J. F. AND F. L. OHMER.

PROTECTIVE DEVICE FOR AUTOTRUCK SERVICE RECORDERS.

APPLICATION FILED MAR. 6, 1920.

1,360,568.

Patented Nov. 30, 1920.

3 SHEETS—SHEET 1.

Fig. 1.

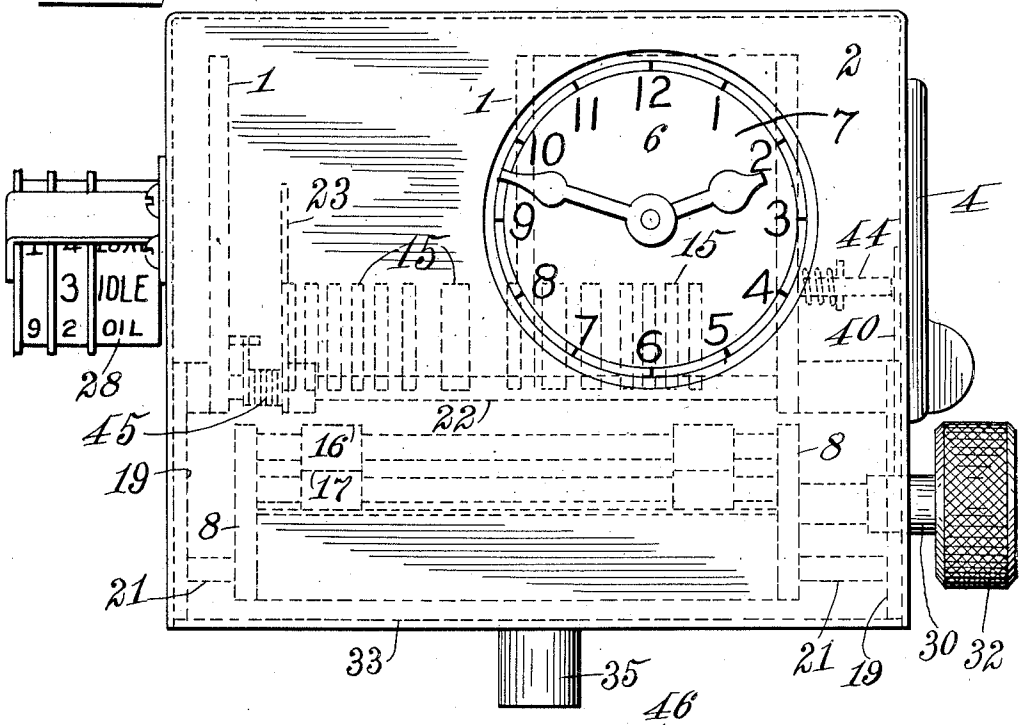
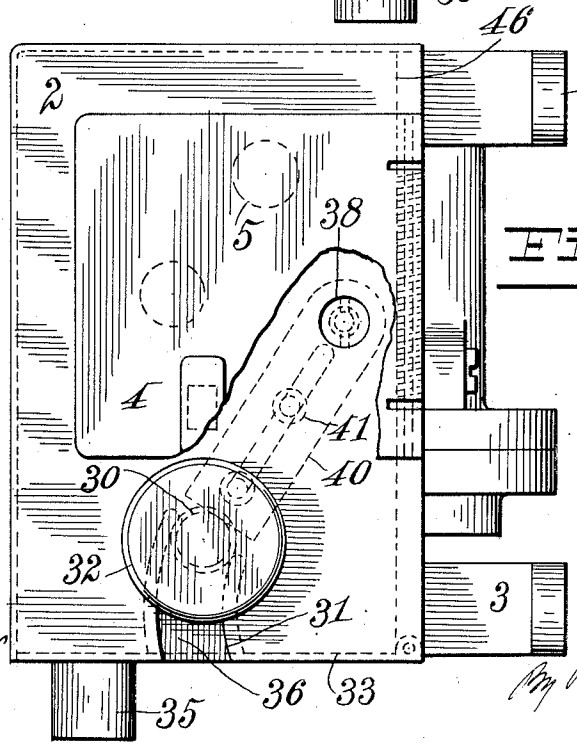


Fig. 2.



