

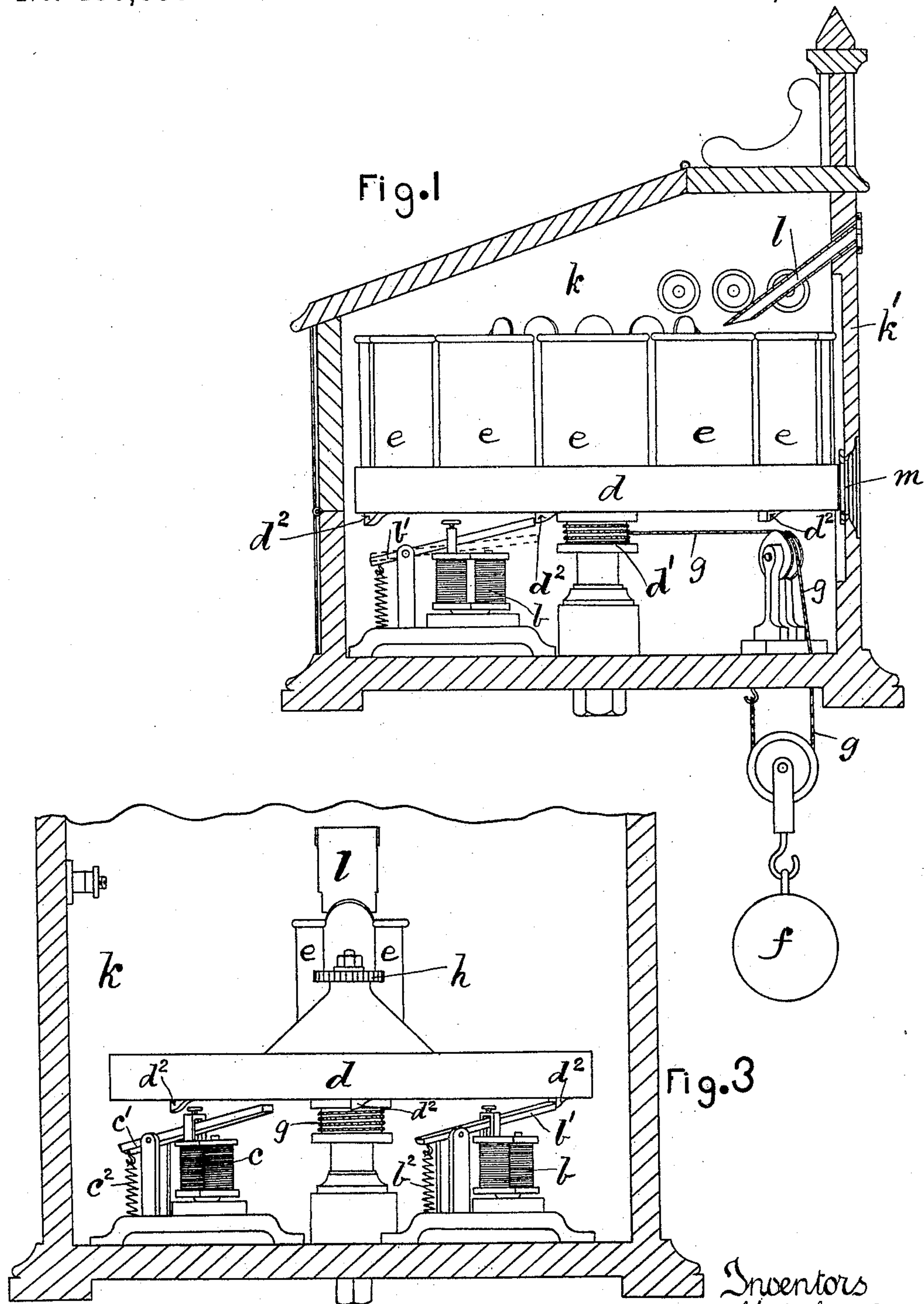
(No Model.)

