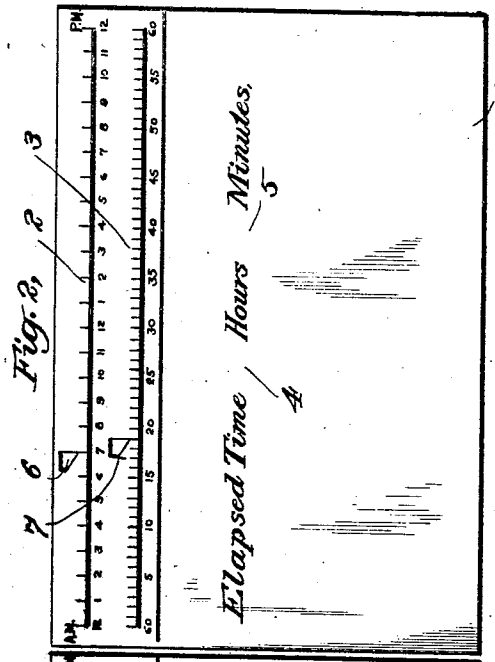
H. T. GOSS & J. W. BRYCE.

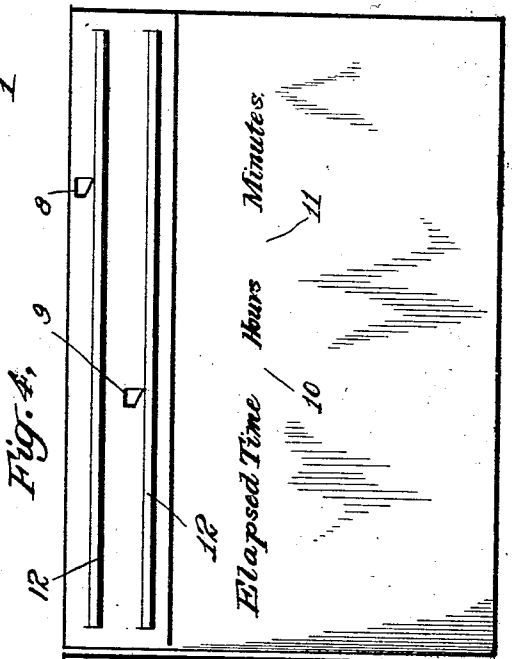
RECORDER.

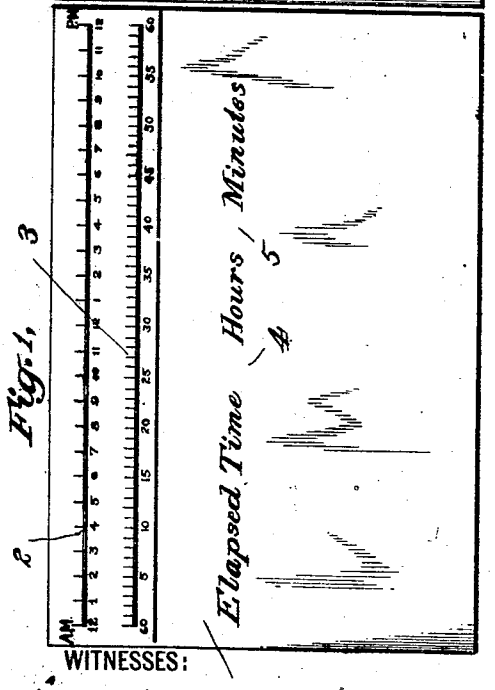
APPLICATION FILED OCT. 5, 1906.

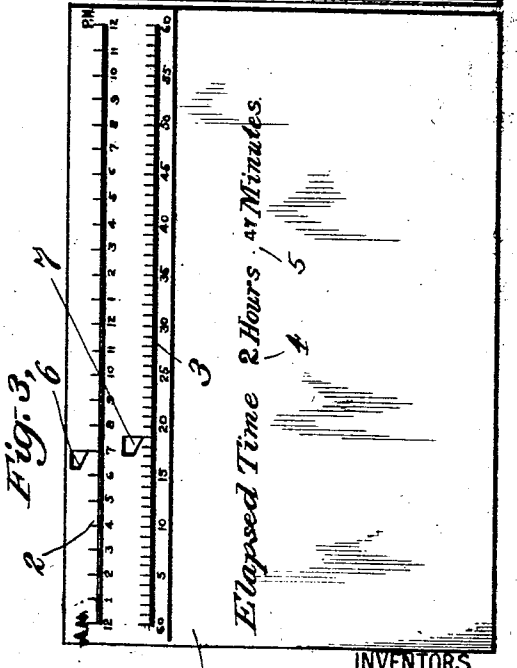
1,124,419.