Witness
M. Sibler

Inventors
Jno. F. Ohmer
Fred. L. Ohmer.
By W. J. McCarty.
their Attorney

J. F. AND F. L. OHMER.

PROTECTIVE DEVICE FOR AUTOTRUCK SERVICE RECORDERS.

APPLICATION FILED MAR. 6, 1920.

1,360,568. **Patented Nov. 30, 1920.**

3 SHEETS—SHEET 2.

Fig. 3.

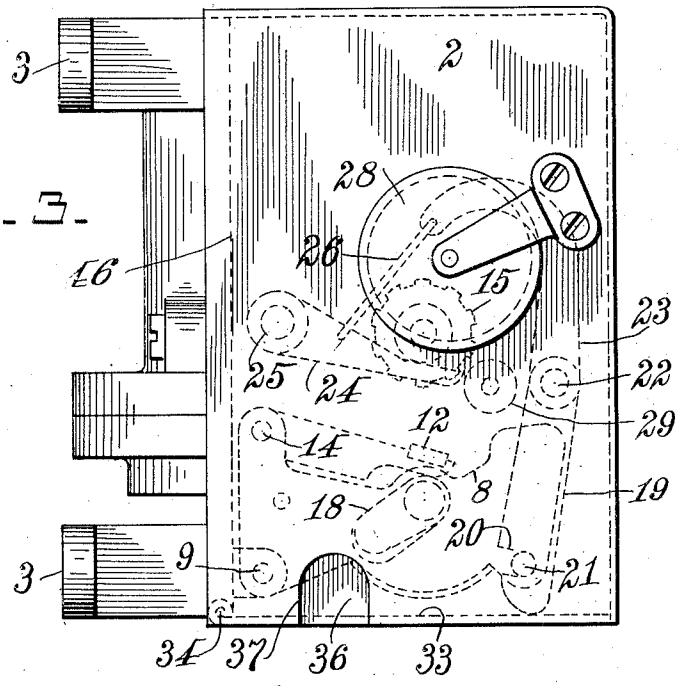
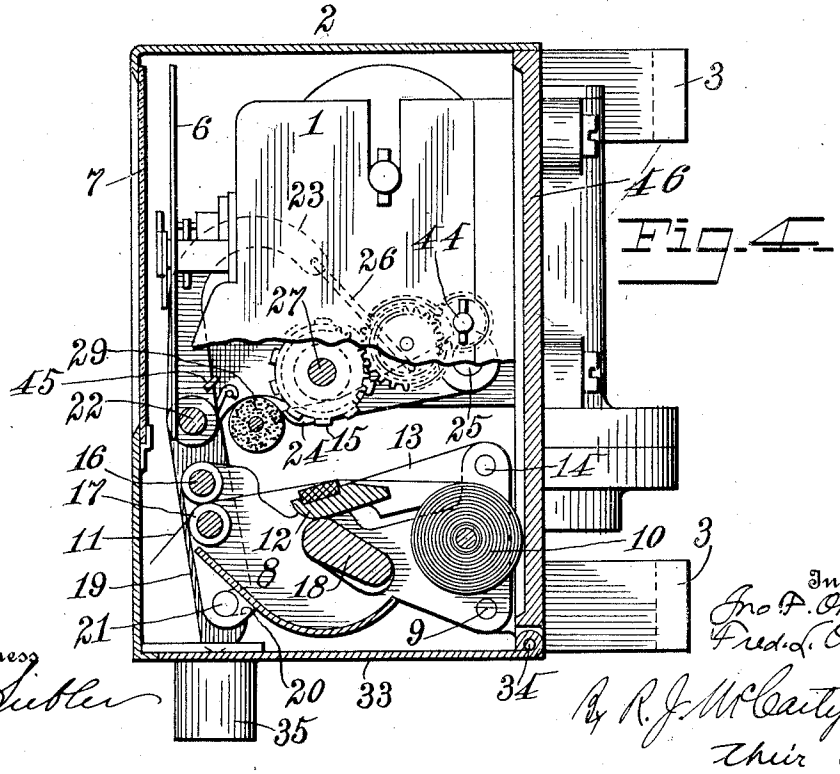


Fig. 4.



