(No Model.) 5 Sheets—Sheet 1.

N. HORN.

BARREL INDICATOR, REGISTER, AND RECORDER.

No. 509,083. Patented Nov. 21, 1893.

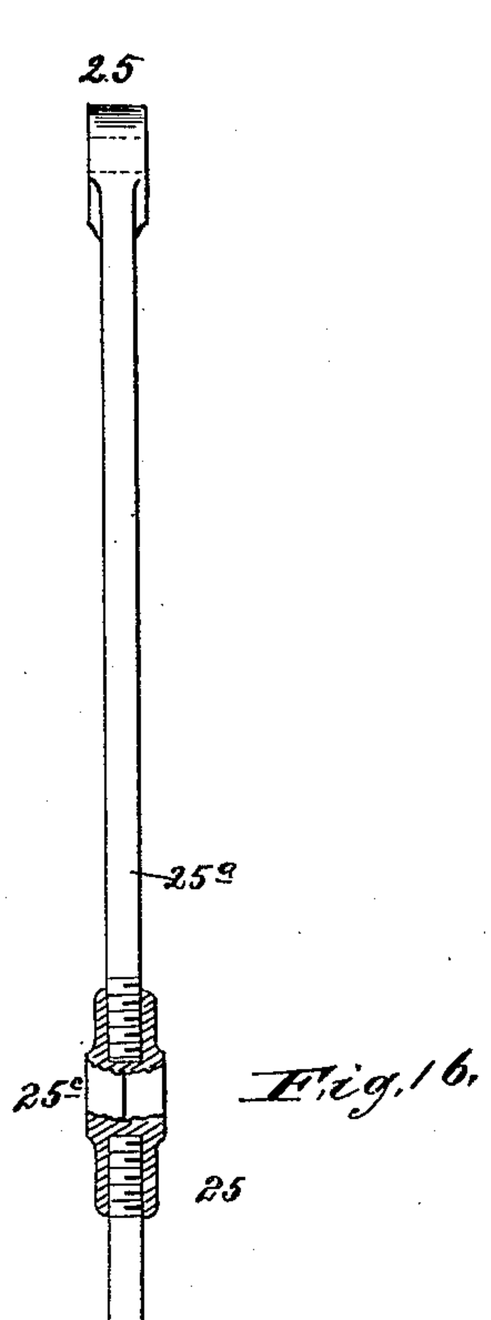


Fig. 1a.

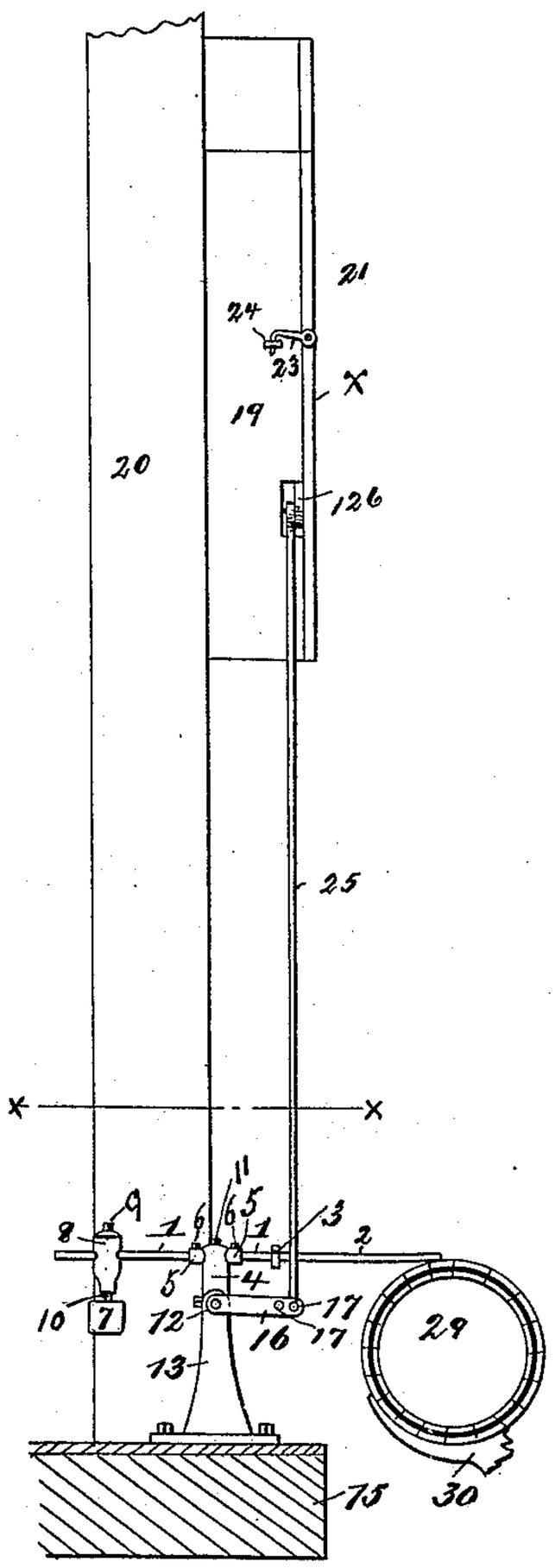


Fig. 1.

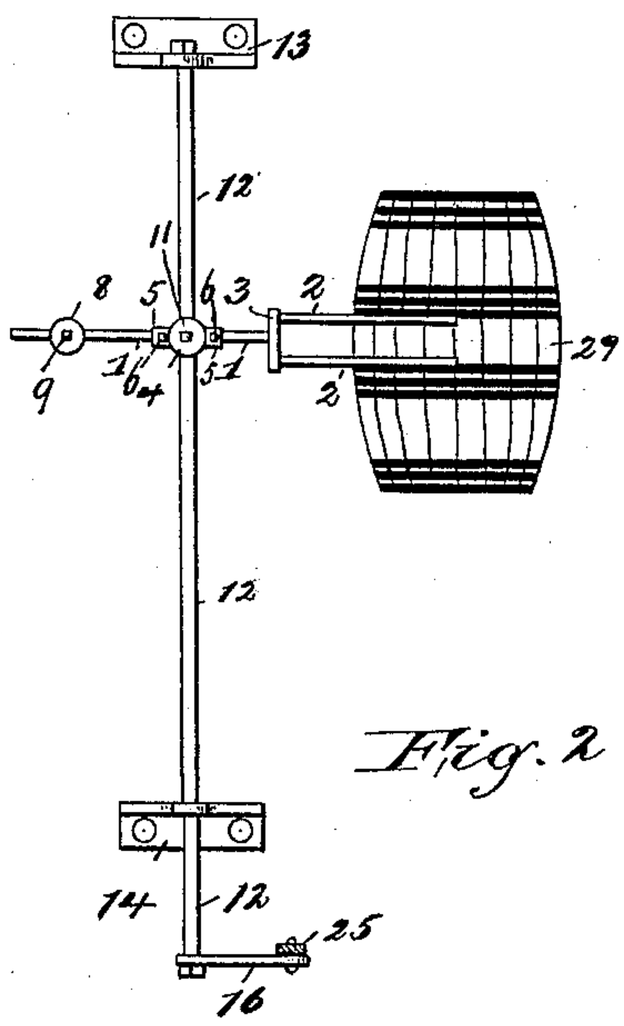


Fig. 2.

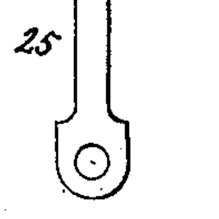
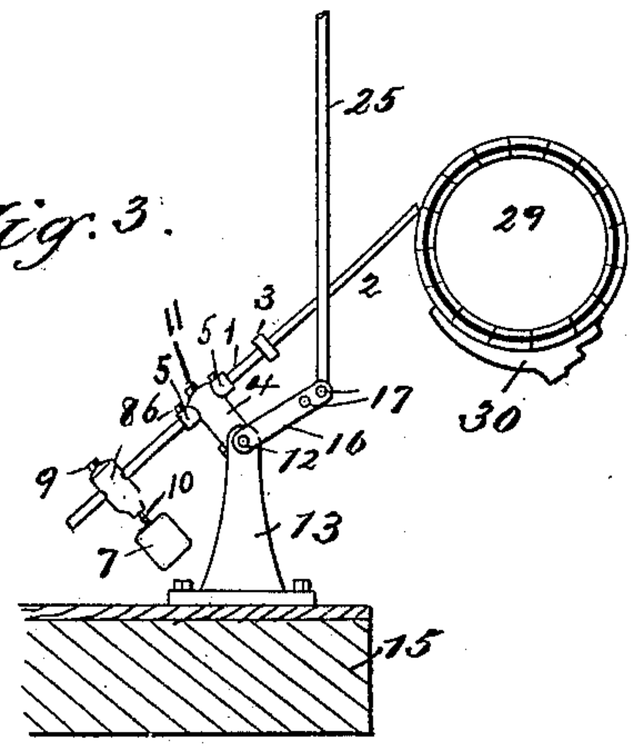


Fig. 3.



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BARREL INDICATOR, REGISTER, AND RECORDER.

No. 509,083. Patented Nov. 21, 1893.

