

No. 707,817.

Patented Aug. 26, 1902.

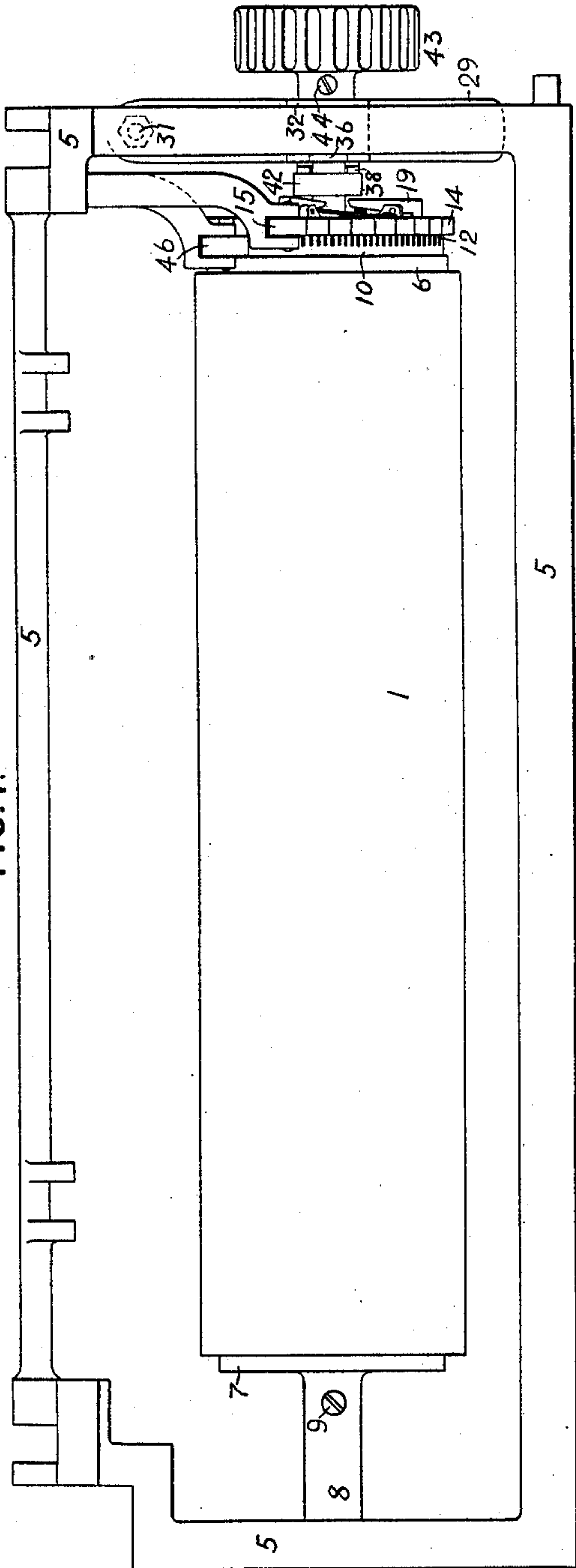
E. M. BENNETT.
TYPE WRITING MACHINE.

(Application filed June 28, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:
N. V. Donovan.
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Fig. 3.

