



No. 864,483.

PATENTED AUG. 27, 1907.

A. A. NEWMAN.  
EMPLOYEE'S TIME RECORDER.

APPLICATION FILED JAN. 12, 1906.

3 SHEETS—SHEET 2.

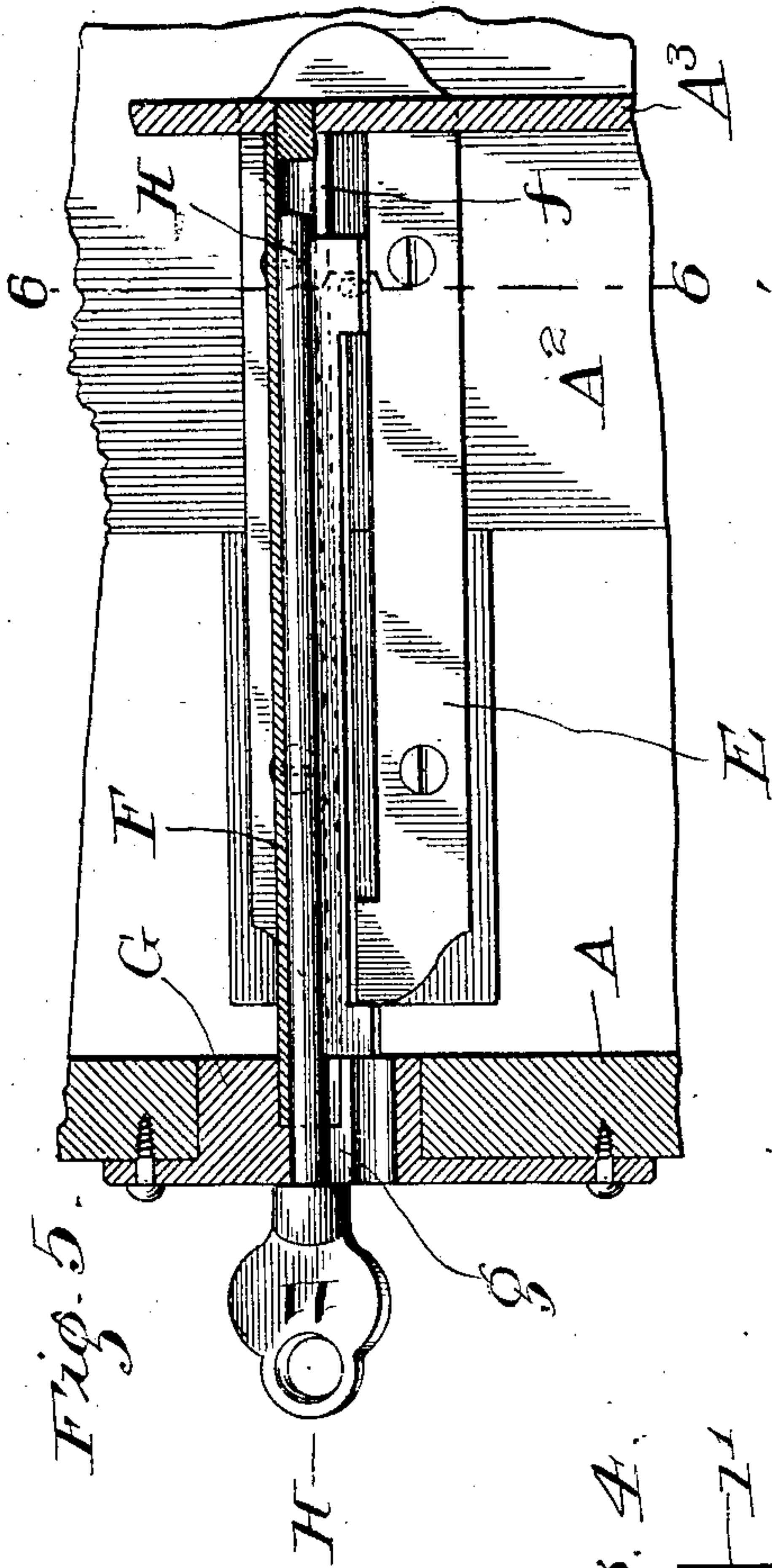


Fig. 5.

