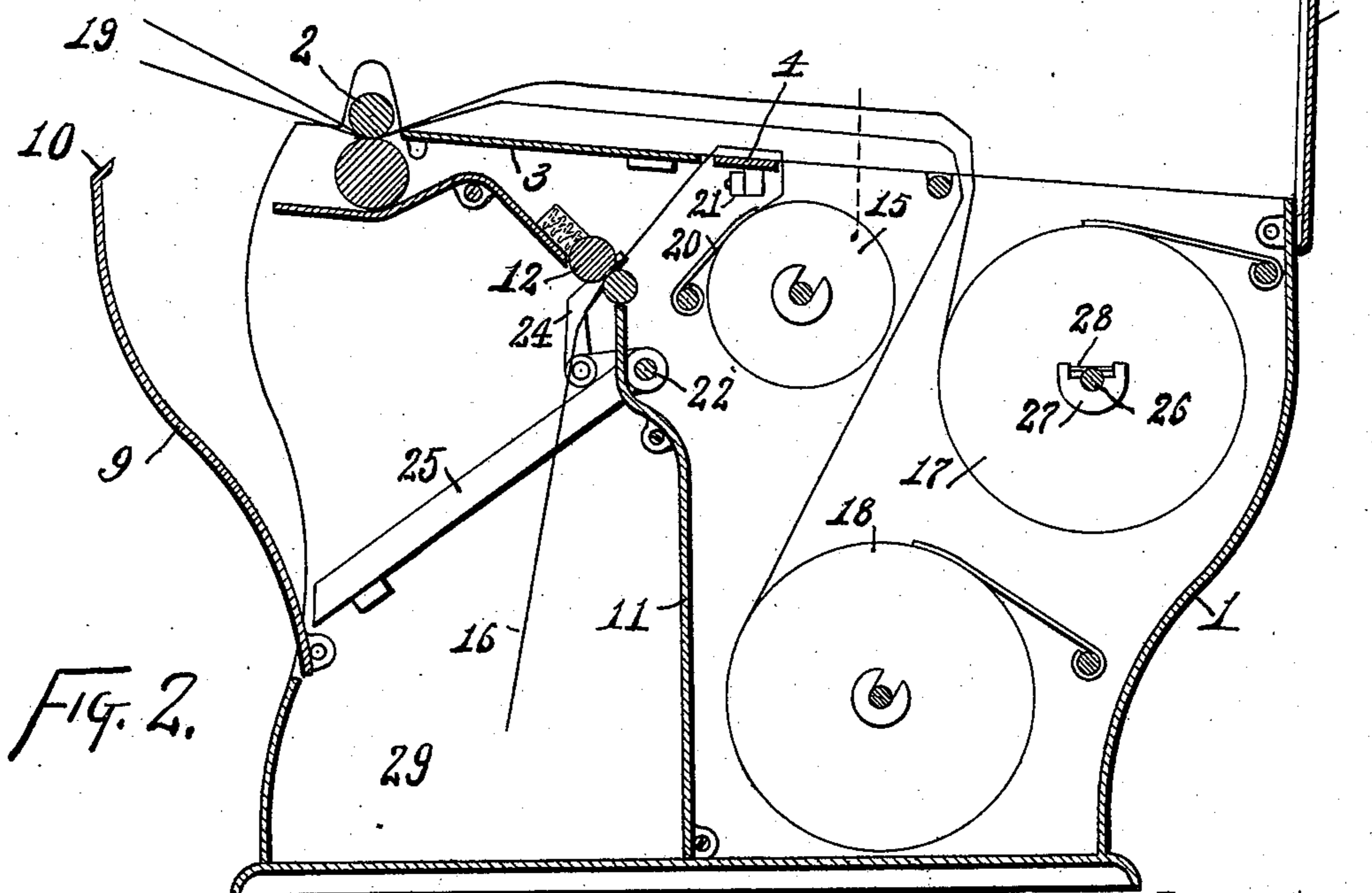
