

(No Model.)

2 Sheets—Sheet 1.

C. H. & C. W. THOMPSON.  
APPARATUS FOR INDICATING TIME.

No. 308,532.

Patented Nov. 25, 1884.

FIG. 4.

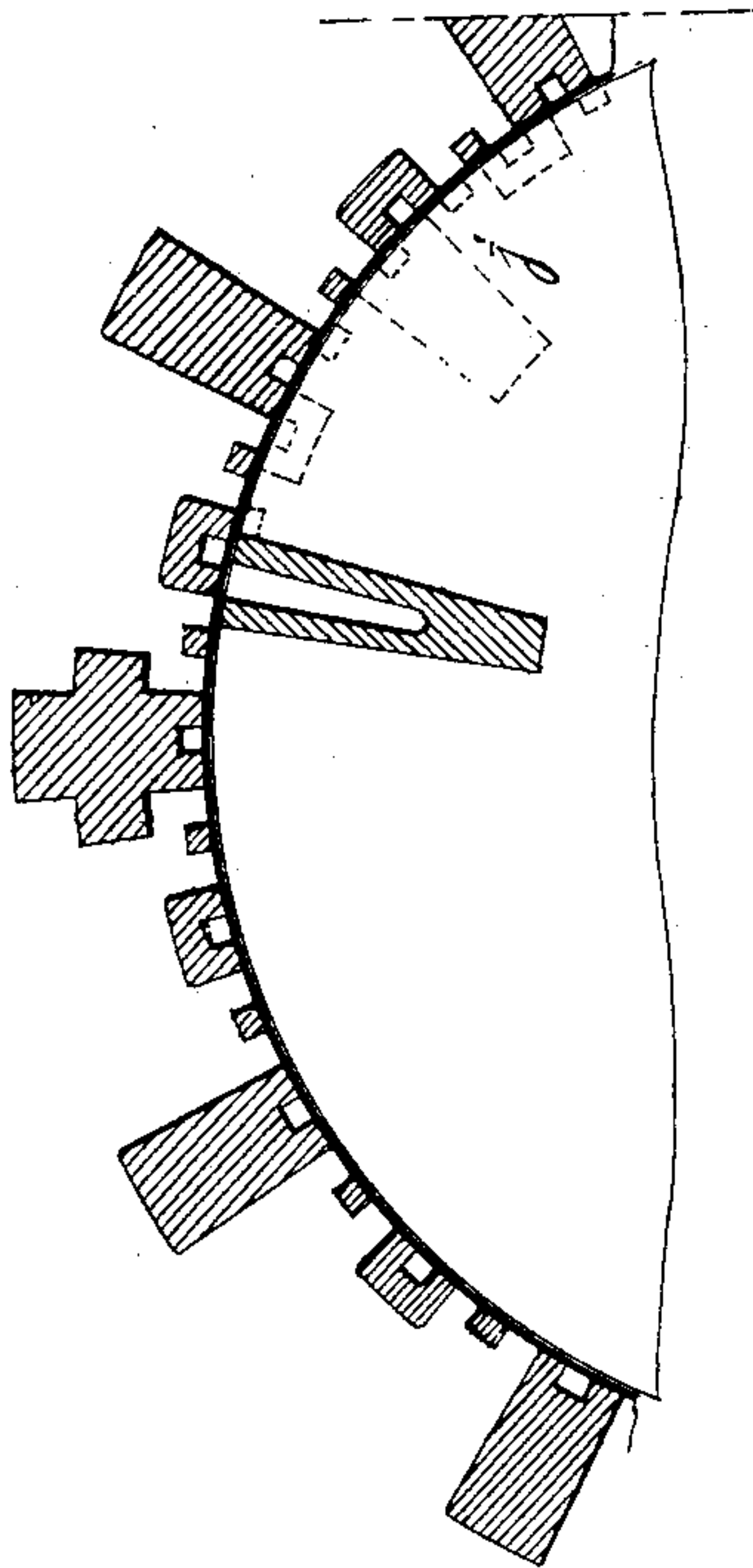


FIG. 3.