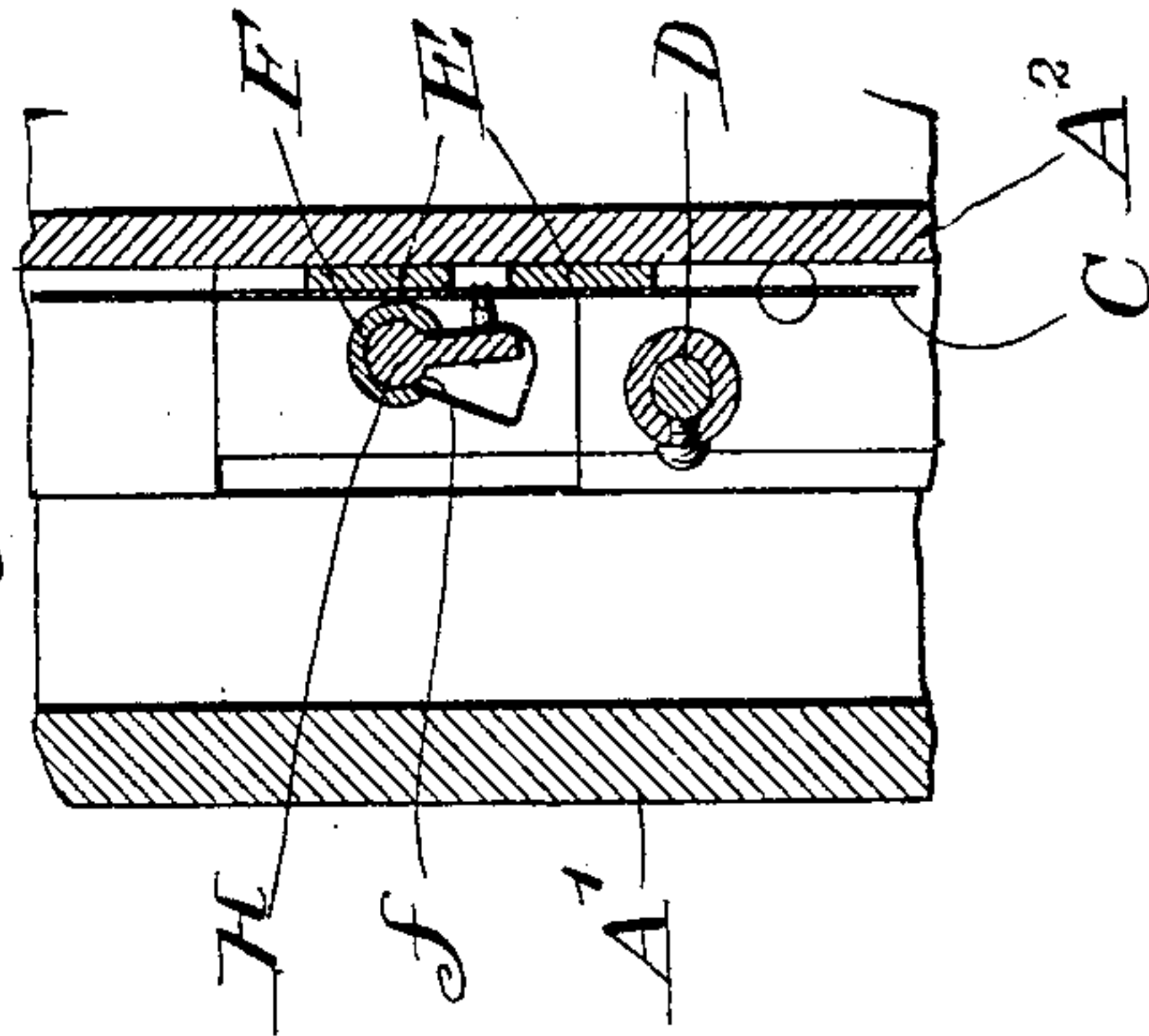


Fig. 7.

