J. MORRISON.

TIME RECORDER.

APPLICATION FILED JULY 18, 1910.

1,022,694.

Patented Apr. 9, 1912.

2 SHEETS—SHEET 1.

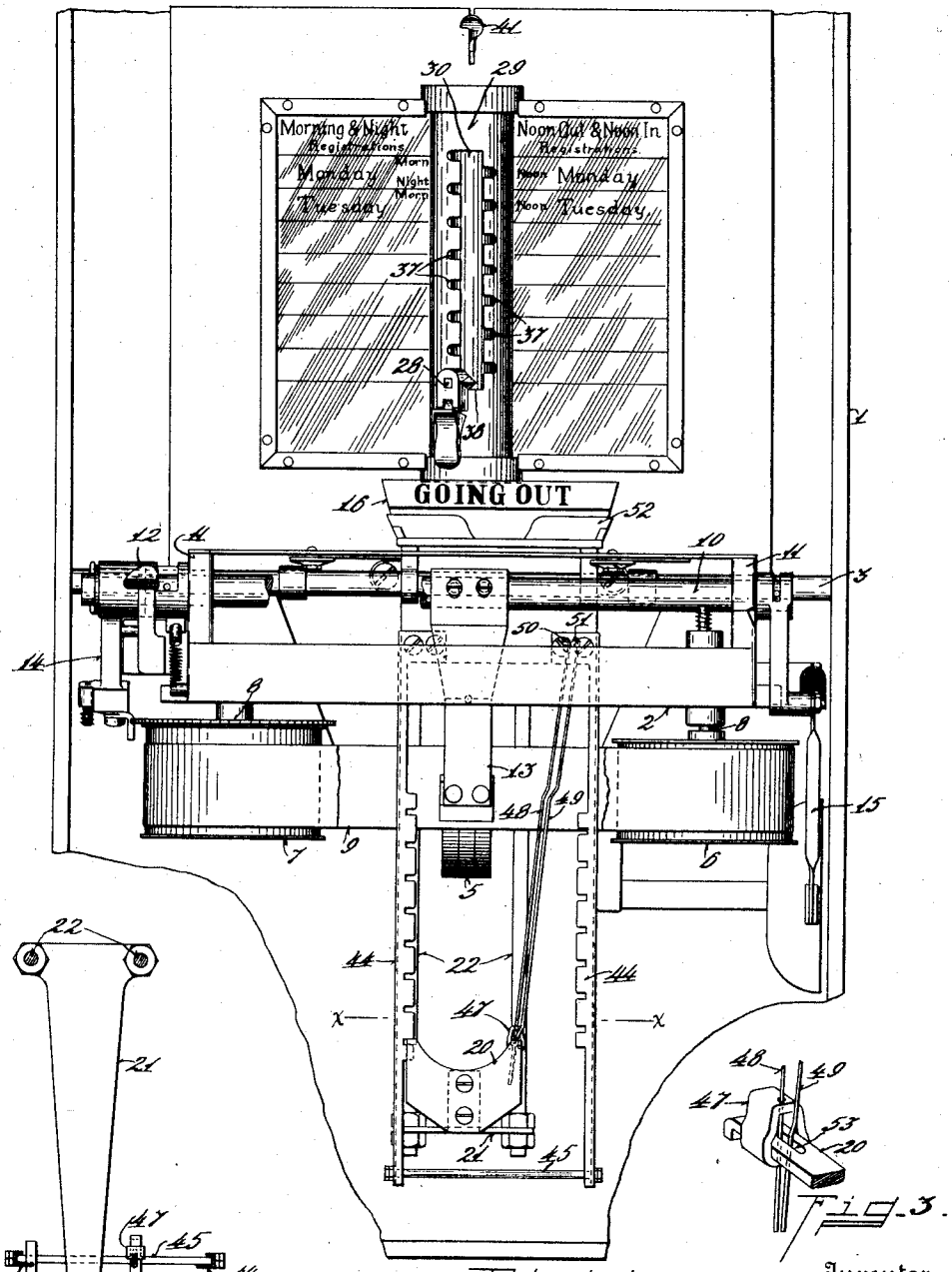

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

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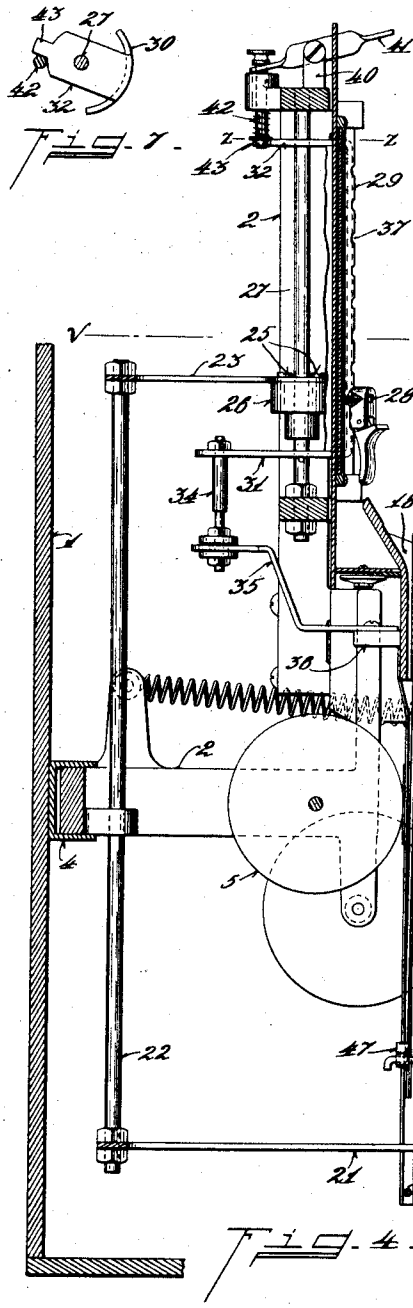

Fig. 4.

Fig. 7.

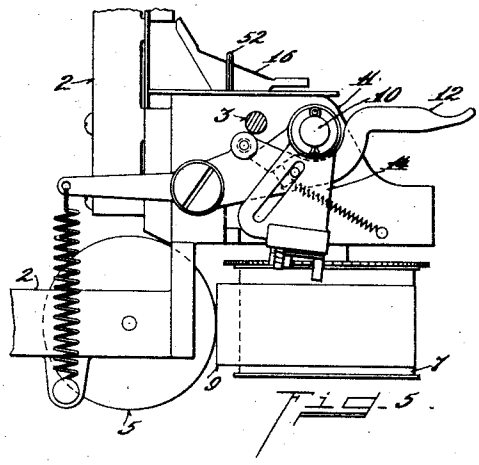

Fig. 5.

	MORNING IN NIGHT OUT		NOON OUT NOON IN		Hrs.
Morn In	Mon AM	7 30	Mon PM	12 30	Out
Night Out	Mon PM	5 15	Mon PM	1 30	In
Morn In	Tue AM	7 20			Out
Night Out					In
Morn In					Out
Night Out					In

Fig. 8.

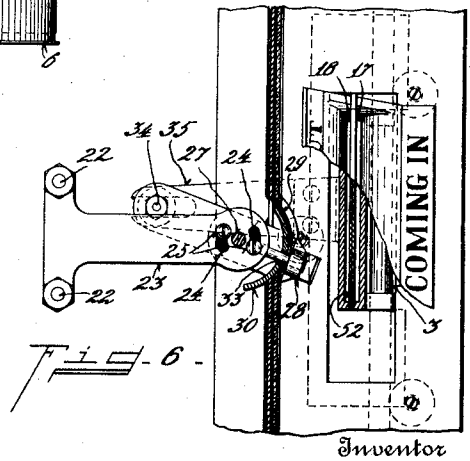

Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES MORRISON, OF CINCINNATI, OHIO, ASSIGNOR TO THE CINCINNATI TIME RECORDER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

TIME-RECORDER.

1,022,694. Specification of Letters Patent. Patented Apr. 9, 1912.

Application filed July 18, 1910. Serial No. 572,505.

To all whom it may concern:

Be it known that I, JAMES MORRISON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Time-Recorders, of which the following is a specification.

My invention relates to an improvement in time-recorders, primarily of that class in which the time is printed upon cards subdivided into spaces within which the time is printed, and in which the depth of insertion of the card into the machine denotes the day as well as denoting an "in" or "out" record.

One of the objects of my invention is to provide a time-recorder, having two card receiving openings, through which the card is fed, and means for relatively limiting the depth of card feed into said openings, wherein one denotes an "in" record, and the second an "out" record.

Another object of my invention is to provide a time-recorder, having a card receiver, provided with a plurality of card receiving spouts, with means for shifting said receiver laterally to print a series of records in a given line, together with means for adjusting the depth of card insertion.

Another object of my invention is to provide a time recorder, having a card receiver, with a series of card-receiving openings, means for shifting the card receiver, and means for limiting the depth of card insertion into each relatively, whereby a series of different records can be had without shift, through the action of the time controlled printing mechanism, and series of card-receiving openings.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which:—

Figure 1 is a front elevation of my improved time recorder, with the casing removed. Fig. 2 is a section on line x, x, Fig. 1. Fig. 3 is a detailed perspective view of the abutment block and guide rods, movable with the card receiver, for controlling differential limits of card insertion. Fig. 4 is a central vertical section, through Fig. 1. Fig. 5 is an end elevation of the lever mechanism for feeding the ink rollers and printing platen. Fig. 6 is a section on line v, v, Fig. 4. Fig. 7 is a section on line z, z, Fig. 4. Fig. 8 is a detailed plan view of one of the cards.

