

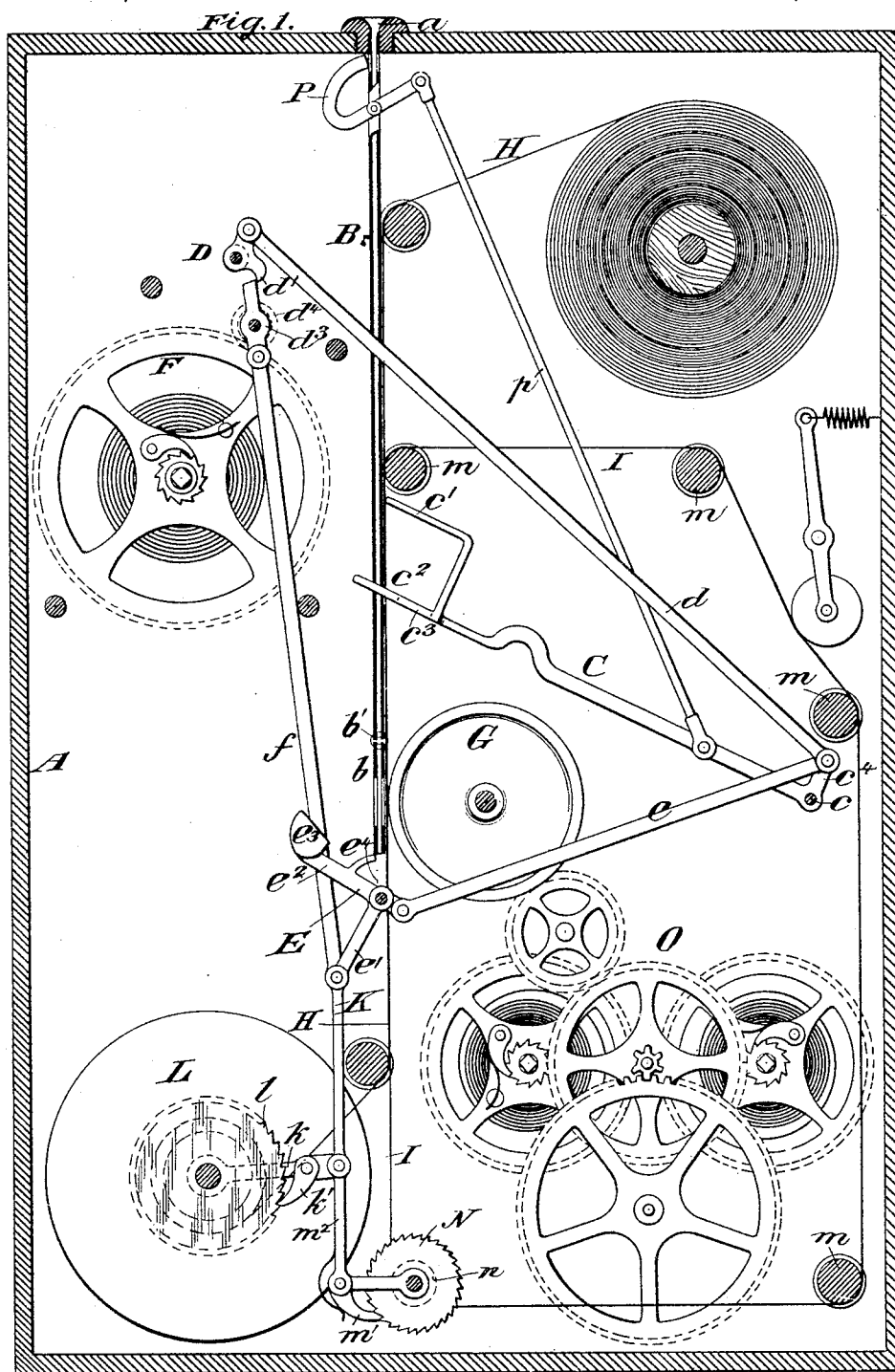
(No Model.)

2 Sheets—Sheet 1.

J. C. ENGLISH.
WORKMAN'S TIME RECORDER.

No. 461,822.

Patented Oct. 27, 1891.



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Inventor:-
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Fig. 2.