Witness
M. Sibley

Inventors
Jno. F. Ohmer
Fred. L. Ohmer.
By R. J. McCarty.
Their Attorney

J. F. AND F. L. OHMER.

PROTECTIVE DEVICE FOR AUTOTRUCK SERVICE RECORDERS.

APPLICATION FILED MAR. 6, 1920.

1,360,568. **Patented Nov. 30, 1920.**

3 SHEETS—SHEET 3.

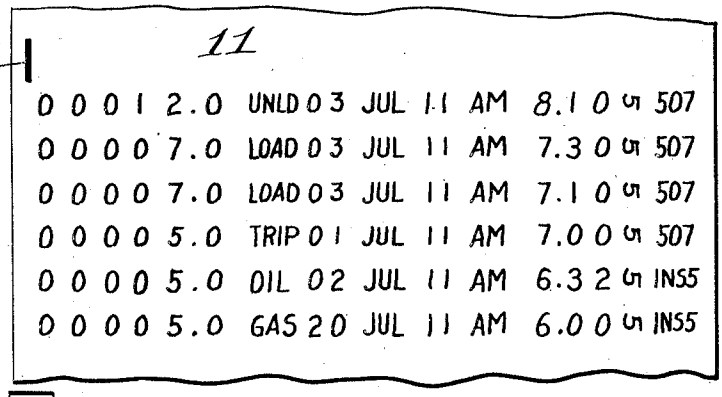


Fig. 5.

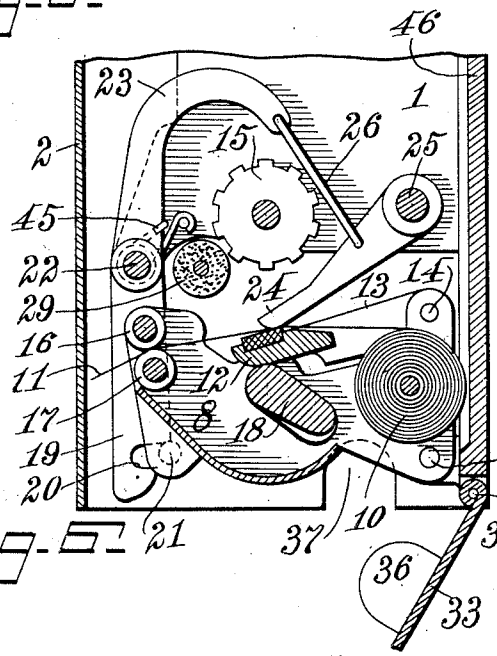


Fig. 6.

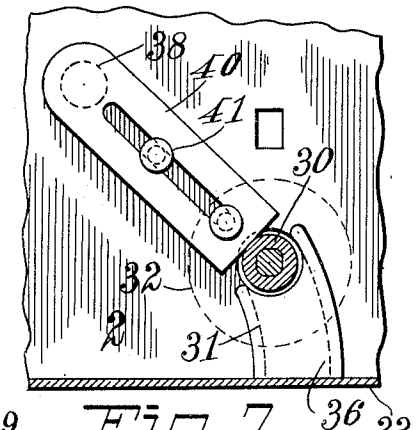


Fig. 7.

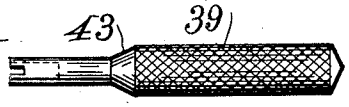


Fig. 8.