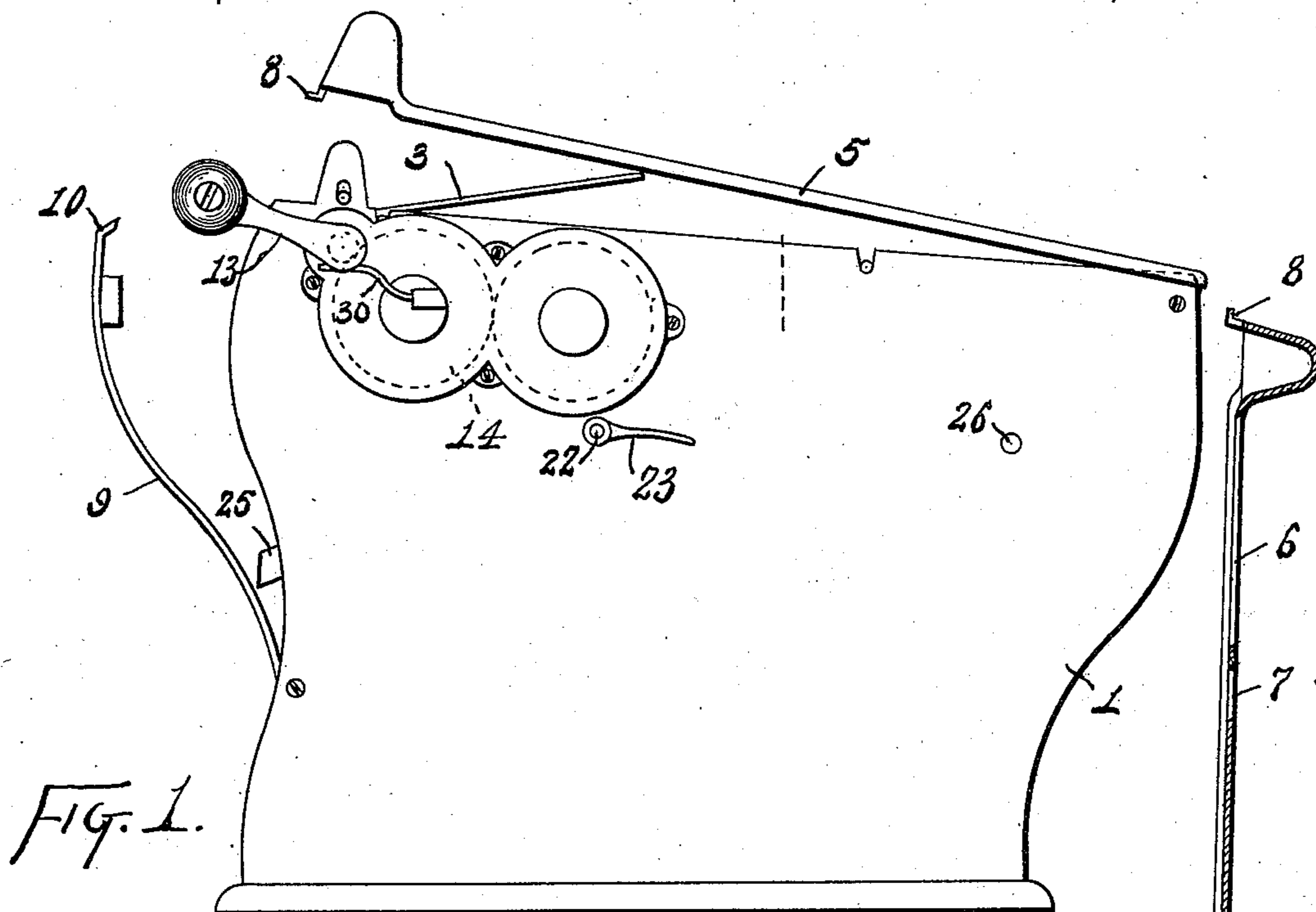