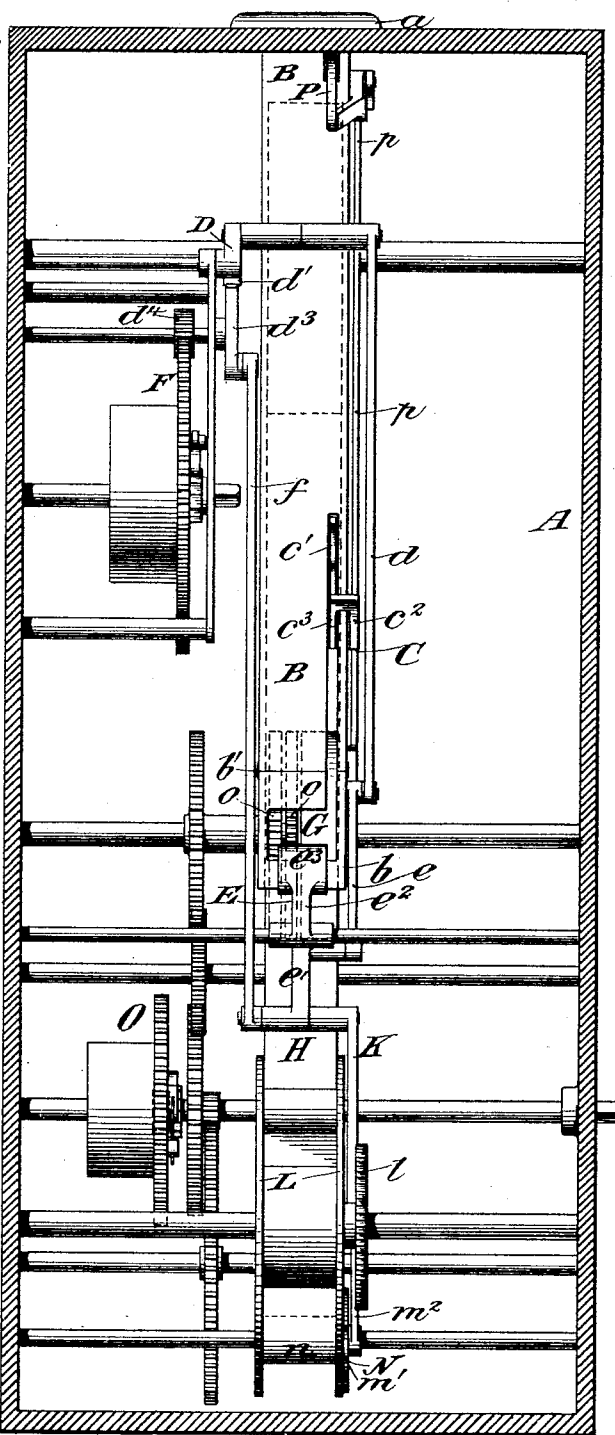


Fig. 3.

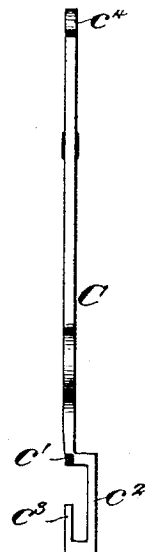


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN C. ENGLISH, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 461,822, dated October 27, 1891.

Application filed May 22, 1891. Serial No. 393,673. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. ENGLISH, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Time-Recording Machines, of which the following is a specification.

My invention contemplates the introduction of a check, held by the workman, into a slot, the check itself being provided with raised type or symbol to denote the holder, which check during its descent under the influence of gravity will rock an operating-lever, which will set in motion the devices for taking an impression and will also feed the strip which is to receive the impression. The operating-lever is so arranged with respect to the check that after it has been rocked by the check it will release the latter and allow the same, after its number has been impressed upon the strip, to fall into a suitable receptacle.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the operative parts in side elevation, the casing being shown in vertical section. Fig. 2 is a view in edge elevation, the casing being shown in section; and Figs. 3 and 4 represent the operating-lever in detail and the check.

A represents a suitable inclosed receptacle, in the top of which there is an opening *a* for the reception of a check, provided with type or a suitable symbol, which, when the check is pressed against the strip to receive a record, will become impressed thereon. From the opening *a* there extends downwardly a chute or channel *B*, adapted to guide the check in its descent under the influence of gravity, the chute terminating at its lower end in a skeleton frame *b*, adapted to hold the check from edgewise displacement, but exposed upon its opposite sides. The extreme lower end of the chute *B* is open, so that when unobstructed the check may fall freely therefrom into the bottom of the inclosed receptacle, or it might be conducted away to any particular part of the receptacle desired. The lower portion of the chute *B* is hinged, as at

b', so as to swing toward and away from the impression device.