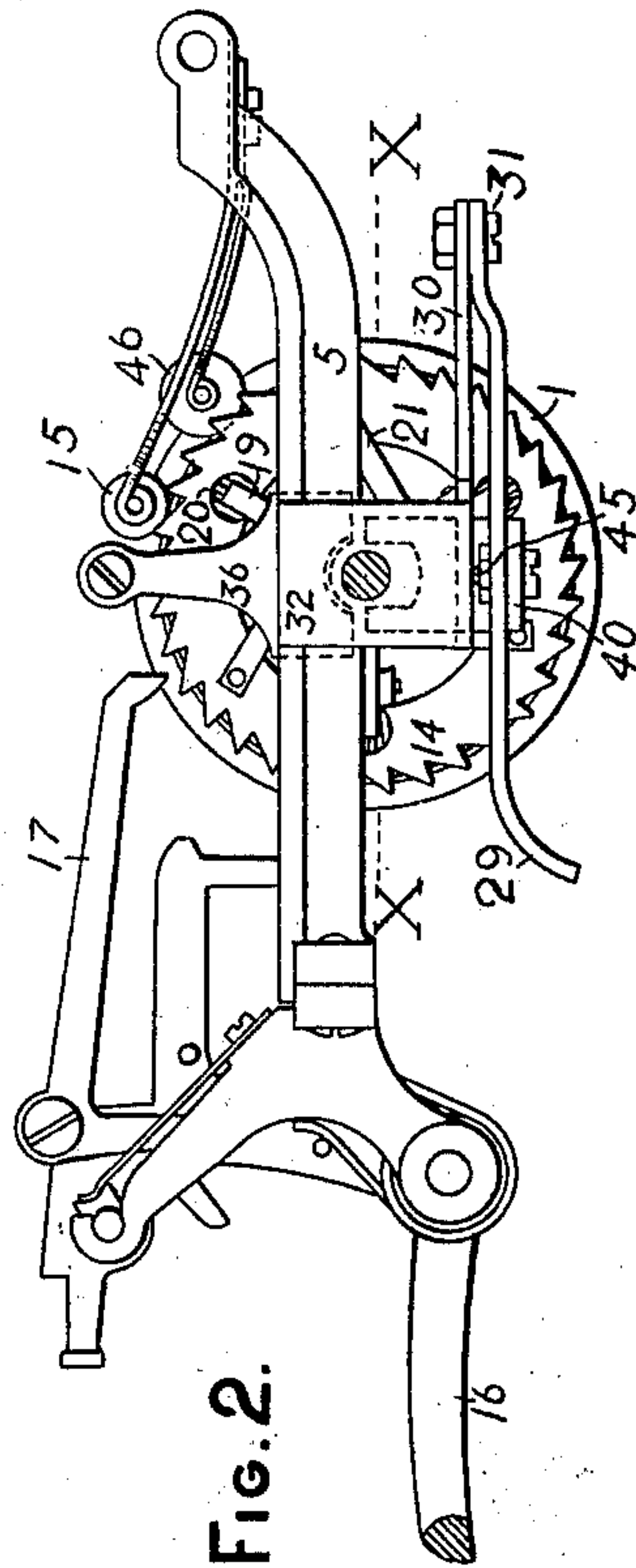
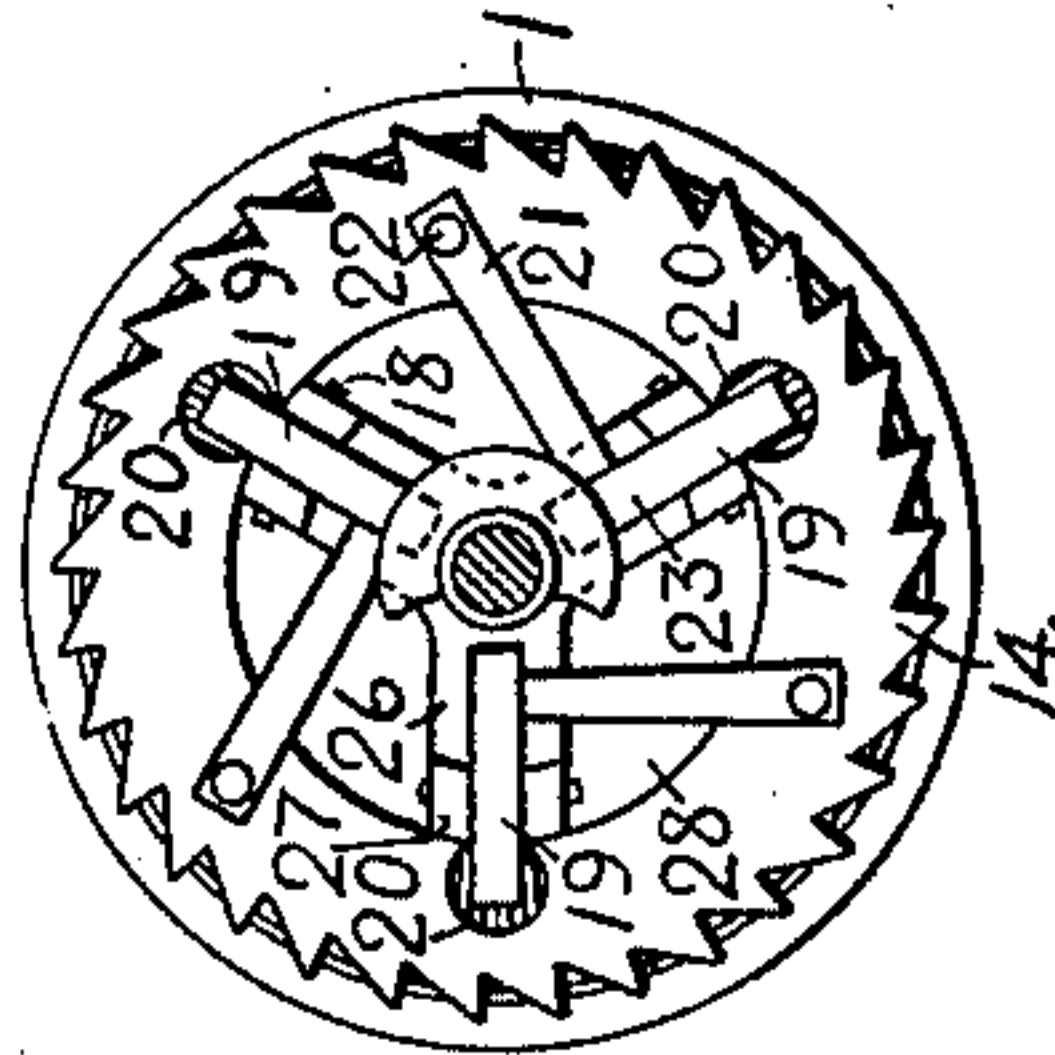