3 Sheets—Sheet 1.

C. J. GARNETT & A. MOORE.  
WORKMAN'S TIME REGISTER.

No. 486,399.

Patented Nov. 15, 1892.



Witnesses  
H. G. McMillan  
T. A. Woodward

Inventors  
Charles James Garnett  
Alfred Moore  
Per J. H. Horn  
Attorney

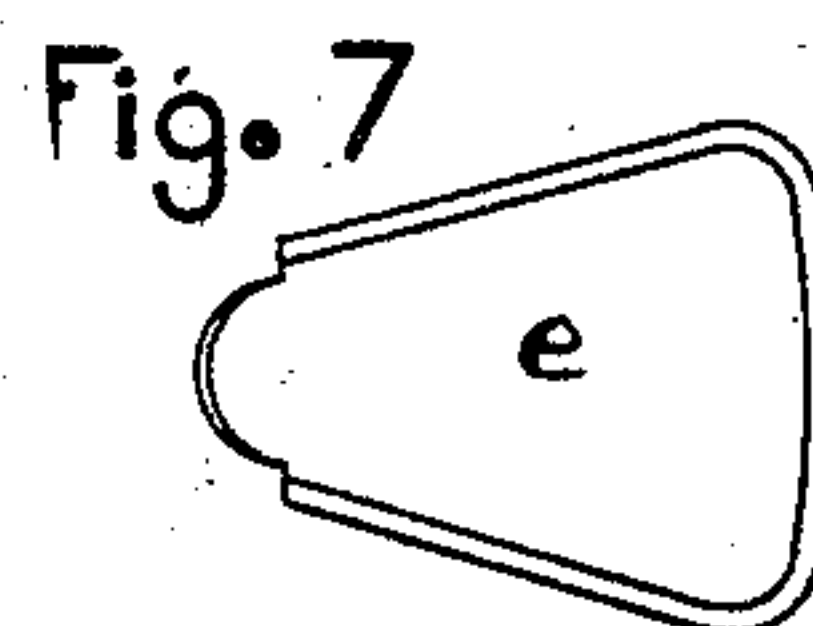
