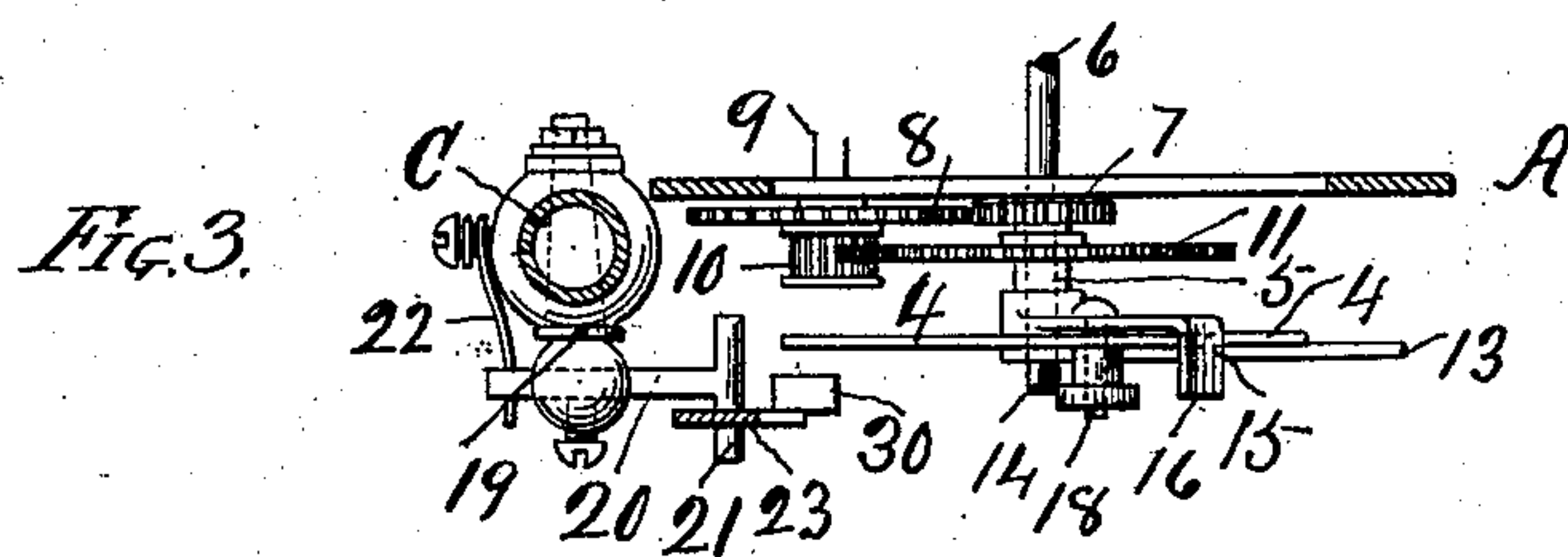
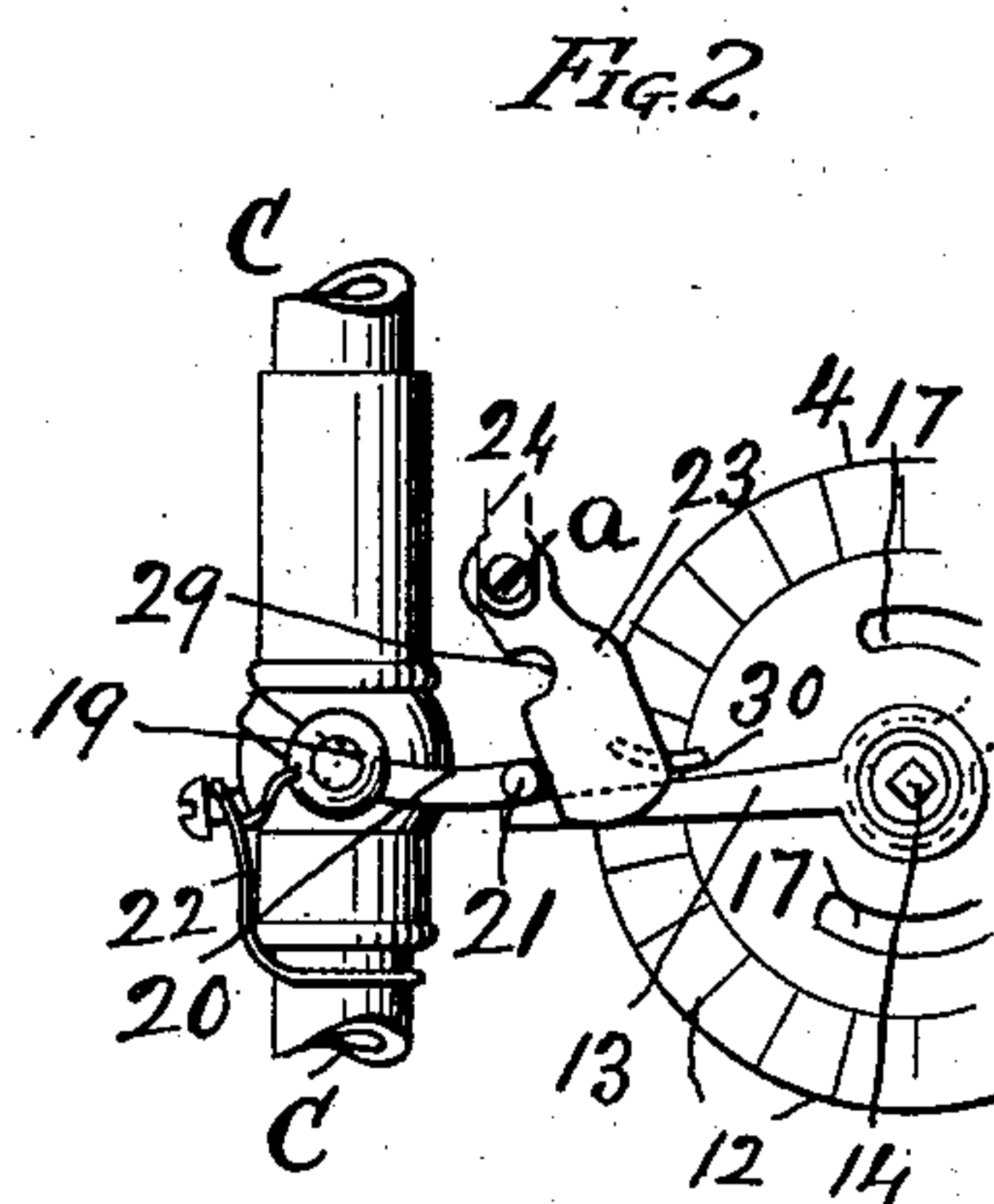