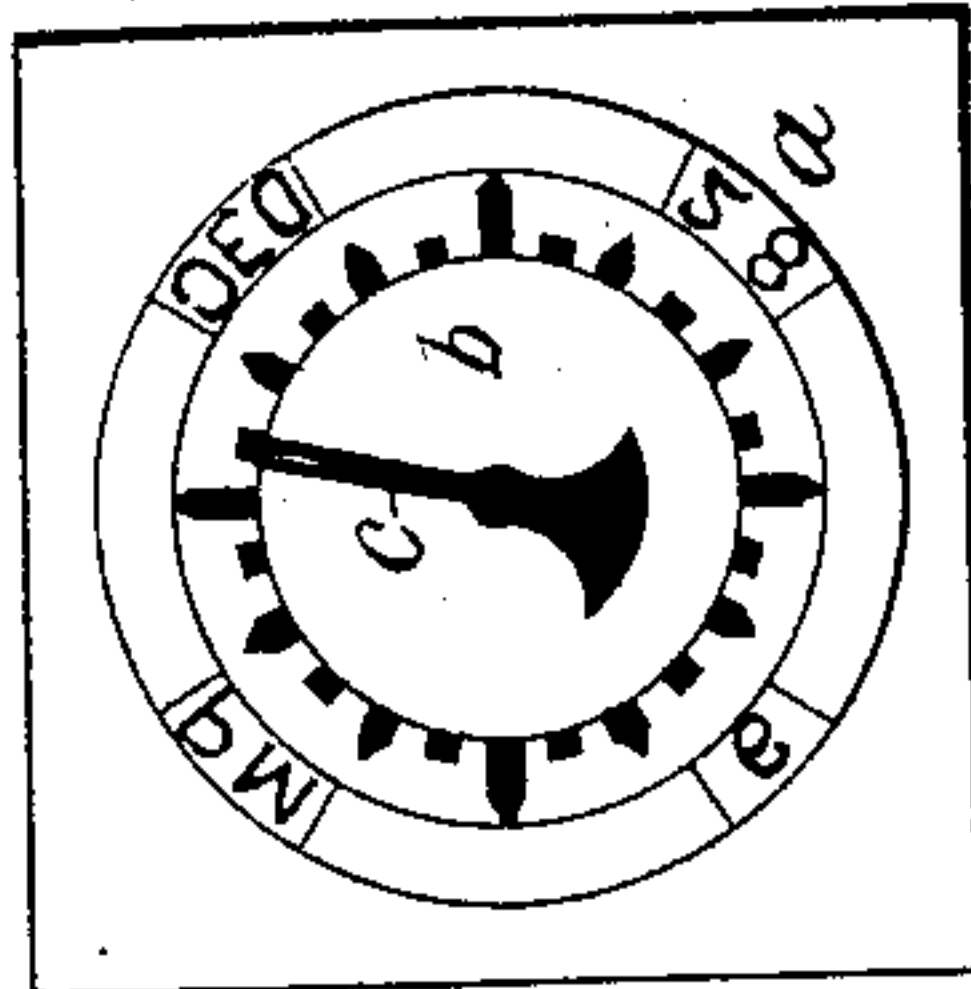


FIG. 2.