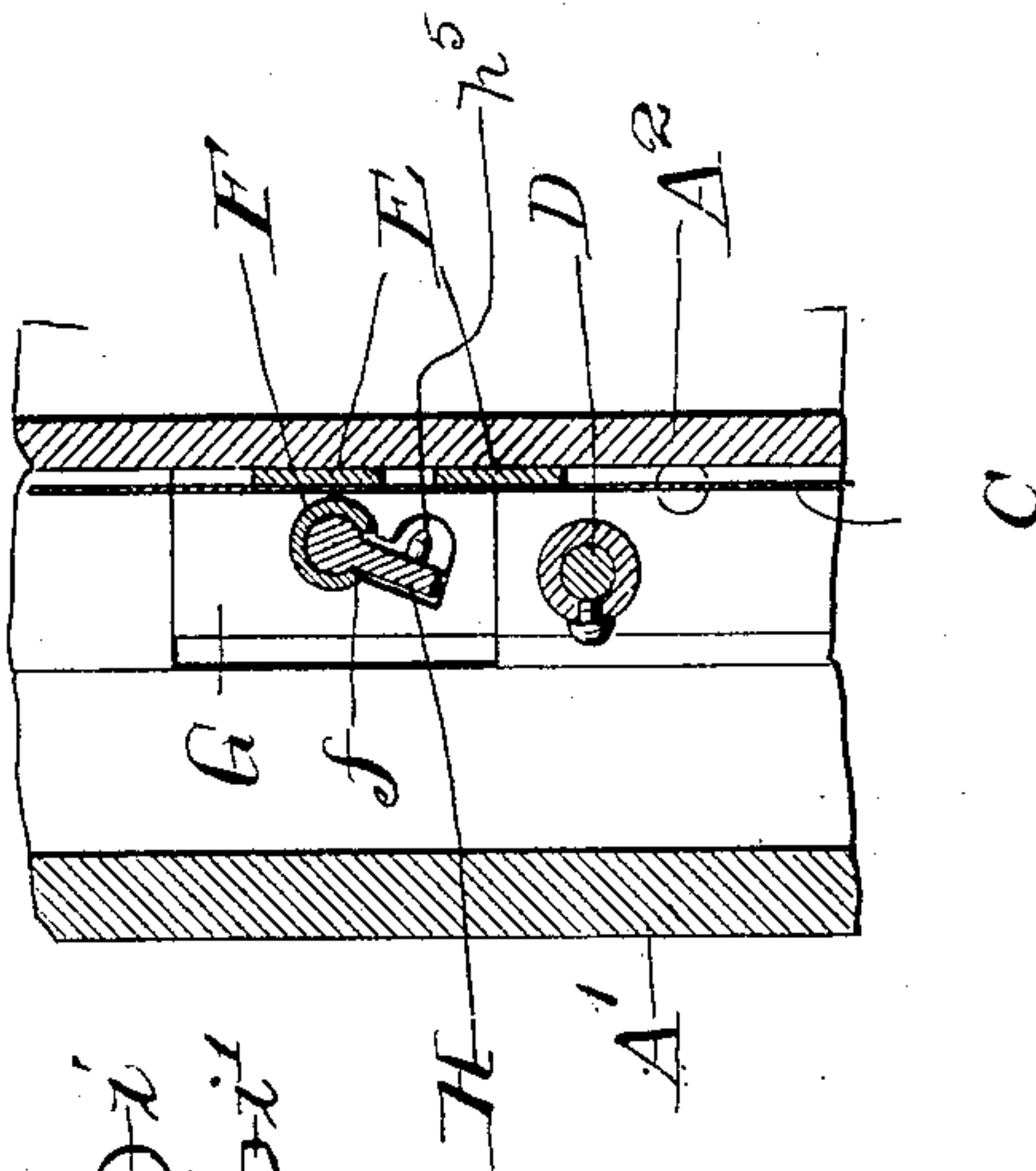


Fig. 6.