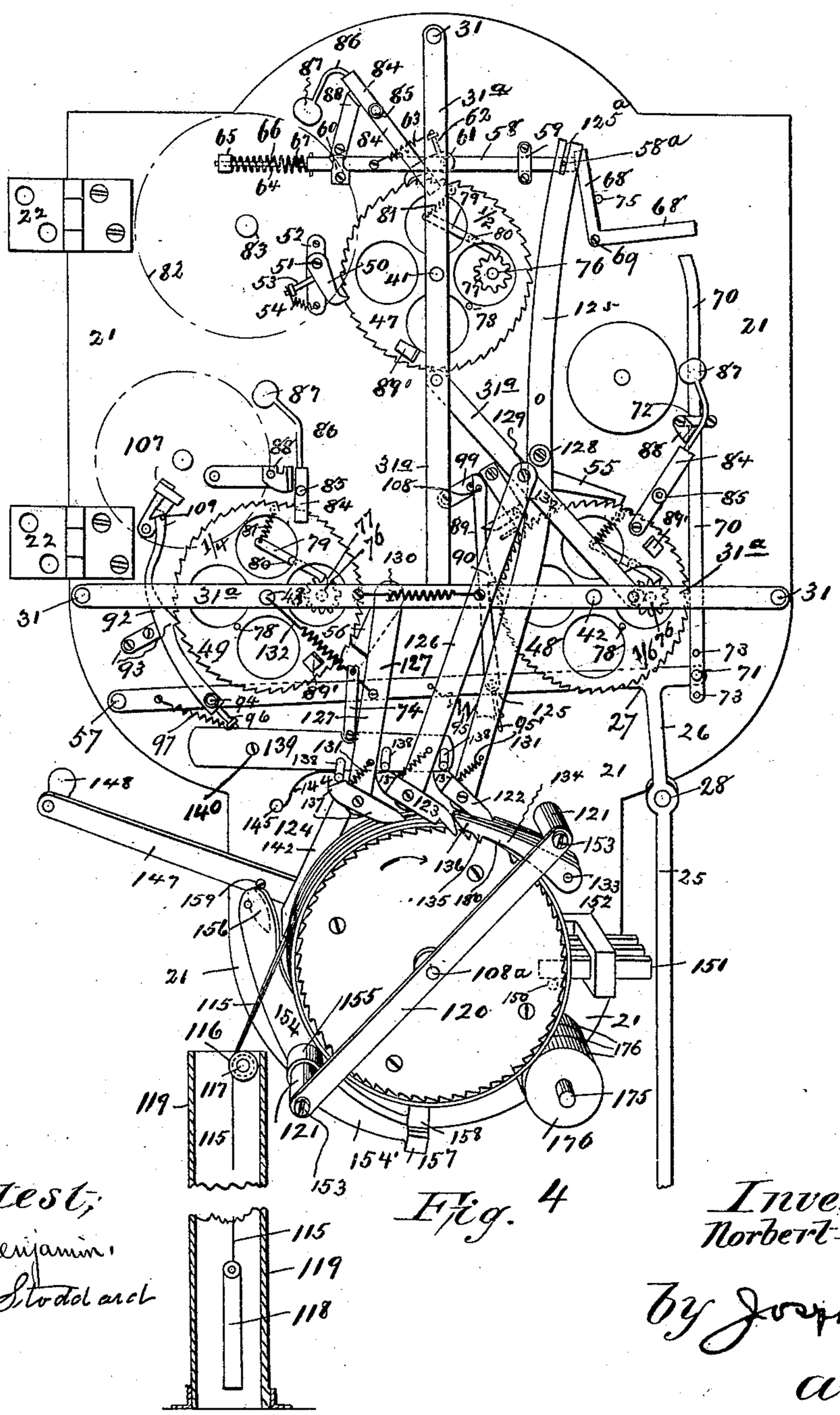

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Fig. 4

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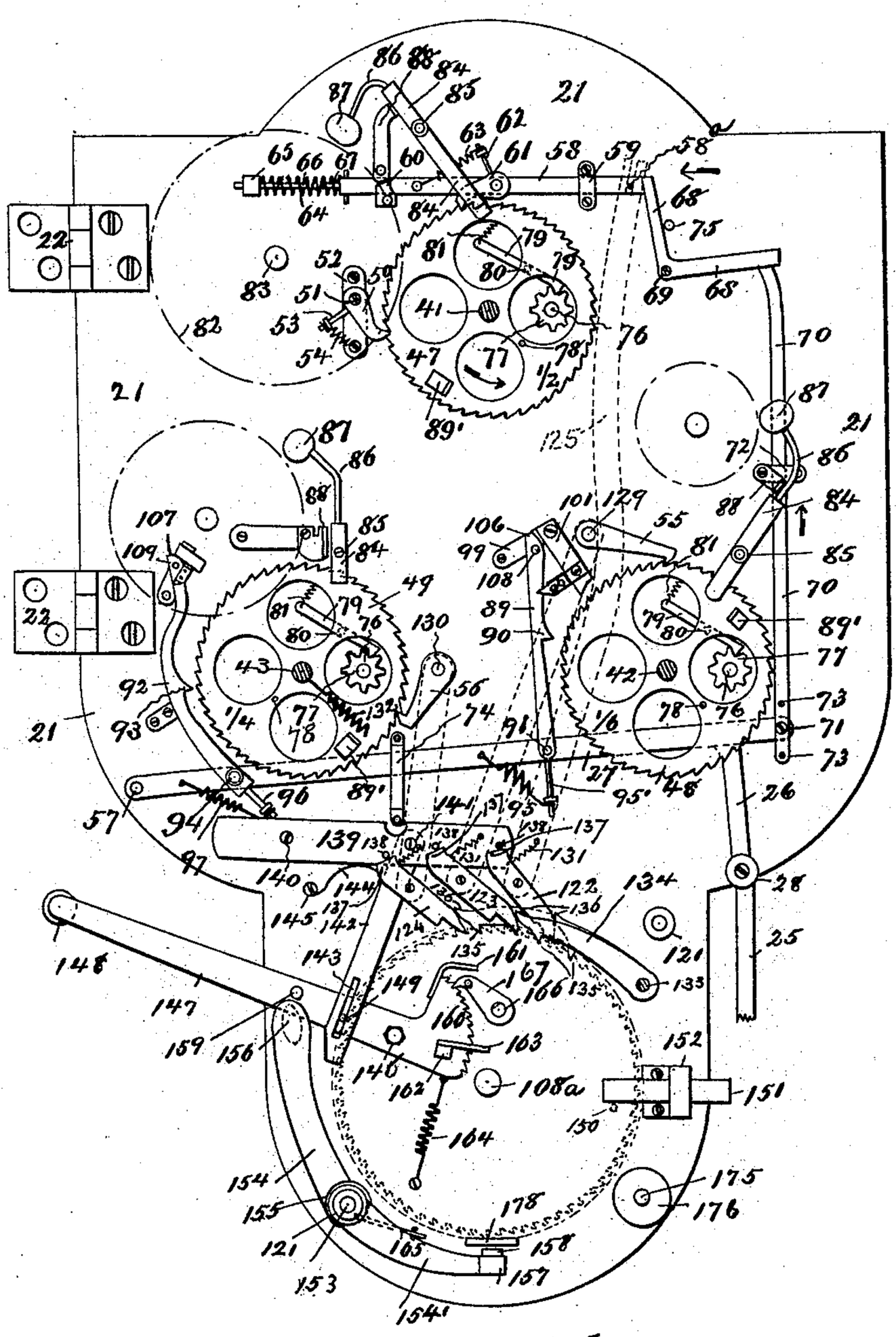

Fig. 5

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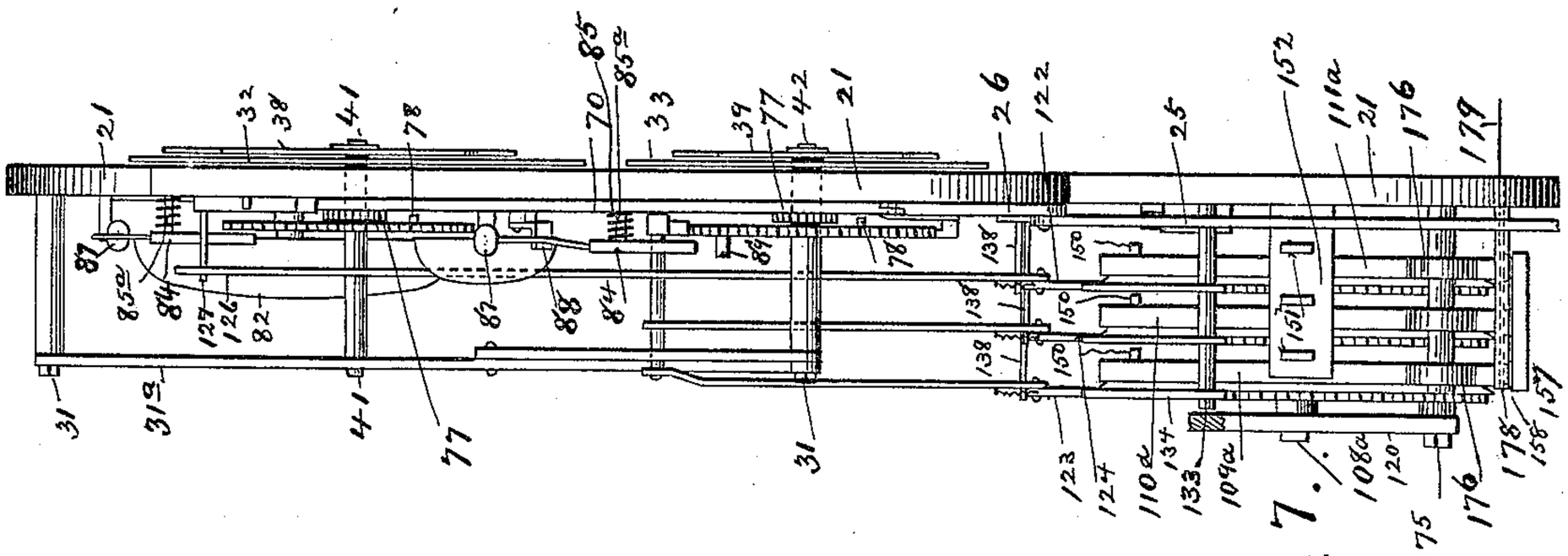

Fig. 7.

