(No Model.) 3 Sheets—Sheet 1.

C. J. WEINMAN, E. E. EUCHENHOFER & W. M. KINNARD.

AUTOGRAPHIC REGISTER.

No. 455,445. Patented July 7, 1891.

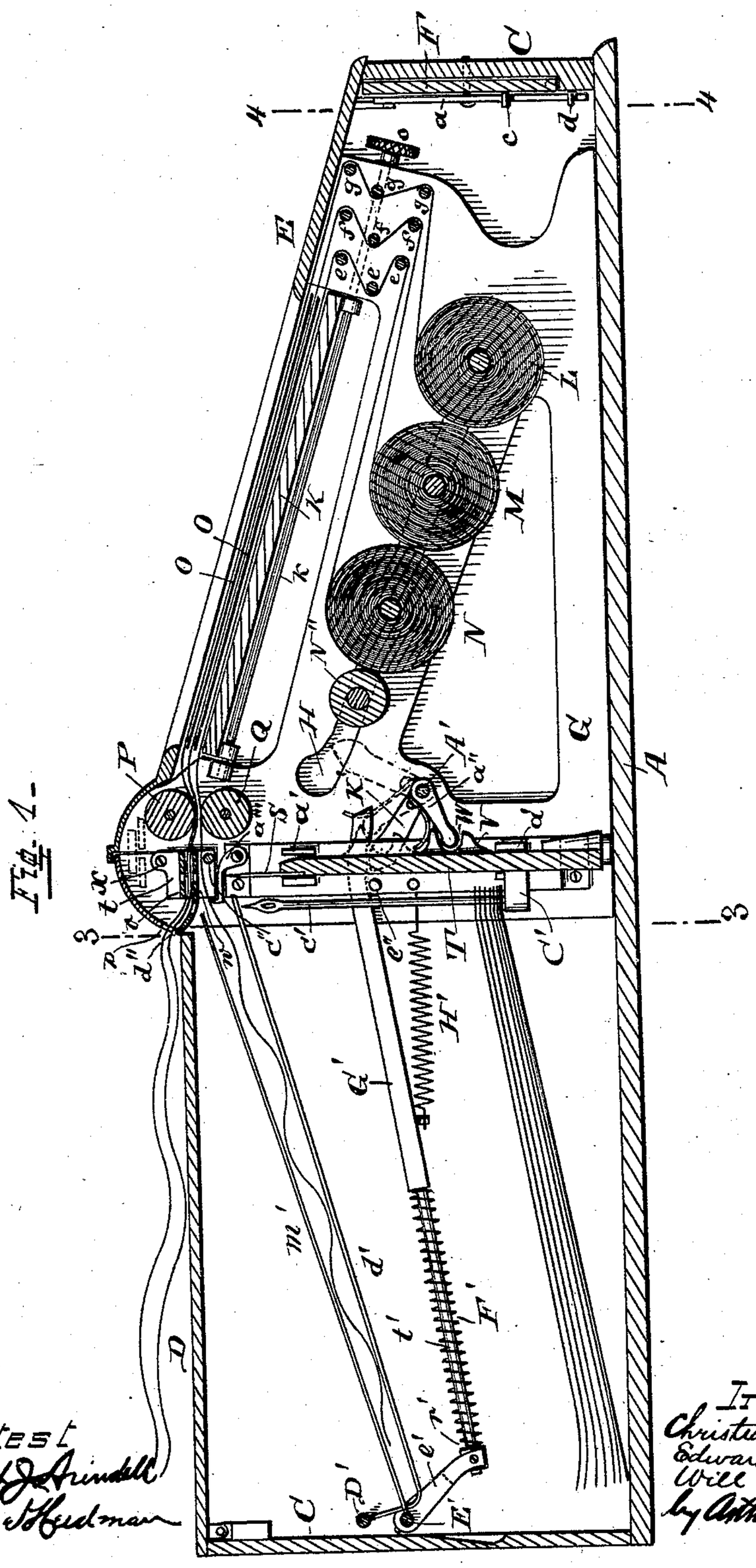

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

