

(No Model.)

F. BENTEL.
AUTOGRAPHIC REGISTER.

No. 438,835.

Patented Oct. 21, 1890.

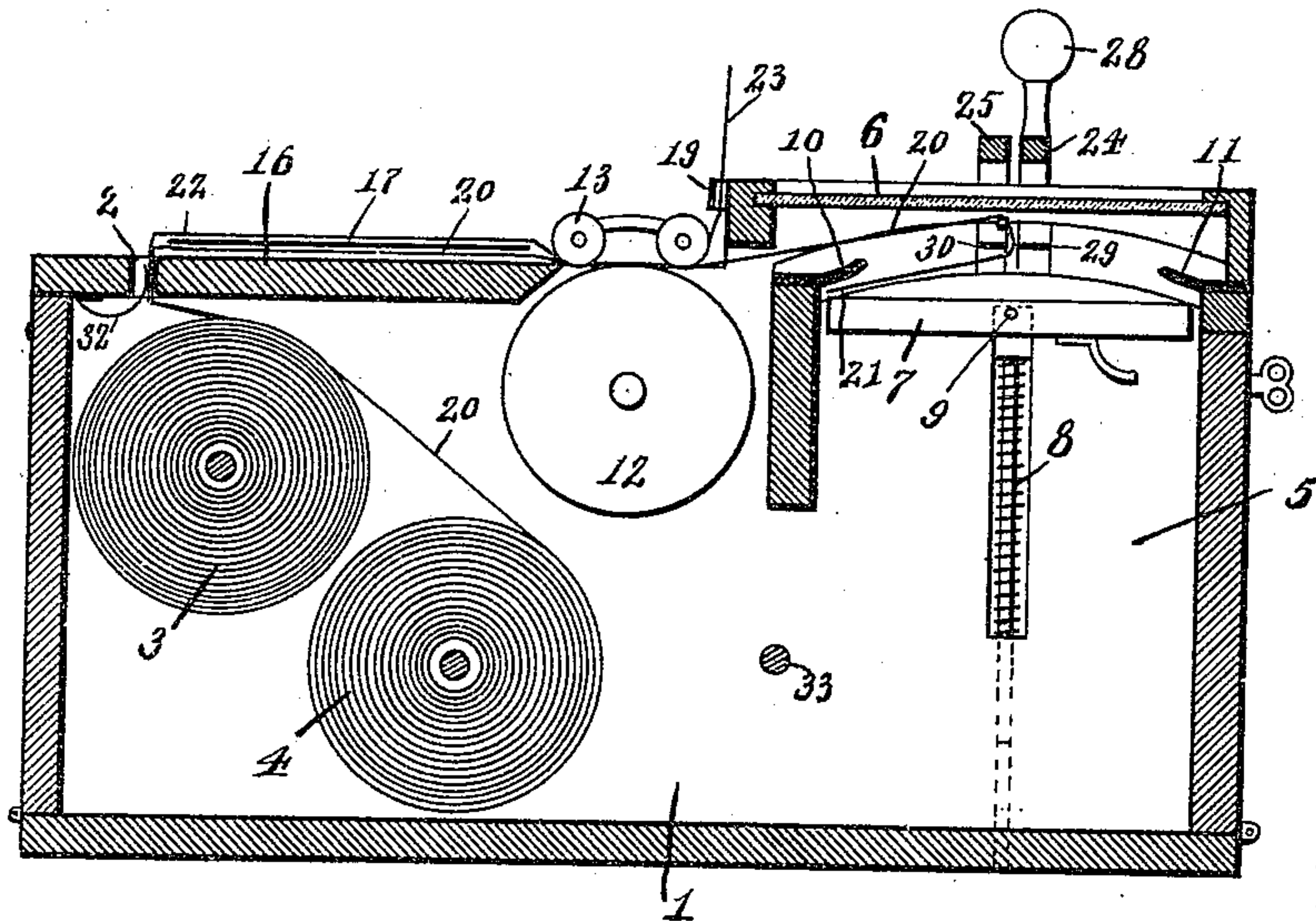


Fig. 2.