2 Sheets—Sheet 1.

No. 577,178.

Patented Feb. 16, 1897.



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Inventor

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(No Model.)

2 Sheets—Sheet 2.

T. F. SCHIRMER.
AUTOGRAPHIC REGISTER.

No. 577,178.

Patented Feb. 16, 1897.

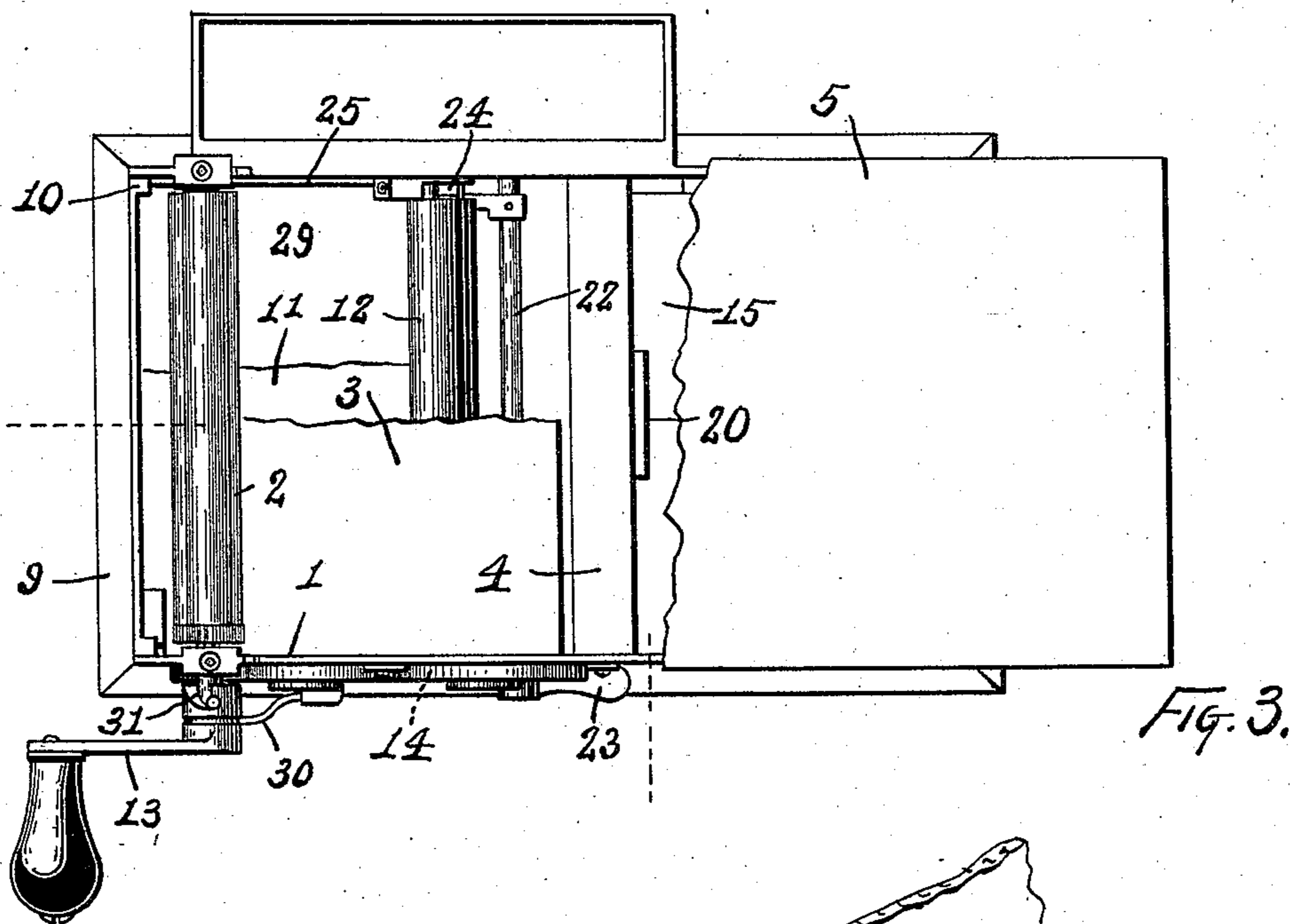


Fig. 3.