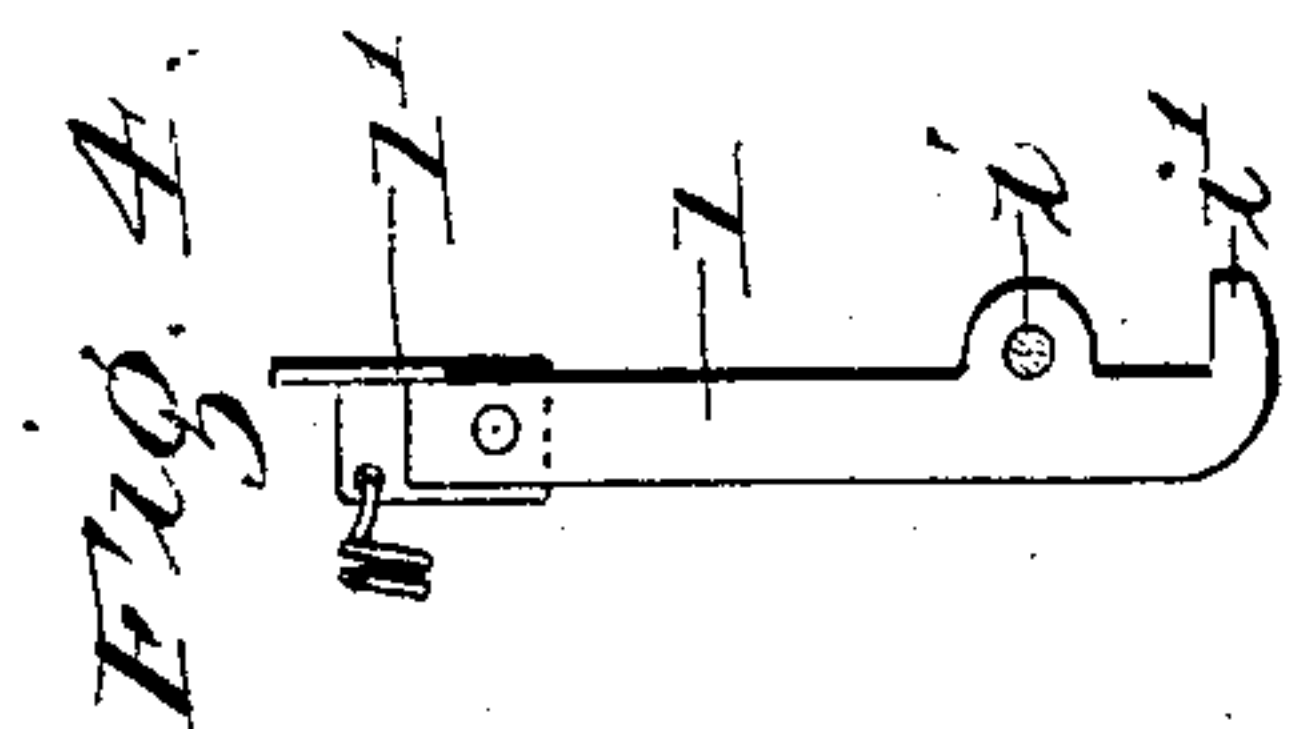


Fig. 4.