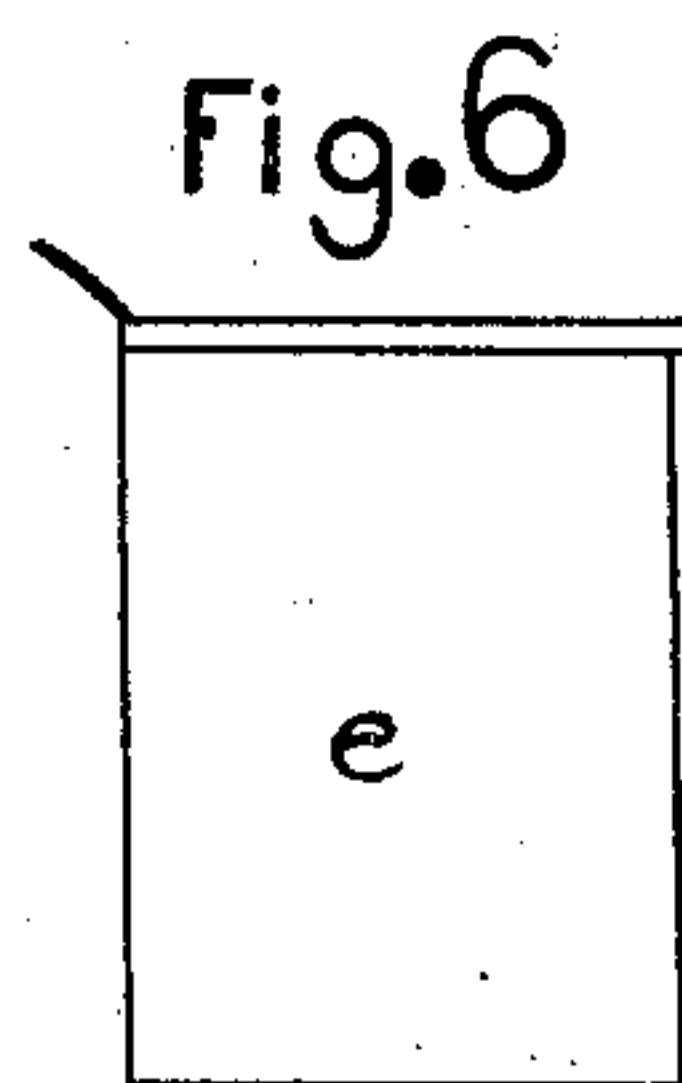
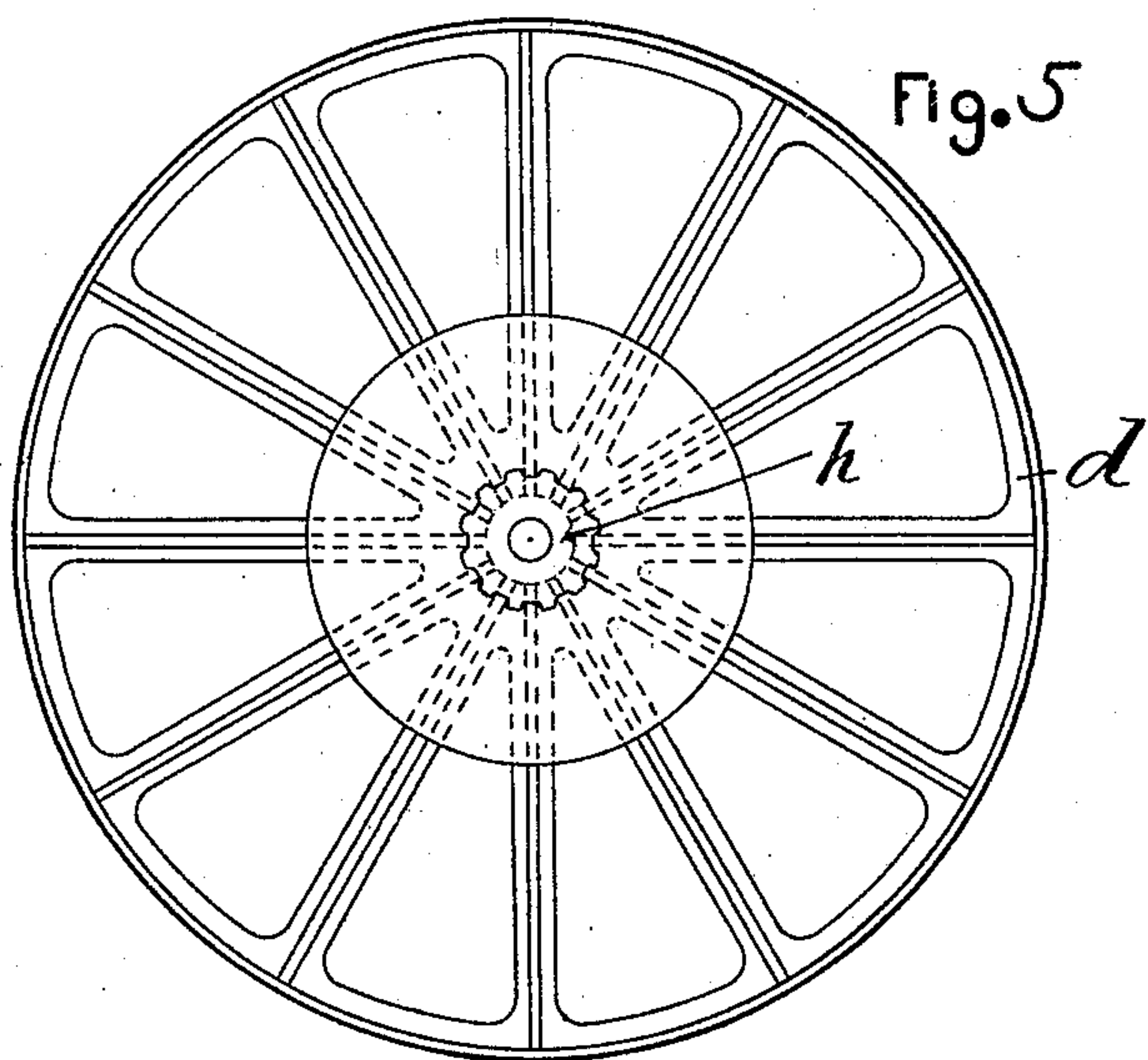
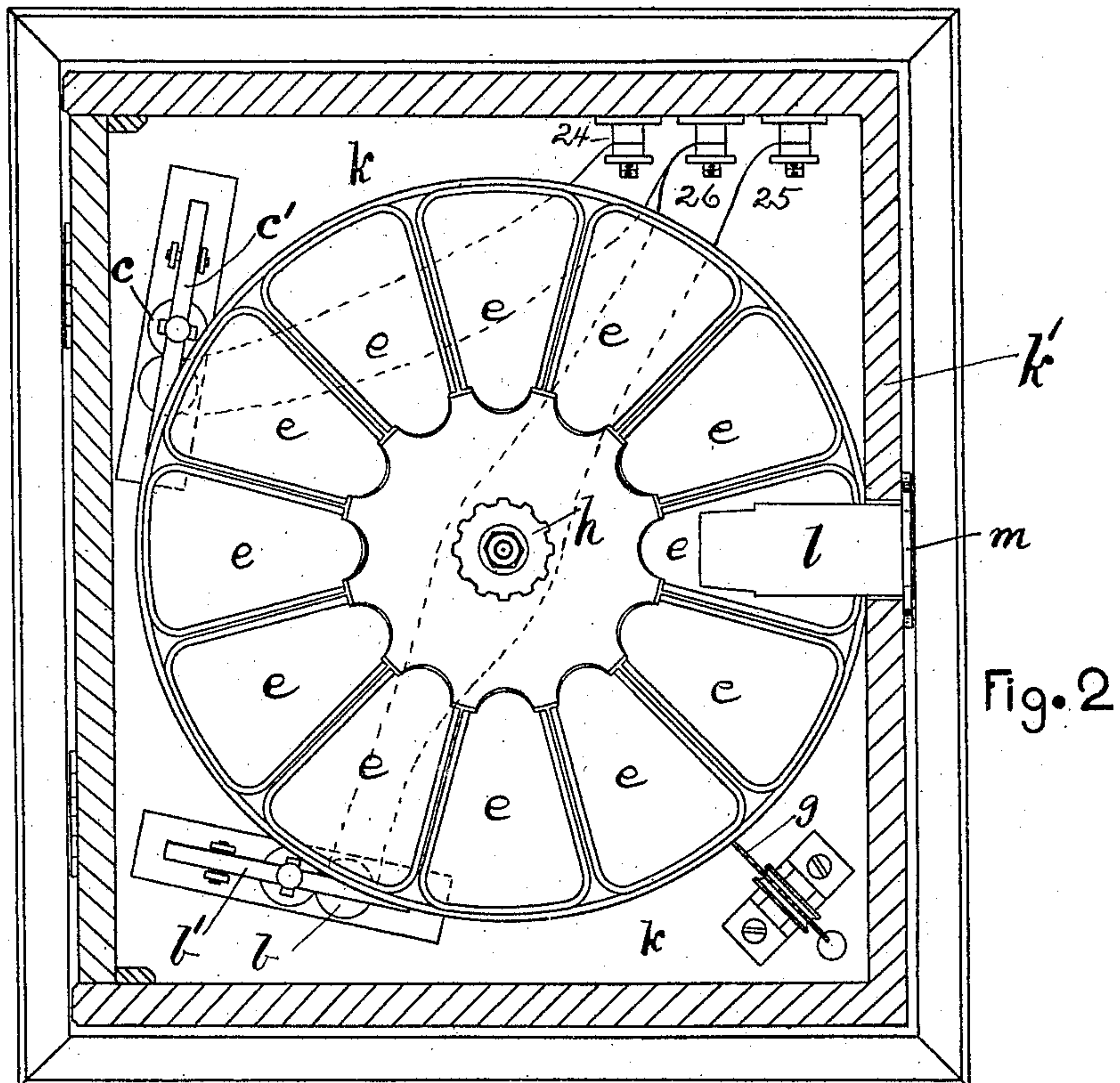
(No Model.)