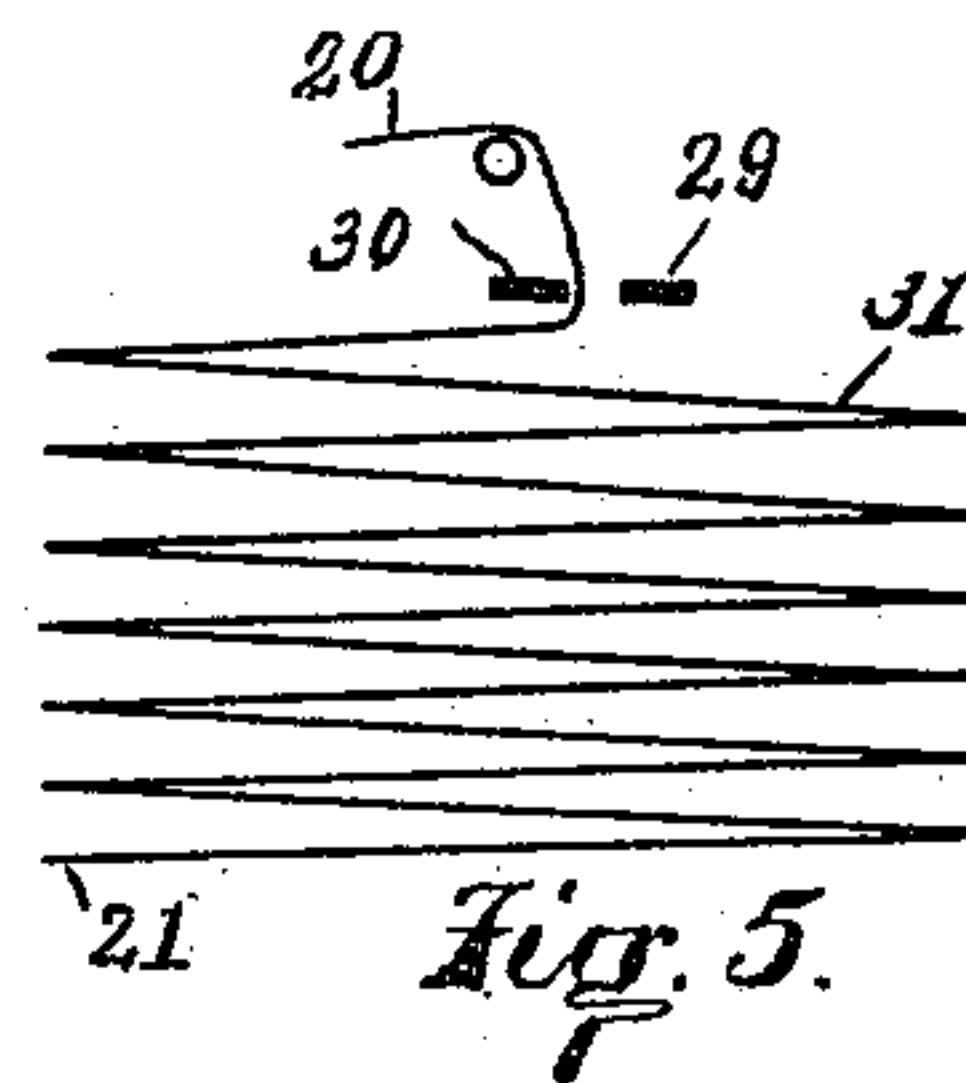


Fig. 5.