An operating-lever *C* is pivotally secured, as at *c*, its long arm being provided with a forked end comprising an upper branch *c'* and a lower branch *c''*, the latter extending around one edge of the chute and provided with a return-tongue *c'''*, adapted to enter a slot in the chute. When in its normal position, the lever *C* rests with the end *c'''* of the lower branch *c''* in position to engage the falling check, the weight of which will rock the lever *C* downwardly and thereby bring the upper branch *c'* across the path of the check, so as to hold it between the two branches and cause it to fall along down with the rocking of the lever. As the lever *C* reaches a position substantially horizontal the lower end of the check will have slid off the end of the tongue *c'''* on the lower branch *c''* and will fall through the said recess into position in the skeleton portion *b* of the chute, its weight being thereby released from the lever *C*. The lever *C* has a short arm *c¹*, to the end of which an escapement *D* and an angle-lever *E* are secured by connecting-rods *d* and *e*, respectively. The escapement *D* is provided with a holding-tooth *d'*, adapted to engage a rotary dog *d²*, fixed to the shaft of a pinion *d¹*, the latter geared with a spring-actuated wheel *F*. The rotary dog *d²* extends in opposite directions from the shaft to which it is secured, and its end opposite the escapement *D* is connected with an arm *e'* of the angle-lever *E* by a connecting-rod *f*. When in normal position, the dog *d²* is prevented from rotating under the pressure of the wheel *F* by its engagement with the tooth *d'* of the escapement. When, however, the lever *C* is rocked by the falling check, it will at the same time rock the arm *c¹* in a direction to release the tooth *d'* of the escapement from the dog *d²*, and the latter will rotate under the impulse of the spring-actuated wheel *F*, and will thereby, through the connecting-rod *f*, rock the angle-lever *E*, throwing its arm *e²*, carrying the pressure-head *e³*, toward the check in the skeleton portion *b* of the chute and forcing it against the face of an impression-roller *G*, between which and the check there is located an impression-receiving strip

H and an ink-ribbon I. As the arm e^2 of the lever E is rocked to give the impression a short branch arm e^4 thereon will extend beneath the lower open end of the chute, and so prevent the check from falling from the chute while the impression is being made.

As the lever C is rocked downwardly and the escapement D releases the dog d^3 the latter will rotate sufficiently to make the impression and will be again arrested by the tooth d' of the escapement device. The latter part of the rotary movement of the said dog will rock the lever E in a direction to open the lower end of the chute B and allow the check to fall therefrom. The connecting-rod e between the angle-lever E and the arm c^4 of the lever C will cause the parts to work in harmony with each other and will arrest the angle-lever E in its desired normal position. The arm e' of the angle-lever E is connected by a rod K with a swinging arm k on the shaft of a winding-drum L, on which the impression-strip is received, the said winding-drum being provided with a ratchet-wheel l , engaged by a pawl k' , carried by the swinging arm k , so that as the lever E is swung to make the impression the pawl k' will be carried freely over the ratchet-teeth on the wheel l ; but when the lever E is returned to its normal position the said ratchet-wheel will be rotated and the strip H thereby fed.

A ratchet-wheel N is fixed to rotate with a winding-drum n for the inking-ribbon, so as to bring a fresh portion of the ribbon in front of the impression device at suitable intervals.

The inking-ribbon I is made endless and passes over suitable guide-rollers m to hold it in position. It is fed, together with the strip H, by means of a pawl m' , carried by an arm m^2 , connected with the arm k or rod K.

A clock mechanism O is connected by suitable intermediate mechanism with time-printing wheels o in axial alignment with the impression-wheel G, so that when the check is pressed by the impression-head e^3 the said time-printing wheels will impress the strip with the time when any particular check is inserted.

In order to prevent the insertion of a second check during the operation of printing or making the record, I provide a swinging cut-off P, connected with the operating-lever C by a rod p , so that as the operating-lever C is carried downwardly by the weight of the check it will rock the cut-off P into position to close the chute B in proximity to its mouth.

What I claim is—

1. The combination, with means for receiving the impression and a type-carrying check adapted to pass beyond the control of the holder into position to print, of an impression device under the control of the type-carrying

check for bringing the impression-receiving means and the type carried by the check into contact, substantially as set forth. 65

2. The combination, with a type-carrying check, of a conduit for conducting the check to its work under the influence of gravity, an impression device under the control of the falling check to secure an impression of its type, and means for temporarily arresting the travel of the check while the impression is being made, substantially as set forth. 70

3. The combination, with a type-carrying check and a conduit for conducting the check to its work, of an impression device located at the side of the path along which the check travels, and an impression-device-operating lever subject to the impulse of the check to operate the impression device, substantially as set forth. 75

4. The combination, with an impression device and time-printing mechanism located with relation thereto, of a type-carrying check, a conduit for conducting the check away from the control of the holder into position to be operated upon by the impression device and time-printing mechanism, and means for operating the impression device, said means being under the control of the type-carrying check, substantially as set forth. 80

5. The combination, with an actuating device held under tension and a feed mechanism and an impression mechanism adapted to be operated by the said actuating device, of a type-carrying check, means for conducting the check to the impression mechanism, and a lever for locking and releasing the actuating device, the said lever being subject to the impulse of the check, substantially as set forth. 85

6. The combination, with the type-carrying check and its conduit having openings at its sides and an opening for the discharge of the check, of a swinging impression device provided with a pressure-head to engage the side of the check and an arm to arrest and release the check, means for actuating the impression device, and a lever subject to the impulse of the check for releasing the actuating device, substantially as set forth. 90

7. The combination, with the impression mechanism, the impression-receiving strip, and the endless inking-ribbon, of the type-carrying check, means for conducting it to the impression mechanism, feed mechanism for the receiving strip and ribbon, feed-actuating mechanism, and a releasing-lever under the control of the traveling check, substantially as set forth. 95

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