Fig. 2.

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2 Sheets—Sheet 2.

FIG. 5.

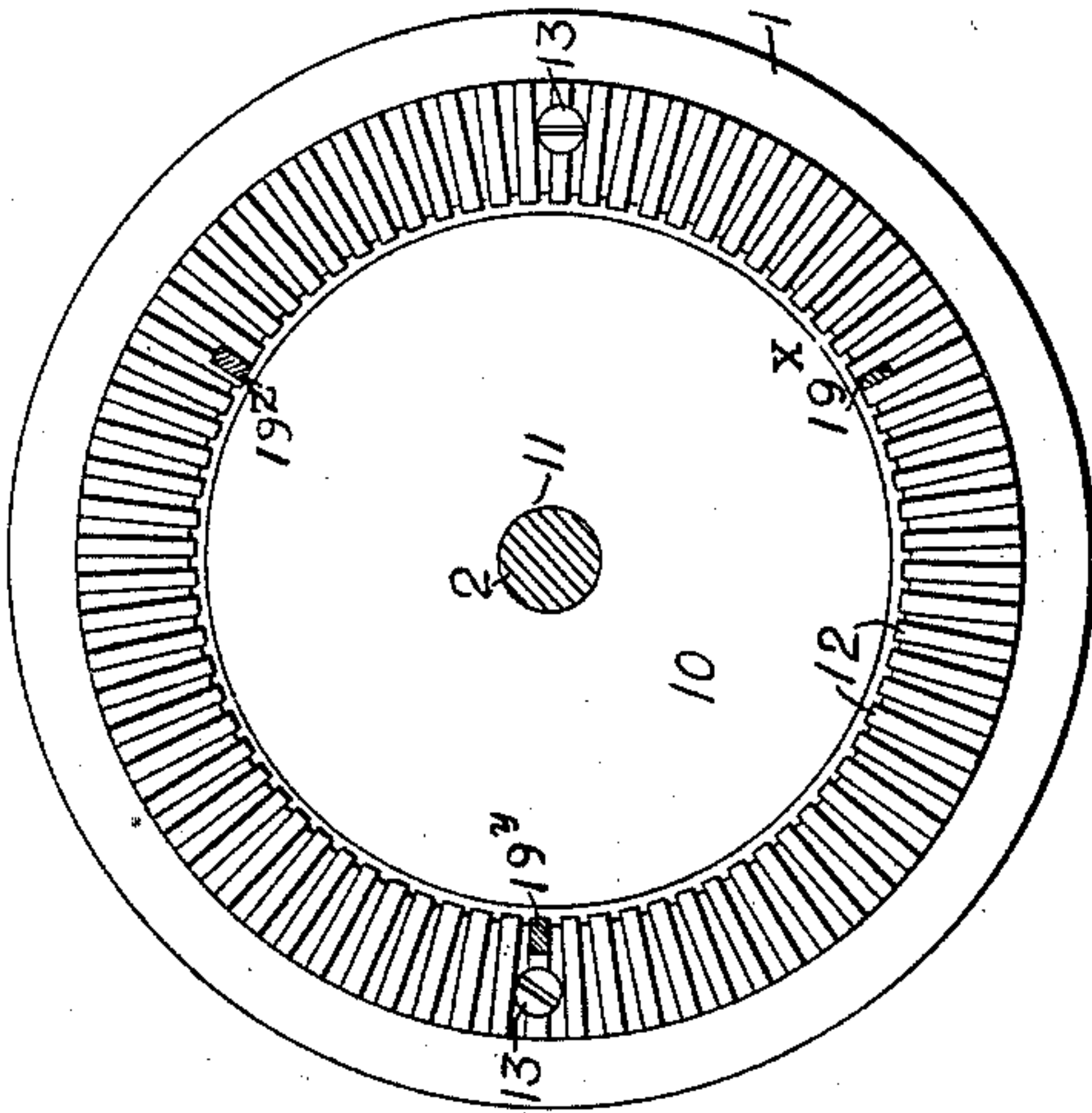


FIG. 4.