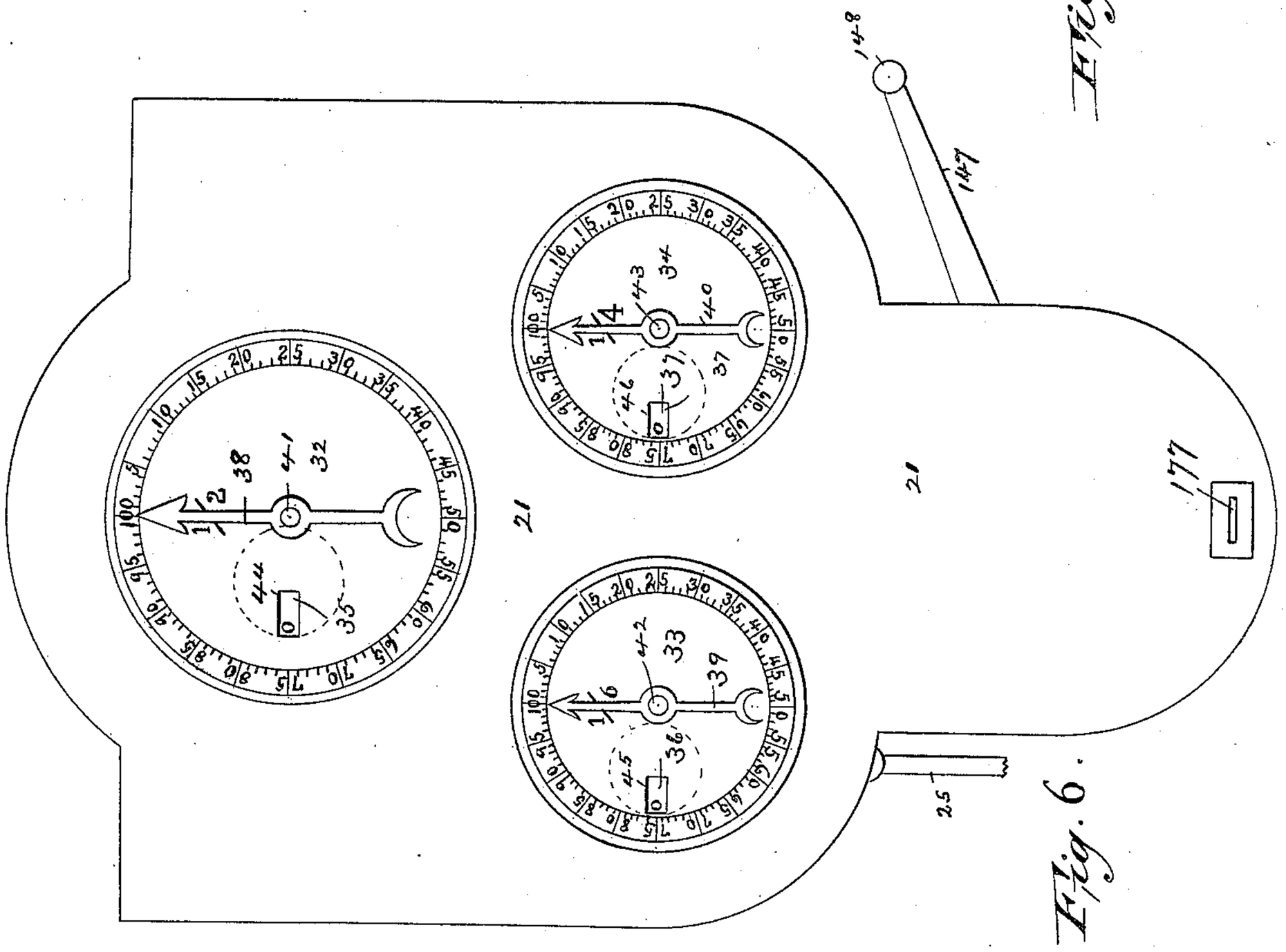

Fig. 6.

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Fig. 10.

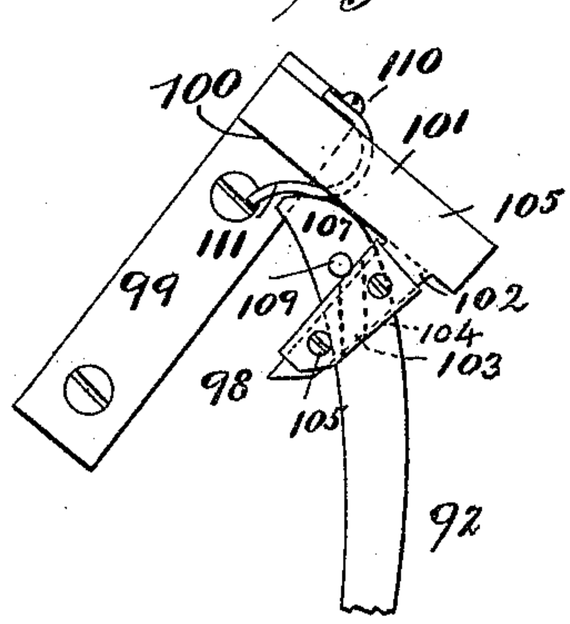


Fig. 11.

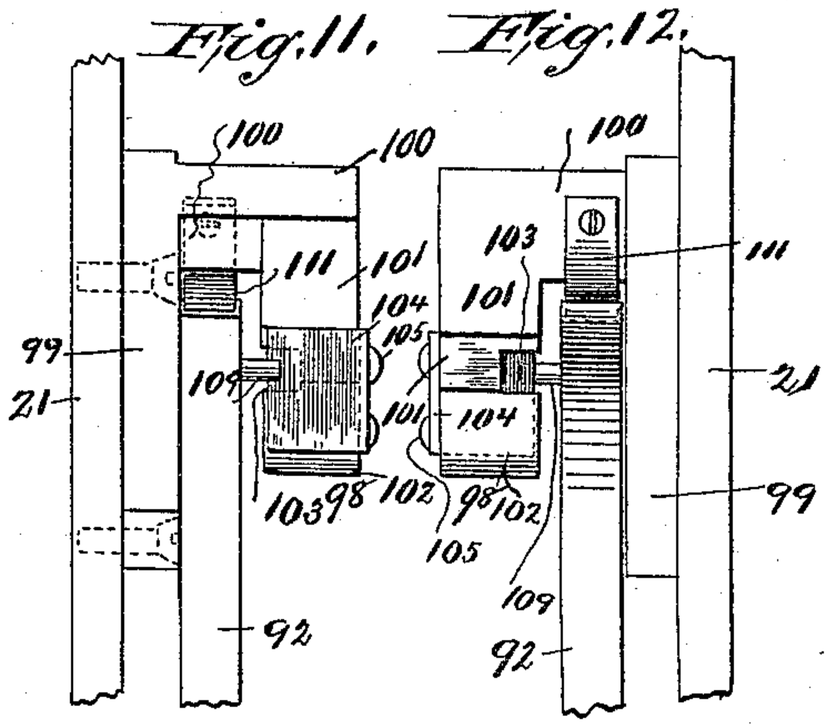


Fig. 12.

Fig. 14.

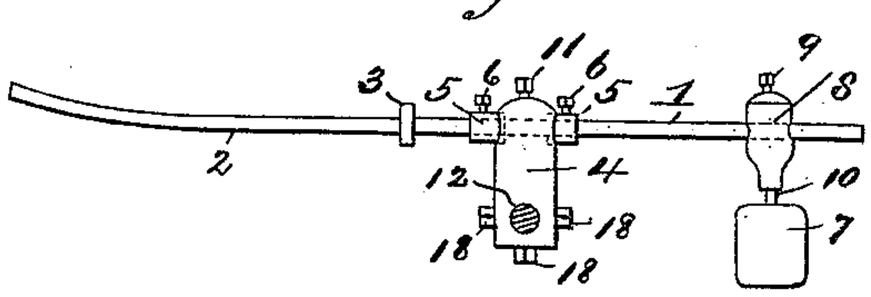


Fig. 15.

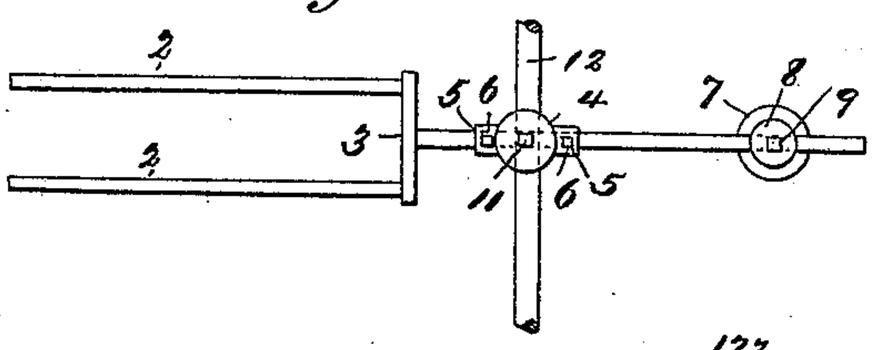


Fig. 13.

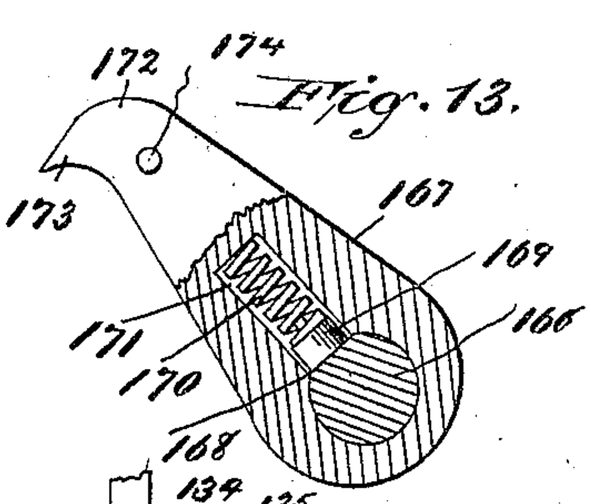


Fig. 8.

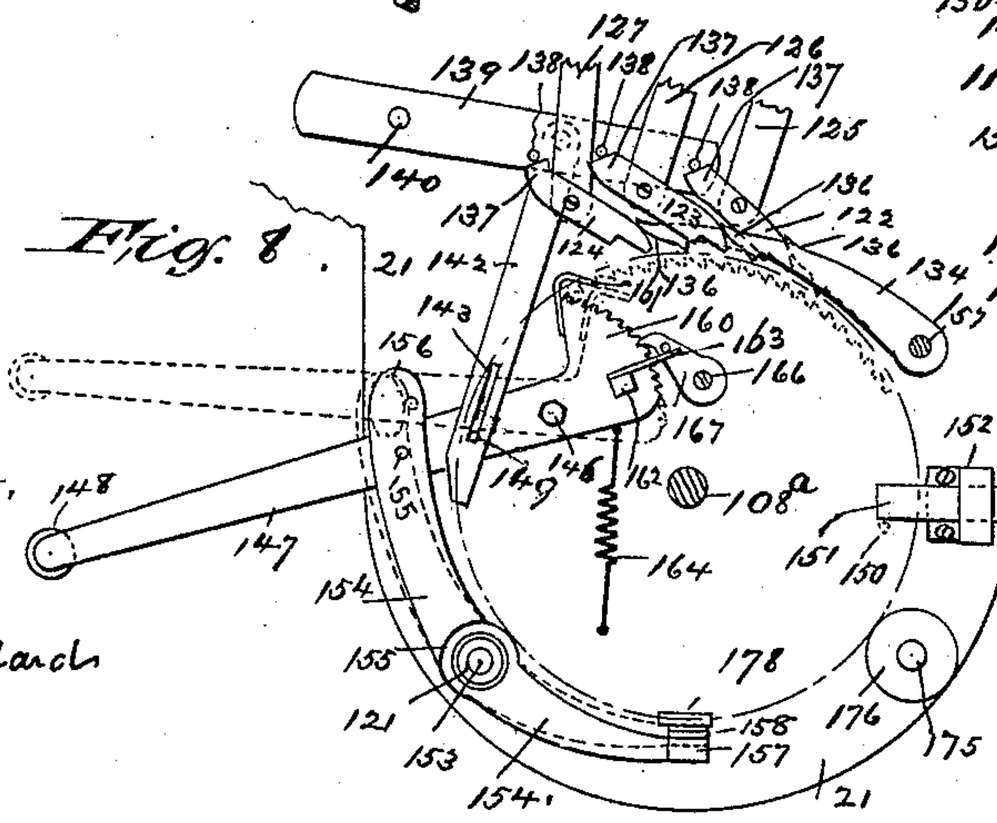
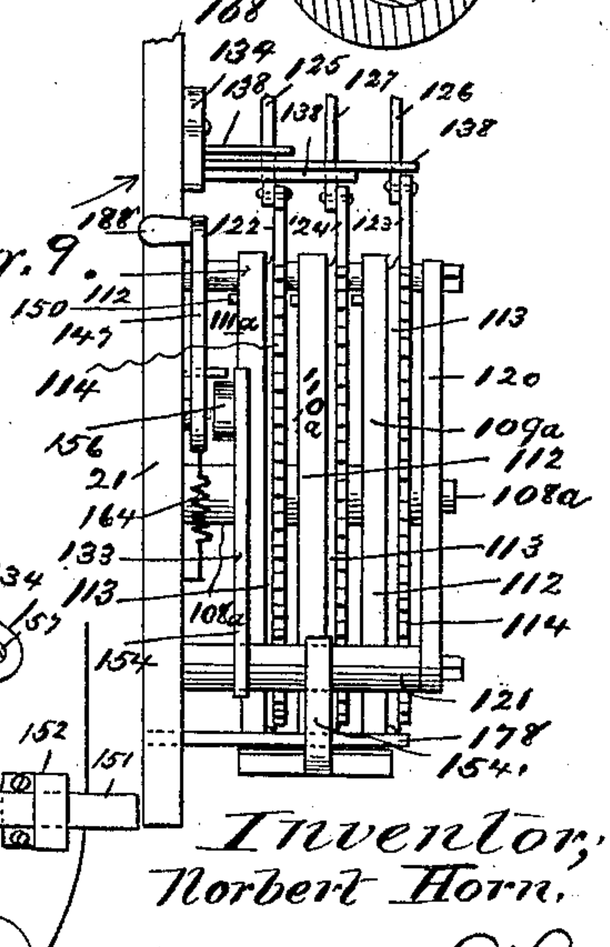