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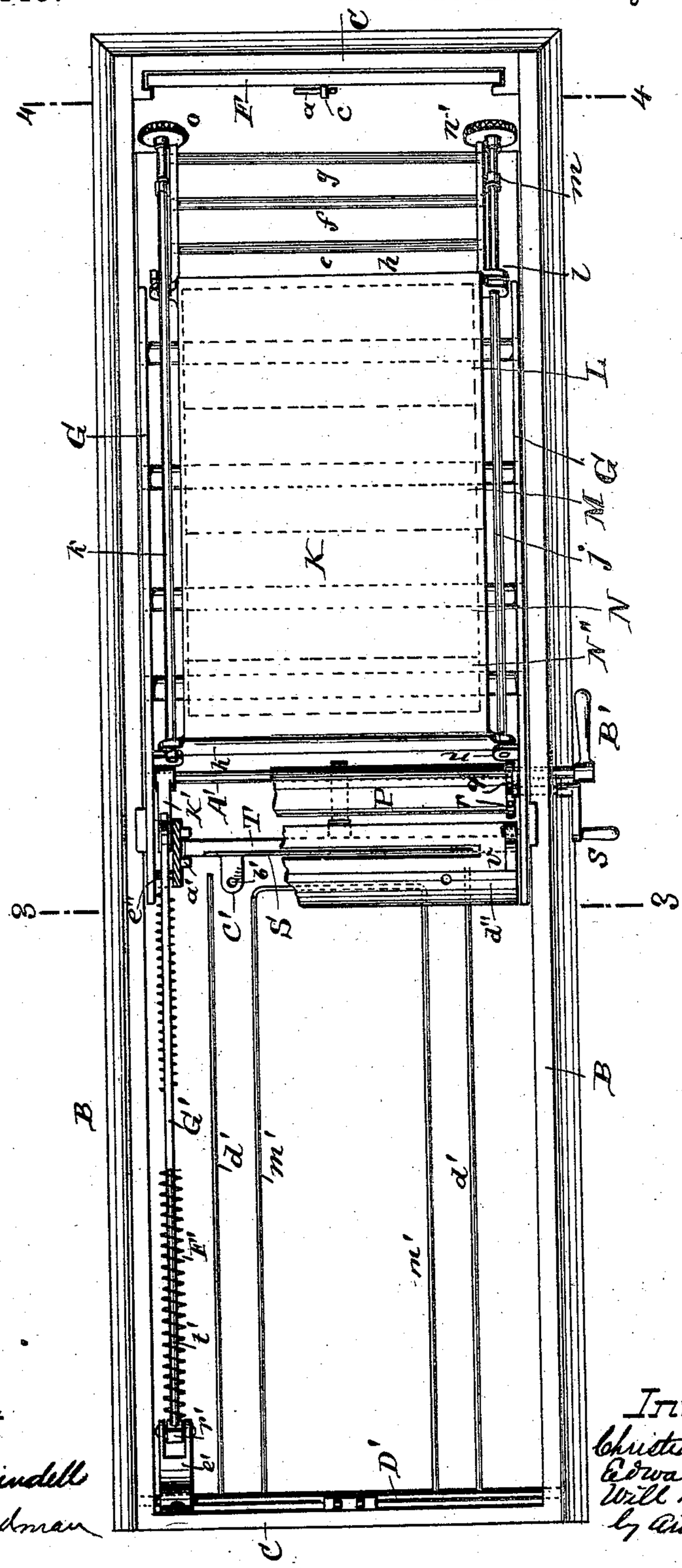

Fig. 2.

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(No Model.) 3 Sheets—Sheet 3.

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Fig. 3.

