(No Model.)

A. R. ABBOTT.

MACHINE FOR PERFORATING DATES AND AMOUNTS UPON DOCUMENTS OR CHECKS.

No. 471,455. Patented Mar. 22, 1892.

Fig. 1.

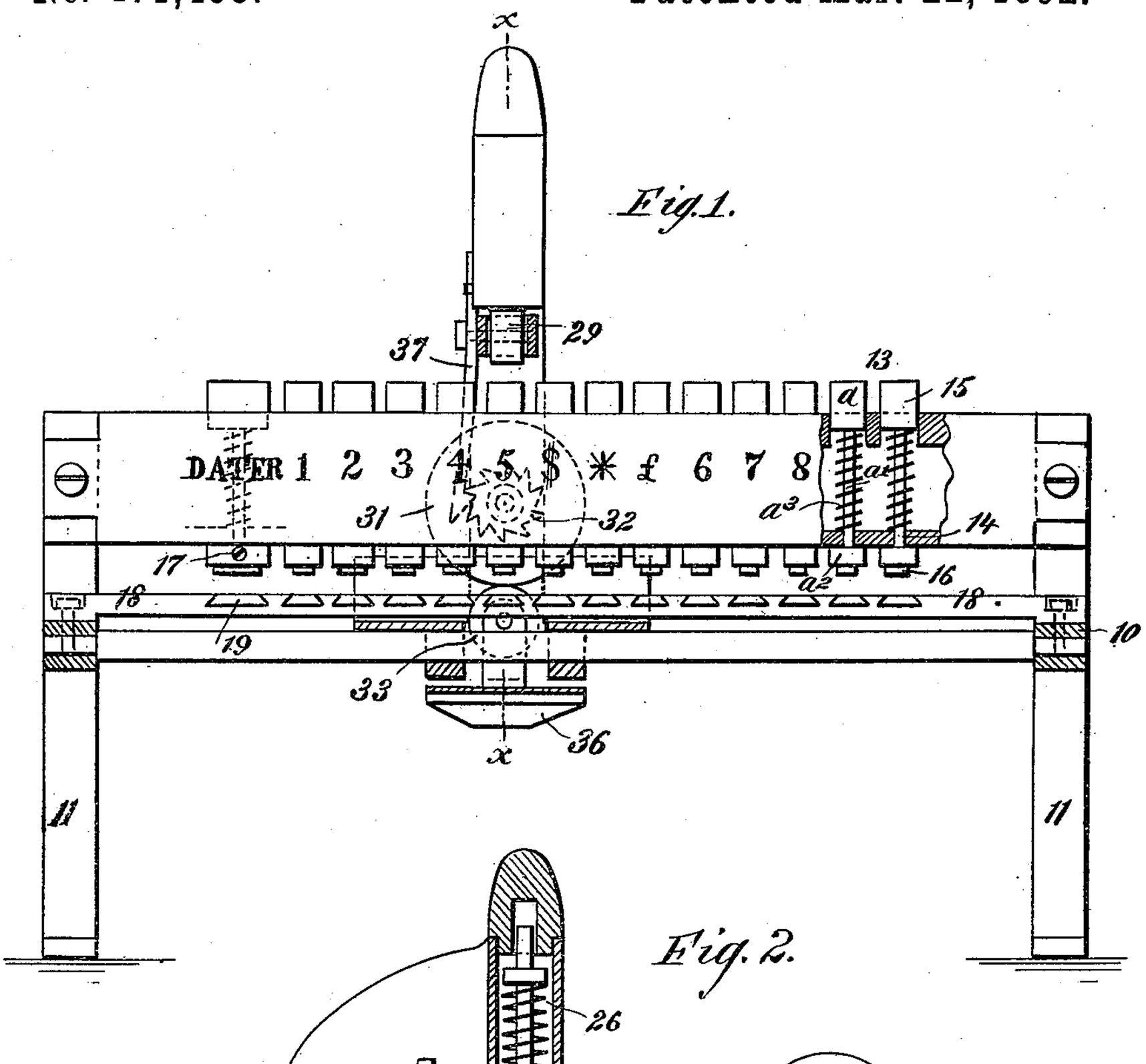
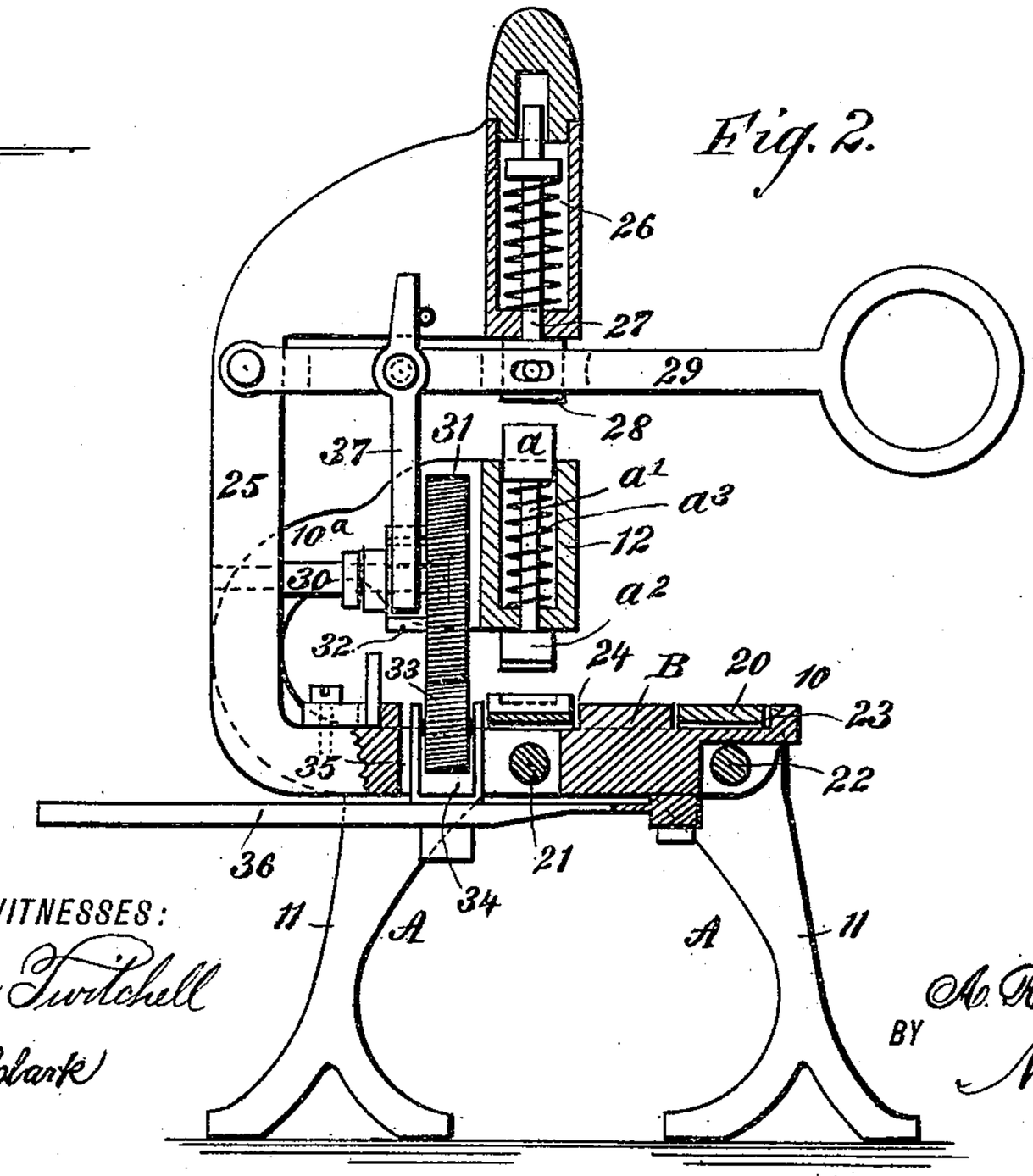