The machine, as illustrated, embodies many of the principles shown and described in my former Patent No. 945,044, dated January 4, 1910.

1 represents a portion of the casing, within which the machine is mounted.

2 represents a frame for supporting the various elements of the machine, which is suitably mounted within the casing, its forward end being provided with a rod 3, said rod in turn being fixed to the casing. The rear portion of the frame 2 is engaged by a yoke-plate 4, fixed to the casing 1. By this construction, the recorder mechanism may be bodily removed from the casing, as a self-contained machine.

5 represents a series of type disks for printing the desired records, said disks are of such construction as commonly employed in time controlled printing mechanisms, and are suitably connected with clock mechanism, for operating the time disks.

The printing mechanism may be of any well-known form of time-controlled type, without departing from the features of this invention.

6, 7, represent a pair of pulleys supported upon the spindles 8, secured to the frame 2, and 9 represents an inking-ribbon mounted on said pulleys, adapted to be fed relatively to the type disks, for inking the type characters thereon when in a printing position.

10 represents a rock-shaft suitably journaled in the bearing bracket 11, projected from the frame 2, one end of which is provided with a lever 12, for operating the printing platen 13, and the pawl lever 14, for intermittently feeding the ribbon, while the opposite end of the shaft 10 is provided with a lever, for operating the bell hammer 15, said ink ribbon feed and mechanism for operating the printing platen or hammer are substantially the same as that shown and described in the said former patent.

16 represents a card receiver, slidably mounted upon the rod 3, and sub-divided, so as to provide a series of mouths 17, 18,

see Fig. 4, for the reception of the card, and preferably, as illustrated, mouth 17 is provided for denoting an "in" record, and mouth 18 is provided for denoting an "out" record. The means for shifting the card receiver 16, is substantially the same as that shown and described in said former patent.

The card is supported in the card receiver by an abutment plate 20, and is arranged to be shifted horizontally to bring the printed records in different columnar alinement, and also to be vertically adjusted, for proper line spacing. Said abutment plate is carried by a plate 21, secured to the lower ends of two vertical rods 22. Upon the upper ends of these rods is secured the forwardly projecting plate 23, the front end of which is provided with segmental slots 24, through which projects pins 25, on the collar 26, and by which connection the plate 23 is coupled to the collar 26. This collar is loosely mounted on a vertical rod 27, and the collar is raised and lowered by a shifting lever 28, which projects through a vertically slotted and laterally notched curved indicator plate 29, fixed to the front of the casing. Mounted behind this fixed indicator plate is a similarly curved rocking plate 30, which carries, at the top and bottom, horizontally projecting arms 31, 32, and these arms are pivotally mounted on the vertical rod 27. The curved plate 30 is provided with a narrow vertical slot 33, through which projects the shifting lever 28, so that with the movement of this lever, from side to side, the rocking plate 30 will be rocked on the shaft 27, and with it, the arms 31, 32. The inner end of the arm 31 carries the depending rod 34, which is connected, at its lower end, to a bifurcated connecting plate 35, secured to a lug 36, on the card receiver 16.

It will be evident, from this construction, that as the shifting lever 28 is shifted from side to side to engage the lateral notches 37, that the card receiver will be shifted laterally to present the card to the type wheels in proper columnar alinement, and it will also be evident, that as the shifting lever 28 is raised or lowered, from notch to notch, in the vertical slot 38, that the abutment plate 20 will be correspondingly raised and lowered. The rods 22 pass through suitable openings in the frame-work, so that in the shifting of the lever 28, from side to side, the abutment plate will not be rocked.

In order that the shifting lever shall be locked against any movement, except when the recorder is to be adjusted, I provide a catch for the rocking plate 30. Pivotally mounted in a lug 40 on the frame-work is a lever 41, the inner end of which engages a spring pressed pin 42, which is adapted to engage on either side of the projection 43, of the arm 32, so that when the shifting lever 28 is in engagement with any notch, said lever is locked until released by the depression of the lever 41. This lever may extend out in front of the casing, so as to be operated by the workmen, or it may be covered up and inaccessible, except to the foreman or other officer, who, with separate key, may unlock this portion of the casing and gain access to the locking device.

Inasmuch as the abutment plate 20, and its supporting plate 31, is preferably light to reduce weight, any workman applying too much pressure on the card inserted in the card receiver, might depress the abutment plate. To prevent this and to maintain rigidity of the abutment plate, I provide the depending guide of the card receiver with a pair of notched plates 44, rigidly connected at their lower ends by a connecting rod 45. The lateral notches in these plates correspond to the lateral notches in the indicator plate 29, and as the card receiver is shifted from side to side, the proper notches will be brought into engagement with the side edges of the abutment plate 20, thereby holding said plate rigidly in position.