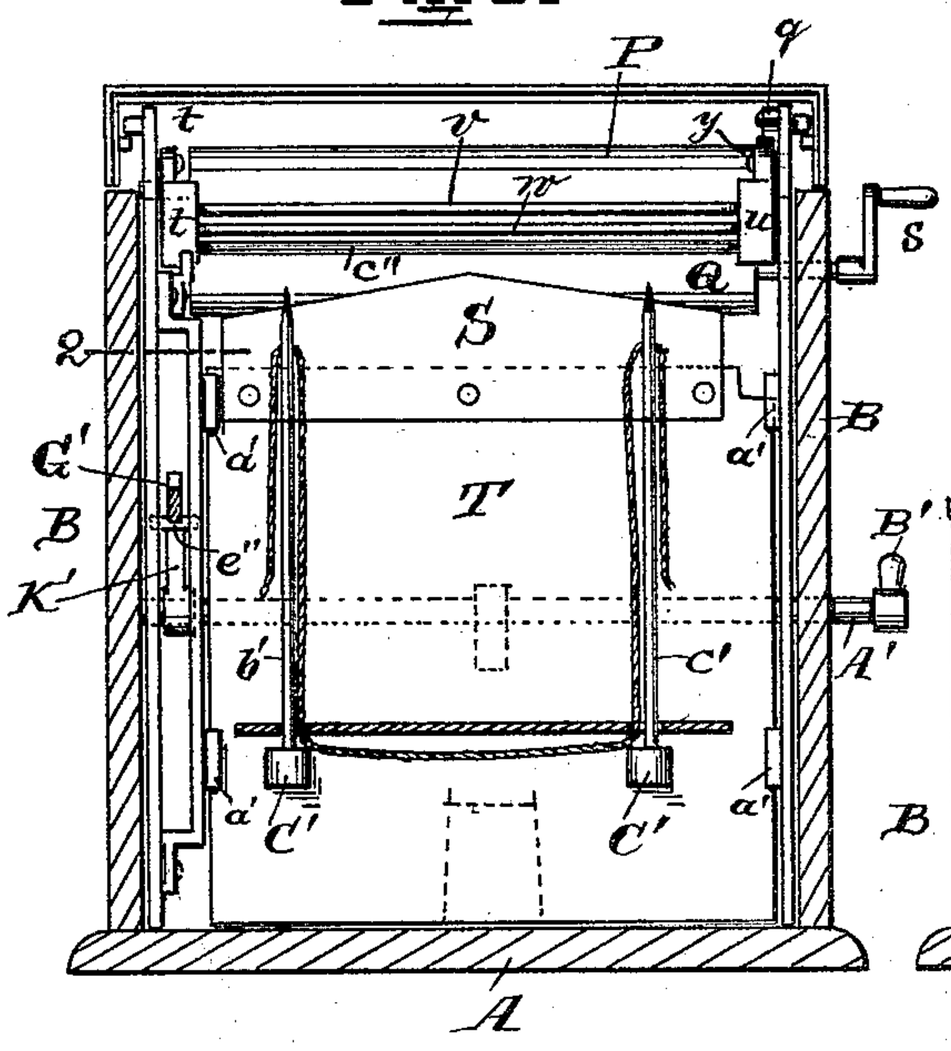


Fig. 4.