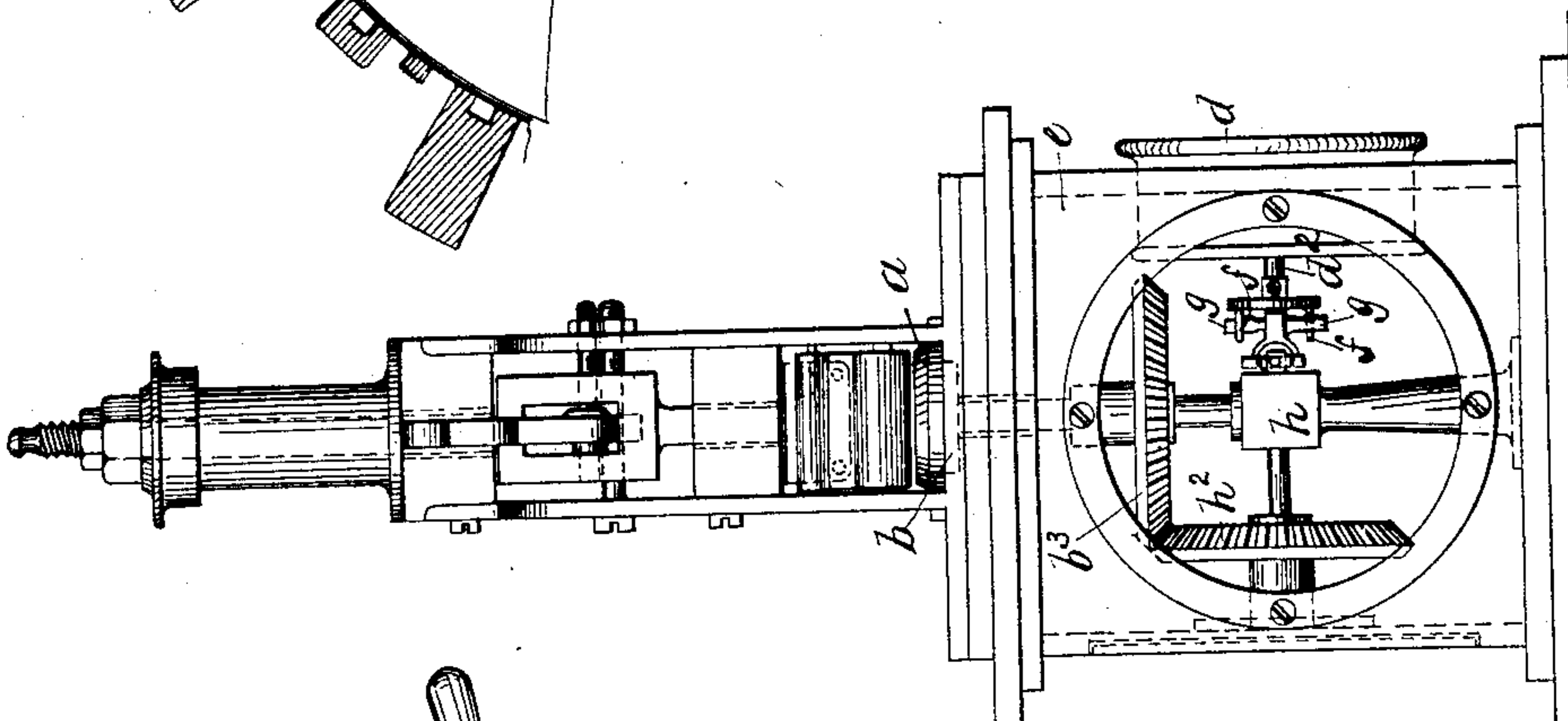