Fig. 9.



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BARREL INDICATOR, REGISTER, AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 509,083, dated November 21, 1893.

Application filed September 15, 1892. Serial No. 445,928. (No model.)

To all whom it may concern:

Be it known that I, NORBERT HORN, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented a new and useful Barrel Indicator, Register, and Recorder, of which the following is a specification.

The object of my invention is to provide a device which will automatically indicate the size and register the number of barrels which have been passed in contact with an element thereof, which device also comprises means for printing a ticket, which printing devices are operated through the instrumentality of and which are co-operative with said registering and indicating devices.

My invention, therefore, consists of an apparatus wherein such indication, registration, and printing can be had, and also in the combination of parts hereinafter specifically set forth and pointed out in the claims.

In the drawings forming part of this specification Figure 1 is a side elevation, showing my device as combined with a keg hoist operating in a vertical plane; Fig. 2, a plan view, partly also in section, taken on the line *x x*, Fig. 1; Fig. 3, a side elevation of the barrel engaging devices illustrating a certain period of their operation; Fig. 4, a rear elevation of the mechanism for registering and indicating and for printing, the printing mechanism being shown partly in perspective and at rest, with the indicating and registering mechanism in position for operating the one-quarter barrel wheel; Fig. 5, a rear elevation of the same mechanism illustrated in Fig. 4, with the exception that a portion of the printing mechanism is omitted, and that the indicating and registering mechanism is shown in the position where it is ready to operate the one-half wheel; Fig. 6, a front elevation of the indicator case, showing the indicator dials and registering counters; Fig. 7, a side elevation of the device as shown in Fig. 6, disclosing the details of the mechanism for indicating, registering, and printing at the rear of the indicator supporting board; Fig. 8, a side elevation of the printing mechanism detached, showing the type wheel-operating pawls disengaged from the type wheels and the type wheel detents also disengaged therefrom, for the purpose of printing a ticket and resetting the type-wheels to zero, the type wheels being shown in dotted lines; Fig. 9, a side elevation of the device as shown in Fig. 8 but with the parts engaged in this view, which are disengaged in Fig. 8, that is the parts being in the position they occupy during the act of indicating and registering; Fig. 10, an enlarged side elevation of one form of freeing device for the pawl for operating the ratchet wheel; Fig. 11, a front view of the same, and Fig. 12, a rear view; Fig. 13, an enlarged partly sectional elevation of a pawl used in the printing mechanism; Fig. 14, an enlarged side elevation of the barrel engaging fork, and Fig. 15, a plan view thereof; Fig. 16, an enlarged side elevation of the extensible connecting rod hereinafter to be described.

The same numerals of reference refer to the same or like parts throughout the several views.

Referring to Figs. 1, 2, 3, 14, and 15 it will be seen that the device for engaging the barrel or keg consists of a rod 1 having a forked extension 2, which comprises longitudinally disposed bars supported a suitable distance apart and secured to the cross bar 3, which in turn is secured to the rod 1. The forks 2 are preferably curved at their outer ends as shown in Fig. 14 to enable them to be disengaged from the barrel more readily than they would be if they were straight. The forked rod 1 passes through an upwardly extending pillar 4 and is normally free to turn therein, about its own longitudinal axis as shown in Figs. 14 and 15.

To set the forked rod the desired distance to or from the line of travel of the keg, or to adjust the leverage of the same, and at the same time permit said rod to be vibrated about its longitudinal axis, two collars 5 are passed about the rod 1 and bear against the pillar 4 adjacent to the aperture therein, through which the rod 1 passes. The collars 5 are provided with set screws 6, which are used in the ordinary manner for holding the rod 1 in the desired position, and the collars and pillar may be so configured where they bear against each other, that as little friction will be had between these parts as possible

when the rod 1 turns in its bearings in the pillar.

The rear end of the forked rod 1 is provided with an adjustable balance weight 7 which depends from a movable hanger 8, through which the rod 1 passes, and the hanger is provided with a set screw 9 for the purpose of holding the balance weight in the desired position. A small spindle 10 extending from the hanger 8 passes into the weight 7, and supports it therefrom.

The pillar 4 is provided with a set screw 11 which passes through its top, and which may be used for the purpose of preventing the forked rod 1 from having a vibratory movement in the pillar if desired. The pillar 4 is mounted on a horizontally disposed shaft 12 which has bearings in upwardly extending supports, 13, 14, which supports are secured to the flooring 15 so that the pillar has a vibratory movement in said shaft. The shaft 12 extends out beyond the support 14, and is provided at that point with a crank arm 16, which arm is preferably provided with a series of holes 17. The lower part of the pillar 4 is provided with one or a number of set screws 18, which adjustably secure the pillar 4, and thereby the forked rod upon the shaft 12.

The case 19 which contains the indicator, register, and printer may be of any desired shape, as shown in Fig. 1, and which is secured to an appropriate place, such as a wall 20. The case 19 has a cover 21 having hinges 22 (see Figs. 4 and 5) secured at one side of the cover, and a latch hook 23 at the opposite end which is adapted to engage a screw eye 24 on the case, so that when the inspection of the machinery is desired, the hook 23 can be disengaged from the eye and the case swung open, parts of the device hereinafter set forth being disengaged to permit this. A vertically disposed connecting rod 25 (which may be made extensible as hereinafter set forth) pivotally engages one of the holes 17 in the crank arm 16, the other end pivotally engaging an extension 26 of the pawl operating lever 27, as shown at 28, Figs. 4 and 5. The holes in the crank arm 16 are for the purpose of altering the leverage or throw of the lever 27.

A keg to be registered is shown at 29, and the bucket of an elevator at 30, Figs. 1 and 3.

The abrupt ending of the flooring 15 is assumed to define the hatchway, through which the keg is lifted by means of the buckets 30 on the elevator.

Any form of elevator may be used for the purposes of my invention, the bucket 30 and keg 29 being shown herein merely in an illustrative manner.

This device is specially intended to be used in breweries where the beer is transported in kegs of the shape shown in Figs. 1, 2, 3, and it is customary to use but three sizes of kegs, which sizes are denominated one-half, one-quarter and one-sixth (meaning a fraction of a barrel) and it is for the purpose of registering and recording the number of filled kegs which have been passed up ready for delivery, and also for the purpose of registering and recording the particular size, each size being separately indicated and registered, that one part of my invention has special reference.

During the act of hoisting the keg it may become displaced upon the buckets 30, so that a line drawn through the center of the keg transversely will not be coincident with the horizontal axis of the forked rod which engages with the barrel, and for the purpose of accurately obtaining the dimensions of the barrel or keg the rod 1 is provided with the forks 2 which are adapted to lie on the barrel and be disposed according to the contour thereof. Thus should one of the forks be raised higher than the other by reason of the barrel not being centrally disposed upon the elevator, this will cause the rod 1 to turn in its bearings through a small angle, proportionately raising the balance weight 7 which will, however, when the barrel has passed the forked rod, again hang vertically below the rod 1, and bring the forks thereof into the same horizontal plane. The kegs in passing upward come in contact with the end of the forks 2 of the rod 1 and elevate it, as shown in Fig. 3, at the same time raising the crank arm 16, which in turn elevates the connecting rod 25.

The amount of vibration or lift given to the forked rod 1, 2 determines what particular set of mechanism is to be operated, as hereinafter described, for registering the number and indicating the particular size of the keg which is passed in contact therewith, so that it is plain that if the forked rod were to come in contact with the lateral surface of the barrel next to the extreme end, an amount of movement would be given to the forked rod, which would be insufficient to properly indicate that particular size, but as the elevator buckets must necessarily be so disposed in relation to the forked rod that this extreme discrepancy will not take place, there is no necessity for provision being made for it, but a slight misadjustment of the keg on the elevator buckets may take place, and it is for the purpose of enabling the forked rod to deal with this latter condition, that it is rotatively supported in the pillar 4.

The adjustability of the forked rod 1 within the pillar 4 and the holes 17 in the crank arm 16 permit of an adjustment for the purpose of ascertaining the proper amount of movement or throw to be given to the connecting rod 25, in order that it will properly indicate the particular size of the barrel; and if desired, the connecting rod 25 may be made extensible for this same purpose. Further the forked rod is made movable along the shaft 12, so that its point of contact with the keg may be changed or altered at will.

Instead of the forked rod being set to operate in connection with a vertically or upwardly moving keg, it is plain that very lit-

tle change, if any, would be required to set it for operation with a horizontally moving keg.