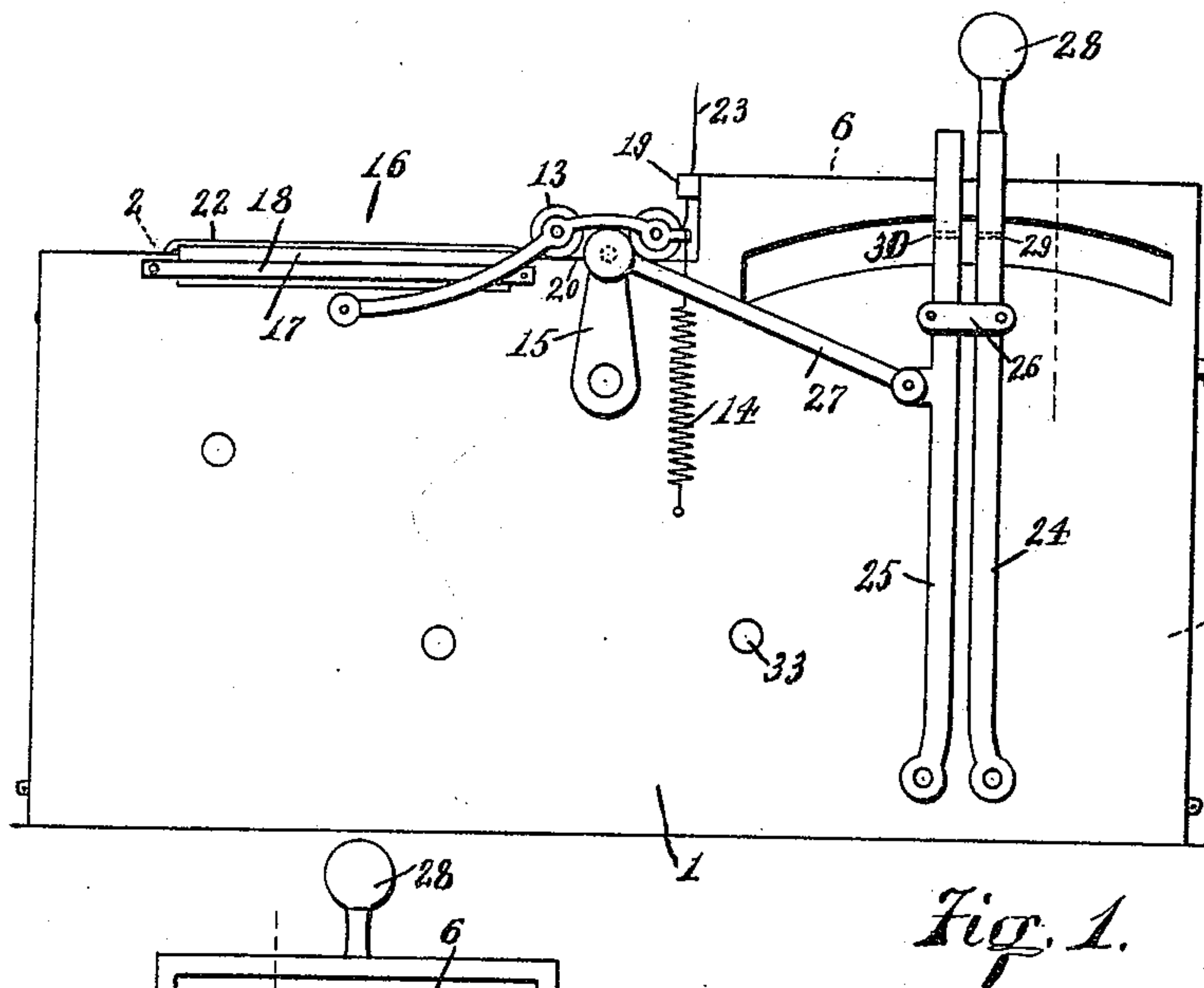


Fig. 1.

