No. 627,957. Patented June 27, 1899.

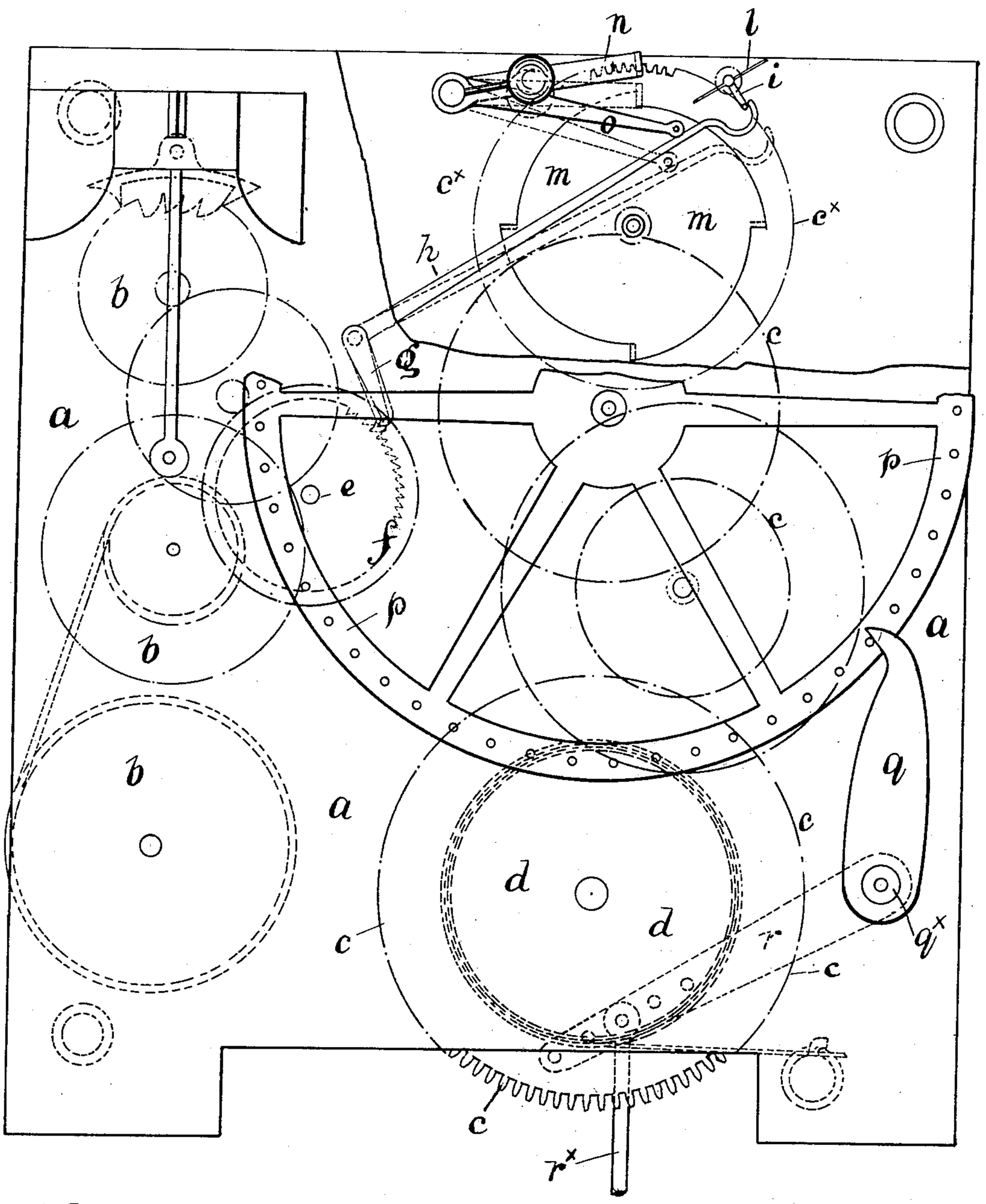
A. GRIFFITHS.

WORKMAN'S TIME RECORDER.