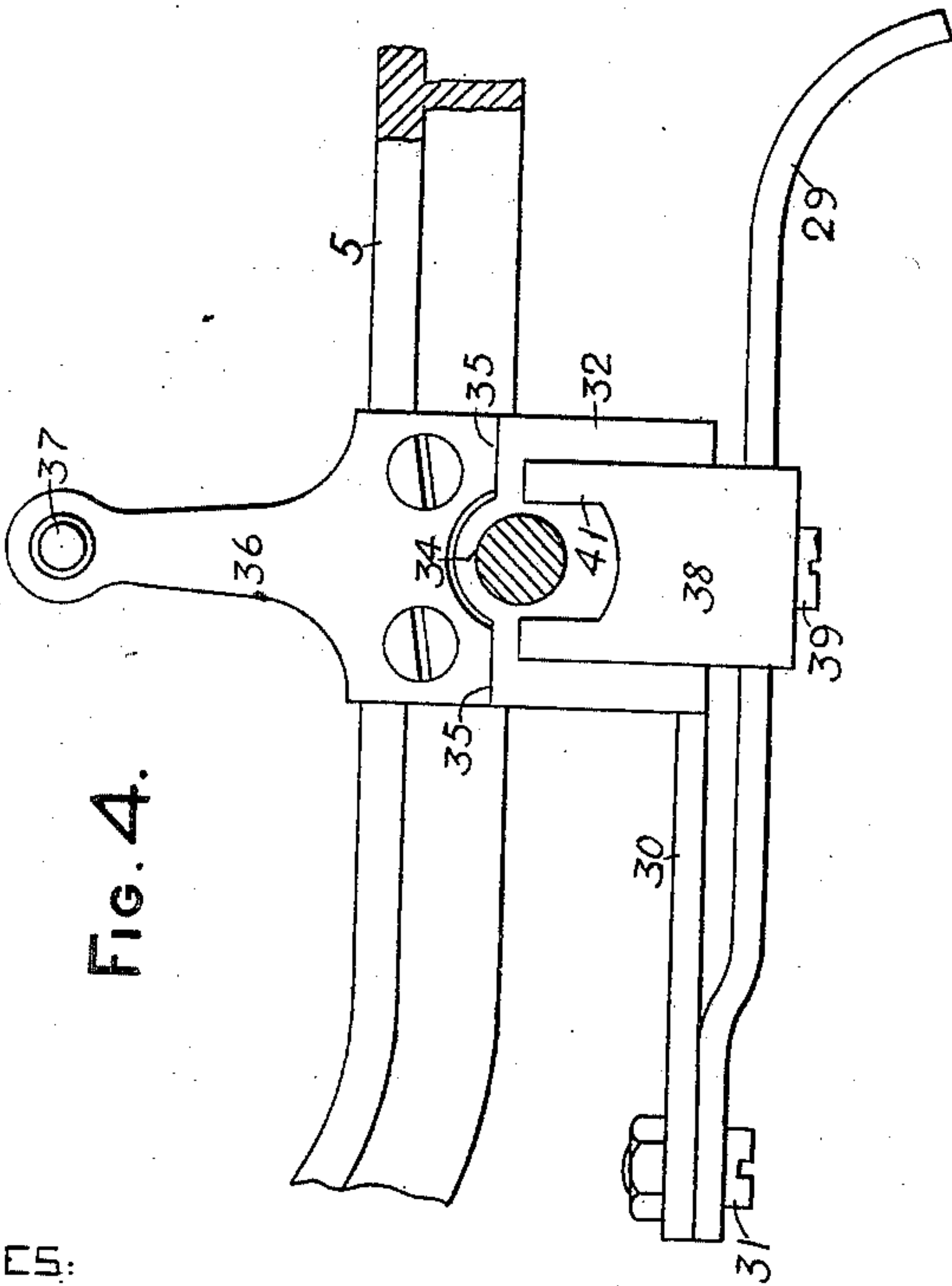


FIG. 6.