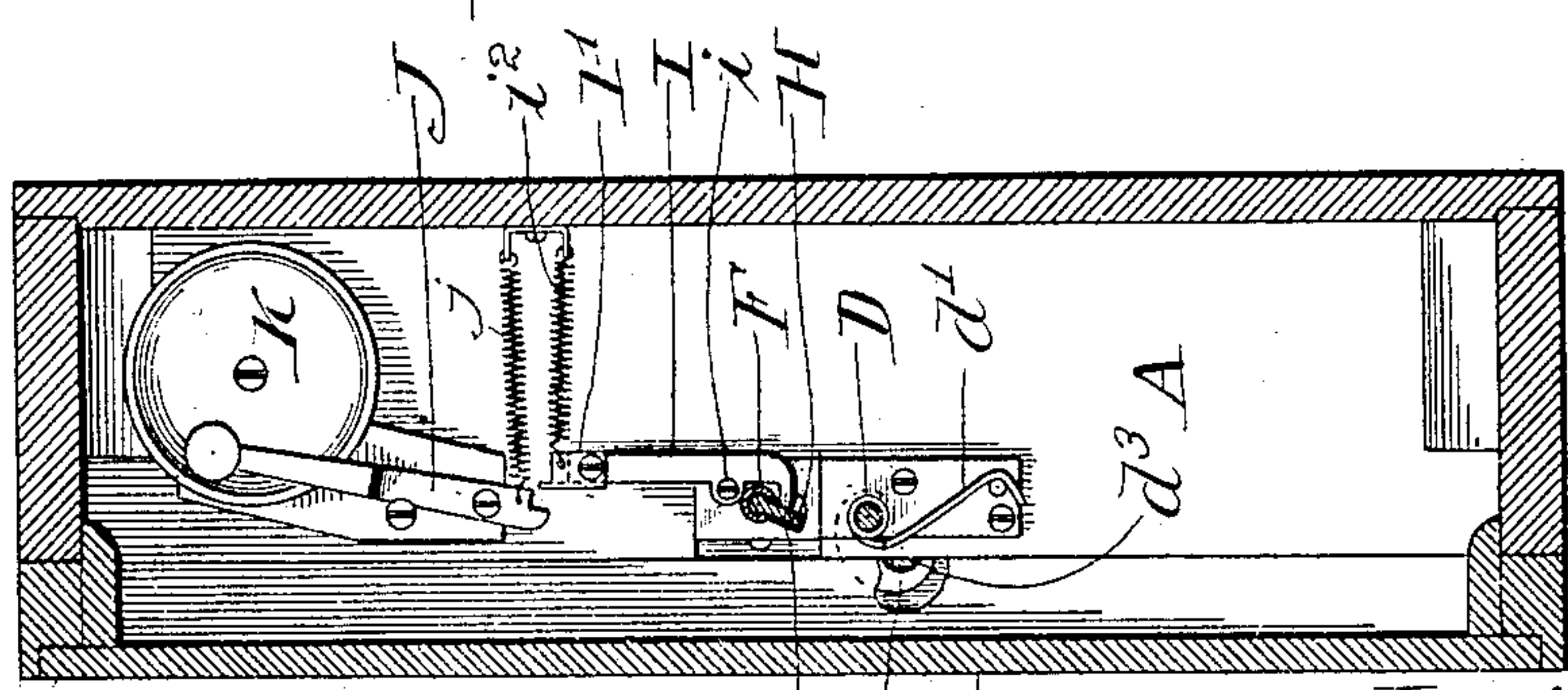


Fig. 3.

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Abraham A. Newman  
by Bitton, Wilcox & Sherry  
Attys