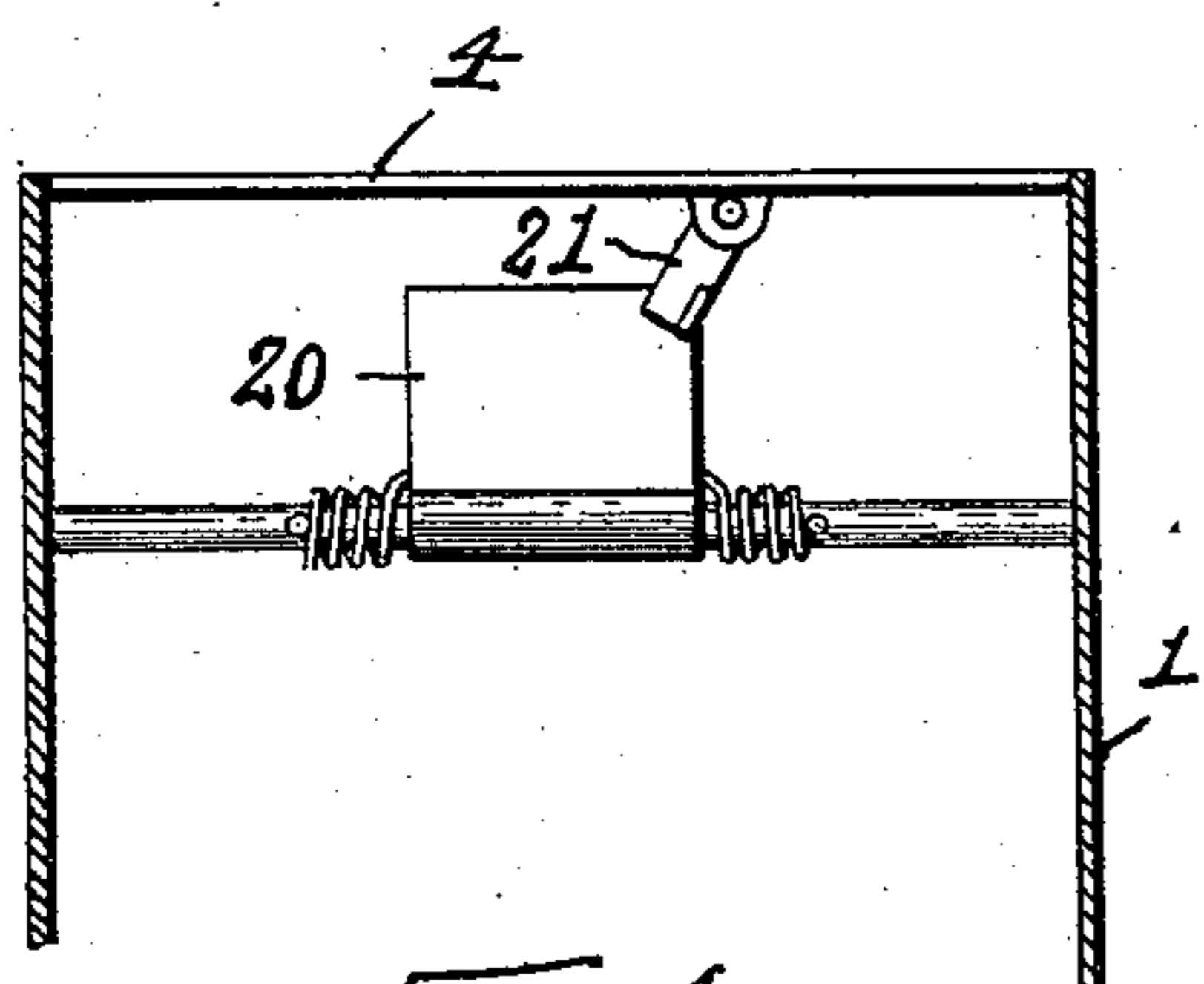


Fig. 4.