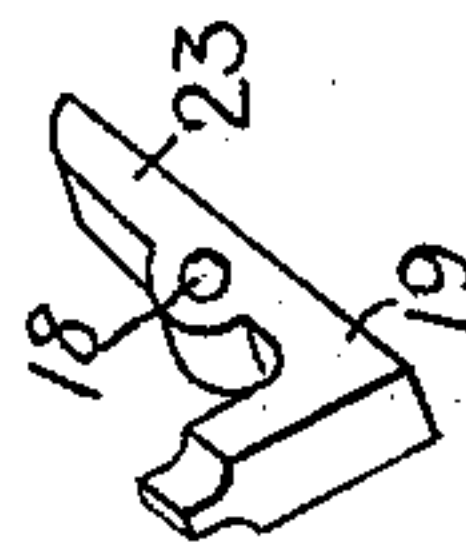
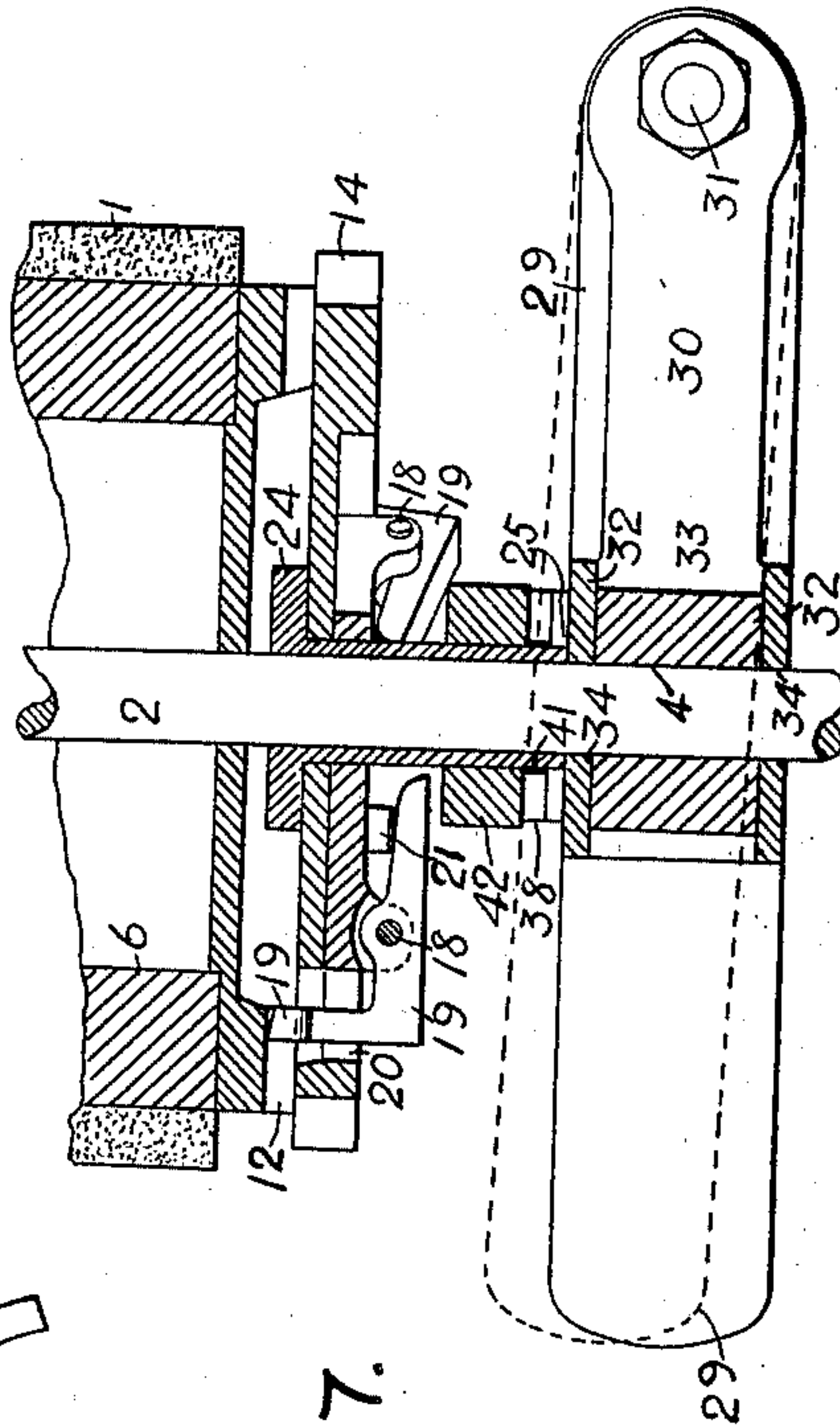