3 Sheets—Sheet 2.

C. J. GARNETT & A. MOORE.  
WORKMAN'S TIME REGISTER.

No. 486,399.

Patented Nov. 15, 1892.



Witnesses  
W. S. McMillan.  
J. C. Woodward

Inventors  
Charles James Garnett  
Alfred Moore  
Per J. W. Horn,  
Attorney

(No Model.)

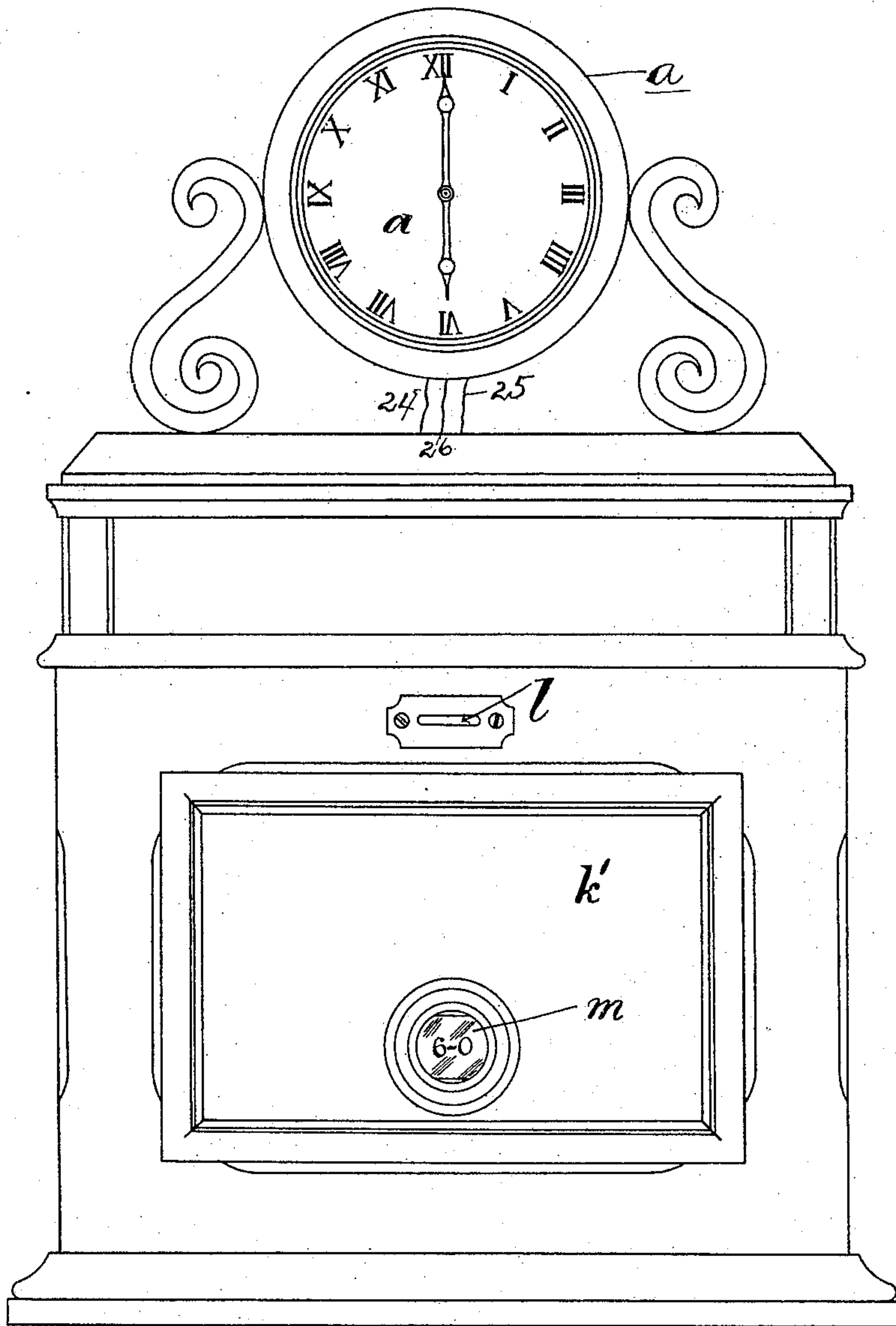
3 Sheets—Sheet 3.