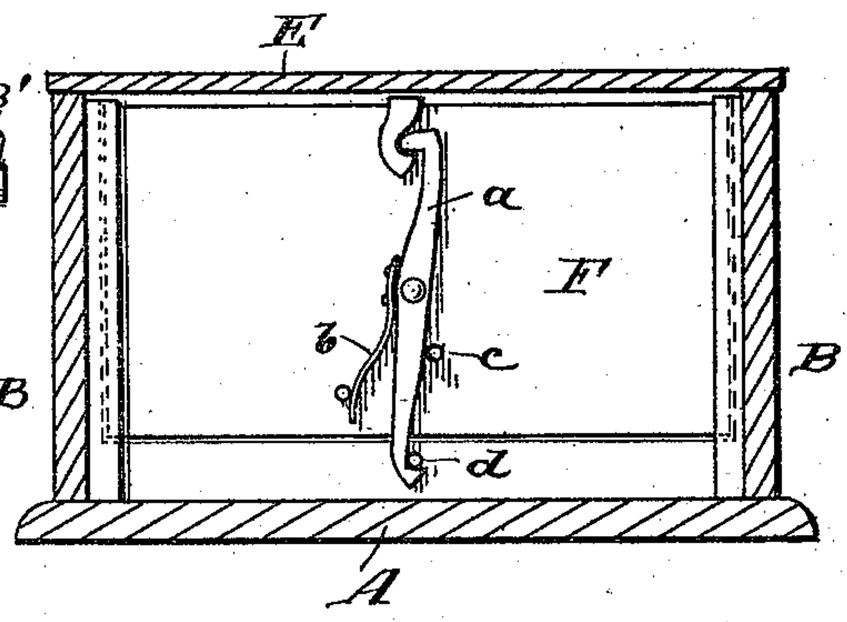
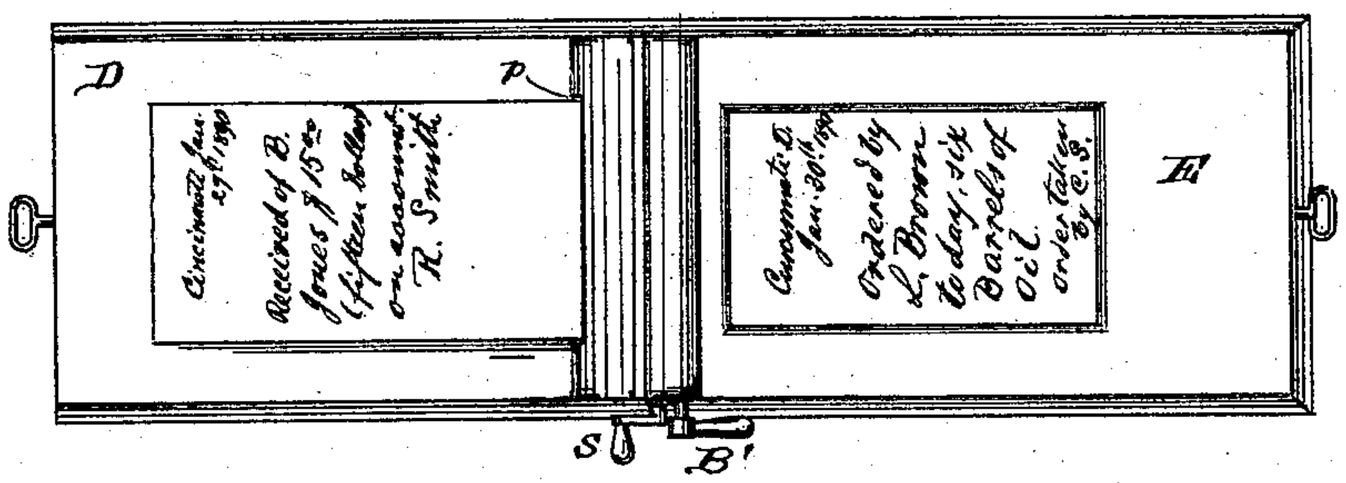


Fig. 5.



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UNITED STATES PATENT OFFICE.

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AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 455,445, dated July 7, 1891.

Application filed February 3, 1890. Serial No. 339,055. (No model.)

To all whom it may concern:

Be it known that we, CHRISTIAN J. WEINMAN, EDWARD E. EUCHENHOFER, and WILL M. KINNARD, citizens of the United States, residing in the city of Dayton, county of Montgomery, and State of Ohio, have invented certain new and useful Improvements 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.

Our invention relates to improvements in apparatus for registering autographic writings the original of which is to be used by the writer, while duplicates thereof are automatically filed away and preserved.