FIG. 7.



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UNITED STATES PATENT OFFICE.

EMMET M. BENNETT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 707,817, dated August 26, 1902.

Application filed June 28, 1900. Serial No. 21,871. (No model.)

To all whom it may concern:

Be it known that I, EMMET M. BENNETT, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the cylindrical platens of type-writing machines; and its objects are to provide improved devices for releasing the platen from the control of the line-space wheel, so that the platen may be rotated or adjusted independently through minute arcs and then reconnected to the line-space wheel; to effect the release of the platen by a lever pivoted upon the platen-frame, and to provide for a more minute adjustment of the platen than has heretofore been practicable when using a toothed adjustment-wheel.

To these ends my invention consists of certain combinations of devices and features of construction, all as will be hereinafter more fully set forth, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan of a platen and platen-frame, showing my improvements applied thereto. Fig. 2 is a view of the right-hand end of the platen-frame, platen, line-space wheel, &c., including the line-spacing lever and appurtenances, the platen-shaft being shown in section. Fig. 3 is a similar view to Fig. 2, but showing only the platen, the line-space wheel, and the devices which are mounted upon the latter. Fig. 4 is an enlarged fragmentary view of the inner side of the right-hand end of the platen-frame and parts attached thereto, the platen-shaft being shown in section. Fig. 5 is an enlarged view of the right-hand end of the platen, showing a fine-toothed wheel secured thereto and also showing in section the platen-shaft and a series of detents. Fig. 6 is a perspective view of a detent. Fig. 7 is a sectional plan, enlarged, taken at about the line X X of Fig. 2, only the right-hand end of the platen being shown.

Throughout the several views same parts are designated by same numerals of reference.

1 represents a cylindrical platen which is secured to a shaft or axle 2, the latter being journaled at 3 and 4 in the ends of a platen-frame 5 of a Remington No. 6 type-writing machine. The rubber sheath which forms the outer portion of the platen is secured upon a tubular wooden core 6. The core is provided at its left-hand end with a metallic head 7, which has a long hub or boss 8, through which the shaft 2 passes, a set-screw 9 securing the hub to the shaft. At its right-hand end the core 6 is provided with another metallic head or wheel 10, the inner or disk portion of which is perforated centrally at 11 to receive the platen-shaft and the outer portion of which is finely divided into evenly-spaced radial teeth 12, cut upon the face of the wheel. The latter is secured to the core by screws 13.

A line-space wheel 14, which is provided with a detent 15 and operated by the usual line-space lever 16 and pawl 17, is supported upon the platen-shaft alongside of or adjoining the toothed wheel 10, the two wheels being arranged face to face. Upon the opposite side or face of the line-space wheel are pivoted at 18 three elbow-shaped detents or locking-teeth 19, which extend through perforations 20, formed in the line-space wheel, and engage the teeth 12 of the wheel 10. Each detent is pressed toward or into engagement with said teeth 12 by a flat spring 21, which is riveted to the line-space wheel at 22, and at its free end bears against the under side of an arm 23, which is formed upon the detent and extends radially from the pivot thereof inwardly or toward the platen-axle. The line-space wheel is rigidly secured upon a long hub or sleeve 24, which is loosely mounted upon the shaft and bears at 25 against the end of the platen-frame or a part fixed thereon to prevent lateral movement of the line-space wheel. The detents 19 are supported upon a three-armed device 26, which is provided with ears 27 for the detent-pivots 18 and is fixed in a circular depression 28, formed in the face of the line-space wheel.