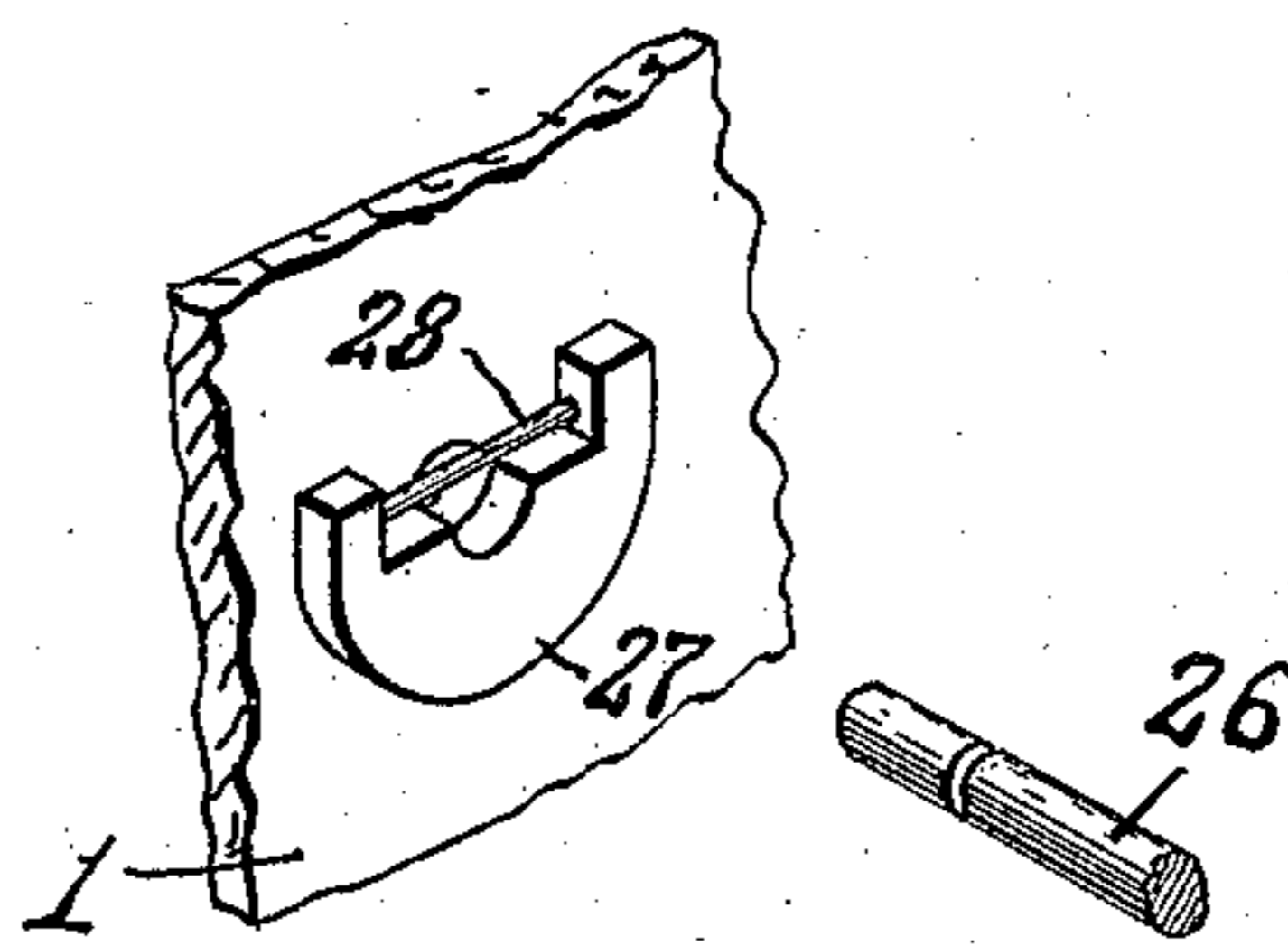


Fig. 6.