Patented Jan. 12, 1915.









WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRY T. GOSS AND JAMES W. BRYCE, OF RUTHERFORD, NEW JERSEY, ASSIGNORS, BY MESNE ASSIGNMENTS, TO INTERNATIONAL TIME RECORDING COMPANY OF NEW YORK, A CORPORATION OF NEW YORK.

RECORDER.

1,124,419. Specification of Letters Patent. Patented Jan. 12, 1915.

Original application filed August 30, 1905, Serial No. 276,361. Divided and this application filed October 5, 1906. Serial No. 337,567.

To all whom it may concern:

Be it known that we, HARRY T. GOSS and JAMES W. BRYCE, citizens of the United States, and residents of Rutherford, county of Bergen, and State of New Jersey, have invented new and useful Improvements in Recorders, of which the following is a specification.

Our invention relates to devices for effecting or controlling the movement of indicating mechanism in recorders. It has special value in connection with time recorders, and particularly in connection with machines for indicating elapsed times, as, for example, the elapsed time between the starting of work on a particular job, and the stopping of work thereon. Our invention, however, is not limited to devices for use in such machines, as it may be used in other machines; for example, in machines for indicating other differences than those of time, as differences in money values.

In the drawings accompanying this specification and forming a part hereof, and in the parts of the specification descriptive of such drawings, we have shown and described our improved device as embodied in the form of a card as used in a machine for indicating elapsed times, as between the starting and finishing of a job. Our invention, however, may be embodied in other mediums than a card, and is not limited to a device separate and removable from the indicating machine with which it is to be used, as is the case with the card shown in the drawings.

Our invention consists in the novel devices herein set forth.

Referring to the specific form or embodiment of the invention shown in the drawings, Figure 1 represents a card adapted for use in a time recorder for indicating elapsed times; Fig. 2 illustrates the card after the starting identification mark has been placed upon it; Fig. 3 illustrates the card after the machine has completed its operation and has printed the elapsed time in hours and minutes upon the card; Fig. 4 represents a modification of our improved card from which the scale has been omitted.

Referring to the embodiment of our invention shown in the drawings, 1 represents our improved device which, in the form here shown, is a card. As shown, it is preferably provided on its surface with two scales, scale 2 indicating the hours from midnight to midnight and 3 indicating the minutes. These scales are arranged upon the card preferably parallel to one another, and preferably also to an edge of the card and at a predetermined distance therefrom, dependent upon the particular machine in which the card is adapted to be used. The card is also preferably provided with suitable wording having blank spaces 4 and 5 within which the elapsed time in hours and minutes, respectively, is to be printed in the operation of the machine in which our card is intended to be used. Any suitable words indicating the purpose or location of these spaces may be employed.

The form of card shown in the drawings, Figs. 1 to 3, is intended and adapted to be used with a starting time identifying recorder. The card is so constructed as to be adapted to be inserted in a slot of a suitable machine, such as is shown in patent granted to applicants January 7th, 1913, No. 1,049,473. Upon the operation of suitable operating devices connected with such machine punches are intended to be brought into contact with the card to punch holes therein. The location of these punches at the time of punching the holes and, consequently, the location of the holes punched by them along the scales of the card, are dependent upon the clock work mechanism of the machine. Accordingly, the location of the holes, thus punched along the hour and minute scales, will represent the hour and minute when the card was inserted in the slot of the machine and the machine operated. Such holes will constitute starting identification marks and in the particular instance shown these are starting time identification marks. In Figs. 2 and 3 such holes are marked 6 and 7.