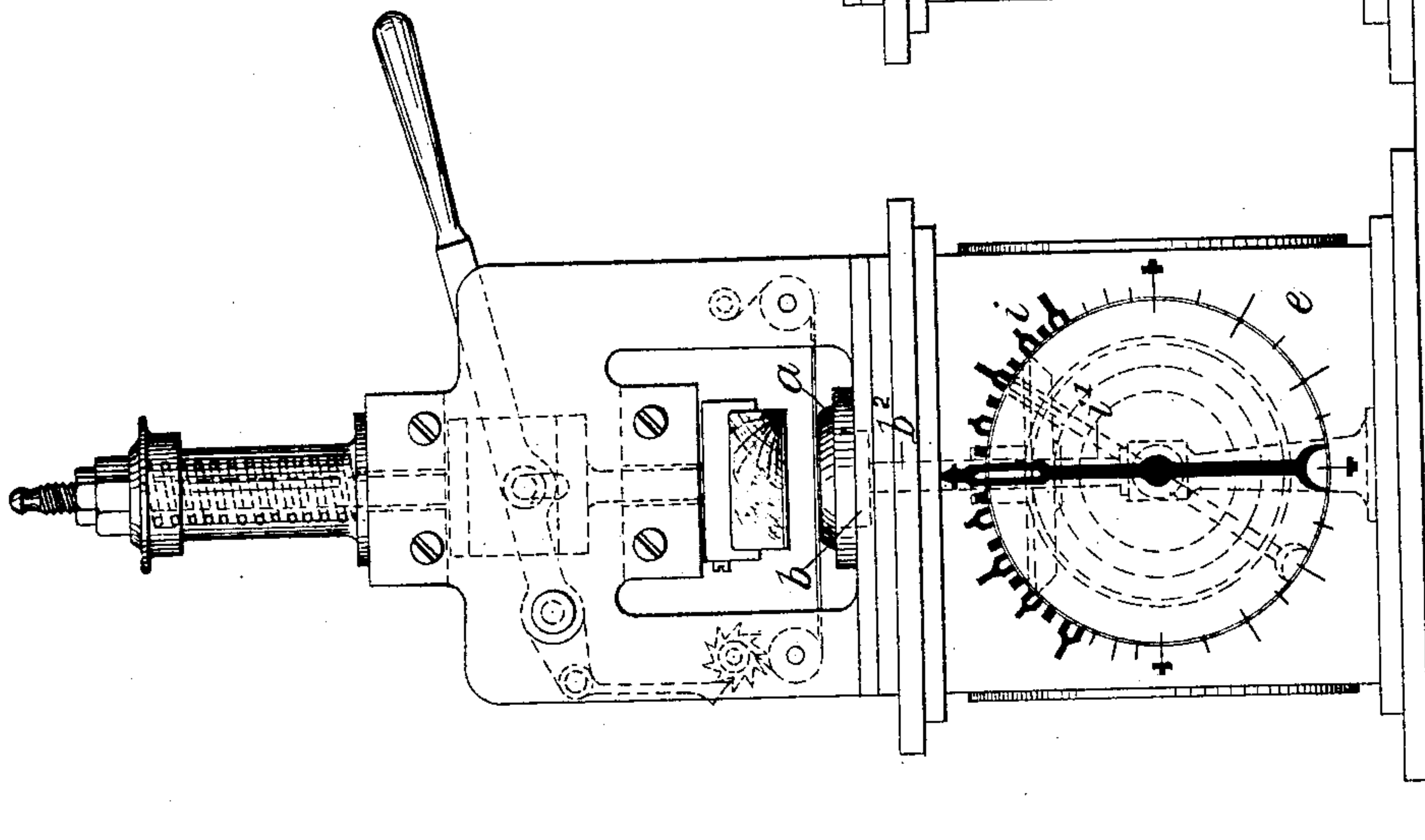