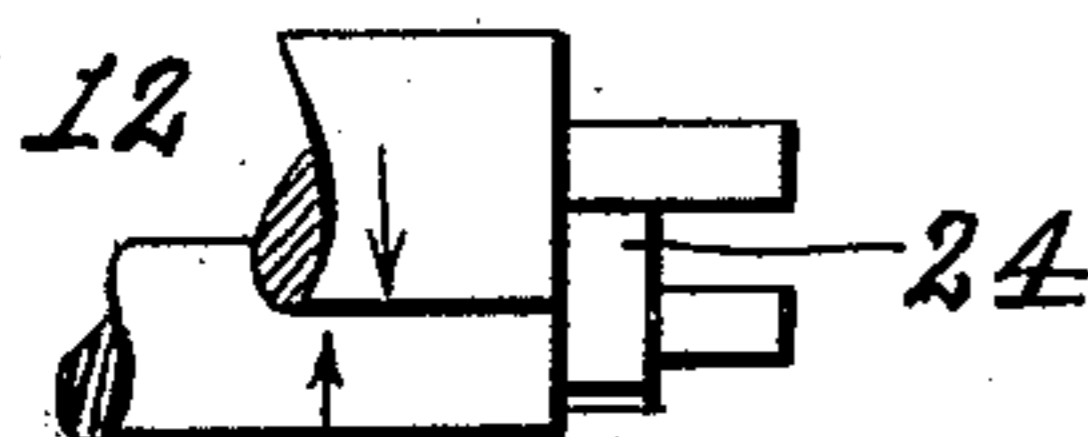


Fig. 5.

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UNITED STATES PATENT OFFICE.

THEODORE F. SCHIRMER, OF DAYTON, OHIO, ASSIGNOR TO THE EGRY
AUTOGRAPHIC REGISTER COMPANY, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 577,178, dated February 16, 1897.

Application filed September 18, 1896. Serial No. 606,285. (No model.)

To all whom it may concern:

Be it known that I, THEODORE F. SCHIRMER, of Dayton, Montgomery county, Ohio, have invented certain new and useful Improvements in Autographic Registers, of which the following is a specification.

My invention, which pertains to improved details in the construction of autographic registers, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a register exemplifying my invention, the top, the main tablet, and the door appearing as partly open; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a plan of the same with parts broken away; Fig. 4, a vertical longitudinal section of the casing, exhibiting one of the tension-fingers; Fig. 5, a plan at one end of the summary feeding-rolls, and Fig. 6 a perspective view of a portion of the casing and one of the paper-roll spindles.

In the drawings, 1 indicates the usual casing; 2, the usual main feed-rolls at the front upper portion thereof; 3, the main tablet, disposed across the casing to the rear of the feed-rolls, this tablet being removably supported in the casing; 4, the summary-tablet in the plane of and forming a rearward prolongation of tablet 3, the contiguous edges of the two tablets being somewhat separated, so as to form a slot between them; 5, the cover of the casing, closing down over the tablets above the papers lying on the tablets; 6, the main opening through the cover, through which the writing is done on the papers lying over the main tablet 3; 7, the summary-opening in the cover, in position to permit writing to be done over the papers lying over the summary-tablet 4; 8, a lip projecting from the free extremity of cover 5, this lip projecting horizontally when the cover is closed down in normal position; 9, the end-door at the front of the register, hinged at its base to the casing; 10 an inwardly-projecting lip at the free extremity of this door and adapted to engage over lip 8 when the cover is down and the door closed; 11, a transverse partition in the casing, dividing the casing into two compartments, one a supply-compartment to the rear of the partition and the