The first part of our improvements relate to the means of supporting the paper-rolls in the paper-supply compartment, whereby the rolls can be easily and expeditiously inserted in place and each roll will act as a tension for the other; and the improvement consists in journaling the rolls one above the other in an inclined slot or groove in the frame-work of the paper-supplying compartment, so that as many rolls as desired may be used and each will serve as a tension-weight for the one below, while a separate tension-roller may be added to give proper tension to the uppermost roll.

The second part of our improvements relate to the cutting appliances used to sever the written sheets, whereby any chance of failure on the part of the knife to perform its work is reduced to a minimum and perfect action guaranteed, and this consists in arranging above the knife two slotted bars, one above the other, so that any failure to cut as the knife is passing through the first bar is remedied at the upper bar.

The third part of our improvements relate to the mechanism for filling the duplicate sheets on the filing-pins, and consists of mechanism to be hereinafter more fully described, whereby the sheets as they are pierced by the filing-pins are forced down at once to the bottom of the file.

The various improvements consist of certain novel constructions and arrangement of parts to be hereinafter more particularly pointed out and claimed.

In the drawings, Figure 1 is a central longitudinal section of the register. Fig. 2 is a top plan view of the register with top covers removed. Fig. 3 is a cross-section of the register, taken on line 3 3, Fig. 2. Fig. 4 is a back view of the sliding panel in the front end of the apparatus and cross-section of the register on line 4 4 of Fig. 2. Fig. 5 is a top plan view of the register as in use.

The apparatus is inclosed in the usual box or casing, consisting of bottom A, sides B B, and ends C C, with horizontal top D and inclined top E cut away to allow for the writing on the writing-tablet K. These top covers are removable to allow access to the two compartments formed by the cutting and filing appliances, which occupy the central portion of the case, each top being supplied with an independent lock, so that access may be had to either compartment independently of the other.

To allow freer access to the paper-supplying compartment, the end C is cut away and the sliding panel F inserted, sliding in grooves in the case, so that when the top E is removed the panel F may be also slid out and the compartment completely opened up. This panel F is provided with a double-headed catch *a*, pivoted thereto, the spring *b* keeping the catch against the pin *c*. A pin *d* in the end C, when the panel is slid to place, catches over the lower head of the bar *a*, and thus locks the panel in place, while the upper head of the bar *a* is in the same way locked to the top E.

A metallic frame-work consisting of sides G G is securely fastened within the box or casing to support the working parts of the apparatus. In the opposite sides of this frame-work the long inclined slots H H are formed, and the paper-rolls L, M, and N are journaled in this inclined slot one above the other, so that the roll M will rest on and serve as a tension for roll L, and so on. As many rolls may be used as it is desired to make copies; but we find that three rolls to supply paper for one original and two duplicate copies are all that are usually required. On the top of the upper roll a metallic tension-roller N″ is placed, journaled with the roll in the inclined slot, which serves as a tension for the upper roll. The paper upon which the writings are

to be made is supplied by these rolls L, M, and N, the paper from the three rolls passing up in the same direction over the three sets of guide-rods *e e e*, *f f f*, and *g g g*.

K is the writing-tablet upon which copies are made. This tablet is supported by the cross-bars *h h* and rods *j k*, which together form a rectangular frame, the rod *k* being arranged so that it can be raised up independently of the rest of the frame, being held down to the cross-bars by a catch, which can be released, allowing the rod *k* to be separated from the cross-bars. The other rod *j* passes loosely through ears *l*, *m*, and *n* on the frame, which thus forms a hinge upon which the tablet can be raised up and swing to the side of the apparatus. The copying medium O O is moved on the rods *j k* and from side to side, as occasion may require, by the thumb-screws *n' o*. The paper from roll N is passed over the face of the tablet K and the copying-paper brought down over it. The paper from roll M is passed in the same way between the two sheets of copying-paper, and the paper from roll L is passed over the top of the second sheet of transfer-paper. In this way any writing made on the top sheet will be transferred to the other two, and duplicates thus made.