When the job or other work which is to be measured in time upon the card is finished, the workman inserts the card either in the same or another slot of the machine, and the machine is again operated. Suitable devices are caused to pass over the card and to be stopped or affected in their move-

ment by the location of the holes 6 and 7 and to start into operation type wheels which are stopped by devices, for example cams, controlled by the clock work, representing in their movement the time when the machine is operated. This travel of the type wheels from the time they are started by mechanism controlled by the identification marks 6 and 7 until stopped by the clock movement, will cause the proper type representing the hour and minute of such elapsed time to stand opposite the blank spaces 4 and 5 representing the hours and minutes, and suitable printing devices will cause such hour and minute to be printed in the spaces. As shown in Fig. 3, the elapsed time is shown as printed two hours and forty seven minutes.

It will, of course, be understood that any suitable machine for placing the starting identification marks upon the card may be employed, and any suitable machine adapted to be controlled by such marks may be used for indicating the time that has elapsed between the time these marks were placed upon the card and the end of the operation. As such a machine forms no part of the present application, it is not shown and described further than above. A suitable machine for this purpose is shown and described in Patent No. 1,049,473, issued to us January 7th, 1913, on an application of ours known as Serial No. 276,361, filed August 30, 1905, for recorders, of which application this is a division.

It is not essential that either an hour or minute time scale be used upon the card. Any other suitable scale may be employed, or the scale may be entirely omitted. In Fig. 4 we have shown a card without a scale. It is provided preferably with two alining marks 12, 12. The holes 8 and 9 on this card indicate the hour, and minute starting time identification marks. The alining marks 12, 12 and the scales in the other figures have the function of enabling the operator to determine whether the holes are punched in the proper place on the card relatively, and in the card of Fig. 4 they form a means of indicating to the operator the difference between the hour and minute identification marks. The blank spaces 10 and 11 on card 4 are for the same purpose as the blank spaces 4 and 5 on the card of Figs. 1 to 3.

It is not essential that the starting identification marks in the card take the form, shown in the drawings, of holes punched into the card as any other marks capable of being recognized or identified by identifying or selecting devices may be employed. Thus they are not limited to holes punched through the body of the card, or to cuts made in other parts or places of the card, as for example, along an edge thereof, but may be projecting parts formed by adding other material to the card or by turning up parts thereof, or they may be any marks suitable for the purpose.

The form of card shown in Fig. 4 is especially useful where it is desired to disconnect the means which control the indication of the elapsed time from the clock movement controlling said means, as, for example, during the noon hour. In such a case a time scale such as is shown on the other figures would be incorrect. If a scale were printed on the card in such a case there must necessarily be omitted from it the time of such disconnection. Nor is it essential that our improved device take the form of a card, nor that it be separate or removable from the indicating machine with which it is adapted to be used.

What we claim as new and desire to secure by Letters Patent is as follows:

1. A card, adapted for use in a machine for indicating elapsed time, provided with two starting identifying marks arranged upon the card in different lines, one mark representing by its location upon the card relative to one end thereof a particular minute of time, and the other mark representing by its location upon the card relative to one end thereof a particular hour.

2. A card, adapted for use in a machine for indicating elapsed time, provided with two parallel scales, one provided with subdivisions representing the hours, and the other provided with sub-divisions representing the minutes, and also provided with two starting identifying marks, one along one scale and the other along the other scale, one representing by its location on the card relative to such scale a particular minute of time, and the other mark representing by its location along the other scale, a particular hour.

3. A card, adapted for use in a machine for indicating elapsed time, provided with two parallel scales, one provided with subdivisions representing the hours, and the other provided with sub-divisions representing the minutes and also provided with two identifying marks, one along one scale and the other along the other scale, one representing by its location on the card relative to such scale the minute a particular minute of time, and the other mark representing by its location along the other scale, a particular hour, and said card having printed thereon the elapsed time in hours and minutes represented by said marks.

4. A card, adapted for use in a machine for indicating time, provided with a starting time identifying mark located upon the card in such a position relative to one end of the card as to represent the time when such mark was placed upon the card.

5. A card, adapted for use in a machine

for indicating time, provided with a starting time identifying mark located upon the card in such a position relative to one end of the card as to represent the time when such mark was placed upon the card and capable of starting into operation the time indicating mechanism of such machine.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

HARRY T. GOSS.
JAMES W. BRYCE.

Witnesses:
H. CROCHERON,
EDWIN SEGER.