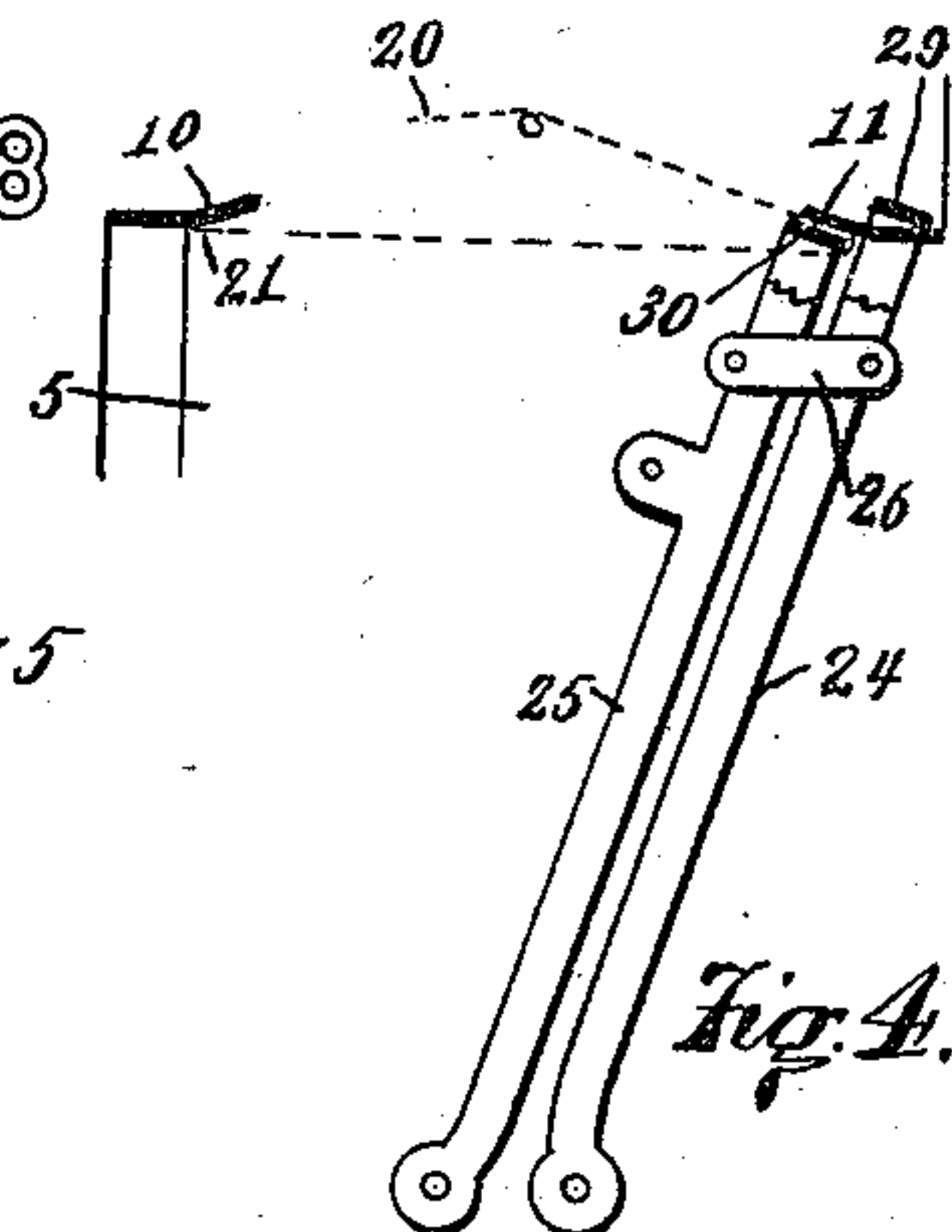


Fig. 4.