In order to enable adjustments of the platen to be effected within still smaller arcs or intervals than are represented by said

teeth 12, I preferably arrange the detents 19 so that only one of them at a time can engage the teeth 12 for the purpose of locking the wheel 10 to the line-space wheel, as indicated at 19^x, Fig. 5. In other words, the three detents do not simultaneously coincide or register with the notches between the teeth 12, but are so placed relatively to one another and to the teeth 12 that three adjustments of the platen can be effected within an arc corresponding to a single one of the teeth 12 and the platen locked to the line-space wheel in any of the three positions. If the platen should be released and given a slight rotation to the right from the position shown at Fig. 5, the detent 19^y would fall into engagement between the adjoining teeth of the wheel 10, while the detents 19^x and 19^z would come to rest against the faces or edges of the teeth 12, or if the platen should be turned slightly to the left from the position at Fig. 5 the detent 19^z would fall into locking position and the other detents would occupy inoperative or idle positions. At Fig. 7 one of the detents is shown in its idle position and the other in locking position. I am thus enabled to adjust the platen through much finer arcs than have heretofore been found practicable in platen-release mechanisms having a fine-toothed adjusting-wheel. Assuming, for instance, that there are one hundred of the teeth 12, it is possible to lock the platen to the line-space wheel in three hundred different positions. This construction permits the paper to be adjusted with great accuracy without the necessity of using teeth so fine as to be too weak for use and practically too fine to cut. In order to vibrate the detents to release the platen, I provide a lever 29, which is suitably supported upon the platen-frame, as by a bracket 30, to which the rear end of said lever is pivoted at 31 in rear of the platen-axis. Said bracket is supported upon the platen-frame by means of a yoke 32, which opens upwardly and clasps a platen-shaft bearing 33, provided in the right-hand end bar of the platen-frame. Both members of said yoke are perforated at 34 to receive the platen-shaft. The upper portion of the inner member of the yoke is shouldered at 35 to abut against the under edge of a bracket 36, which is usually provided upon the Remington platen-frame, and carries at its upper end a locking-pin 37 for coaction with the line-space pawl 17 to prevent overthrow of the platen.

By means of the described bearings the bracket 30 is rigidly supported upon the platen-frame. The lever extends to a point forward of the platen-axis and at its free end is downwardly curved, as indicated at Figs. 2 and 4, to form a handle. An upwardly-projecting ear 38 is loosely secured to the lever by means of a screw 39, which passes upwardly through a horizontal member 40, which is provided upon said ear and extends under the lever. At its upper end said ear is forked

at 41 to straddle the sleeve 24 and is adapted to bear against a collar 42, placed loosely upon said sleeve and arranged to contact with the arms 23 of the detents 19. The lever 29 lies normally parallel with the end bar of the platen-frame, from which position it may be swung inwardly or toward the platen to the position indicated at Fig. 7 in dotted lines, during which operation the ear 38 contacts with the collar 42, and the latter is moved along the shaft or the sleeve 24 thereon. The collar in its said movement engages the active detent 19 and vibrates the latter upon its pivot to release the wheel 10 and the platen. The platen may then be finely adjusted by a hand-wheel 43, which is secured to the platen-shaft 2 by a screw 44, or by the hand-wheel usually placed upon the other end of the shaft. The lever 29 may then be released, whereupon the springs 21 cause the detents to press against the teeth 12, and one of said detents enters between two of said teeth and relocks the platen to the line-space wheel. By means of said spring or springs 21 the collar 42 may also be forced back to normal position, together with the ear 38 and the lever 29.

If desired, the point 45 of the screw 39, Fig. 2, may be caused to bear up against the under side of the yoke 32 to frictionally hold the lever in either normal or working position independently of the spring or springs 21. The friction required may be produced by bending or springing either the bracket 30 or the rear end of the lever 29. It will be seen that not only the lever but also the collar and the detents can be held in operative position by the described frictional engagement of the point 45 with the yoke, so that the operator may employ both hands in adjusting the platen or the paper thereon, and that then the lever may be swung back to normal position, permitting the detent to relock the platen to the line-space wheel.