In order to get the extra adjustment in the upright connecting rod 25 before mentioned, the structure, shown in Fig. 16 can be used, where it is shown as being made in two parts 25^a 25^b, both parts being screw threaded, left and right handed, and connected by the turnbuckle 25^c, the part 25^a being secured to the lever 27, and the part 25^b to the crank arm 16. This feature of extensibility of the connecting rod adds an additional means for adjusting the throw of the forked rod to suit the particular requirements of the devices hereinafter set forth.

The mechanism for operating the indicator and register will now be described. The dial cover 21 of any desired shape or size is provided with a number of indicating dial plates 32, 33, 34 which read from one up to one hundred. The plates 32, 33, 34 I term indicating dial plates, because from an inspection of these plates at any moment it can be seen what sized kegs are being transferred. The dial cover 21 may be recessed to receive the indicating dial plates 32, 33, 34, or they may stand off a short distance from the same (as shown in Fig. 7) for the purpose of enabling the registering dials 35, 36, 37, shown in dotted lines in Fig. 6, to be located between the dial cover and the indicating dial plates, the dial covers being recessed to receive the registering dials. These registering dials 35, 36, 37, read from one to one hundred increasing by one. The dial plates 32, 33, 34 are provided with pointers 38, 39, 40 which are secured to spindles 41, 42, 43, which extend through the indicating dial plates and the dial cover to the rear of the plates, the spindles having suitable bearings in the dial cover and in the inverted T shaped support 31^a, which is secured to the dial cover by the studs 31. See Fig. 4. Upon each complete rotation of either of the pointers, that is, when one hundred kegs have been registered, the registering dials are caused by mechanism hereinafter described to move one figure forward and so count the hundreds. The indicator dial plates are apertured, as at 44, 45, 46, to permit the registering dial to be read therethrough. The mechanism for operating the registering dials is of such a nature that any number of dials, within reasonable limits, can be used, but in the present case it has been found expedient to use three sets of dials, as that is about the number of different sizes of kegs at the present time used in breweries; namely, a half barrel, a quarter barrel, and a sixth barrel. The hereinafter described mechanism is so constituted that it will operate only on one dial at a time. Secured to each of the spindles 41, 42, 43 are ratchet wheels 47, 48, 49, the ratchet wheel 47 operating the pointer 38, the ratchet wheel 48 operating the pointer 39, and the ratchet wheel 49 operating the pointer 40. The ratchet wheel 47 has a detaining pawl 50 mounted on a stud 51 on a block 52, which is secured to the dial cover 21. The detaining pawl 50 is provided with an outwardly extending pin 53, to which one end of the spring 54 is secured, the other end being secured to the block 52. Each of the ratchet wheels 48, 49 is provided with independent detaining pawls 55, 56 which operate the printing mechanism as will be hereinafter described; and these last two pawls are in operative connection with the printing mechanism, and are kept in contact with the ratchet wheels by springs on the devices operating said printing mechanism. Each ratchet wheel is independently provided with an operating pawl, all in direct communication with the connecting rod 25 leading from the forked rod. The upright connecting rod 25, as before described, is connected to the transverse pawl-operating lever 27 by means of the depending arm 26, said lever being pivotally secured to the dial board 21 at 57. I shall first describe the connection of this lever with the ratchet wheel 47 for operating the one-half barrel indicating pointer 38, and registering dial 35. Above the ratchet wheel 47 is located a pawl bar 58, which is adapted to slide in guides 59, 60 secured to the dial cover. To the pawl bar 58 is pivotally secured an operating pawl 61 having the pin 62 to which a spring 63 is secured, the other end of the spring being fixed to the pawl bar, said spring keeping the operating pawl in contact with the ratchet wheel. A movement of the pawl bar in the direction of the arrow (see Fig. 5) will cause the ratchet wheel to be advanced one tooth, and this movement on the part of the pawl bar compresses a spring 64, held between the end of said bar and a stud 65 which is secured to the dial cover, the spring 64 being kept in position by pins 66, 67 which extend respectively from the pawl bar and from the stud 65, and which are encircled by the spring 64. When pressure is removed from the end of the pawl bar, the spring 64 moves the same in the reverse direction, causing the pawl 61 to travel back on the ratchet wheel one tooth. A bell-crank lever 68 is pivotally secured to the dial cover at 69, one arm of which engages with the end of the pawl bar 58. The other end of the bell-crank lever engages with an upright rod 70, the lower end of which is pivotally secured to the lever 27 at 71. The upright rod 70 rests in a guide 72 secured to the dial cover, the lower end of said rod being provided with a series of holes 73, by which the distance between the lower arm of the bell-crank lever 68 and the lever 27 can be changed for the purpose of altering the amount of lift to be given to the rod 70 to operate the pawl bar 58. If the rod 25 is moved upward, as before described, a like vibration will be given to the lever 27 (which is confined by the guide 74 secured to the dial cover) and the rod 70 will be moved in the direction of the arrow, Fig. 5. This movement will vibrate the bell-crank

lever 68 which in turn moves the pawl bar 58 against the tension of the spring 64, advancing the ratchet wheel 47 one tooth. The descent of the rod 25 will carry the lever 27 downward and with it, the guide 74 checking or limiting it, the rod 70, permitting the spring 64 to move the pawl bar in the reverse direction, retracting the pawl 61 one tooth and bringing the upper arm of the bell-crank lever 68 against a stop 75 which limits its movement in this direction, the lower arm of the bell-crank lever 68 re-engaging the rod 70, the pawl 50 preventing a reverse movement on the part of the ratchet wheel 47. In Fig. 5 the operating pawl 61 and its propelling devices are shown as about to move the ratchet wheel 47 one tooth, that is to say, a barrel or keg having the dimensions of one-half a barrel has passed the forked lever, before referred to, vibrating it and the crank arm 16, which in turn has raised the rod 25 and has brought the upper part of the rod 70 against the lower portion of the bell-crank lever 68, and a continuation of the movements of these parts will operate the pawl bar and its connected mechanism, as before set forth. With an advancement of the ratchet wheel the pointer 38 being secured to the spindle of the ratchet wheel is also advanced one space, to wit: one one-hundredth. The dial cover is provided with a spindle 76 carrying a pinion 77, which lies between the ratchet wheel 47 and the dial cover. The spindles 76 carry the registering dials 35, 36, 37. The ratchet wheel 47 is provided with a pin 78 which extends outwardly toward the dial cover, as shown more clearly in Fig. 7, said pin being so located on the ratchet wheel that during its revolution, it will mesh with the teeth of the pinion 77 and cause it to rotate one tooth, bringing the next reading in hundreds on the registering dial 35 opposite the aperture 44. To prevent the pinion 77 from moving in the reverse direction, a pawl 79 pivoted to the dial cover at 80 is provided with a spring 81 secured at one end to the pawl and at the other to the dial cover, which spring insures the engagement of the pawl with the teeth of the pinion and prevents its rotation in the reverse direction.

It is very desirable that notice be given when the hundredth barrel or keg has been registered, and to this end I secure a gong 82, shown in full in Fig. 7 and in dotted lines in Figs. 4 and 5, by means of the stud 83 to the dial cover. A hammer arm 84 pivoted on the spindle 85 on the dial cover has at its upward portion a bent arm 86, ending in a knob or hammer 87, and about the spindle is a coiled spring 85^a, Fig. 7, secured to the spindle and hammer arm at its ends. To the guide 60 is secured an upwardly extending flat spring 88, against which the upper portion of the hammer arm 84 is pressed by the spring 85^a.

At any convenient portion of the ratchet wheel 47 and in proper position with the work it is to perform, is secured an outwardly extending lug 89′ of any desirable shape, which by the rotation of the ratchet wheel 47 is brought to bear against the lower portion of the hammer arm 84, and a continuation of the rotation of the ratchet wheel vibrates the hammer with its knob 87 out of contact with the spring 88 against the stress of the spring 85^a, and when the lug 89′ has passed out of contact with the hammer arm 84, the spring 85^a causes the hammer 87 to move forward in the direction of the gong, compressing the spring 88 before striking the gong, which spring, after the knob has struck the gong, raises it from contact therewith, keeps it away therefrom, and permits the vibration of the gong to continue uninterrupted.

The foregoing describes the means for indicating and registering one size of keg only. For registering different sizes, which in this case are smaller than the one just before described, the lever 27 is given a smaller amount of movement by reason of the size of the keg, and devices are provided whereby one of the two indicating and registering instrumentalities, to wit: the one-quarter and one-sixth can be operated independently of the other and of the one-half barrel register, but by a movement of the lever 27. This is obtained as follows:

Referring now to Fig. 5 it will be seen that the lever 27 is provided with two upwardly extending pawls, one 89 pivoted to the lever 27 at 91, and having a tooth 90 adapted to engage the teeth of the one-sixth ratchet wheel 48, the other 92 having a tooth 93 adapted to engage the teeth of the one-quarter wheel 49. The pawl 89 has a spring 95 secured at one end to a depending arm 95′ and the other end to the lever 27, while the pawl 92 pivoted to the lever 27 at 94, is provided with a pin 96 from which extends one end of the spring 97, the other end of the spring being secured to the lever 27. Both springs are intended to keep the teeth of the pawls in contact with their respective ratchet wheels, and to return them to said teeth after the pawl escapements hereinafter described have ceased to act, as will be hereinafter described.