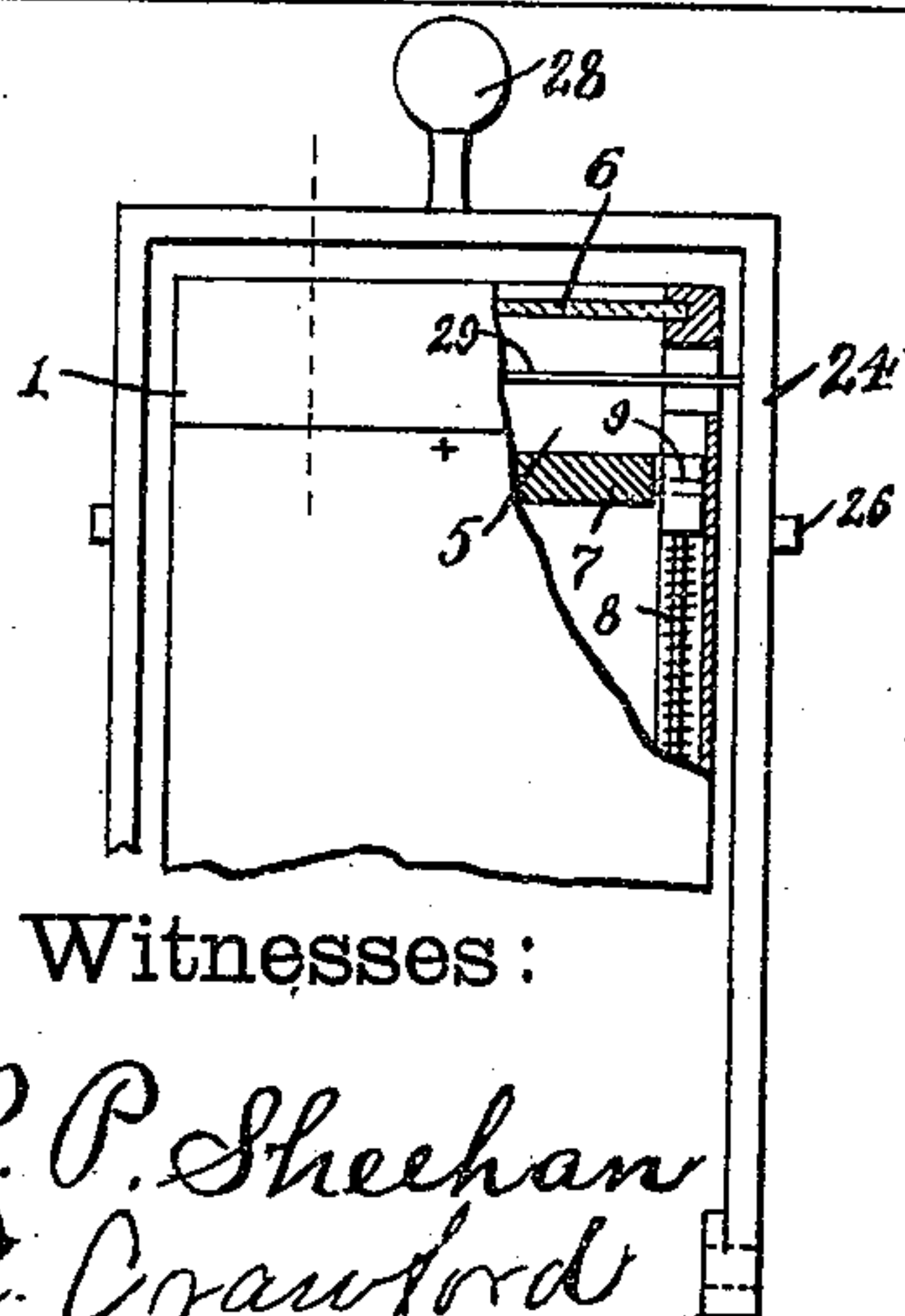


Fig. 3.

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AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 438,835, dated October 21, 1890.

Application filed July 2, 1890. Serial No. 357,566. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BENTEL, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Autographic Registers, of which the following is a specification.

There is in quite common use a class of registering-machines known as "autographic registers," and designed to provide for the production and retention of a fac-simile of a business record. The contrivance may be described in general terms as a box containing two ribbons of paper, a compartment for the retention of the used portions of one of the ribbons of paper, one of the ribbons passing from its source of supply to the outside of the box and over a writing-tablet thereon and thence into the retaining-compartment, a sheet of transfer-paper over said ribbon of paper at the writing-tablet, the second ribbon of paper passing out of the box and over the transfer-paper and to a tearing-blade, and mechanism for advancing the paper ribbons. In using the device the writing is done on the second paper and simultaneously by means of the transfer-paper on the first-mentioned ribbon of paper. When a record has been made, both papers are advanced and the top one is torn off for any desired use and the lower one goes into the retaining-compartment for future use. The paper in the retaining-compartment has generally been wound up into a roll, though in some cases it has been cut and stored in the retaining-compartment in sheets. The sheet system interferes with the continuity of the retained record and renders possible the removal of one of the individual records or the introduction of a false individual record. These demerits are avoided by the system of storing on roll; but this roll system makes it very difficult to inspect a given individual record, as the entire storage-roll may need to be unwound to find it. A special winding apparatus is required to get the storage-roll back into proper shape.

My invention relates to autographic registers of the general class above indicated and is designed to avoid all of the evils referred to.

My improvements will be readily understood from the following description, taken in

connection with the accompanying drawings, in which—

Figure 1 is a side elevation of an autographic register exemplifying my present invention; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a rear elevation, (right-hand end of Fig. 2 is considered as rear,) portions being broken away, exposing the storage-chamber in vertical transverse section; Fig. 4, a side elevation of the tucking-yokes shown in the extreme right-hand position, the tucking-blades appearing in vertical transverse section; and Fig. 5, a side elevation of the retained "book" of paper, the tucking-blades appearing in vertical transverse section.