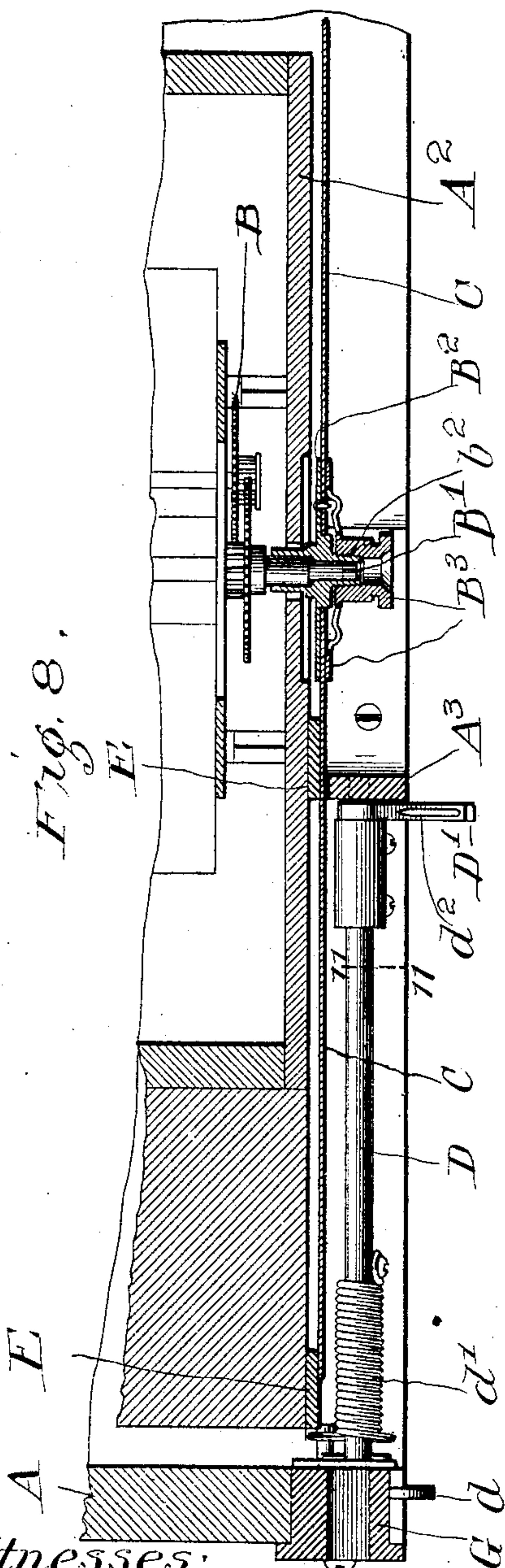
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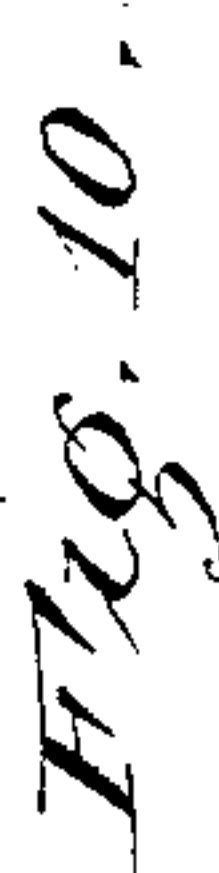
APPLICATION FILED JAN. 12, 1906.

3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

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## EMPLOYEE'S TIME-RECORDER.

No. 864,483.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed January 12, 1906. Serial No. 295,699.

*To all whom it may concern:*

Be it known that I, ABRAHAM A. NEWMAN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Employees' Time-Recorders, of which the following is a specification.

My invention relates to improvements in employees' time recorders, and is fully described and explained in this specification and shown in the accompanying drawings, in which

Figure 1 is a rear view of the device with the back of the cabinet open; Fig. 2 is a side elevation with the cabinet closed looking in the direction of the arrow 2 in Fig. 1; Fig. 3 is a section in the line 3—3 of Fig. 1, looking in the direction of the arrow; Fig. 4 is an elevation of the ringing lever, looking from the left in Fig. 1; Fig. 5 is a vertical section in the line 5—5 of Fig. 2, looking in the direction of the arrow; Fig. 6 is a section in the line 6—6 of Fig. 5; Fig. 7 is a similar view showing the marking key in an operating position; Fig. 8 is a horizontal section in the line 8—8 of Fig. 1, looking downward, as indicated by the arrow; Fig. 9 is an elevation of one of the marking keys; Fig. 10 is a similar view of another of the keys; Fig. 11 is a section in the line 11—11 of Fig. 8, showing the opening and closing marking pin, and Fig. 12 is a front view of the device showing the dial.

Referring to the drawings, A, is the front portion of the case or cabinet, and A<sup>1</sup>, is the cover thereof, the same being hinged to the rear of the front portion and arranged to swing toward the same to inclose the contents thereof.