other a storage-compartment forward of the partition, the storage-compartment having its front closed by end door 9; 12, a pair of summary feeding-rolls disposed across the casing at the slot or opening in partition 11; 13, a crank on one of the main feed-rolls 2; 14, gearing suitably incased and connecting main feed-rolls 2 with the summary feed-rolls 12, so that the rolls turn in unison, the proportion of the gearing being, however, such that the summary feeding-rolls will feed paper very much slower than the main rolls—say, for instance, the main feed-rolls feeding an ordinary bill-length of several inches while the summary feed-rolls feed their paper but half an inch; 15, supply-roll of summary-paper mounted on a spindle extending across the supply-compartment, as usual; 16, the summary-paper received from roll 15 and passing up and forwardly over summary-tablet 4 and then down into the casing and then between summary feed-rolls 12 and into the storage-compartment, Fig. 2, showing all of the papers in abnormal separate relationship, so that their courses may be more readily followed; 17, supply-roll of bill-paper; 18, supply-roll of duplicate bill-paper; 19, the two bill-papers, coming from rolls 17 and 18 and passing forwardly over both tablets and between main feed-rolls 2, the forwardly-projecting portion of these papers beyond the feed-rolls being susceptible of being torn off, as usual; 20, the usual spring tension-finger, pivoted on a cross-shaft and bearing yieldingly against summary-roll 15 to give tension to the draft of the paper from that roll; 21, a latch disposed under the summary-tablet and adapted, when tension-finger 20 is sprung up to inactive position to retain the tension-finger, so as to permit the ready insertion and removal of paper-roll 15; 22, a pivoted shaft disposed across the casing near summary feed-rolls 12; 23, a handle on this shaft on the outside of the casing; 24, wedges carried by arms fast on shaft 22, these wedges engaging between the journals of the summary-rolls and adapted, when handle 23 is operated, to spread the summary-rolls apart, one of the summary-rolls being spring-mounted; 25, an arm fast on wedge-operating shaft 22 and projecting forwardly, so that when the wedges

move to roll-opening position the extremity of arm 25 will interfere with the closing of end door 9, and end door 9, when closed, preventing the movement of arm 25, and hence
 5 preventing the spreading of the summary-rolls; 26, spindle of supply-roll 17, which spindle is applied to position by being passed through apertures in the side walls of the casing and through the bore of the roll of paper;
 10 27, a half-bearing for spindle 26, disposed against one of the side walls of the casing and on the inside of the casing; 28, a spring-wire extending over the half-bearing and secured at each end to ears projecting up from the
 15 half-bearing and adapted to have its unfixed mid-portion impinge against spindle 26 when the spindle is in place; 29, the storage-compartment of the casing; 30, a spring-wire supported by the casing and impinging
 20 against the hub of crank 13, the crank being removably fitted upon its feed-roll and the hub having a circumferential groove engaged by spring 30 when the crank is in working position on the roll, and 31 a spiral slot in
 25 the inner end of the hub of crank 13 and engaging a pin projecting from the shaft of the roll on which the crank is fitted, the curvature of this spiral slot being such that if the crank be turned in the non-feeding direction
 30 the crank will unscrew, so to speak, from the roll-shaft.

When crank 13 is turned in the feeding direction, its spiral slot has a hooking engagement with the pin of the roll-shaft, and spring-wire 30 prevents the accidental unscrewing
 35 of the crank by reason of the crank being unbalanced. If the crank be turned in the wrong direction, then spring-wire 30 will yield and the crank will shift endwise on the roll-shaft
 40 and not turn the rolls.

In applying spindle 26 the spring-wire 28 bites upon the spindle and prevents its accidental displacement, and it is preferable that the spindle be circumferentially grooved
 45 where the wire engages to enhance the holding quality of the wire.

The usual transfer-papers will be employed between all the papers as they pass over the tablets. Writing done through opening 6 becomes effective on bill-papers 19, but not on
 50 the summary-paper. The summary-entry, made through opening 7 in the cover, becomes effective on all of the papers. After the entries have been made then the crank is turned,
 55 thus projecting the two bills 19 from the register and permitting them to be torn off, the summary-paper being fed forward into storage-compartment 29. Summary-tablet 4 is rigidly attached to the side walls of the casing,
 60 while main tablet 3 is removable to permit the proper threading forward of the summary-paper in rotating the register. In loading the register the summary-roll 15 is applied while its tension-finger 20 is held up by latch
 65 21. In threading the summary paper through between its feed-rolls 12 the rolls may be spread apart by using handle 23; but this