In the drawings, 1 indicates a case or box of general rectangular form and provided with doors, locks, &c., to permit proper access to its interior; 2, a slot extending across the box through one of these walls, shown as at the front end of the top wall; 3, a roll of paper supported within the box, this paper being hereinafter denominated the "check-paper," for the reason that it will generally consist of a series of printed blank sale-checks or the like; 4, another roll of paper, which will generally be blank paper and which will hereinafter be denominated the "record-paper;" 5, the storage-compartment of the box, in which the completed record is to be stored; 6, a glass over the storage-compartment permitting a view of the top one of the records stored therein; 7, a floating platen forming a floor to the storage-compartment and capable of rising and falling therein; 8, spring-stems at each side edge of the platen, serving to support the platen and press it firmly upwardly and at the same time permit of its being pressed downwardly to accommodate the increasing pile of records; 9, pivots uniting the upper ends of these stems to the platen, whereby the platen is supported at its center of length by the springs, and is at the same time capable of independent motion vertically at either of its ends; 10, a fixed clamp or clip extending across the front upper portion of the storage-chamber and adapted to be forcibly pressed by the front edge of the platen; 11, a similar clip at the rear of the storage-chamber; 12, a feed-roller journaled

in the box and having its upper periphery about even with the top of the box and having a circumference equal to twice the length from front to rear of the storage-chamber; 5 the length of the storage-chamber corresponding substantially with the desired length of check to be dealt with; 13, pressure-rollers above the feed-roller and pressed thereto by springs, one pressure-roller only being really 10 needed, while two, as shown, will be found preferable; 14, the spring for drawing the pressure-rollers toward the feed-roller; 15, a hand-crank on the spindle of the feed-roller; 16, the general rear upper surface of the box, 15 this surface forming the writing-tablet of the apparatus; 17, a sheet of transfer-paper extending across this writing-tablet, as is usual in this class of devices; 18, clamps at the side of the box for holding the side edges of the 20 transfer-paper, if the clamp system be employed in preference to the rollers sometimes employed to hold the transfer paper; 19, a tearing-blade rearwardly beyond the pressure-rollers; 20, the record-paper, running from roll 4 25 and passing out through slot 2, and thence rearwardly under the transfer-paper, and thence between the pressure-rollers and feed-roll, and thence into the storage-chamber; 21, the initial end of the record-paper, clamped between clip 10 and the front edge of the platen, the clamping being effected by the upward 30 pressure of the platen-springs, Fig. 2 of the drawings showing this end of the paper as not being tightly clamped, owing to the fact that openness of the drawing has been considered important to plainness; 22, the check-paper, running from its roll 3 out through slot 2, thence over the transfer-paper, thence along 35 with the record-paper between the pressure-rollers and feed-roll, and thence up behind the tearing-blade; 23, the end of the check-paper, which may be assumed as containing a written check ready to be torn off; 24, a tucking-yoke straddling the storage-compartment, and pivoted to the base thereof, and 40 adapted to oscillate from one end to the other of the storage-compartment; 25, a similar tucking-yoke disposed just in front of the one first mentioned and mounted on a pivotal axis somewhat forward of the first one; 26, links 50 uniting the two yokes so that they oscillate in unison; 27, a link connecting the yokes with the crank 15 of the feed-roller, the stroke of this crank being such as to cause the yokes to properly oscillate from front to rear of the storage-compartment; 28, a handle on the yoke structure to serve as a means for oscillating the yokes if the link 27 be disconnected or dispensed with; 29, a tucking-blade 60 attached to yoke 24 and extending across the storage-compartment over the platen, and adapted, when its yoke is oscillated to the extreme left, to pass just under the clip 10, and also adapted, when its yoke is oscillated 65 to the extreme right, to pass freely above clip 11; 30, a similar tucking-blade in yoke 25, this blade working under clip 11 and above

clip 10 as its yoke is oscillated; 31, Fig. 5, the book of record-paper resulting from the operation of the tucking or folding mechanism; 32, a tension-spring engaging the papers 70 before they reach the writing-tablet and serving to cause the feed-roll to draw the papers neatly and flatly over the writing-tablet, and 33 an extra spindle for an extra roll of paper 75 in case it should be desired to have duplicate checks to be torn off for immediate use, as is quite common, two transfer-papers being employed in such cases.