FIG. 1.



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INVENTORS  
Charles H. Thompson  
and  
Charles W. Thompson  
By their Attys.  
Howson & Bond

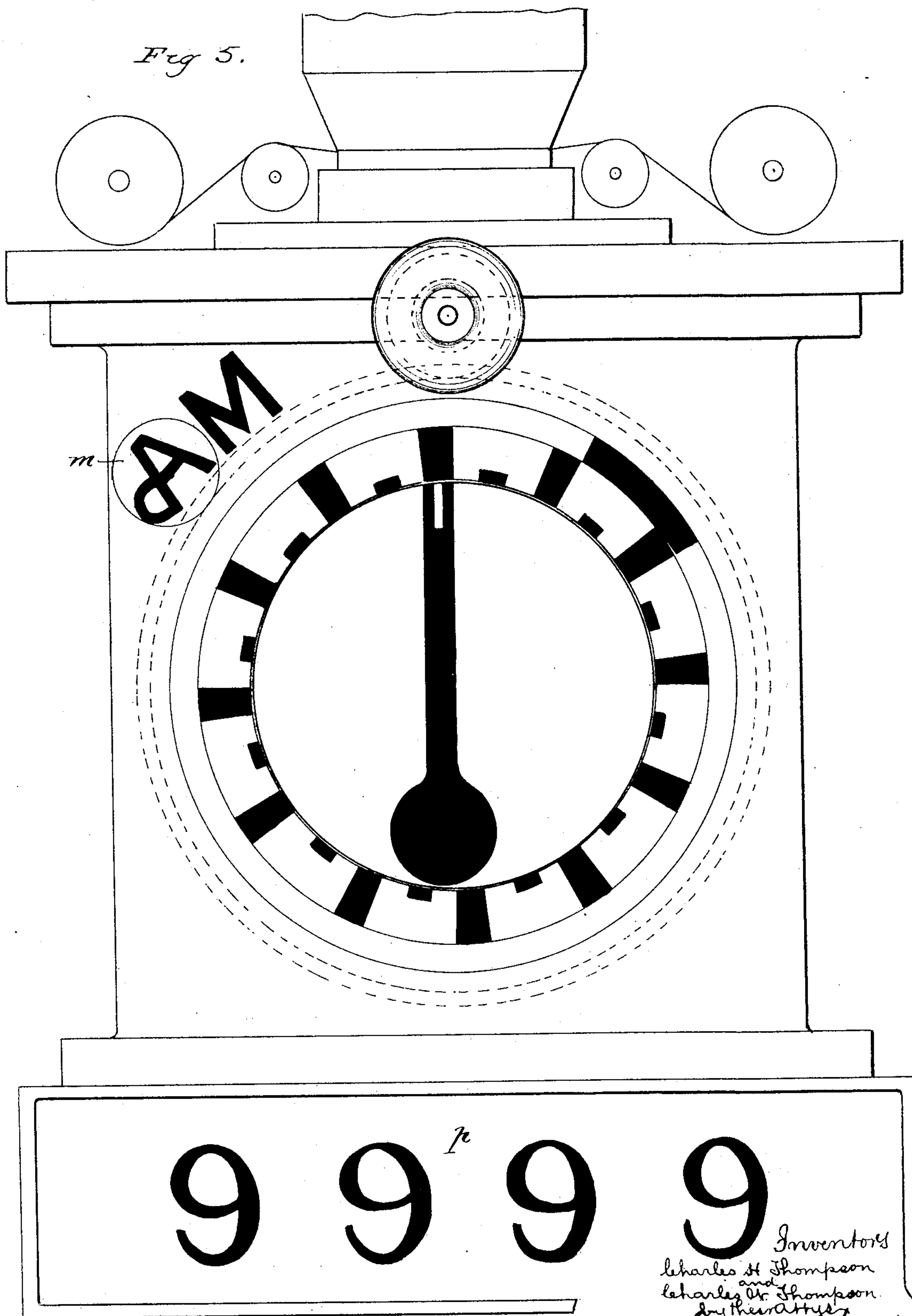
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# UNITED STATES PATENT OFFICE.

CHARLES H. THOMPSON AND CHARLES W. THOMPSON, OF ENDELL STREET,  
LONG ACRE, COUNTY OF MIDDLESEX, ENGLAND.

## APPARATUS FOR INDICATING TIME.

SPECIFICATION forming part of Letters Patent No. 308,532, dated November 25, 1884.

Application filed June 26, 1883. (No model.) Patented in England December 7, 1882, No. 5,847.

*To all whom it may concern:*

Be it known that we, CHARLES HENRY THOMPSON and CHARLES WILLIAM THOMPSON, subjects of the Queen of Great Britain, and residing both at Endell Street, Long Acre, county of Middlesex, England, have invented certain Improvements in Apparatus for Indicating and Recording Time, applicable also to stamps for stamping telegraph-forms, railway or other tickets, and for checking receipts on tram-cars or at other places, and for other analogous purposes, (for which we have obtained a patent in Great Britain, No. 5,847, dated December 7, 1882,) of which the following is a specification.

Our invention consists of improvements in the construction of the indicating or marking devices of recording apparatus, in which an impression-stamp is combined with movable indicating devices operated by time mechanism, as more fully described and claimed hereinafter.

In the accompanying drawings, Figures 1 and 2 represent elevations, taken at right angles to each other, of a stamping-press with our invention applied thereto. Fig. 3 is a plan view of the indicating or marking die. Fig. 4 is a diagram view of a portion of a modified form of indicator, drawn to a larger scale; and Fig. 5 is a view of another form of indicator embodying our improvement.