C. J. GARNETT & A. MOORE.  
WORKMAN'S TIME REGISTER.

No. 486,399.

Patented Nov. 15, 1892.

Fig. 4



Witnesses  
H. S. McMillan  
J. A. Woodward.

Inventors  
Charles James Garnett  
Alfred Moore  
Per J. W. Horn  
Attorney



# UNITED STATES PATENT OFFICE.

CHARLES JAMES GARNETT AND ALFRED MOORE, OF KEIGHLEY, ENGLAND,  
ASSIGNORS TO THOMAS HORN, OF TORONTO, CANADA.

## WORKMAN'S TIME-REGISTER.

SPECIFICATION forming part of Letters Patent No. 486,399, dated November 15, 1892.

Application filed October 20, 1891. Serial No. 409,297. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES JAMES GARNETT and ALFRED MOORE, subjects of the Queen of Great Britain, residing at Keighley, in the county of York, England, have invented certain new and useful Improvements in Time-Checking Mechanism, of which the following is a specification.

Our invention relates to checking mechanism for indicating the time of entrance of employes into factories, workshops, or the like; and it consists in the peculiar arrangement, construction, and combination of parts hereinafter more particularly described and then definitely claimed.

Our mechanism is so constructed that the movements thereof are controlled by the normal clock or timepiece of the shop or office, and in such a manner as to be beyond the power of the employes to tamper or in any way to interfere with the same, so as to defraud or to cause it to be inoperative.

In using our improvement each operative or employe is supplied with and represented by time-checks, usually of metal, as is well known, and we attain the object of our said invention by the employment of a series of receptacles, which represent in the aggregate the several or varied times at which said employes are allowed or expected to enter the workshop or commence their work, each one of these receptacles being presented for the reception of time-checks in its proper order, and after the expiration of each of said respective times or periods its corresponding receptacle is removed automatically, so that any checks subsequently inserted fall into the succeeding receptacle and are reckoned as of the later time.

In the accompanying drawings, Figure 1 is a side view of part of our mechanism with the case in section; Fig. 2, a plan of the same, also with the case in section. Fig. 3 is a similar view to Fig. 1, but at right angles thereto. Fig. 4 is a front view with a clock mounted on the case. Fig. 5 is a plan of the upper side of the disk and check receptacles detached. Fig. 6 is a side elevation of one of the check-receptacles. Fig. 7 is a plan of the same.