P and Q are the gripping-rollers between which the paper is passed and fed, one sheet into the filing-compartment and the others out through the slot *p* on top of the register. The lower roller is provided with a crank *s*, by which it is operated, and a dog *q* and ratchet *r* on the upper roller-shaft prevent the roller from being rotated in the wrong direction.

Immediately in front of the feeding-rollers and pivoted to the frame on opposite sides by the screws *x* and *y* are the small castings *t* and *u*, to which are securely soldered the bars *v* and *w*, extending horizontally from side to side. These bars are slotted longitudinally to receive the cutting-knife. This cutting-knife S is a thin steel knife-blade raised at the center to give a shearing cut, and is securely riveted to a carrier-frame T, consisting of a rectangular plate, which slides up and down between the guides *a' a'* on the supporting-frame. At the central portion of the bottom of this frame T at the back is extended upward an arm V integral therewith, which arm is grooved or hollowed out at its upper end to form a tooth or cog W.

To the rear of the carrier-frame the shaft A' is located, journaled in suitable bearings in the frame-work and operated by the crank B'. Attached thereto at the central part of this shaft an arm or fixed pawl *a''* is rigidly attached, which pawl engages with the tooth W, so that when the crank B' is revolved the arm V will raise the frame and knife.

Integral with the base and carrier-frame T and extending out at right angles thereto are the projections or arms C' C', on which are rigidly attached in an upright position the filing-pins *b' c'*, which are thus raised and lowered simultaneously with the knife. These pins are hollowed or grooved and carry a piece of twine therein extending from one needle to the other, with which twine when the files are removed they may be tied or bound up.

When the knife-blade S is raised by operating the crank B, it passes at once up through the slots in the bars *v* and *w*, and the needles likewise pass up through holes in an extension of the bar *v* made to receive them. When the paper strips are passed through the feeding-rollers, the two upper sheets are passed between the slotted bars *v* and *w*, while the third strip is passed over the rod or support *c''*, which extends from side to side immediately underneath the bar *w*. This bar *w* has an extension *d''*, curved upward to assist in delivering the upper sheets of paper through the slot *p*. In order to render the passing of the sheets of paper between the knife-bars as easy as possible when the apparatus is being stocked with paper, the frame carrying the bars is pivoted so that the bars can be raised into a vertical position, and then the paper strips more easily pass through. A spring-catch *a'''*, pivoted to the frame, catches over the edge of the casting *t* and holds the knife-bars in place when in use.

At the rear of the filing-compartment in suitable posts or supports is pivoted the horizontal shaft D'. This shaft carries the long wire fingers or arms *d' d'*, which extend upward and outside of the needles to a point slightly above the point of the needles. The object of these fingers is to support the duplicate strip being filed and prevent it curling up or otherwise getting out of place.

Immediately underneath the shaft D' is journaled a second shaft E', and upon this shaft the arms or fingers *d' d'* rest, as shown in Fig. 1. The shaft D' will revolve upward and the fingers can be thrown up and back against the end of the case whenever it is desired to get at the paper-files. The shaft E' carries an arm *e'*, affixed thereto at one end close to the side of the case. This arm is forked, as shown in Fig. 2. Between the forks is pivoted the box *r'*. Through this box a round bar *t'* works loosely, which bar is a continuation of and rigidly attached to the end of the bar G'. A coiled wire spring F' connects the box *r'* with the end of the bar G', surrounding the round bar *t'* throughout its length. The flat bar G' extends along the side of the case a short distance into the paper-supply compartment. The inner end of this bar G' is connected with the side of the case by the coiled wire spring H', and a pin *e''* serves to support the bar.