(Application filed Mar. 9, 1899.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

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Fig 2

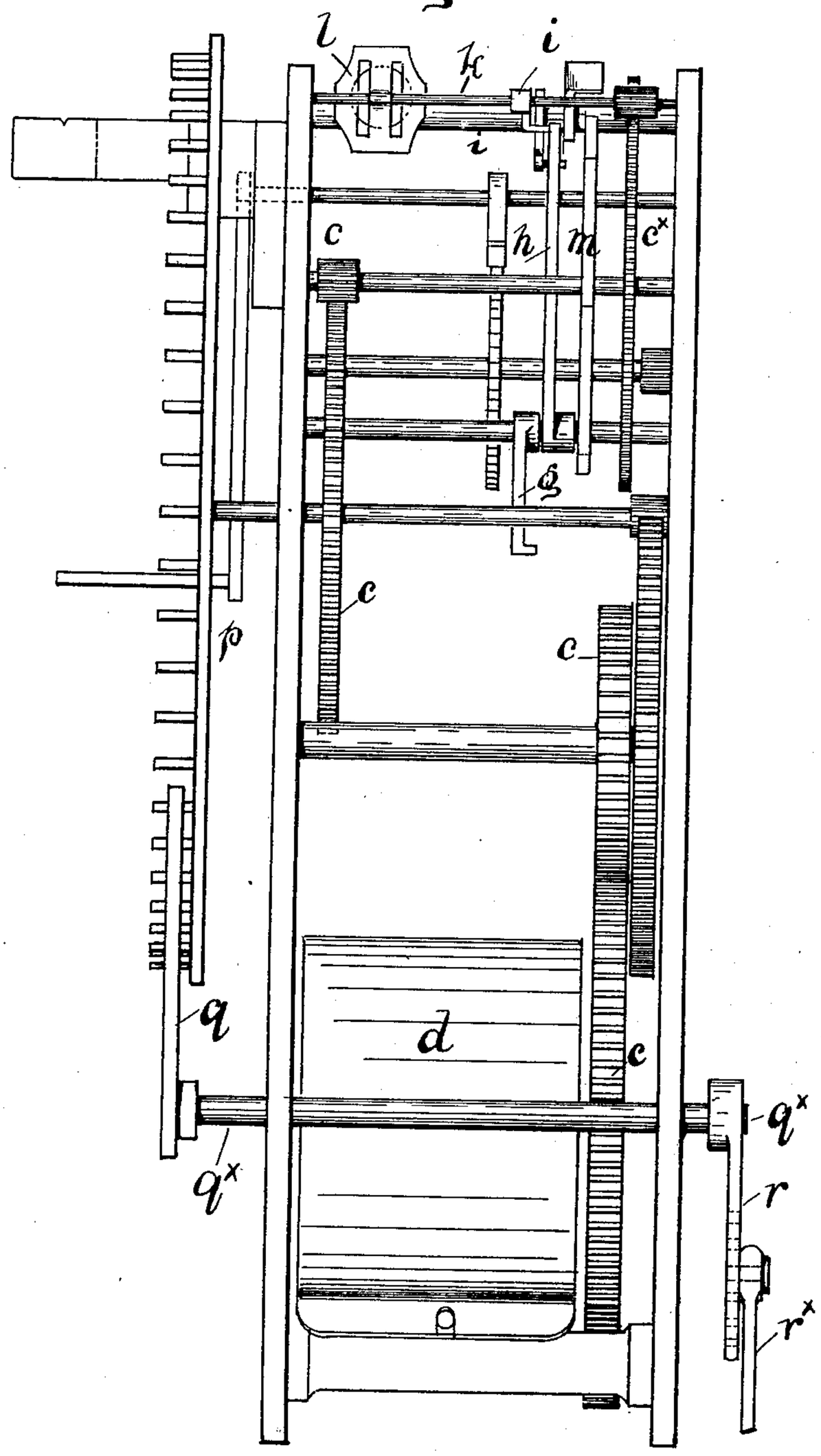

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FIG. 3.