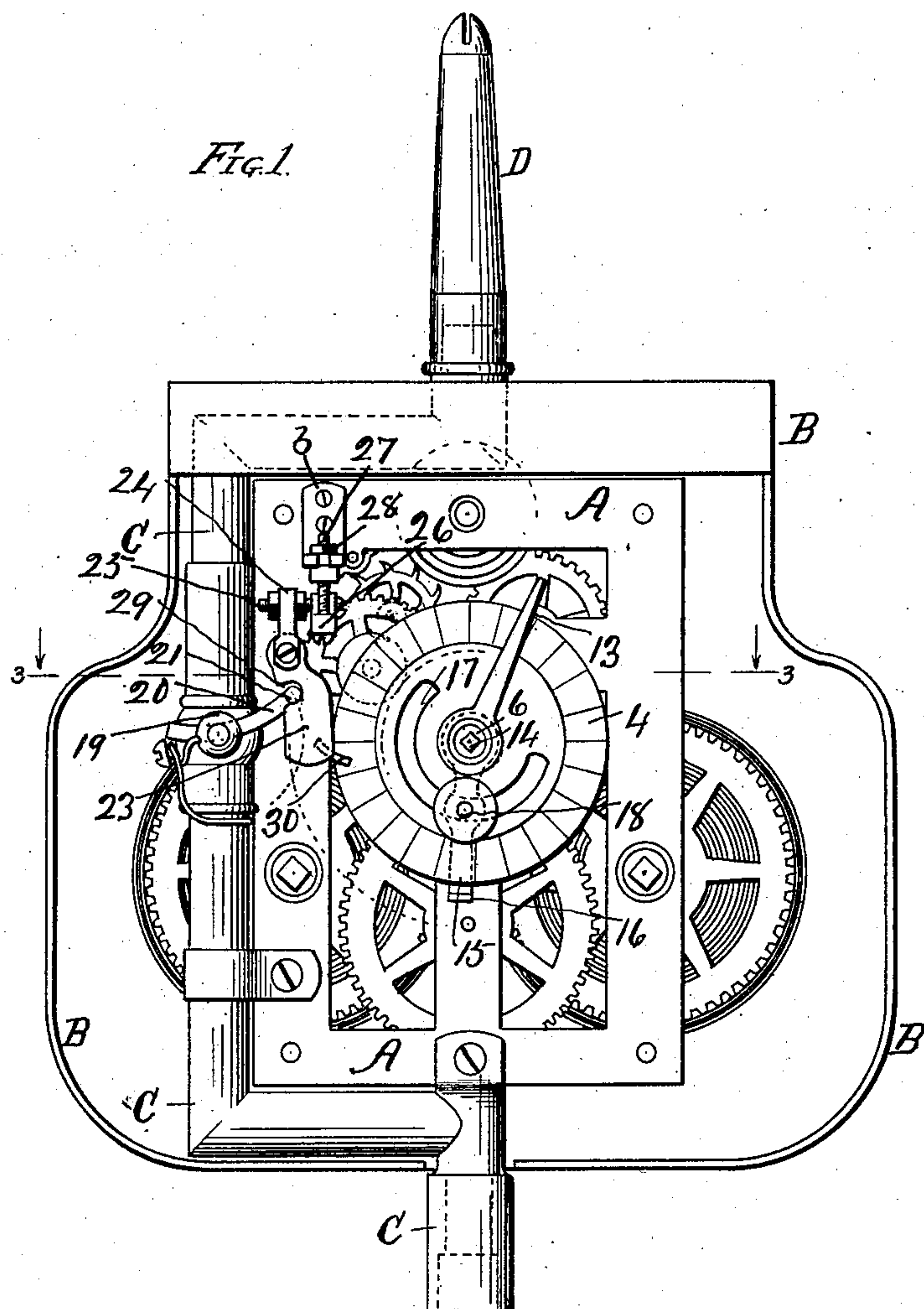