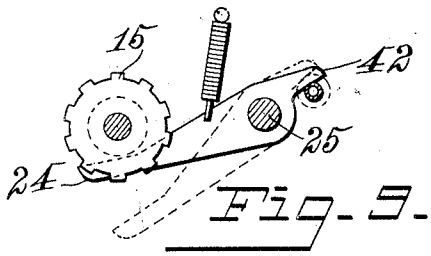


Fig. 9.

Inventors
Jno. F. Ohmer.
Fred. L. Ohmer

Witness
M. Sieblen

By R. J. McCarty.
Their Attorney

UNITED STATES PATENT OFFICE.

JOHN F. OHMER AND FREDERICK L. OHMER, OF DAYTON, OHIO; SAID FREDERICK L. OHMER ASSIGNOR TO SAID JOHN F. OHMER.

PROTECTIVE DEVICE FOR AUTOTRUCK-SERVICE RECORDERS.

1,360,568. Specification of Letters Patent. Patented Nov. 30, 1920.

Application filed March 6, 1920. Serial No. 363,643.

To all whom it may concern:

Be it known that we, JOHN F. OHMER and FREDERICK L. OHMER, citizens of the United States, residing at Dayton, in the county of Montgomery and the State of Ohio, have invented certain new and useful Improvements in Protective Devices for Autotruck-Service Recorders, of which the following is a specification.

This invention relates to new and useful improvements in automobile truck service recorders such as are shown and described in the pending application of John F. Ohmer and Frederick L. Ohmer, filed June 12, 1919, Serial Number 303,691.

In more specific terms the present improvements relate to means for safe-guarding the machine while in service, through the provision of instrumentalities which prevent the time or clock mechanism of the machine being set, without it becoming known that the machine had been opened, and access to said mechanism had, by some one.

In the autotruck service recorder as disclosed in said pending application, the clock mechanism controls the service of the truck; that is to say, when the clock runs down, the ignition circuit is broken and the truck cannot be driven and as a consequence the service recorder is likewise inoperative. This condition remains as long as the clock mechanism is permitted to remain inoperative or in a run down condition.

The object of the present improvements is to provide means to prevent unauthorized persons from obtaining access to the clock mechanism for setting the same to indicate and print incorrect time, in other words, to prevent tampering with the recorder.

The protective means is of a character which prevents the insertion of the setting key unless access is first had to the printing mechanism through which records of the service are obtained. The said protective means will now be described in connection with certain mechanism of the service recorder, the accompanying drawings being first referred to in general terms, after which a more particular description follows.

In the said accompanying drawings, Figure 1 is a front elevation of the autotruck service recorder. Fig. 2 is a side elevation thereof with part of the side door broken out to disclose a feature involved in the present improvements. Fig. 3 is an elevation of the opposite side of the recorder, parts involved in the present improvements being shown in the broken lines. Fig. 4 is a side elevation with parts broken away and other parts shown in section, the printing mechanism for the records being there disclosed. Fig. 5 is a view of a part of a record sheet furnished by the machine and which contains a mark indicating that the machine was opened and access had to the clock mechanism through the setting key. Fig. 6 is a side elevation of the lower part of the recorder with parts shown in section, involving the present improvements. Fig. 7 is a detail involving a part of the side casing containing the key-hole through which the setting key for the clock is inserted, the key-hole closing plate, and a sectional view of one of the extensions of the platen actuating bar. Fig. 8 is a view of the setting key, and Fig. 9 is a detail view of a modification of the means for indicating on the record when the machine is opened.

In a more particular description of the invention similar reference characters will indicate like parts both in the description and drawings.

The supporting elements of the recording mechanism as shown in broken lines in Fig. 1, and including the division plates —1— are inclosed in a suitable casing —2— from the back —46— of which brackets —3— extend for attaching the machine in a serviceable position on the truck or vehicle (not shown). The time is indicated on dial —6— exposed through a glass —7— in the front face of the casing, the mechanism of the clock being within the casing in the rear of said dial —6—. The time is printed upon the record (Fig. 5) from type wheels —15— shown in broken lines in the rear of the clock (Fig. 1). A side of the casing is provided with a hinged door —4— which normally closes several openings in the casing, including the opening —5— through which the clock is wound up, the said door —4— being of a character which is held closed by a spring.

