clutch member S' , so that the pawl S^4 will be moved clear of the notched or toothed portion of the hub or enlargement S^2 , due to the fact that the bottom of the notch or cut-away of the hub, which is formed to provide the shoulder or tooth S^3 , has an outward slant or inclination to the smooth periphery of the hub, as indicated in dotted lines in Fig. 1. As soon as the pressure on the knob I^2 is released the actuating-spring P' turns the gear-wheel O' in the direction of the arrow, Fig. 2, and reverses the direction of rotation of the feed-worm N , thereby returning the carriage to initial position, said carriage on arriving in the said position striking by its abutment t' against the finger T^2 and causing the latter to shift the gear-wheel S' back in proper mesh with gear-wheel S and bringing the pawl S^4 back into engagement with the tooth or shoulder S^3 . The described pawl S^5 and tooth S^6 will be brought into engagement and the rotation of the gear S' by gear S stopped at a point corresponding to the initial or starting position of the carriage.

At the back of the carriage G there is arranged a horizontal rack-bar U , having rearwardly-extending tapering pins U' , (shown partly in full and partly in broken lines in Fig. 4 and also shown in Figs. 2 and 3,) which pins take one after the other into or mesh in the successive notches of the worm-wheel E^2 of the stamp-feeding mechanism, an intermittent rotation being thereby imparted to said worm-wheel during the right-hand intermittent or step-by-step motion of the carriage, which turns the pawl e^4 free of its tooth or shoulder and produces no responding movement in the sheet-feeding mechanism; but during the automatic return of the carriage to its initial position the feed-rollers $E E'$ are rotated so as to project another row of stamps. When the carriage returns, it brings the successive pins U' in mesh with the successive notches of the wheel E^2 , so that the latter turns until the carriage stops, and this turning of the worm-wheel is sufficient to cause, as stated, the protruding of another row of stamps.

The actuating-bar R carries, as shown in Fig. 3, a pivoted freely-hanging or pendent pawl R^2 , the tooth of which takes into the notches of a ratchet-wheel R^3 , which is mounted on the shaft of the moistening-roll M and imparts an intermittent movement to the same, so as to positively turn it so that the next article to be stamped will be brought in

contact with a freshly-moistened portion of the said roll.

Briefly stated, the use and operation of the machine are as follows: The reservoir L is
 5 supplied with water and the carriage G moved to its initial left-hand position. The stamp-holding box, which in the example shown has a capacity for half-sheets of stamps, so that there will be five stamps across, is now charged
 10 with stamp-sheets, a pile, say, of fifty sheets, and the box then closed and locked. The operator now applies one hand to the segment D at the top of the box and with the other hand takes hold of the turning knob e^2 of the
 15 feed-rollers and first gives a partial turn to said segment and then rotates the feed-rollers E E' in the proper direction, so as to project the first row of stamps through the aperture C until it will register with the plunger-
 20 opening g^2 in plates G^2 . Before starting to work the knob e^2 is turned back a partial rotation until it can turn no longer for the purpose of always permitting the succeeding rows of stamps to be automatically fed to the
 25 proper distance, as previously described, the operator pressing one finger through opening g on the stamps and depressing handle F', so that the sheet will not be moved back by the feed-rollers, the grip of which on the sheet
 30 is loosened. The machine is now ready for work, and the envelopes or other articles to be stamped being at hand the upper right-hand corners of the same are successively introduced into the machine. Upon introducing an
 35 envelop its stamp-receiving corner is moistened by the moistening-roll M, such corner being received in the angle formed by the angular cutting-die g^3 . The operator now presses one hand down upon the knob or disk I^2 , and
 40 thereby causes the plunger to detach the first stamp and press it onto the moistened corner of the envelop, such downward movement imparting a simultaneous downward movement to actuating-bar R and operating the
 45 carriage-feed mechanism, as previously described, so as to automatically shift the carriage to the next position and bring the plunger in line with the next stamp. The stamped article is now removed, another one
 50 inserted and moistened, the plunger depressed, a stamp detached and applied to the article, the carriage automatically shifted, and so on step by step until the carriage arrives at the end of its movement at the right-
 55 hand side. Having arrived at the end of its movement, as stated, and another article stamped, by depressing the plunger the carriage will, upon release of the plunger, return automatically to its initial or left-hand posi-
 60 tion. When the last row of stamps of the sheet is protruded from aperture C, it will be fed and held in position by the feed-rolls grasping the attached portion of the border of the sheet, and this row having been used
 65 up the border portion is forced out and the next top sheet fed out and used up, and so

on until the stamp-holding box has to be charged again.