No. 742,054.

PATENTED OCT. 20, 1903.

E. NEWMAN.
TIME LIGHT CONTROLLER.
APPLICATION FILED JULY 26, 1902.

NO MODEL



WITNESSES:
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UNITED STATES PATENT OFFICE.

EDWARD NEWMAN, OF CHICAGO, ILLINOIS.

TIME LIGHT-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 742,054, dated October 20, 1903.

Application filed July 25, 1902. Serial No. 116,935. (No model.)

To all whom it may concern:

Be it known that I, EDWARD NEWMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Light-Controllers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements for automatically controlling and operating illuminating gas-lamps or the like, and is more especially intended for use in connection with street-lighting, and has for its object to provide an attachment located between the source of the gas-supply and the actuating mechanism, whereby the flame is turned up and burns at full head for a number of hours at a prearranged time, and at the expiration of that time the flame is turned down low, but not extinguished, so that it may again be turned on at the proper time in dividing the twenty-four hours into day and night time.

In the drawings, Figure 1 is a front elevation of a device embodying the improved features. Fig. 2 is a broken-away detail; and Fig. 3 is a transverse section on line 3, Fig. 1, looking in the direction indicated by the arrow.

The operating means employed in connection with the improved attachment for controlling the light consists of clockwork mechanism of the usual construction, so that a detail description thereof will be omitted.

A represents the frame in which the clockwork mechanism is mounted; B, an inclosing sheet-metal case; C, a pipe connecting with the source of the gas or vapor supply, and D a burner-tube mounted on the terminal end thereof.