Referring to Fig. 8, it will be seen that the "in" and "out" registration are distinguishable by their respective vertical alinement, and by reference to Figs. 1 and 6, it will be seen that the card slot 17 is intended to be used in recording "in" records, or time of arrival, and that the slot 18 is to be used in recording "out" records, or time of departure. By this arrangement, it is evident that the insertion of the card in the slots 18, must be limited to a distance of one line space less than when inserted in the slot 17. To accomplish this, I provide the following mechanism:—Straddling and adapted to slide upon one of the rearwardly extending arms of the abutment plate 20, is an abutment block 47, upon which the card rests when inserted into the slot 18. When the card is inserted into the slot 17, it rests upon the abutment plate in front of said block. To guide the card during its insertion, I provide two guide wires 48, 49, which are separately pivoted at 50, 51, in the partition 52, of the card receiver. The wire 48 projects through the outer edge of the abutment block 47 and through an elongated slot 53, see Fig. 3, in the plate 20. The wire 49 extends in front of the block 47, and also through said slot 53. This wire prevents the card from catching on the edge of the block 47, during its descent of said card. The lateral movement of the block 47 is for insuring a proper abutment of the card upon the said block, without bending or flexing said card.

In the construction illustrated, the lateral notches on one side of the indicator plate 29, represent the morning and evening records,

and those on the other side represent the noon records. The different card slots provide for the "in" and "out" records and the machine is arranged for a week's use of the card.

The operation of the machine, is as follows:—On Monday morning, the setting lever 28 is set in the top notch on the left hand side of the indicator plate 29, and the workmen insert their cards in the slot 17, which is properly designated "Coming in". The lever 12 is operated to print the time record in the left-hand column, opposite the first "Morn in" inscription on the card. At noon, the setting lever 28 is shifted to the top notch on the right hand side of the indicator plate 29, and the workmen insert their cards in the slot 18, which is properly designated "Going out". This lateral shifting of the setting lever, shifts the card receiver and brings the second column into printing alinement. The lowering of said lever from the first notch on the left to the first notch on the right, lowers the card abutment plate 20, but as in this "Out" registration, the card is limited in its insertion by the abutment block 47, the "Noon out" record will be printed in the second column, opposite the first "Out" inscription on the card. In recording the "Noon in" records, the time card is inserted in the "Coming in" slot and extends one space farther than when inserted into the "Going out" slot, in the "Noon out" registrations, thereby printing the "Noon in" records in the second column, opposite the first "In" inscription. In the evening, the setting lever is shifted to the second notch on the left hand side of the indicator plate, and the workmen, in recording the "Night out" records, insert their cards into the "Going out" slot, to print the record in the first column opposite the first "Night out" inscription. No further adjustment is needed for the registration of the "Morn in" records of the next morning, as in inserting the cards in the "Coming in" slot, they descend one line space farther than when inserted in the "Going out" slot the previous evening. This causes the record, for the second morning arrivals, to be recorded in the first column opposite the second "Morn in" inscription on the card. This sequence of adjustment is repeated throughout the remainder of the week.

Having described my invention, I claim:—

1. In a time recorder, having time indicating stamping mechanism, a card receiver having separate mouths, a card abutment stepped relative to the mouths, a member guiding the card to the abutment appropriate to the mouth in which it is inserted.

2. In a time recorder, time controlled stamping mechanism, a laterally shifting card receiver having two chutes and a step abutment coöperating therewith.

3. In a time recorder, time controlled stamping mechanism, a laterally shifting card receiver, having separate mouths, a card abutment stepped relative to the mouths, and means for moving the abutment transversely with the movement of the card receiver.

4. In a time recorder, a laterally shifting card receiver, having a series of mouths, means for limiting the depth of card insertion to stepped planes relative to each mouth, guiding means for directing the card insertion to its depth, and means for laterally shifting said card receiver and vertically adjusting the depth of card insertion into each mouth.

5. In a time recorder, a laterally shifting card receiver having a series of mouths, means providing step limits of vertical card insertion relative to the mouths, a single lever, and connections between said card receiver and depth-controlling means and lever for laterally shifting the card receiver and vertically adjusting the step limits of card insertion.

6. In a time recorder, a laterally shifting card receiver having a series of card receiving mouths, a vertically adjustable stepped abutment plate for limiting the relative vertical depth of card receiver mouths, guiding means for directing a card to each step of the abutment plate relative with a mouth of the card receiver, a single shifting lever for vertically adjusting the abutment plate, connections between said lever and card receiver for laterally shifting the same, and notched guiding means for said lever to govern its position of adjustment.

In testimony whereof, I have hereunto set my hand.

JAMES MORRISON.

Witnesses:
LOUISE BECK,
CLARENCE B. FOSTER.