For the operation of each respective ratchet wheel each pawl should be lifted but sufficient to advance the ratchet wheel one tooth on the descent of the lever 27, but in order to enable either of the ratchet wheels to be operated independently of the other, I provide escapements, so called, which throw either of the pawls out of operative engagement with its respective ratchet wheel according to the amount of vibration given to the forked rod 1, 2 due to the particular size of the keg which may have passed in contact therewith. I have used two forms of escapement, one for the pawl 89 and another for the pawl 92, but one form of escapement may be adapted to operate with both pawls, of course independent structures being provided for each pawl. The escapements are constructed as follows: The escapement consists of the bracket 98 (see

Figs. 10, 11, 12) which comprises the bed 99 which is secured to the dial cover, an outwardly extending arm 100, an arm 101 extending downwardly from the arm 100 at right angles thereto, and also at right angles to the bed 99, and another arm 102 extending out from the arm 101 at right angles thereto. The arm 102 is provided with a slot 103 extending upwardly there-through, and to said arm is secured a right-angled spring plate 104 by the screws 105, one portion of said plate being secured to the front side of said arm, the other portion resting on the top thereof and covering the slot 103, which is on the inside of the said arm. The entire frame of the escapement is secured to the dial cover in such a way, as to make the arm 102 assume an oblique angle with the paths of the pawls 92, 89 and with it the spring plate 104, which plate may be made entirely of resilient material, such as flat steel, or only that portion which covers the top of the slot, which latter portion, however, should be resilient. The upper portions of both pawls 89, 92 are rounded for a purpose hereinafter described, as shown at 106, 107, and at the top thereof are provided with outwardly extending pins 108 and 109. To the arm 100 is secured at 110 a reverse curved spring 111 which embraces the said arm, and extends in front of the same upwardly and outwardly. For both of the pawls 89, 92 I use exactly the same frame for the escapement and the spring plate 104, and for the pawl 92 I use the spring 111. The arm 101 of the escapement frame for the pawl 89 extends a greater distance from the bed 99, or in other words, the spring 104 is located closer to the one-sixth wheel than it is to the one-quarter wheel. The reason for this construction is that the pawl 89 is located farther away from the fulcrum of the lever 27, and therefore gets a greater amplitude of movement; whereas the pawl 92 is located nearer the fulcrum of said lever, and has less amplitude of movement, so that the pawl 89 should be freed by the operative movement of the pawl 92, as follows:

Referring to Fig. 10, and assuming that the pawl 92 there shown is either that pawl or the pawl 89, the function of the spring plate 104 would be as follows: When the lever 27 is raised upwardly, either of the pins 108, 109 on either of the pawls 89, 92 will pass through the slot 103 in the arm 102 and strike the free end of the spring plate 104, raising it, and a continuation of this movement upwardly will free the pin from the plate, and on the downward movement of the lever 27 the pin would then fall back on the spring plate, slide down thereon, and pass over the edge of the plate. This gives either of the pawls an opportunity of coacting with the teeth of its respective ratchet wheel independently of the other pawl, or should a one-quarter barrel pass the forked rod 1, 2, the amplitude of movement of the pawl 92 would be such as to correspond with the amount of movement given to the forked rod, which would be sufficient to raise that pawl far enough to rotate the particular ratchet wheel one tooth, the pin on the top of the pawl not having to pass through the arm 102, through the escapement and on to the plate 104, but the pawl 92 is free to fall in direct contact with the teeth on the ratchet wheel, while the pawl 89 for the one-sixth barrel wheel will have passed entirely through the arm 102, and the pawl 92 will have engaged the teeth of its ratchet wheel before the pin on the pawl 89 will have come back into contact with the spring of the escapement, and such upward movement of the lever 27 will not have been sufficient for the operation of the bell-crank lever 68. As before stated the top of both of the pawls is rounded for the purpose of enabling that portion to strike and ride over the arm 100 of the escapement, so that the pawls will be thrown still farther away from the teeth of their respective ratchet wheels; however with the pawl 92 I prefer to use the spring 111, as this pawl has the smallest amplitude of movement, and should come back into engagement with the ratchet wheel before any of the others, and this the spring 111 will accelerate by throwing it quickly away ready to drop into engagement with the teeth of its ratchet wheel before any of the other pawls have finished their downward motion. It is only necessary that escapements be provided for the pawls which operate their respective ratchet wheels by an amount of movement less than the movement given to the lever 27 to operate the one-half barrel wheel, which is the greatest amount of movement, but those ratchet wheels following require a less amount of movement, and for their operation require an escapement, whereas the one-half barrel wheel does not. Each one of the ratchet wheels last described, to wit: the one-quarter and one-sixth, is connected to its respective indicator and registering dials in precisely the same manner as the one-half barrel ratchet wheel, and the means for ringing the gong is precisely the same for the one-quarter and one-sixth barrel wheels, except so far as there may be a slight variation in the shape of parts, and they will all receive the same numerals of reference as those parts which relate to the one-half barrel wheel. It will now be seen that by the use of the two above described escapements, a movement is given to each of the ratchet wheels 47, 48, 49 corresponding to the particular size of the keg which is actuating the lever mechanism, and to that ratchet wheel only. Thus when a one-half barrel keg moves the registering mechanism, the amplitude of vibration of the lever 27 is sufficient to actuate the pawl bar 58 by means of the rod 70, and at the same time carry both of the pawls 89 and 92 past the spring plates of their respective escapements and thus throw both of them out of engagement with the corresponding ratchet wheel. In this case only the one-half barrel ratchet-wheel is operated.

Again, if a one-quarter barrel keg is being elevated, then the amplitude of vibration of the lever is not sufficient to operate the pawl bar 58, while too great to actuate the one-sixth barrel ratchet wheel, since its pawl is thrown out of engagement with the ratchet wheel by its escapement as above described. Thus only the one-quarter barrel ratchet wheel is in this case operated. If a one-sixth barrel keg is being elevated, then the amplitude of vibration of the lever 27 is not great enough to permit the rod 70 to reach the bell crank lever 68, nor is it great enough for the tooth 93 of the pawl 92 to be raised sufficiently to engage the next tooth of the ratchet wheel. Thus the pawl 92, when the keg has passed, drops to its original position without having engaged the ratchet wheel to turn it through one division so that only the one-sixth barrel wheel is actuated. It will thus be seen from the foregoing that I have provided devices whereby each different sized keg (in this case three different sizes) can be independently and automatically indicated and registered, without effecting such like acts for the others.

I have also provided devices in combination with those before described, which will enable the user of the machine to at any time get written evidence of the operation thereof, and to that end I have provided a printing mechanism which will act synchronously with the registration and indication before set forth, and by which a ticket may be printed which will show and be a record in writing of the work done by the device. For instance, a wagon may have been loaded with a number of kegs for delivery, after having passed the forked rod, which has caused the indicator to show the particular size of keg and the register to keep a registry of how many kegs have been passed for delivery, and when the wagon has been sufficiently loaded, the driver, in order to prevent connivance and fraud, would be required to insert a ticket into the casing 19 at 177, as will be hereinafter set forth, and print the same, which will truthfully represent the number of barrels or kegs that have been placed upon his wagon, and the particular sizes thereof. His ticket may read thus: 5 $\frac{1}{2}$, 10 $\frac{1}{4}$, 15 $\frac{1}{6}$, meaning five one-half barrel kegs, ten one-fourth, and fifteen one sixth; and this ticket would be presented to the accountant's office, and by this means a check would be placed in the delivery department, and enable the brewer, or others using the machine, to have an accurate and correct record of the number of barrels delivered and their particular sizes. This mechanism is as follows: To a spindle 108^a on the dial cover 21 is affixed a series of independently mounted wheels 109^a, 110^a, and 111^a. Each one of these wheels is free to rotate upon the spindle 108 independently of the other, and is provided with type beds 112, peripheral grooves 113 and ratchet wheels 114. See Fig. 9. A series of cords 115 (see Fig. 4) are secured between the peripheral grooves 113, and extend away from the same over a series of small pulleys 116 independently mounted on a spindle 117 suitably supported, each cord being independently secured to a weight 118 by means of which the type wheels are reset to zero, as hereinafter described, each individual cord being wound upon the peripheral grooves of its particular type wheel. The type wheels, however, may be rotated by springs, or by other mechanism equivalent to the weights 118, but as the weights are very desirable and have operated successfully I have shown them herein, and I have also provided a well 119 in which the weights 118 can play, the spindle 117 finding bearings in the walls of the well. The outer portion of the spindle 108^a has bearings in the cross bar 120 which is secured to the dial cover by means of the circular blocks 121 to which the cross bar 120 is secured by screws. Each type wheel is independently connected by screws or bolts with each of the ratchet wheels and their operating mechanism, and each type wheel besides having numbers thereon has other figures which indicate the particular size of the barrel, so that with the operation of each ratchet wheel a like operation will be given to the type wheels. This is accomplished as follows: 122, 123, 124 are the pawls which operate the type wheels, each pawl engaging the teeth of one of the ratchets on the type wheels, and which pawls are pivotally secured to upright arms 125, 126, and 127. The lever 125 is slotted at its upper end at 125^a, which slot engages a pin 58^a on the pawl bar 58. The lever 125 is pivoted to the dial cover at 128 and passes downwardly to the type wheels between the bracket 31^a and the dial cover. The lever 126 is pivotally secured to the bracket 31^a at 129, and the lever 127 is pivoted to the stud 130 on the dial cover. The stud 129 which supports the lever 126 also carries the detaining pawl 55 which engages the teeth of the ratchet wheel 48, and the stud 130 which supports the lever 127 also carries the detaining pawl 56 which engages the ratchet wheel 49, each stud being firmly secured to its lever and pawl, so that the lever and pawl vibrate together. Each of the pawls 122, 123, 124 is provided with a spring 131 secured thereto beyond its fulcrum and to its supporting lever, by which the said pawls are normally kept within the teeth of the wheels. The detaining pawls 55, 56 are kept in engagement with their respective ratchet wheels by the springs 132 which are secured to the bracket 31^a at one end, and at the other end to the levers 126, 127 respectively. The pawls 123, 124 are moved to advance the type wheels one tooth by the movement of the ratchet wheels 48, 49 by the riding of the detaining pawls 55, 56, over the teeth thereof, which causes the levers to be vibrated, advancing the type wheels one tooth for every

tooth that said ratchet wheels advance. As the lever 125 is positively controlled by the pawl bar 58 it is not necessary to provide it with springs, as the other two levers are. To a spindle 133 secured to the dial cover are pivotally mounted a series of toothed dogs 134 which dogs have teeth projecting therefrom at 135, which teeth engage the ratchets of the type wheels, and these dogs have extensions or noses 136 (see Figs. 4, 5, and 8) and the pawls 122, 123, 124 are rounded where they engage with the teeth of the ratchets of the type wheels, so that the noses on the dogs 134 can ride thereon, as will be hereinafter described. Each of the pawls 122, 123, 124 have extensions 137 which are adapted to come into contact with pins 138 which extend outwardly from a short bar 139 which is pivotally secured to the dial cover at 140, to which bar 139 is pivotally secured at 141 a short bar 142 having a slot 143; and a small spring 144 secured to the dial cover 21 at 145 presses against the short bar 139. It is clear from the foregoing that should either of the ratchet wheels 47, 48, 49 be operated, one of the pawl carrying levers 125, 126 or 127 would be operated, and thus the corresponding one of the pawls 122, 123, or 124 will be moved forward, or to the right in the drawings, advancing its particular type wheel one tooth, the springs 132 which engage the levers 126, 127 pressing their respective operating pawls, which they now become, into the teeth of their respective ratchet wheels. As before stated the lever 125 is positively moved into both positions, back and forth, the spring 64 retaining the pawl bar 58, which in turn through the instrumentality of the upright lever 125 draws back the pawl 122, for the purpose of readvancing its particular ratchet wheel when the lever 125 is operated again. The dogs 134 keep engaged with the teeth of their respective ratchet wheel by virtue of their own weight, and it is necessary during the operation of the printing mechanism to disengage these dogs from their respective ratchet wheel for the purpose of permitting the weights 118, through the instrumentality of the cords 115, to turn each type wheel back to naught, and to accomplish this, the device which frees one pawl, frees all of them simultaneously, so that all of the type wheels can be turned at the same time to bring them back to naught. This is accomplished by pivoting to the dial cover 21 at 146 a printing lever 147 provided with a crank arm 148, one portion of which lever extends between the type wheels and the dial cover. This lever carries a pin 149 which engages with the slot 143 in the lever 142. By reference to Fig. 8 it will be seen that the lever 147 has been vibrated downward on its fulcrum 146, the pin 149 thereon having come in contact with the lower part of the slot 143, vibrating the short bar 139 downwardly on the fulcrum 140 which has caused the pin 138 thereon to strike the extensions 137 on the pawls 122, 123, 124, vibrating their contact points upwardly and out from engagement with the teeth of their respective ratchet wheels, said noses or contact points striking the noses 136 of the dogs 134, and freeing the dogs from the teeth of the ratchet wheels. The operating pawls and the dogs then being freed, the weights 118, through the instrumentality of the connecting cords 115, will turn each separate type wheel on the spindle 108 setting the wheels to zero. This movement is arrested by pins 150 (shown in full in Figs. 7 and 9, and in dotted lines in Figs. 4, 5, and 8, which pins are secured to the inner side of each respective type wheel) coming in contact with detaining bars 151 which extend within the plane of rotation of said pins between the ratchet wheels, and which are held in place by the bracket 152 secured to the dial cover 21.