A graduated revoluble disk 4 is rigidly mounted on a hub or sleeve 5, which in turn is loosely mounted on the clock-arbor 6. A pinion 7 is rigidly mounted on the arbor 6 and engages a gear-wheel 8, mounted on an arbor 9. A pinion 10 is also mounted on the arbor 9 and engages a gear-wheel 11 on the hub 5. By this train of gearing the necessary motion is transmitted to the disk 4, which is timed to make a complete revolution

every twenty-four hours. This disk is provided on its face with division hour-lines 12, disposed around the circumferential surface thereof and spaced at proper intervals. The inner end of a hand 13 is rigidly mounted on the hub 5, the outer end extending beyond the edge of disk 4, as shown in the drawings, and makes a complete revolution therewith once in every twenty-four hours. A hand 15 is loosely mounted on the arbor 6, the outer end 16 of which extends beyond the edge of the disk and is bent around at right angles. The graduated disk is provided with a circular slot 17, in which is inserted a clamping-bolt 18, extending through the hand 15 near its longitudinal center. This bolt may be moved to any point within the range of the slot in positioning the hand 15 with reference to the hand 13 in increasing or lessening the number of hours the light is to be burned full head.

A controlling-valve 19 is inserted in the supply-pipe and has a movement-lever 20 connected with the outer-end of the valve-plug. The respective ends of this lever project from opposite sides of the end of the valve, the inner end being provided with the cross-bar 21, positioned in the path of the hand 13. A spring 22 connects with the outer end of the lever and serves to return the valve to its open position.

The upper end of a swinging plate 23 is pivoted to a hanger 24, as at *a*. This hanger is adjustably mounted on a horizontal screw-bolt 25, headed in a hanger 25, mounted on the lower end of a screw-bolt 26, set at right angles with reference to bolt 25. The upper end of the bolt 27 is supported in a bracket and has a vertical adjustment by means of a nut 28, whereby the plate 23 may be raised or lowered in setting the same in its proper working position. The plate 23 is provided in its outer edge with a notch 29, with which the cross-bar end of the valve-lever is adapted to engage at the proper time in nearly closing the valve and turning down the light. The plate 23 is also provided on the lower end with a lug 30, projecting into the path of the hand 15, which contacts it once in each revolution and has the effect of drawing the disengaged end of the plate inward far enough to release the cross-bar end of the

valve-lever from its notch engagement therewith. As shown in Fig. 1, the valve is in its nearly-closed position, and in Fig. 2 the valve is in the opposite open position. The hand 13 controls the closed position with the light turned down and the hand 15 the open position of the valve, the light burning full head.

In operation, supposing the hand 15 to be just coming into contact with the lug 30 on the lower end of plate 23, which has the effect, as the hand moves on, of gradually drawing the plate back far enough to release the cross-bar end 21 of the valve-lever 20 from its engaged position, Fig. 1, with notch 29 in plate 23. When so released, the valve-lever is pulled down to its lowermost position, Fig. 2, by the action of spring 22. In this lower position of the lever the valve is wide open and the light turned on full head and remains so turned on until the period of time has elapsed which brings the hand 13 in contact with the cross-bar end of the valve-lever, Fig. 2, and gradually raises the same into engagement with the notch in plate 23, which gravitates to its locking position with the contacting end of the valve-lever and automatically locks the valve in its closed position as the hand 13 passes on out of contact. In this position the light remains turned down until the hand 15 is again brought in contact with and retracts plate 23 and automatically releases the valve from its locked closed position. The relative position of the two hands, as shown, indicates that the light will burn brightly for the period of ten hours and be turned down for the remaining hours of the twenty-four, there being ten division-lines between the hands on one side and fourteen on the other. By shifting the hand 15 with

reference to the hand 13 the number of hours the light is to be burned may be lessened or increased, as necessary.

The clock mechanism used will ordinarily be of the eight-day kind and require winding accordingly.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a light-controlling device, a valve normally held in one position, a locking device to automatically lock the valve when brought to abnormal position, automatically-operated means to release the lock to allow the valve to move to its normal position, and means to return the valve to its abnormal position to be automatically locked therein.

2. In a light-controlling device, the combination with clockwork mechanism, of a revoluble graduated disk receiving motion therefrom and provided with a circular slot, a fixed hand, an adjustable hand movable in said slot, a valve located in the supply-pipe, a lever mounted thereon and extending into the path of the adjustable hand, a swinging plate provided with a notch with which the inner end of said lever is adapted to periodically engage and hold the valve in its closing position, the lug formed on said plate, positioned to be contacted by the adjustable hand in releasing said lever from its engaged position, and means for returning the valve to its open position, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD NEWMAN.

Witnesses:

J. B. DONALSON,
L. B. COUPLAND.