The present improvements are identified with the printing mechanism, therefore, it will not be necessary to describe the mechanism in general of the recorder.

Well known features of the printing mechanism consist of two side plates —8—

hinged at —9— to the back of the supporting frame-work. These plates —8— support the paper roll —10— from which the web —11— is unwound and upon which the records are printed, as shown in Fig. 5. The platen bar —12— the arms —13— of which are pivoted at —14— to said plates —8—, the paper feed rollers —16— —17—, and the platen-actuating bar —18— are all supported on said side plates —8—. It will therefore be seen that when the said plates —8— are lowered upon their hinges —9— they will carry the foregoing parts with them. As shown in Figs. 4 and 5, the said plates and parts mounted thereon are in the operative position, being so held by arms —19— the lower ends of which are formed in hooks —20— which engage and release studs or pins —21— on the ends of said plates —8—. The arms —19— are fulcrumed on a transverse rod —22— supported in the opposite side of the frame-work of the machine, and one of said arms has a curved extension —23— which is connected to a finger —24— pivoted to an adjacent part of the frame-work at —25—. The arms —19— are held in engagement with the pins —21— by a spring —45— on the rod —22—. The connection between the extension —23— and the finger —24— is by means of a suitable member —26—. The finger —24— engages the upper side of the paper web —11— as it lies on the platen bar —12— and presses said web and makes the identification mark —A— shown on the record sheet. (Fig. 5.)

The impression —A— is made when the arms —19— are moved out to release the pins —21— and to permit the impression devices supported on plates —8— to be lowered. The movement of the arms —19— having the connection with the fingers —24—, presses said finger against the web of paper. Above the web of paper are the various type wheels —15— including the time printing wheels which are all mounted upon the transverse shaft —27— and from which the various data appearing upon the record (Fig. 5) is printed. The said recording or type wheels are actuated from the registering wheels —28— of the machine. These as well as the operation thereof are well known features of the recorder as shown and described in the application hereinbefore referred to. Arranged adjacent to the recording wheels —15— is a well known inking roll —29— which applies ink thereto for each impression or print. Ink is also applied to the impression end of the finger —24— by said inking roll. As shown in Fig. 4 the said finger is elevated in contact with the inking roll and occupies this position when the impression devices are held up by the arms —19— through the spring —45—.

The platen-actuating bar —18— has one of its end extensions —30— extended through an opening —31— in a side of the casing and fitted with a finger knob —32— by which said bar —18— is operated to elevate the platen bar —12— with the paper web —11— thereon against the recording wheels in taking the record (Fig. 5). The opening —31— in the side of the casing is in the form of a slot which extends through the bottom of the side, and owing to said opening the parts supported on the side plates —8— are carried down thereby when the bottom door —33— which is hinged at —34— is lowered. This door is normally held closed by a lock —35— and it has plates or projections —36— on opposite sides which close the opening —31— as well as another similar opening —37— on the opposite side of the casing when the said door —33— is elevated.

The key-hole —38— in the side of the casing through which the time printing and setting key —39— is inserted to engage the setting spindle —44—, is normally closed by a plate —40— which lies against the inside of the casing and is slidingly supported by studs —41— (Fig. 7). This plate —40— rests against the end extension —30— of the platen-actuating bar whenever the printing devices are in their operative position (Figs. 2 and 7). When the impression devices are lowered through the bottom door —33— the said plate —40— moves down by gravity and frees the key-hole —38— for the insertion of the time setting key —39—. It will thus be seen that when the impression devices are lowered, the mark —A— is made upon the record sheet showing that such has occurred, and access may be then had to the clock to set the time wheels and pointers.