The operation of freeing the detents and dogs, just before stated, and bringing the type wheels back to naught, is preceded by the act of printing, which will now be described. The cylindrical blocks 121, to which the cross bar 120 is secured, are attached to the dial cover 21 by short spindles 153, and upon one of these blocks is pivotally secured the platen 154 by the sleeve 155 formed thereon. The upper part of the platen 154 is provided with an elliptical lug or projection 156, shown in dotted lines thereon, in Figs. 4, 5, and 8 and in full in Fig. 9, and the lower end of the platen is provided with an enlargement or pad 157 which has a series of upwardly projecting parallel bars or ridges 158 thereon, as best seen in Fig. 8. The printing lever 147 is provided with an outwardly extending pin 159, see Fig. 5, which is located thereon adjacent to the elliptical lug 156, and has also at its extreme end a segmental rack 160 and a bent arm 161 projecting outwardly from and over the upper portion of said rack. This end is between the dial cover and the type wheels. A stud 162 on the printing lever 147 carries a plate spring 163 which extends out beyond the rack; and a spring 164 secured at one end to the dial cover and the other end to the printing lever tends to keep said lever in the position shown in Fig. 5. The spring 165 secured to the platen 154 (see Fig. 5) bears against the pin on the dial cover and tends to keep said platen in the position shown in that figure. To a stud 166 on the dial cover (see Figs. 5 and 8) is secured a pawl 167, best seen in Fig. 13, which pawl engages the rack 160. The stud 166 has a squared face 168 on which normally bears a block or follower 169 which is pressed thereon by means of the coil spring 170, both the follower and spring being contained within a recess 171 cut within the pawl, the object of the above contrivance being to enable the pawl to maintain any position on its stud to which it is turned. The pawl is provided with a rounded beak 172 ending in the projecting tooth 173, from which beak a pin 174

extends. To a spindle 175 secured to the dial cover 21 are affixed inking rollers 176. At the bottom of the dial cover (see Fig. 6) is provided an aperture 177 (see Figs. 5, 6, 7, and 8) from which extends a casing 178 in which is a movable plate, shown in dotted lines in Fig. 7, which normally rests below the aperture 177, and the bottom of the casing 178 is apertured to permit the entry of the projections 158 on the pad 157.

The operation is as follows: A ticket, as at 179, Fig. 7, is passed through the aperture 177 in the dial cover, it resting on the movable plate within the casing 178. The lever 147 is then vibrated downwardly on its fulcrum 146 against the stress of the spring 164, during which movement the pin 159 strikes the elliptical lug 156 (see Fig. 8) which vibrates the platen 154 against the stress of the spring 165, causing the projections 158 to enter the casing 178, raise the movable plate therein, and bring the card against the surface of the type on the type wheels. During this movement the pin 149 has been moved downwardly in the slot 143 in the arm 142, and before the said pin strikes the bottom of said slot, the pin 159 on the printing lever 147 has passed the lug 156, which permits the spring 165 to withdraw the projections 158 on the pad from the casing 178, and causing said platen to assume the position shown in Fig. 5. The downward movement of the lever 147 being continued, the pin 149 on the printing lever strikes the bottom of the slot 143 in the lever 142, vibrating the lever 139 on its fulcrum 140, which causes the pins 138 projecting therefrom to strike the projections 137 of the pawls 122, 123, 124 vibrating them, freeing them from the teeth of the printing wheel ratchets, at the same time engaging the noses 136 of the detents 134, which raise the teeth of the detents out of the teeth of the printing wheel ratchets. During this movement the flat spring 161 on the printing lever has struck the pin 174 on the pawl 167, and has vibrated it out of contact with the teeth of the segmental ratchet 160, which vibration has caused the follower 169 in said pawl to be moved away from the squared surface 168 of the spindle 166, moving it over on to the cylindrical surface and compressing the spring 170 which then presses against the top of the aperture 171, the compression of the spring holding the pawl 167 away from contact with the teeth of the segmental rack 160, and at this time, that is while the pawl 167 has been freed from the segmental rack 160, both the pawls 122, 123, 124 and the detent dogs 134 have been disengaged from the teeth of the printing wheel ratchets. There being nothing at this time to oppose the pull of the weights 118, the type wheels are rotated upon the spindle 108[a] until the pins 150 thereon come in contact with the stops 151 which arrest the motion of the type wheels, bringing each one to naught. The downward motion of the printing lever 147 is necessary for the printing of the ticket and the freeing of the pawls and detents of the type wheels, but it is very desirable that the printing apparatus be so designed that the bringing of the type wheels back to naught be finished before the operator can lift the printing lever to reset the type wheel pawls and detents, which is done by raising the pins 138 by the reverse of the operation before described, which will permit the springs 131 to press the pawls into the teeth of the ratchet wheels, so that the machine cannot be used surreptitiously for the purpose of printing a false number. If it were not incumbent on the operator to make a downward movement of the printing lever 147, so as to free the pawl 167, he could operate the platen 154 to print a number on the ticket which was not the true number, because it would be a very easy matter to tamper with the machine and make the register pointers correspond with the number that he would surreptitiously print. It is only therefore after the printing lever has been vibrated down far enough to free the pawl 167, that the pawls and detents for the type-wheels can be reset to operate the type wheels, so that the commencement of the downward movement of the printing lever prints the ticket, and before that movement has ceased, the platen has been freed and the ticket printed, and another ticket cannot be printed until the pin 159 bears the proper co-operative position with the lug 156, which is that shown in Fig. 5, and before this can be done, the pawls and detents for the type-wheels are freed and the type wheels rotated back to naught, and even after the ticket has been printed, the printing lever cannot be moved upwardly until the pawl 167 is freed from the rack 160. This having been accomplished, as before described, the type-wheel pawls and detents are re-engaged with the ratchets on the type-wheels by lifting the printing lever 147 upward, which will cause the bent arm 161 to come in contact with the rounded beak 172 of the pawl 167, and press the tooth 173 thereof back into engagement with the teeth of the rack 160. During this movement the pin 149 has engaged the top of the slot 143 of the lever 142 which vibrates the lever 139 upwardly releasing the pressure on the pawls for the type-wheels and permitting the springs 131 to press the pawls back into engagement with the ratchets for the type-wheels. The re-engagement of the pawl 167 with the rack 160 moves the follower 169 on to the squared surface 168 of the stud 166, the spring 170 then being under sufficient tension to keep the pawl engaged with the rack, and the spring 164 keeping the teeth of the rack engaged with the pawl 167 after the pawls and detents for the type wheels and the pawl for the printing lever have been reset. The printing lever is brought down, so as to permit the pin 159 thereon to be brought adjacent to the elliptical lug 156, where it will be ready for a repetition of the operation before described, so that in Fig. 5 which repre-

sents this position, the bent arm 161 is moved a slight distance from the teeth of the pawl 167. In order to prevent the type wheels being turned after they have passed the highest number which they are constructed to print, their ratchets are intermitted at 180, Fig. 4. For example, if the type wheels are capable of printing up to one hundred, it is necessary that they be prevented from going around to, say ten, and printing ten where they should print one hundred. Of course this example is made with one wheel, but the result of the comparison is true of them all. The inking rollers 176, one for each type wheel, and each independently mounted, bear against the type surface of the type wheels, keeping them constantly inked. The addition of another element for the purpose of registering another size of barrels would require only the duplication of the parts, which are herein shown and used for any one of the particular indicating and registering devices, with the exception of that for the largest, said added devices being connected to the lever 27 and its operating pawl, and its accompanying escapement timed in accordance with the necessary movement of the other parts, that is to say, that the device may be divided up so as to register more than three sizes, or fewer than three sizes of kegs, and the printing mechanism can be connected therewith in the same manner, as hereinbefore shown and described. It is therefore apparent that many changes or modifications can be made in the structure and elements thereof, without departing from the spirit of my invention.

I claim—

1. In an indicator and register, the combination with a series of registering devices having independent ratchet wheels, of a fulcrumed lever carrying pawls at varying distances from the fulcrum thereof, the pawls being adapted to engage the ratchets, actuating means for the said lever, each pawl operating its respective ratchet wheel through the varying amplitude of movement of the said lever, substantially as described.

2. In an indicator and register, the combination with a series of registering devices having independent ratchet wheels, of a fulcrumed lever carrying ratchet engaging pawls at varying distances from the fulcrum thereof, each pawl operating its respective ratchet wheel through the varying amplitude of movement of said lever, independent escapements for some or all of said pawls, and actuating devices for said lever, substantially as described.

3. In an indicator and register, the combination with a series of registering devices having independent ratchet wheels, of a fulcrumed lever carrying ratchet engaging pawls at varying distances from the fulcrum thereof, each pawl operating its respective ratchet wheel through the varying amplitude of movement of said lever, independent escapements for the pawls, except that actuated by the greatest amplitude of movement of said lever, and actuating devices for the lever, substantially as described.

4. In an indicator and register, the combination of a plate, a registering device secured thereon having a rod sliding in bearings on the plate, a second sliding rod, an operative connection whereby a longitudinal movement may be imparted to the latter from the passing contact of the registered article, and a bell crank lever disconnected from both rods, but adapted to have contact with both, when the latter rod is put in operation, and thereby impart motion to the registering mechanism, substantialiy as described.