In carrying out our invention we provide a

normal clock, which may be connected directly with the check apparatus, as shown in Fig. 4, or it may be separate therefrom and set in the office of the factory, as desired. In either case said clock should be connected with the coils of the electro-magnets *b* and *c* in such a manner as to cause said magnets to be alternately energized by the making and breaking of the circuits through the conducting-wires 24 and 25 and return-wire 26, running from a circuit-closer to the clock, which circuit-closer is not shown, as nothing is here claimed on it, and such circuit-closer being within the knowledge of any one skilled in the art. All that is necessary is to provide the normal clock with such a circuit-breaker as will cause the same to complete an electric circuit at any given or prearranged time, so that at each of such prearranged times one or the other of the electro-magnets *b* or *c* will, by moving its hinged armature *b'* or *c'* out of the path of motion of the projecting catches *d*<sup>2</sup> on the disk *d*, release the said disk *d*, which carries the series of detachable receptacles *e* (all these receptacles except one being omitted from Fig. 3) and which is constantly under the action of a motor-weight *f*, operating said disk *d* by its pull upon the cord *g*, encircling the drum *d'*, attached to the disk *d*, and in this manner allowing the said disk *d* to move the space of one receptacle *e* at each prearranged time. In order that the rotary motion of the disk *d* may be arrested when the same has completed its movement of the space of one receptacle *e*, only half the number of projections *d*<sup>2</sup> are formed on the disk *d* as compared with the number of receptacles *e*, so that at any time said disk *d* is only held by one or the other of the armatures *b'* or *c'*, the armature *b'* being shown as in contact with the projection *d*<sup>2</sup>, while the armature *c'*, although in the path of motion of the projections *d*<sup>2</sup>, is the space of one receptacle from contact with the next in succession, by which means and by arranging the clock *a* to complete the circuits of the electro-magnets *b* and *c*, alternately, that of the electro-magnet *b* being next in order, when the armature *b'* is moved out of contact with the projection *d*<sup>2</sup> the disk *d* will rotate until the other projection *d*<sup>2</sup> comes in contact with the armature *c'*. The



armatures  $b'$  and  $c'$  are retracted by the springs  $b^2$  and  $c^2$ , respectively, when the circuits through the magnets are broken. The cord  $g$  is rewound upon the drum  $d'$  by the turning or rotating of same by the thumb and finger wheel  $h$ .

The disk  $d$  and the receptacles  $e$ , together with the electro-magnets  $b$  and  $c$  and the other parts  $b'$ ,  $c'$ ,  $g$ , and  $h$ , are mounted within the box  $k$ , which is preferably fixed in the time-office or like private room, having only its side  $k'$  accessible to the operative. In this side  $k'$  is made a slot or opening, into and through which the operative places his time-check, which slides down the chute  $l$  into the receptacle beneath.

Now supposing that such time-check was the one used at the commencement of the working-day—say six o'clock in the morning—the particular receptacle  $e$  at that time beneath the chute  $l$  would bear figures indicating that particular time, and in order that the operative might not be misled as to the particular receptacle into which his check was falling that part of the outer edge of the disk  $d$  presented before the glazed opening  $m$  would bear the same figures and display them to him. When the time-clock  $a$  indicates the expiration of the time thus displayed, said clock also completes the circuit of one or the other of the electro-magnets, as above described, and as the armature is attracted it sinks below the stop  $d^2$ , and the disk  $d$  is moved by the weight  $f$  and cord  $g$  and another receptacle  $e$  is brought beneath the chute  $l$  and other figures are displayed at the opening  $m$ , and so the movements and operations are repeated and carried on throughout

the day. If the factory is run at night-time also, the disk  $d$  should be so divided or carry such a complement of receptacles that the twelve hours during the night are divided into the same number of times, indicating the several times of starting work, as are the twelve hours of the working-day.

What we claim as new is—

1. In a time-checking mechanism, the combination of a rotary disk, check-receptacles mounted thereon, electro-magnets, armatures acted on by said magnets and engaging with the disk, and means for intermittently moving said disk at prearranged times, substantially as described.

2. In a time-checking mechanism, the combination of a rotary disk, check-receptacles mounted thereon, a motor-weight acting on said disk, electro-magnets, armatures acted on by said magnets, and a clock electrically connected with said magnets, constructed to make and break the circuits at prearranged intervals, substantially as described.

3. In time-checking mechanism, the combination of a rotary disk carrying suitably-formed receptacles, means for rotating the same, electro-magnets with hinged armatures operating in connection with projections formed on said rotary disk for governing or controlling its said rotary motions, and a timepiece or clock for completing the circuit of said electro-magnets at prearranged times, substantially as specified.

CHARLES JAMES GARNETT.

ALFRED MOORE.

Witnesses:

JOHN WHITEHEAD,

HARRY ELLISON.