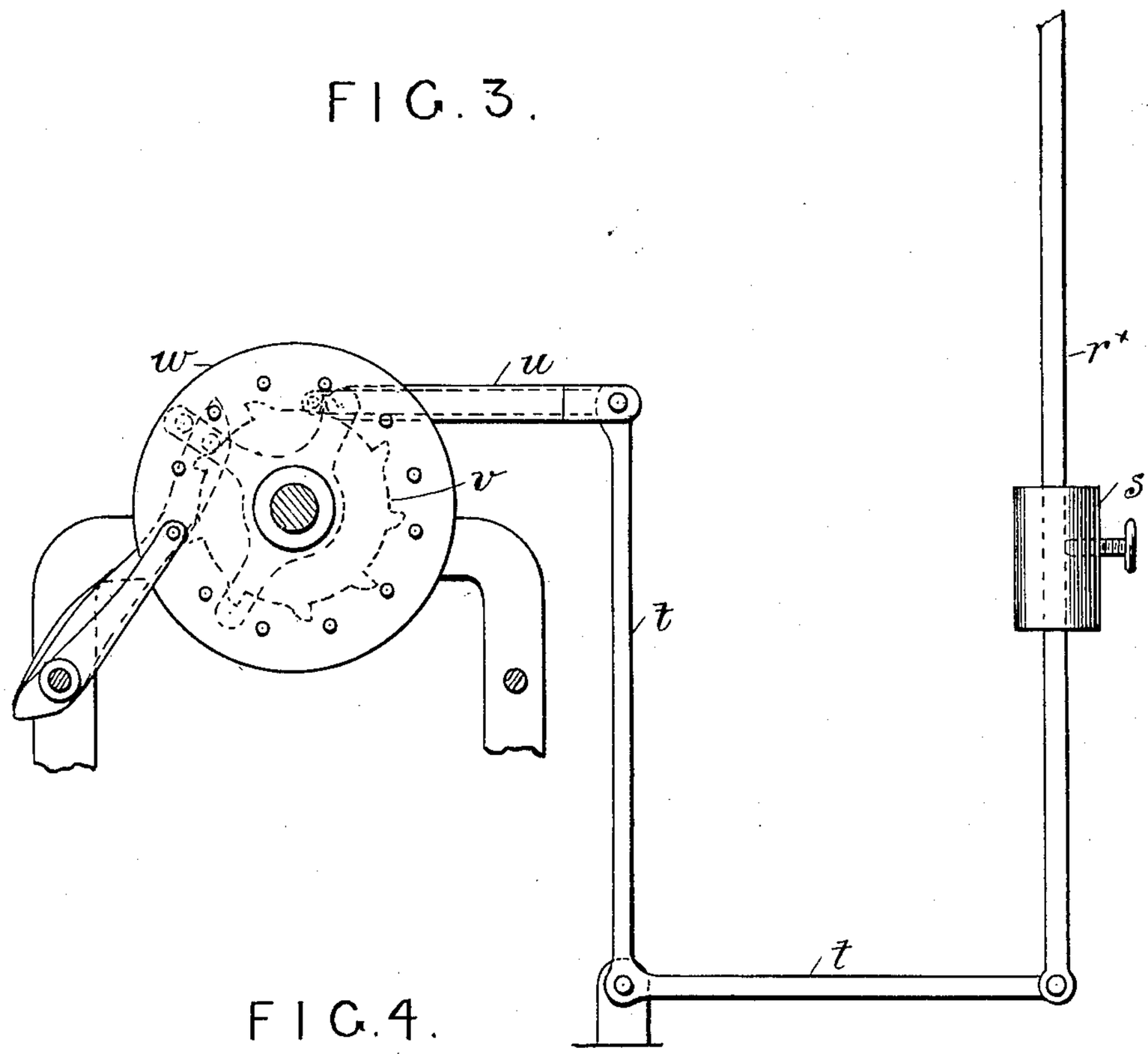