Referring first to Figs. 1, 2, and 3, which illustrate a form of stamping-press which may be employed in carrying out our invention, the die *a* or stamp proper is provided with a central portion, *b*, adapted to be rotated within the other part, *a*. The portion *b* is provided with a pointer, *c*, forming a part of the raised or engraved portion of the stamp, and being of the construction and bearing the relation to the dial hereinafter set forth. The pointer portion *b* is provided with a stem, *b*<sup>2</sup>, which is attached to clock-work or to gearing from clock-work in such a manner that the said central part, *b*, is caused to rotate at the same speed as the hand or hands of the clock—say once in twelve or in twenty-four hours. The inner edge of the stationary part of the die *a* is engraved or formed with divisions, so that the position of the pointer may be accurately, and conse-

quently the time may be accurately, ascertained, as hereinafter described.

In the arrangement shown in the drawings a clock, *d*, is used, mounted in a casting, *e*, forming the base of the apparatus. The external or hand spindle, *d*<sup>2</sup>, of the said clock is furnished with pins *f*, which bear upon springs *g*, carried by a spindle, *h*, upon which is fixed the pointer *i*<sup>2</sup> of the dial *i*, for indicating the time at the exterior of the apparatus. The said spindle carries a bevel-wheel, *h*<sup>2</sup>, which gears with another bevel-wheel, *b*<sup>3</sup>, upon or connected to the spindle *b*<sup>2</sup>, carrying the central part, *b*, of the die or stamp of the press. The parts of the press itself may be of any ordinary or convenient construction, as will be understood in reference to the drawings without further description.

In the construction of the indicating-dial we dispense with the figures and numerals of the ordinary clock-dial, and substitute for them twelve or other number of radial divisions or plain marks of uniform widths equidistant round the dial. In place of the hand or hands we use a disk which accurately fits in and is flush with the dial-circle, with the "gage" raised or engraved therein, having a square or oblique end, the gage and the space between the divisions being each equal to some factor of the dial's circumference. These divisions form the units for measuring the advance of the leading edge of the gage, which gives the measurement of the time for the leading edge of the gage, and the division-marks on the dial are on coinciding radial lines. The width of the divisions and of the gage in, for example, a dial with forty-eight divisions measures fifteen minutes of time. Therefore, for every distance advanced by the gage equal to its width one-fourth of an hour is recorded. The half hours are recorded by the gage being flush or in radial line with the intermediate divisions, and the hours, likewise, by the gage being flush or in radial line with the main divisions. The square or oblique end of the gage being divided into three, five, or other number of equal parts, the time can be measured as the gage advances by those fractions of the one-fourth of an hour.

With four or more vernier marks or divisions



ions placed in advance of the gage—say fifty-nine minutes apart—the time may be told to one minute or to the fraction of a minute. In Fig. 4 such a vernier is indicated at *j* in dotted lines, the said figure showing only a portion of the dial and disk. It will be seen that when the leading edge of the gage overlaps any division the amount of that overlap in minutes is shown by the leading edge of the first, second, third, fourth, or fifth verniers being flush or in the radial line with the leading edge of the corresponding succeeding divisions of the dial. Subdivisions may be added to measure the time to any fraction of a minute.

The arrangement illustrated in Fig. 5 is more especially adapted for use on railroad-cars, and a counter may be used for registering the number of impressions taken by the press, as shown at *p*. There are also the "A. M." and "P. M." indications, so combined that the change may be made from one to the other without removing the type, the "A." and "P." being united on one reversible disk, so that by turning the disk on its axis it can be made to print as "A." or "P."

By the use of the broad angular-ended gage with the leading edge adapted to coincide with the radial divisions, we obtain a means of accurately noting the divisions, time, and measurement, and the gage, owing to its broad end,

is not liable to be damaged or put out of shape by the blows of the stamp.

We claim as our invention—

1. The combination of a marking-stamp and clock mechanism with a dial-circle having radial divisions of uniform width equal to some factor of the dial's circumference, and a pointer operated by the clock-work, the said pointer consisting of a wide gage having an angular end with its leading edge adapted to coincide with the radial division-lines, substantially as set forth.

2. The combination of a marking-stamp and clock-work with a graduated dial-circle having radial divisions of uniform width, and a pointer operated by the clock-work, the said pointer consisting of a gage having a divided end to indicate subdivisions of the graduations of the dial, substantially as set forth.

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

CHARLES HENRY THOMPSON.  
CHARLES WILLIAM THOMPSON.

Witnesses:

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