The entire operating mechanism is mounted in the front portion of the cabinet, as illustrated, and the swinging back, A<sup>1</sup>, merely forms a cover for the operating parts. The front face of the portion, A, of the box is provided with a clock dial, a, of the ordinary form, the same being adapted to indicate time in the ordinary way. Within the main portion, A, of the box and behind the dial is a box, A<sup>2</sup>, containing a clock movement, B, (Fig. 8) the said movement having at its front arbors of the ordinary form which carry the clock hands, b, b<sup>1</sup>, and having also an hour arbor, B<sup>1</sup>, which projects backward and carries a frictionally-held dial plate, B<sup>2</sup>, having a screw-threaded boss, b<sup>2</sup>, which is adapted to receive a dial clamp, B<sup>3</sup>, which can be screwed upon said boss to clamp a paper dial, C, between itself and said dial plate, B<sup>2</sup>. The said dial is divided circumferentially into a plurality of divisions to the various hours and fractions thereof during the day, and is divided radially into a plurality of annular spaces, one of which is reserved for each employee registering with the apparatus.

The back, A<sup>1</sup>, of the box can be locked shut by a

latch, d, (dotted lines Fig. 2) carried on a shaft, D, journaled between one side of the box and a cross brace, A<sup>3</sup>, (Fig. 1) which extends across the front portion, A, of the box. This shaft, D, has a squared end which extends through one of the side walls of the box and can be manipulated by an ordinary clock-key to turn against the tension of a spring, d<sup>1</sup>, which surrounds the said shaft. The opposite end of the shaft, D, carries an opening and closing marker, D<sup>1</sup>, (Figs. 1 and 11) comprising a radial arm and a pointed needle, d<sup>2</sup>, which is adapted to pierce the dial near its center when the said shaft is rotated. It will be seen that the latch, d, engages with a pin, d<sup>3</sup>, (Fig. 3) on the back or cover, A<sup>1</sup>, of the box, so as to make it impossible either to open or close the box without first retracting the latch and consequently piercing the dial. As a result, the dial will show not only the record made by the operatives, as will hereafter be set forth, but also will show when the box is opened and closed, so that if any manipulation of the registering device should be made by an unauthorized person, a record thereof will be left.

Just in front of the dial, C, and extending radially thereof is a platen plate, E, having a central longitudinal slot which runs underneath all the radial sections of the dial. Just behind the platen plate, E, and slightly above the slot in the same, is a key-tube, F, having a longitudinal slot, f, along its lower side (Fig. 6). The interior of this tube, F, is in line with a keyhole, g, in a block, G, secured to the side of the box. This keyhole, it will be seen, is L-shaped and has at its upper end an enlarged circular portion. This portion lies directly in line with the tube, F. Two of the keys used with my improved device are illustrated in Figs. 9 and 10, and the same are generally indicated by the letter, H. Each has a handle, h, an elongated cylindrical portion, h<sup>1</sup>, arranged to fit the circular portion of the keyhole, g, and the tube, F, a downwardly-projecting ear, h<sup>2</sup>, which is removed from the handle, h, by the thickness of the block, G, an elongated rib, h<sup>3</sup>, in the plane of the ear, h<sup>2</sup>, said rib being of varying lengths with the various keys, and a second ear, h<sup>4</sup>, carrying a marking pin, h<sup>5</sup>. It will be understood that each of the employees is provided with a separate key and that the keys vary in length, no two of them having the marking pin, h<sup>5</sup>, at the same distance from the ear, h<sup>2</sup>. When an employee is to make a record, either of his entrance or departure, on the dial, he inserts his key in the keyhole pushing it home as far as it will go. The marking pin passes through the end of the L-shaped keyhole slot and the ear, h<sup>4</sup>, projects radially from the slot in the tube, F. During the entrance of the key, it is impossible to turn it by reason of the fact that the ear, h<sup>4</sup>, rib, h<sup>3</sup>, and the ear, h<sup>2</sup>, lie in the main portion of the L-shaped keyhole slot, g. When the key is pushed completely home, the ear, h<sup>2</sup>, lies just inside the block, G,



and the key is free to be turned, its rotary motion being limited by the size of slot in the tube, F. When the key is turned, the marking pin,  $h^5$ , thereon, strikes the paper dial, C, just behind the slot in the platen plate, E. Thus an indentation is made in the paper, the circumferential or angular position of which indicates the hour at which it was made, and the radial position of which indicates the key with which it was made, and, consequently, the employee who made it.