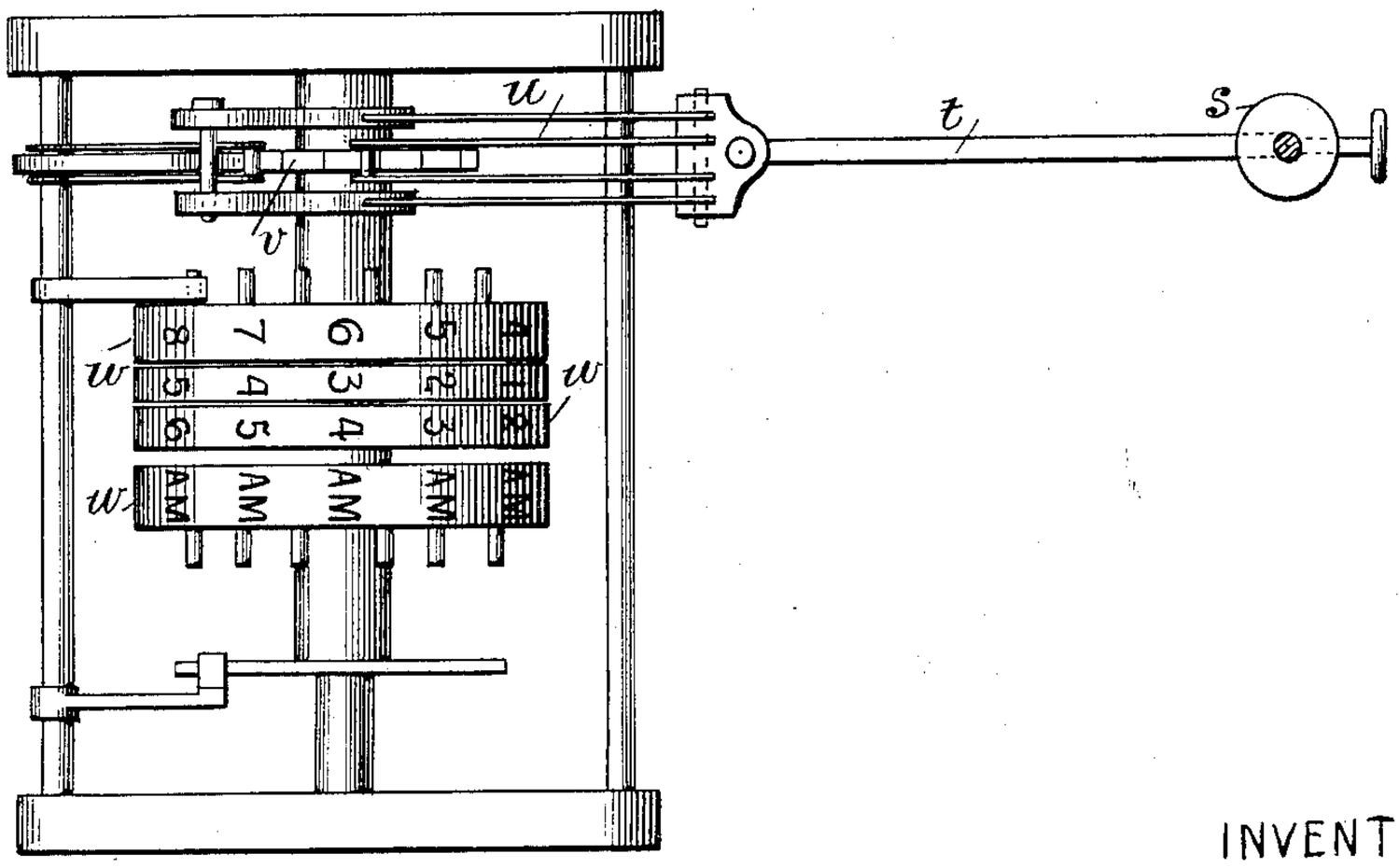