5. In an indicator and register, the combination of a plate, a ratchet wheel and a lever pivotally mounted on the plate, a pawl carried by the lever, an escapement piece secured to the plate having therein a slot or slideway, and a spring plate covering one end of said slideway, and a pin on the pawl arranged to slide in the slideway, substantially as described.

6. In an indicator and register, the combination of a plate, a ratchet wheel and a lever pivotally mounted on the plate, a pawl carried by the lever, an escapement piece secured to the plate, having therein a slot or guideway for said pawl, and a spring plate covering one end of said guideway, and arranged obliquely to the slideway, and a resilient abutment or diverter for the end of the pawl, substantially as described.

7. In an indicator and register, the combination of a plate, two ratchet wheels pivotally mounted thereon, a sliding bar and pawl thereon actuating one ratchet wheel, a pivoted lever and pawl thereon actuating the other ratchet wheel, the lever having a loose connection at its power end with, and being operated from, the bar, substantially as described.

8. In an indicator and register, the combination of a plate, registering mechanism carried thereon, a type wheel pivotally mounted thereon, a ratchet wheel for operating the type wheel, a lever pivotally mounted on the plate, whereof one end has loose or contact connection with the registering mechanism to be operated thereby, and the other end carries a pawl for engagement with the ratchet wheel, and said pawl, substantially as described.

9. In an indicator and register, the combination of a plate, a ratchet wheel pivoted thereon actuated step by step by the passage of registered articles, a detent for the ratchet wheel, pivoted on the plate, and vibrated step by step by the motion of said ratchet wheel, a bar having a common pivotal axis with the detent and vibrating therewith, a pawl pivoted at about its center on the end of said bar, a ratchet wheel actuated by the pawl, and a type wheel operated by the ratchet wheel, and

independent means for depressing the rear end of the pawl to disengage the same from the ratchet wheel, substantially as described.

10. In an indicator and register, the combination of a plurality of ratchet wheels, pawl levers carrying pivoted pawls severally engaging the ratchet wheels, a slotted bar operatively connected with the pawls to simultaneously disengage the same, a platen, and a printing lever engaging one end of the platen, and having a pin working in the slot of the bar to operate the same, substantially as described.

11. In an indicator and register, the combination of registering mechanism, a ratchet wheel rotated from the registering mechanism, a detaining dog therefor, a slotted bar operatively connected to the detaining dog to disengage the same, a printing lever having a pin working in the bar slot, and means for automatically rotating the ratchet wheel when released from the dog, substantially as described.

12. In an indicator and register, the combination of registering mechanism, a type wheel rotated step by step from the registering mechanism, a platen for co-operating with the type wheel, a printing lever having engagement therewith to operate the same, a rack carried by said printing lever, a pawl engaging the same, and means for disengaging said pawl from said rack, the parts being so arranged that the lever is operated for printing before the rack is released, substantially as described.

13. The combination of a lever, a rack carried thereby, a detaining pawl engaging the rack, a projecting piece carried by the lever and arranged to engage the pawl and disengage it from the rack at a certain stage of the angular movement, and means for re-engaging the pawl with the lever, substantially as described.

14. The combination of a vibrating lever carrying a segmental rack, a pawl engaging the rack to detain the lever, and means carried by the lever for throwing the pawl into engagement with the rack, and also for disengaging it, at certain stages of the angular movement of the lever, substantially as described.

15. The combination of a lever, the extended end whereof is provided with a segmental rack, a pawl for engaging the rack, and an arm carried upon the extended end of the lever and arranged to engage the beak of the pawl as the lever is vibrated to effect the engagement of the pawl with the rack, substantially as described.

16. In an indicator and register, the combination of a lever, the extended end whereof is provided with a segmental rack, a pawl engaging the rack, a pin carried by the pawl, and an arm carried upon the end of the lever and engaging the pin at a certain stage of the angular movement of the lever to throw the pawl out of engagement with the lever, substantially as described.

17. In an indicator and register, the combination of registering mechanism, a typewheel operated therefrom, a detaining device for the same, and means for automatically rotating the typewheel without actuating the registering mechanism when released from said device, printing mechanism, an operating piece arranged to actuate the printing mechanism, and having operative connection with the detaining device to disengage the same in one continuous movement of the operating piece, substantially as described.

18. In an indicator and register, the combination with registering mechanism, of a typewheel operated therefrom, a platen for co-operating with the same, a lever for actuating the platen, a locking device adapted to engage the lever and resist its return to its operative position, and means carried by the lever for throwing the said device into engagement with the lever and also for throwing it out of engagement, at certain stages of the movement of the lever, substantially as described.

19. In an indicator and register, the combination, with registering mechanism, of a typewheel operated therefrom, a platen for co-operating with the typewheel, a lever actuating the platen, a detaining device for the typewheel, and means connected with the lever for disengaging the same, substantially as described.

20. In an indicator and register, the combination of registering mechanism, a ratchet wheel, means for operating the same from the registering mechanism, a detaining dog for the ratchet wheel, a slotted bar having operative connection with the dog to disengage the same, a platen carrying a cam surface or lug, and a lever having a stud engaging the stud of the platen and a pin working in the slot of the bar, the parts being so arranged that the stud engages the lug to operate the platen before the pin arrives at the end of the slot to operate the bar and disengage the dog, substantially as described.

21. In an indicator and register, the combination of registering mechanism, and printing mechanism comprising devices for arranging the type in position for taking an impression, said devices being actuated from the registering mechanism, independent devices for taking the impression, the latter being adapted to be actuated by hand without actuating the registering mechanism, and means for restoring the type to the zero position without affecting the registering mechanism substantially as described.

22. In an indicator and register, the combination of registering mechanism, printing mechanism comprising devices for arranging the type for taking an impression, said devices being actuated from the registering mechanism, but capable of moving independ-

ently of the motion of the registering mechanism detents for restraining the type-arranging mechanism, means for automatically restoring said mechanism to its initial position when released from said detents, and also comprising mechanism for taking the impression, the latter adapted to be actuated by hand, and an operative connection between the latter mechanism and the detents to release the latter, substantially as described.

23. In an indicator and register, the combination, with independent registering devices, of type-carrying devices respectively operated from their corresponding registering devices, but capable of movement independently of the registering mechanism for arranging the type in position for taking an impression, a detaining device for each type-carrying device, an independent mechanism for taking an impression adapted to be operated by hand, and an operative connection between said mechanism and the detaining devices, whereby the latter are operated and the type-carrying devices released, substantially as described.

24. In an indicator and register, the combination, with independent registering mechanisms, of typewheels corresponding thereto, capable of movement independently thereof detents for said typewheels, devices for transmitting motion to said typewheels from said registering mechanisms, independent means for taking an impression from said typewheels, and an operative connection with the detents, whereby they may be simultaneously released by a continuation of the movement which takes the impression, substantially as described.

25. In an indicator and register, the combination of registering devices, a vibrating lever, arms secured thereon normally disconnected from said registering devices but adapted to actuate the same through the vibration of said lever, and escapements for one or more of said arms whereby they are prevented from operating their registering devices in the maximum vibration of said lever, substantially as described.

26. In an indicator and register, the combination of a registering dial, a pointer, a ratchet wheel therefor, and means for operating the same, a detent for the ratchet wheel, a pawl bar vibrating with the detent, a pawl carried thereby, a ratchet wheel operated by the pawl, and a type wheel moving with the ratchet wheel, substantially as described.

27. In an indicator and register, the combination of registering mechanism, type carrying mechanism actuated thereby, detaining means for the latter, mechanism for taking an imprint from the type carrying mechanism, and an operating device, which, in one continuous movement, operates first the printing mechanism, and then the detaining means to free the type carrying mechanism, said device being incapable of reverse motion after its first aforesaid operation and before its second, substantially as described.

28. In an indicator and register, the combination of registering mechanism, type carrying mechanism actuated thereby, detaining means for the latter, mechanism for taking an imprint from the type carrying mechanism, and an operating device, and means for preventing the backward movement of said device to its operative position, said device having suitable connections with the printing mechanism, the detaining means, and the means for preventing its backward movement, the parts being so arranged that the continuous movement of the operating device first actuates the printing mechanism, next, disengages the detaining means from the type carrying mechanism, and then disengages said preventive means, substantially as described.

29. In an indicator and register, the combination of a plurality of step by step register wheels, and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of packages of various sizes, of type wheels actuated from and in unison with said register wheels and by said passing contact, and a printing presser for taking an impression from the type wheels, the register wheels being capable of any desired number of step movements before printing, substantially as described.

30. In an indicator and register, the combination of a plurality of step by step register wheels, and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of barrels or packages of various sizes, of type wheels severally actuated from said register wheels, detaining means for the type wheels independent of the operative connection between the register wheels and the type wheels, and means for returning said type wheels to zero when freed from said detaining means, said detaining means being arranged to be so freed by part of said operative connection, and means, adapted to be operated by hand without operating the register wheels or the operative mechanism therefor, for actuating the said part of the operative connection to free the detaining means, substantially as described.

31. In an indicator and register, the combination of a plurality of step by step register wheels, and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of barrels or packages of various sizes, of type wheels actuated from said register wheels, detaining means for the type wheels independent of the operative connection between the register wheels and type wheels, part of said connection having a motion in one direction, derived from the motion of the register wheels to actuate the type

wheels and a motion in a different direction to disengage the detaining means, and means for communicating the latter motion without operating the register wheels or the operative mechanism therefor, substantially as described.

32. In an indicator and register, the combination of a plurality of step by step register wheels and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of barrels or packages of various sizes, of type wheels severally actuated from the register wheels, a detent for each type wheel independent of the operative connection between the register wheels and type wheels, and a lever simultaneously disengaging all of said detents without operating the register wheels or the operative mechanism therefor, substantially as described.

33. In an indicator and register, the combination of a plurality of step by step register wheels, and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of barrels or packages of various sizes, of type wheels severally actuated from said register wheels, a detent for each type wheel, independent of the operative connection between the register wheels and type wheels, automatic means for bringing each wheel to zero when freed from its detent, and a lever simultaneously disengaging all of said detents without operating the register wheels or the operative mechanism therefor, substantially as described.

34. In an indicator and register, the combination of a plurality of step by step register wheels, and operative mechanism therefor, said register wheels being adapted severally to derive their motions from the passing contact with said mechanism of barrels or packages of various sizes, of type wheels severally actuated from said register wheels, a printing presser for the type wheels, a detent for each type wheel, independent of the operative connection between the register wheels and type wheel, and a lever simultaneously disengaging all of said detents without operating the register wheels or the operative mechanism therefor, and also actuating the presser, substantially as described.

Signed at the city, county, and State of New York this 31st day of August, 1892.

NORBERT HORN.

Witnesses:
M. F. DALY,
BENEDICT S. WISE.