A machine of the described class is of especial advantage in commercial houses, to manu- 70
 facturers, professional men, and others who send out more or less mail-matter, as the stamps are fed out automatically, so that there is no unnecessary waste of time and labor, the automatic movement of the machine go- 75
 ing on as fast as the envelopes or other articles can be thrust under the stamps and the plunger depressed by hand or any suitable power device.

Various changes evident to skilled me- 80
 chanics may be made in my invention without departing from the scope and spirit thereof, and I therefore desire it understood that I do not limit myself to the mechanism shown and described. 85

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

1. In a stamp detaching and affixing machine, the combination of means for holding 90
 a sheet of stamps, a carriage provided with an aperture or throat for receiving the articles to be stamped, means for guiding said carriage, a plunger mounted on the carriage, means for supplying moisture, and means 95
 for automatically returning the plunger and for automatically shifting the carriage progressively from one stamp to the next, substantially as set forth.

2. In a stamp detaching and affixing ma- 100
 chine, the combination of means for holding a sheet of stamps, means for automatically shifting the sheet progressively, a carriage provided with an aperture or throat for re- 105
 ceiving the articles to be stamped, means for guiding said carriage, a plunger mounted on the carriage, means for supplying moisture, and means for automatically returning the plunger and for automatically shifting the carriage progressively from one stamp to the 110
 next, substantially as set forth.

3. In a stamp detaching and affixing machine, the combination of means for holding a sheet of stamps, a carriage provided with an aperture or throat for receiving the article to 115
 be stamped, means for guiding said carriage, a plunger mounted on the carriage, means for supplying moisture, means for automatically returning the plunger and for automatically shifting the carriage progressively from one 120
 stamp to the next, and means for causing the automatic return of the carriage to initial position, substantially as set forth.

4. In a stamp detaching and affixing machine, the combination of means for holding 125
 a sheet of stamps, means for shifting the sheet progressively, a carriage provided with an aperture or throat to receive the articles to be stamped, means for guiding said carriage, a plunger mounted on the carriage, means for 130
 supplying moisture, means for automatically shifting the carriage progressively from one

stamp to the next, and means for causing the automatic return of the carriage to initial position, substantially as set forth.

5 In a stamp detaching and affixing machine, the combination of a platform for supporting a sheet of stamps, means for retaining the stamps, means for automatically shifting the position of the sheet progressively, a carriage having an aperture or throat for receiving the articles to be stamped, a suitably-
10 operated and spring-returned plunger connected to and movable with the carriage for detaching and affixing the stamps, mechanism operated automatically by the plunger for automatically shifting the carriage progressively from one stamp to the next, and means for limiting or determining the extent of such movement, substantially as set forth.

6 In a stamp detaching and affixing machine, a platform for supporting a sheet of stamps, means for automatically shifting the position of the sheet progressively, a carriage having an aperture or throat for receiving the articles to which the stamps are to be affixed,
25 a hand-operated and spring-returned plunger connected to and movable with the carriage for detaching and affixing the stamps, mechanism operated automatically by the plunger for automatically shifting the carriage progressively from one stamp to the next, and means for locking the carriage momentarily to prevent accidental movement, substantially as set forth.

7 In a stamp detaching and affixing machine, the combination of a platform, means for feeding the sheet of stamps forward, a carriage guided transversely of the platform, said carriage comprising a moistener, and means for detaching the stamps and pressing them
40 onto the articles to be stamped, and means for automatically returning the carriage to initial position, substantially as set forth.