It will be readily understood from the general knowledge of the class of devices to which 80 this belongs that pencil-writing done at the writing-tablet on paper 22, which is check-paper, will be impressed also upon the lower paper 20, and that by turning the feed-roll 85 forwardly both papers may be advanced until the lower or record paper has gone into the storage-compartment and the upper or check paper projects far enough beyond the tearing-blade to permit the check to be torn off. 90 A written check is thus provided for immediate use and a duplicate of its writing has been made upon a continuous paper, which has gone into the storage-compartment.

We now take up for consideration the disposition of the record-paper within the storage-compartment, so that it may be stored 95 compactly and at the same time be in such form that any individual element of the record may be inspected without the necessity 100 for dealing with a wound-up roll of paper. The record-paper 20 after entering the storage-compartment passes down between the two tucking-blades, and the end of the paper 21 is, as before explained, firmly held by being 105 clamped between the platen and the front clip. As the feed-roll revolves the yokes will be oscillated rearwardly. Consequently, blade 30, which engages in front of the loop of record-paper, will carry the loop to the rear 110 and tuck it firmly under clip 11, leaving the lower layer of the loop flatly stretched upon the platen. As the blade 30, with its loop of paper, enters under clip 11, the rear edge of the platen yields downwardly sufficient for 115 the purpose and, as the blade retreats, the rear edge of the platen rises a trifle and firmly grips the loop, thus retaining it at the rear edge of the platen. While blade 30 has been thus engaged in tucking the paper under clip 120 11 blade 29 has passed idly over that clip, as indicated in Fig. 4. The record-paper, which was before gripped solely at clip 10, has now become gripped at clip 11. When the yokes oscillate toward the front, then tucking- 125 blade 29 engages behind the record-paper now retained by clip 11 and folds a second layer of it down upon the platen and tucks the front edge of that layer under clip 10. In this way successive layers are folded and 130 tucked, the platen yielding downwardly to accommodate the increasing pile. The pile of stored paper will take on the form of a continuously-folded book, as indicated in Fig. 5,

and both the front and rear folded edges of the pile will at all times be gripped by the clips, the grip not being released even while a tucking-blade is passing under a clip.

5 Whenever it be desired to remove the book from the stored compartment, it is only necessary to pull the platen down and withdraw the book. The paper may be torn off and the book removed bodily and a new book started, 10 or the desired inspection of the book may be made and the book then restored to its place under the clips without breaking the paper.

It is to be understood, of course, that the thickness of the book is limited to the falling 15 capacity of the platen. A book two inches thick will be found convenient to handle and quite within the capacity of the machine and generally suited for a full day's work in retail business of sales-checking. The book thus 20 formed will permit of the finding and inspection of any individual element of the record with nearly the same readiness as an ordinary book, and such record-books as they accumulate will be found to store for preserva- 25 tion much more conveniently than rolls of paper. Again, if the system of business calls for the ultimate preservation of the record in sheet form, the folded-book system permits of the cutting being readily done by cutting 30 down the folded edges of the pile, two cuts thus turning the entire record into sheets.

In using the device the crank 15 will be turned a half-revolution for each check to be torn off. This motion also makes one fold in 35 the storage-chamber. This mode of operation is based on the use of checks of uniform length, as is very customary; but some users will prefer that even the check-paper be blank instead of printed, and to use for each 40 check only so much of the check-paper as the

transaction calls for. In such case the feed-roll may be turned the desired distance to expel the proper length of check to be torn off, and the folding will go on as before, except that each fold will not represent a dis- 45 tinct individual check, there being every likelihood that folds will come in the middle of individual records. This would interfere with the cutting-up system—seldom employed, however—but would not interfere with ready 50 finding of an individual check-record by turning the leaves of the book, as before. Link 27 may be disconnected or omitted and the folding may be done by manipulating the handle 28 to oscillate the tucking-yokes, the 55 tucking operation being performed whenever there is sufficient accumulation of record-paper to make one or more folds.

The apparatus illustrated and specifically described is merely an exemplification of the 60 best mode in which I contemplate applying my invention, which is not limited to the details set forth.

I claim as my invention—

In an autographic register, the combina- 65 tion, substantially as set forth, of a storage-compartment, a writing-tablet, a floating platen in the storage-compartment, a feeding device between the writing-tablet and the storage-compartment arranged to feed two 70 ribbons of paper passing over the writing-tablet, and mechanism, substantially as described, for folding one of the ribbons of paper into a book on the floating platen in the storage-compartment.

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