10 It is usually desirable to have the manipulation of the marking mechanism operate some audible signal which will notify the time-keeper or other person in charge that a record has been made, and which will also indicate to the employee that he has moved the marking apparatus far enough to effect the record. For this purpose, I mount on the side wall of the box a ringing-lever, I, (Fig. 4) said lever being pivoted at,  $i$ , (Fig. 3) and having a backwardly-projecting arm,  $i^1$ , which is in position to be engaged by the ears,  $h^2$ , of the various keys, as illustrated. This lever carries on its upper end a latch,  $I^1$ , which (as viewed in Fig. 3) can rotate to the left with respect to the ringing lever, but cannot rotate to the right. A spring,  $i^2$ , connects this latch with a stationary point toward the front of the box and thus serves three purposes. In the first place, the spring serves to give the latch the proper spring pressure with respect to the ringing lever; in the second place, the spring serves to give the ringing lever its proper radial tendency; and, in the third place—by 30 tending to rotate the ringing lever—the spring becomes a resistance which must be overcome by the keys as they are turned. This gives the keys something substantial to work against, and also returns them automatically to place, so that they can be readily removed when desired without the necessity of their being turned back by hand. When the key is turned to make this record, the lower end of the ringing-lever is swung forward and the latch thereof is swung back. In this movement, it swings the end of a hammer, J, (Fig. 3) and swings the same about its pivot until the motion of the two parts is sufficient that one snaps off the other by reason of their being pivoted upon different pivots. When this takes place, the hammer is pulled back by its spring,  $j$ , and swings a bell, K, making an audible 45 signal as desired.

It will be seen that my device is particularly simple in construction, contains but a few moving parts, in addition to the ordinary clock-movement; and that it

can therefore be manufactured at a very low cost compared with other devices now on the market. 50

I realize that considerable variation is possible in the details of this construction, and hence I do not intend to limit myself particularly to the specific details herein shown and described.

I claim as new and desire to secure by Letters Patent:— 55

1. In a device of the class described, the combination with a clock-movement adapted to carry a dial having divisions parallel to its line of movement, for the various employees, and transverse to its line of movement for the divisions of the day, of a platen-plate lying behind the position of the dial and having a radially disposed slot, a slotted tubular key-guide arranged parallel with the slot in the platen-plate, a plurality of keys having shanks adapted to fit the key-guides and having flanges adapted to pass through the slot and to have a limited angular movement therein, a piercing point on the flange of each key adapted to engage the dial opposite the slot in the platen-plate when the key is rotated, the piercing points on the various keys being spaced at different distances from the handle ends of the keys, and a block having a slot accurately engaging the flanges of the keys to prevent the rotation of the keys until they are pushed home. 60 65 70

2. In a device of the class described, the combination with a clock-movement adapted to carry a dial having divisions parallel to its line of movement, for the various employees, and transverse to its line of movement for the divisions of the day, of a platen-plate lying behind the position of the dial and having a radially disposed slot, a slotted tubular key-guide arranged parallel with the slot in the platen-plate, a plurality of keys of varying lengths having shanks adapted to fit the key-guides and having flanges adapted to pass through the slot and to have a limited angular movement therein, a piercing point on the flange of each key near the end thereof and adapted to engage the dial opposite the slot in the platen-plate when the key is rotated, and a block having a slot accurately engaging the flanges of the keys to prevent the rotation of the keys until they are pushed home. 75 80 85

3. In a device of the class described, the combination with a clock-movement adapted to carry a dial, and a series of keys for producing records upon the dial, of a ringing-lever adapted to be actuated by said keys, a latch on the ringing-lever movable in one direction, and a bell-hammer arranged to be engaged and released by the ringing-lever in one continuous movement thereof in one direction and to be unaffected by the return movement of said lever. 90 95

In witness whereof I have signed the above application for Letters Patent at Chicago, in the county of Cook and State of Illinois, this 26th day of December A. D. 1905.

ABRAHAM A. NEWMAN.

Witnesses:

TÖREY ROSS,

RUSSELL WILES.