8 In a stamp detaching and affixing machine, the combination of a platform, a carriage guided transversely of the platform, and comprising a moistener, a work-table for supporting the articles to be stamped, and means for detaching the stamps and pressing them
50 returning the carriage to initial position, substantially as set forth.

9 In a stamp detaching and affixing machine, the combination of an apertured box, provided with means for feeding a sheet of stamps through its aperture, for use, means for supporting a pile of sheets in the box, and means consisting of a series of pivoted pushers, a pivoted segment protruding through the box, and devices connecting the segment
60 and pushers, said means being adapted for imparting an initial movement to the uppermost sheet in the box for introducing it to the aforesaid feeding means, substantially as set forth.

65 10 In a stamp detaching and affixing machine, the combination of an apertured box or case, provided with means for supporting

a sheet or sheets of stamps therein, a pair of feed-rolls arranged in the aperture, one of said rolls being shiftable relatively to the other, automatically-operated gearing for turning said rolls intermittently, and means for adjusting and setting the other roller and said gearing back for producing a certain movement of the rolls, corresponding with the width of a row of stamps, substantially as set forth.

11 In a stamp detaching and affixing machine, the combination of means for holding sheets of stamps, a pair of feed-rolls, gearing for said rolls, such gearing comprising a worm-wheel, a carriage, means for guiding said carriage parallel with said feed-rolls, means on said carriage for successively detaching and affixing the exposed stamps, and
85 a rack-bar fixed to the carriage and meshing with said worm-wheel, substantially as set forth.

12 In a stamp detaching and affixing machine, the combination of means for holding a sheet of stamps, a carriage, means for guiding the carriage, means, mounted on the carriage for detaching individual stamps, means for supplying moisture, a feed-worm suitably geared with said carriage, means for rotating said feed-worm in one direction, and means
95 for reversing the direction of movement of the feed-worm, substantially as set forth.

13 In a stamp detaching and affixing machine, the combination of means for holding a sheet of stamps, a carriage, means for guiding the carriage, means, mounted on the carriage, for detaching individual stamps, a feed-worm suitably geared to said carriage, means, operated through the stamp-detaching means, for rotating said feed-worm in one direction, whereby the carriage is advanced step by step, means for limiting said advancing motion to correspond with one stamp, and means for automatically reversing the direction of movement of said feed-worm to return the carriage to original position, substantially as set forth.

14 In a stamp detaching and affixing machine, the combination of means for holding a sheet of stamps, a carriage, means for guiding the carriage, means, mounted on the carriage, for detaching individual stamps, a feed-worm suitably geared with the carriage, a spring-barrel, means, operated through the stamp-detaching means, for storing up power in said barrel and for causing the turning of the feed-worm in one direction, and means operated by the spring-barrel for reversing the direction of movement of said feed-worm to return the carriage to original position, substantially as set forth.

15 In a stamp detaching and affixing machine, the combination, of means for holding a sheet of stamps, a carriage, means for guiding the carriage, means, mounted on the carriage, for detaching the stamps, a feed-worm suitably geared with the carriage, a toothed actuating-bar guided in the carriage, a spring-

- barrel, a toothed or ribbed winding-shaft operated by said actuating-bar and connected with said spring-barrel, means for connecting the latter with the feed-worm for intermit-
- 5 tently turning the same in one direction, and means for holding said winding-shaft stationary so that the spring-barrel may impart a reverse movement to the feed-worm, substantially as set forth.
- 10 16. In a stamp detaching and affixing machine, the combination of means for holding a sheet of stamps, a carriage, means for guiding said carriage, means, mounted on the carriage for detaching the stamps, mechanism
- 15 for advancing said carriage step by step and for automatically returning it to original position, and a shifting device operated by a part connected with the detaching devices on

the carriage for causing the automatic return thereof to initial position, substantially as set forth. 20

17. In a stamp detaching and affixing machine, the combination of means for detaching individual stamps, comprising a plunger, an apertured die-plate through which the 25 plunger passes, and a pivoted yielding worktable upon which the articles to be stamped are placed, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses. 30

JOHN A. CHAMBLISS.

Witnesses:

GEO. L. WHEELOCK,
M. H. WURTZEL.