Affixed to the shaft A', operating the knife-carrier frame, is a second arm K', immediately under the bar G'. The position of this arm is such that as the shaft A' is operated to raise the cutting-knife this arm K' lifts up and finally passes by the bar G'. As the shaft A' reaches its farthest point of ro-

tation in raising the knife and filing-needles when the knife and filing-pins have done their work and are returning to place, the arm K′, returning also, comes into contact with the end of the bar G′ and pushes it forward against the action of the spring H′.

Permanently affixed to the shaft E′ and extending out therefrom to a point above the point of delivery of the sheet to be filed is the wire frame *m′*. The movement of the bar G′ pushes over the round bar *t′*, pivoted to the arm, and the coiled spring F′ frictionally grasping this bar and bearing against the box *t′*, pivoted to the arm. The arm is rotated, and with it the shaft E′, and thus the wire frame *m′* is brought down heavily on the paper strip to be filed, and thus driving the sheet down on the pins and packing the sheets at the base of the pins. When the filing-pins are almost filled with sheets, the wire frame *m′* cannot revolve to its full extent, and in that event the round bar *t′* slips through the box *r′* and the coiled spring F′ alone does the work; but when only a few sheets are packed on the needles the frictional hold of the spring F′ on the bar *t′* holds the bar, and in that way the arm *e′* is pushed over and the wire frame *m′* brought down on the sheets. The bar G′ is curved downward at its outer end, as above stated, so that while the arm K′ is pushing the bar G′ over the under side of the bar is brought to bear against the pin *e′*, thus raising it somewhat, so that the bar is tripped and released from engagement with the arm during its operation, and the spring H′ at once draws back the bar, and the shaft E′, and with it the wire frame *m′*, is returned to its original position.

We do not herein broadly claim an autographic register having a filing-compartment and a filing arm or frame to drive the sheets severed upon a file; but our improvements in this respect relate to one specific construction, as above described, and as pointed out in the claims hereunto annexed.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an autographic register, the combination, with the frame, of a series of paper-rollers journaled in an inclined slot therein one above the other, so that each roll will serve as a tension for the one below, substantially as shown and described.

2. In an autographic register, the combination, with frame-work having inclined slots on opposite sides to receive the paper-rolls, of a series of paper-rollers resting therein one above the other, and a tension-roll resting on the topmost roll to give tension thereto, substantially as shown and described.

3. In an autographic register, the combination, with the cutting-knife operating against the paper to be cut, of two or more slotted knife-bars arranged on the other side of said paper to receive and act as cutting-edges for the knife, substantially as shown and described.

4. In an autographic register, the combination of a series of paper-rollers, writing-tablet, and transfer-paper upon which copies are to be made, feeding mechanism to unwind said paper, reciprocating cutting-knife operating upon said paper, and slotted double knife-bars arranged opposite said cutting-knife, and between which bars the paper is passed, said bars arranged to receive said knife, and thus sever the sheets, substantially as shown and described.

5. In an autographic register, the combination, with a cutting mechanism and a filing-compartment and filing mechanism consisting of a rock-shaft located at one end of the said compartment, of filing-arms extending therefrom, a rock-arm extending from said shaft, a bar connected to the rock-arm and extending across one side of the filing-compartment, a second rock-shaft located at the other end of the compartment, and a rock-arm mounted on said shaft and arranged to come in contact with said bar and operate the same and through it the filing-arms, all substantially as shown and described.

6. In an autographic register, the combination, with the cutting and filing mechanism, of a shaft carrying fingers to assist in the filing, bifurcated arm attached thereto, box pivoted thereon, and bar working through the same, with springs H′ and F′ connected thereto, substantially as shown and described.

7. In an autographic register, the combination, with shaft E′ and filing-frame thereto attached and bar G′ connected therewith, of the shaft A′ and arm K′ to operate said bar G′, which bar is curved at its outer end, and pin *e″* to support the same, so that said bar G′ will be tripped during its operation, substantially as shown and described.

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WILL M. KINNARD.

Witnesses:
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