So long as the platen-releasing lever is supported or pivoted upon the platen-frame it is immaterial whether it be pivoted upon the bracket 30 or directly to some part of the platen-frame. I prefer the construction shown because it enables the invention to be readily attached to machines already manufactured.

Many other changes may be made in the details of construction and arrangement within the scope of the invention, and it may be applied to type-writing machines of other designs.

A pressure-roll 46, which bears upon the periphery of wheel 10, is employed to cause friction at the platen-bearings.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a line-space wheel adjoining said fine-toothed

wheel, and a detent extending through the line-space wheel to engage the said fine-toothed wheel.

2. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a space-wheel adjoining said fine-toothed wheel, and a detent pivoted upon the opposite side of said line-space wheel and extending through the latter to engage the said fine-toothed wheel.

3. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a line-space wheel adjoining said fine-toothed wheel, and a series of radially-arranged and independently spring-pressed detents pivoted upon the opposite side of said line-space wheel and extending through the latter to engage the said fine-toothed wheel.

4. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a line-space wheel adjoining said fine-toothed wheel, a series of detents pivoted upon the opposite side of said line-space wheel and extending through the latter to engage said fine-toothed wheel, each of said detents having an arm, and a spring arranged between each of said arms and said line-space wheel.

5. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a line-space wheel, ears fixed upon the latter, and a series of spring-pressed detents pivoted in said ears and engaging said fine-toothed wheel.

6. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a platen-shaft, a line-space wheel loosely mounted upon said shaft, a movable detent engaging said fine-toothed wheel and mounted upon the line-space wheel, a collar supported upon the shaft and engaging said detent, and means for moving said collar along the said shaft to disengage the detent.

7. In a type-writing machine, the combination with a platen-frame and a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a platen-shaft, a line-space wheel loosely mounted upon said shaft, a movable detent engaging said fine-toothed wheel and mounted upon the line-space wheel, and a lever mounted upon the platen-frame and connected to disengage said detent.

8. In a type-writing machine, the combination with a platen-frame and a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a platen-shaft, a line-space wheel loosely mounted upon said shaft, a movable detent engaging said fine-toothed wheel and mounted upon the line-space wheel, a collar

engaging said detent, and a lever mounted upon the platen-frame and constructed to move said collar along said shaft so as to disengage said detent.

9. In a type-writing machine, the combination with a cylindrical platen, of a fine-toothed wheel secured to the end thereof, a platen-shaft, a line-space wheel loosely mounted upon said shaft, a movable detent engaging said fine-toothed wheel and mounted upon the line-space wheel, a collar engaging said detent and supported upon said shaft, a platen-frame, a horizontally-swinging lever mounted upon said platen-frame, and an ear on said lever connected to said detent.

10. In a type-writing machine, the combination with a cylindrical platen, a fine-toothed wheel, a platen-shaft, a hand-wheel connected to turn said shaft, a line-space wheel, a detent, a platen-frame, and a lever mounted upon the platen-frame and connected to move said detent to release the platen.

11. In a type-writing machine, the combination with a platen-frame, a cylindrical platen, and a line-space wheel, of a toothed wheel connected thereto, a releasable detent, a lever mounted upon the platen-frame, and connections between said lever and said detent.

12. In a type-writing machine, the combination with a platen and a line-space wheel, of an adjustment-wheel having teeth, and a series of detents connecting said wheels, said detents being so constructed and arranged as not to simultaneously fall between said teeth.

13. In a type-writing machine, the combination with a platen and a line-space wheel, of a wheel having evenly-spaced teeth, and releasable locking devices engaging said teeth and so constructed and arranged as to enable the platen to be adjusted relatively to the line-space wheel through finer intervals than the intervals between said teeth, and to be relocked to the line-space wheel at such finely-adjusted positions.

14. In a type-writing machine, the combination with a platen and a line-space wheel, of a spring-pressed releasable device for locking the platen to the line-space wheel, a lever or finger-piece operatively connected to said releasable device, whereby the latter may be moved to an inoperative position, and a frictional device for holding said lever and said releasable device during the adjustment of the platen relatively to the line-space wheel.

Signed at Boston, in the county of Suffolk and State of Massachusetts, this 26th day of June, A. D. 1900.

EMMET M. BENNETT.

Witnesses:

FLORENCE WALLACE,
AMOS L. BETTS.