In Fig. 9 a modification of the protective device is shown which shows the impression finger —24— to have an extension —42— which lies in the path of the key —39—. In the application of this modification the key-hole —38— is not closed but the key —39— may be inserted at any time and the clock set. Whenever the key is inserted, however, the impression —A— is made upon the record, indicating that the key has been inserted by some one in possession of a key. The impression finger —24— is elevated in this instance by the tapered shoulder —43— of the key engaging the end —42 —of the impression finger.

It may be stated that the accuracy of movement of the time mechanism employed in recording machines of this character is more or less interrupted owing to the usage to which the time mechanism is subjected, for example, the taking of prints or impressions from the time printing wheels at various times necessarily checks the movement there-

of under the action of the clock, for the moment, therefore it becomes necessary to reset the clock occasionally to the correct time.

Also, inasmuch as the time mechanism interrupts the electric ignition circuit when run down, thereby preventing the vehicle from being operated, and consequently the mileage counter, the key —39— is employed to reset said time mechanism, as well as to rewind it to place the vehicle in service. The resetting and rewinding key is further useful in affording means of ascertaining when access is had to the time mechanism for any purpose. For example, in the event the driver of the vehicle should attempt to set the time devices back of the correct time or ahead of it to cover up an improper use of the vehicle by him, he would be compelled to use said key —39— to change the position of the time indicating and printing mechanism and in so doing his act would be discovered and he identified therewith from the mark "A" on the record, showing clearly that the clock setting mechanism had been improperly manipulated.

Having described our invention, we claim:

1. In a protective device for controlling machines of the character specified, the combination with printing devices, and impression devices coöperating with said printing devices in obtaining service records, of means for indicating upon said service records when access is had to set the printing and indicating mechanism of the clock.

2. In a protective device for safe-guarding the operations of machines of the character specified, the combination with a mileage printing counter movable from a rotating part of a vehicle, time printing counters movable from clock mechanism, and impression devices coöperating with said printing counters in obtaining service records of the vehicle, of means for rewinding the clock mechanism whereby the vehicle is maintained in service, said rewinding means being adapted to indicate on the service records when access is had to the clock mechanism.

3. In a protective device for controlling the operation of machines of the character specified, the combination with printing devices, and impression devices coöperating with said printing devices in obtaining service records, of means for preventing the time printing and indicating devices being set until the impression devices are moved out of an operative relation with the printing devices.

4. In a protective device for controlling the operation of auto-truck service recorders, the combination with printing devices, impression devices coöperating therewith in obtaining service records, and means for supporting said impression devices in operative relation with said printing devices, of an impression device adapted to indicate on said records when access is had to the time mechanism of the machine, said impression being made when said impression devices are released from their supporting means.

5. In a machine of the character specified including the time mechanism thereof, the combination with printing devices, impression devices coöperating therewith in obtaining service records, and means for supporting the impression devices in operative relation with the printing devices, of means for preventing access to the time mechanism for setting it while the impression devices are maintained in operative position with the printing devices, and means for making an impression on said service records when said impression mechanism is released from such position.

6. In a machine of the character specified, the combination with printing devices including time mechanism, impression devices coöperating therewith in taking service records, and means for releasing said impression devices from their coöperative position with the printing mechanism, of means adapted to close the key entrance to said time setting mechanism when the impression devices are in a coöperative position with the printing devices, said key entrance closing means being maintained in such a position by an element of said impression devices.

7. In a machine of the character specified, the combination with printing devices, time mechanism, impression devices coöperating with said printing devices in obtaining service records from said printing devices, and means for releasing said impression devices from such coöperative position, of a slidable member adapted to prevent the setting of the time mechanism when the coöperative relation between the printing and impression devices is established, and to permit the time mechanism being set when the impression devices are released.

8. In a machine of the character specified, the combination with the printing devices, impression devices coöperating therewith in obtaining service records, and clock mechanism, including time printing wheels, of a slidable member adapted to close the key-hole entrance to said clock mechanism through which the clock mechanism is set, when the printing and impression devices are in operative relation, said slidable member being maintained in such position by an element of the impression devices, and permitted to uncover said key-hole and permit the time to be set when said impression devices are lowered from an operative position.