spreading of the rolls can only be done when door 9 is opened, and as that door is locked it follows that the summary-rolls cannot be
 70 spread without authority of the key-holder, and before door 9 can be closed it is necessary to close the summary-rolls. The closing of the door does not cause the closure of the
 75 summary-rolls, but merely renders their closure necessary. When the summary-rolls have been opened by the operation of the wedges and the summary-paper passed forward between the rolls, it is generally desirable to give the rolls a few turns to get the
 80 papers in good working condition before the register is closed. In case through oversight the summary-rolls should not be closed, that is to say, the wedges still engaging between them, the first effect of the turning of the
 85 summary-rolls is to work the wedges to inactive position by reason of the frictional engagement of the rolls upon the wedges, the summary-rolls thus automatically closing as soon as they are started into action. This
 90 prevents that slackness in the summary-paper which would result if after threading up the papers the main papers were fed forward by the main feed-rolls while the summary feed-rolls were still open.
 95

It is to be observed that partition 11 is gapped or slotted at the location of rolls 12 and that the partition is completed by the presence of rolls 12 directly in the gap. By
 100 this arrangement the rolls 12 are virtually in neither of the two compartments separated by the partition, but are in the partition itself, and thus visible and accessible in threading the summary-paper from either side of the partition.
 105

It is to be observed in Figs. 2 and 6 that the half-bearing 27 projects from the inside of the case-wall and that the spring 28 is above the half-bearing with its intermediate unfixed
 110 portion in position to engage the spindle when in proper place. Springs arranged outside the case and fixed at one end and free at the other end and arranged to impinge tangentially against the spindle are well known, but such outside springs interfere with the exterior smoothness and cleanliness of the casing,
 115 and in inserting the spindle the spring is quite apt to yield sidewise. If such spring be placed within the casing, then its presence is apt to interfere with the proper placing of the roll of
 120 paper. In the improved construction shown in the drawings the half-bearing 27 forms a boss against which the end of the roll of paper may run without touching the spring, the half-bearing thus protecting the spring, and
 125 the spring, being not only protected, but being also held at both ends in the half-bearing, will not yield sidewise as the spindle is inserted in place.

I claim as my invention—

1. In an autographic register, the combination, substantially as set forth, of mechanism within the casing adapted for the spreading of the feed-rolls, a handle exterior to the
 130

casing for actuating said mechanism, and an arm moved by said mechanism and projecting as an unyielding obstruction to the casing-door when the feed-rolls are spread.

5 2. In an autographic register, the combination, substantially as set forth, of a pair of feed-rolls, wedges engaging between and adapted by endwise motion in one direction to spread said rolls and to be moved in a reverse direction by the rotation of the rolls, and a handle and connecting mechanism for moving said wedges.

15 3. In an autographic register, the combination, substantially as set forth, of a feed-roll having a pin projecting from its shaft, a crank removably fitted on said shaft and having a spiral notch engaging said pin and having its hub circumferentially grooved, and a spring seating in said groove.

20 4. In an autographic register, the combination, substantially as set forth, of a casing, main feed-rolls at the front upper portion thereof, a gapped partition in the casing to the rear of said main feed-rolls, summary feed-rolls

at and closing the gap in said partition and 25 connected with the main feed-rolls, a main tablet at the top of the casing to the rear of the main feed-rolls, a summary-tablet at the top of the casing to the rear of and separated from said main tablet, and supports for supply-rolls supported by the casing to the rear of said partition. 30

5. In an autographic register, the combination, substantially as set forth, of a casing having apertures for the reception of a spindle to be inserted endwise from outside the casing, a half-bearing projecting from one inner wall of the casing below said aperture therein and having ears projecting at each side above the level of the top of such aperture, and a spring-wire extending from one to the other of said ears above said aperture and adapted to impinge tangentially upon a spindle engaging said apertures in the casing. 35 40

THEODORE F. SCHIRMER.

Attest:

ROY G. FITZGERALD,
WM. L. EGRY.