FIG. 4.



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UNITED STATES PATENT OFFICE.

ALFRED GRIFFITHS, OF MANCHESTER, ENGLAND.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 627,957, dated June 27, 1899.

Application filed March 9, 1899. Serial No. 708,394. (No model.)

To all whom it may concern:

Be it known that I, ALFRED GRIFFITHS, a subject of the Queen of Great Britain, residing at Longsight, Manchester, in the county of Lancaster, England, have invented new and useful Improvements Relating to Workmen's Time Checking and Recording Machines, of which the following is a specification thereof.

This invention relates to all classes of time checking and recording machines wherein motion is required to be communicated at definite interrupted periods, and particularly to that class of workmen's time checking and recording machines wherein the workman has to sign his name or impress his number on a continuous strip of paper, and in some cases by the additional pulling over of a handle or lever, which causes the exact time or period within which such signature is made or number impressed to be printed close to the said signature or number; and the object of this invention is to construct a mechanical apparatus which shall change or alter the type of such checking and recording machine once in any given period—as, for instance, once every minute—so that the machine will always be in a condition to print the exact time or the period within which such signature is made or number impressed.

The manner in which my said invention is to be performed or carried into practical effect will be readily understood on reference to the sheets of drawings hereunto annexed and the following explanation thereof.

Figure 1 on the drawings is a partial sectional elevation, and Fig. 2 a side view, of the works of an ordinary eight-day clock with my invention shown as applied thereto. Fig. 3 is a continuation of Fig. 1, and Fig. 4 is a plan of Fig. 3.

a is a portion of the frame, and *b* is the ordinary train of wheels.

For the purposes of my invention I provide the clock with a secondary train of wheels *c*. This train of wheels *c* is actuated by a spring-barrel *d*, and it is connected to and regulated by the ordinary train *b* of the clock in the following manner: Upon the arbor *e* of the center wheel of the clock, which carries the hands, (see Fig. 1,) I mount a ratchet-wheel *f*, having, say, sixty teeth, in gear with which is a short ratchet or lever *g*, to which is attached a long lever *h*, curved into a hook at the end, which alternately holds and releases an arm *i*, fixed on the spindle *k*, which carries the "fly" *l* as the levers *g* and *h* are caused to rise and fall by the action of the teeth of the ratchet-wheel *f*. The holding position of the lever *h* is shown by the full lines at Fig. 1 and the releasing position in dotted lines. Whenever the fall of the lever *h* releases the fly the train of wheels *c* is put in action by the spring *d*. On the arbor of the wheel $c^{\times}$ of this train is fixed a wheel or disk *m*, having, say, four teeth, above which hangs a catch *n*, which is held up or allowed to fall onto the notched disk *m* by a lever *o*, a pin at the end of which rests on the lever *h*, so that they rise and fall together, the effect of which is that when the fly is released the wheel $c^{\times}$ can only make, say, one-fourth of a revolution—that is to say, the length of one tooth—on the disk *m*, which the catch then holds fast until again released.

The disk *m* may have any suitable number of notches and is fixed on the arbor of the wheel $c^{\times}$, which drives the fly, so that every lift of the lever *h* allows this wheel to turn the fly *l* the required number of times. On the arbor of the wheel which drives the wheel $c^{\times}$ is fixed a pin-wheel *p*, having any desired number of teeth—as, for instance, fifty-two—which gives motion to a lever *q* on a shaft $q^{\times}$, a lever *r* on the end of which is connected by a rod $r^{\times}$ to the type-printing apparatus of the checking-machine and by its motion gives the necessary pull or lift to change the type from time to time—as, for instance, minute by minute—as may be desired, in the manner shown in Fig. 3 (a side elevation in continuation downward of Fig. 1) and which shows the lower end of the rod $r^{\times}$ provided with a weight *s* and connected to the horizontal arm of a bell-crank lever *t*, the upper end of the vertical arm thereof being provided with a pawl or catch-link *u*, which actuates the ratchet-wheel *v*, fixed on the arbor of the type-changing apparatus *w*, which is of the ordinary known construction and a plan view of which is shown at Fig. 4.

I claim as my invention—

1. Mechanism for controlling a workman's time checking and recording machine having

a notched disk, a "fly," a common mechanism to revolve both, a ratchet-wheel, a catch and a lever operated by the ratchet-wheel, a catch to govern the movement of the notched disk, a lever connected to catch and having a free end adapted to be raised by the first-named lever to operate the catch and release the notched disk from its catch, said first-named lever adapted to check the "fly" at the same time, and to afterward release the fly and allow the catch to check the notched disk, substantially as described.

2. Mechanism for controlling a workman's time checking and recording machine, consisting of a clockwork, a ratchet-wheel operated by the clockwork, a catch and lever operated by the ratchet-wheel, an additional train of wheels having a "fly," a notched disk and a catch, a pin-wheel, a rod operated thereby, said lever adapted to act upon and check the "fly" and release the catch when in one position and to check the catch and release the "fly" when in another position, whereby the notched disk is permitted to revolve a predetermined distance and revolve the train of wheels thereby advancing the pin-wheel, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED GRIFFITHS.

Witnesses:
JNO. HUGHES,
THOS. PRESCOTT.