9. In means of the character described, the

combination with printing devices, impression devices coöperating therewith in obtaining service records, and clock mechanism including time printing wheels, of a slotted slidable member adapted to normally close the key-hole entrance to said clock mechanism through which the clock mechanism is set, when the printing and impression devices are in operable relation one to the other, said slidable member being maintained in such position by an element of the impression devices, and permitted to uncover said key-hole to permit of the insertion of a key to set the time mechanism, when the impression devices are lowered from an operative position.

10. In means of the character specified, the combination with printing devices including time printing elements, impression devices coöperating therewith in obtaining service records, and clock mechanism connected with said time printing elements, of a slidable member adapted to open and close the key-hole entrance to said clock mechanism through which said mechanism is set, means for making an impression on said records when said slidable member uncovers said key-hole, said impression means being actuated to make such impression when the impression devices are moved from an operative position.

11. In means of the character specified, the combination with printing devices including time printing elements, impression devices coöperating therewith in obtaining service records from said printing devices, and clock mechanism connected with the time printing elements, of a member adapted to open and close the key-hole entrance to said clock mechanism through which the clock mechanism is set, means connected with the impression mechanism for making an impression on said records when the said impression mechanism is moved from its operative position and whereby the said member opens said key-hole and enables access to the clock mechanism.

12. In means of the character specified printing devices including time printing elements, impression devices coöperating therewith in obtaining service records from said printing devices, said impression devices having pivotal supports by means of which they are maintained in an operative position or may be lowered to an inoperative position, and clock mechanism connected with said time printing elements, of a slidable member adapted to open and close the key-hole entrance to said clock mechanism through which said mechanism is set, said slidable member being maintained in a position to close said key-hole by the impression devices when they are in their operative position, and to uncover said key-hole when said impression devices are moved from their operative position, and a member adapted to make an impression on said records when said impression devices are so moved from their operative position, said member being connected with the pivotal supports of the impression devices.

13. The combination with printing devices, impression devices coöperating therewith in taking service records, and means for supporting said impression devices in operative relation with the printing devices, of a pivotal member arranged to make an impression upon said records when said impression devices are moved from their operative position, said pivotal member being connected with the supports of the impression devices.

14. The combination with printing devices, impression devices coöperating therewith in taking service records, and pivotal supporting arms by means of which the impression devices may be supported in their operative position or released from such position, of an impression finger arranged to make an impression on said records when said arms release said impression devices, an extension from one of said arms, and a flexible connection between said extension and said impression finger.

15. The combination with printing devices, impression devices coöperating therewith in taking records from said printing devices, and pivotal supporting arms holding said impression devices in their operative position and adapted to release them from such position, of an impression finger —24— arranged to make a mark on said records, an extension —23— movable with the pivotal supporting arms of the impression devices, and a flexible connection —26— between the extension —23— and the finger —24— whereby, when the impression devices are released by their supporting arms, the said finger —24— will be actuated to make said mark on the records.

16. The combination with printing devices including time indicating and printing devices and impression devices coöperating therewith in taking service records, of a slotted plate slidably mounted to obstruct or free the key-hole through which a key is insertible in setting said time mechanism, said slotted plate being released to free said key-hole when the impression mechanism is in an inoperative position.

17. The combination with printing devices including time printing devices, and impression devices coöperating therewith in taking service records, and means for supporting said impression devices in an operative position relative to the printing devices and releasing them from such position, of a plate slidably mounted and adapt-

ed to close and open an opening through which the time printing devices are set, said plate being held in a position to close said opening when the impression devices are in an operative position, a member —24— adapted to indicate on said records when the said impression devices are moved from their operative position, said member —24— being connected to the supporting means of the impression devices.

In testimony whereof we affix our signatures.

JOHN F. OHMER.
FREDERICK L. OHMER.