Fig. 2.



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MACHINE FOR PERFORATING DATES AND AMOUNTS UPON DOCUMENTS OR CHECKS.

SPECIFICATION forming part of Letters Patent No. 471,455, dated March 22, 1892.

Application filed September 5, 1891. Serial No. 404,813. (No model.)

To all whom it may concern:

Be it known that I, ALBERT R. ABBOTT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Machine for Perforating Dates and Amounts upon Documents or Checks, of which the following is a full, clear, and exact description..

My invention relates to an improvement in machines adapted for perforating dates and amounts in checks or documents of all descriptions, and the object is to construct a concise machine which will be simple, durable, and economic.

A further object of the invention is to provide a means whereby a table may be conveniently slid beneath any one of a series of punches to present a check and the punches be expeditiously and conveniently operated.

It is a further object of the invention to provide the machine with a feed at once simple and positive, which feed may be readily thrown out of gear to receive the check or paper and will automatically return to its normal position—that is, in clamping engagement with the article to be perforated.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in both the views.

Figure 1 is a front elevation of the machine, partly in section; and Fig. 2 is a transverse section taken, practically, on the line $x\,x$ of Fig. 1.

The frame of the machine consists of two side pieces A, the said side pieces each comprising a horizontal bed 10, provided at its rear with an extension 10^a, which extension curves upward and over the horizontal portion of the bed, terminating at a point at or near its center, and legs 11, supporting the bed. The ends of the extensions 10^a of the bed are connected by a bar 12, which bar for the greater portion of its length is hollow and is provided with a series of partitions 13, arranged transversely at the top, and a series of apertures 14, produced in the bottom of the bar, which is closed, an aperture being arranged in vertical alignment with about the center of each space between the upper partitions 13, or vertical slideways may be produced in the front bar 12 of the machine in any suitable or approved manner.

In each slideway or compartment produced in the front bar 12 a key 15 is held to slide. Each key preferably consists of a head a, which normally extends upward above the upper edge of the front bar, a stem a' of less diameter than the head and extending down through an aperture 14 in the bottom of the front bar, and a socket a^2, integral with or attached to the lower end of the stem below or beneath the lower face of the front bar, as is shown in both Figs. 1 and 2. The stem of each key is surrounded by a spring a^3, which bears against its head a and against the bottom of the front bar. The spring normally holds the key in its upper position—that is, with the socket a^2 in engagement with the under face of the bar; but the keys may be otherwise constructed, if desired, and spring-controlled in any other approved manner. One key, which is ordinarily located at the left-hand end of the front bar, is larger than the others, and this particular key is adapted for use in dating a check or a document. Each of the other keys are adapted to carry a character—such as numerals—and when numerals are used in connection with the keys they are arranged consecutively, one to each key, from and including the numeral "1," the numeral "9," and the "0." When numerals are employed on sundry of the keys, characters may be carried by the others—as, for instance, the dollar-mark, the mark denoting pounds, and a star; but whatever characters or numbers may be carried by the keys the character upon each particular key is produced upon the outer face of the front bar 12, which may be called a "key-bar," immediately opposite the key bearing the character, as shown in Fig. 1.

The sockets a^2 at the bottom of the keys are adapted to receive male dies 16, and these dies are preferably removable from the sockets, being secured in position when in use by set-screws 17 or the equivalents thereof.

A die board or plate 18 is secured at its ends to the bed-sections of the end pieces A

immediately below the keys. The die-board has produced therein, preferably transversely, a series of recesses, which are ordinarily made dovetail in cross-section, as illustrated in Fig. 1, one of which recesses is immediately below or in the downward path of each key. All of the recesses are adapted to receive female dies 19, corresponding to male dies in the keys immediately above them, and when two dies are brought into engagement a check or a sheet or document placed between the dies will be perforated with the characters carried by the dies. The side pieces are also connected by a bar 20, located at their forward ends and attached to the bed-sections. Two shafts 21 and 22 are secured at their ends also in the bed-sections of the side pieces, one shaft being located below the front connecting-bar 20 and the other beneath the die board or plate 18. A table B is held to slide upon the shafts 21 and 22, being loosely mounted upon said shafts, and the table is provided with two transverse longitudinal grooves 23 and 24, one loosely receiving the die board or plate and the other the front connecting-bar 20. These two connecting mediums of the side pieces of the frame act as guides for the table. The table moves from end to end of the machine upon its shafts, and from its rear a bracket-arm 25 is carried upward and then over the key board or bar 12. The upper forward end of the bracket-arm is provided with a vertical recess 26, in which a spring-pressed plunger 27 has movement, the plunger terminating below the under face of the recessed portion of the bracket-arm in a head 28, which is pivotally connected with a horizontal lever 29, the said lever being pivoted at its rear end to the vertical section of the bracket-arm. This lever extends over keys and beyond the key board or bar, being provided at its forward end with a suitable handle. The connection between the head of the plunger and the lever is ordinarily effected by locating upon the head a pin and producing a longitudinal slot in the lever to receive the pin, as shown in Fig. 2.

A short shaft 30 is projected forward from the vertical portion of the bracket to within a short distance of the key board or bar. This shaft has loosely mounted thereon a feed-wheel 31, having integral with one face a ratchet-wheel 32. The peripheral surface of the feed-wheel 31 is serrated or otherwise roughened, and this feed-wheel is adapted to engage with a smaller feed-wheel 33 of like character, the smaller wheel being journaled between lugs 34, projected upward through an opening 35 in the table from a spring-plate 36, located beneath the table, which spring-plate is secured at its forward end only to the under portion of the table, and its rear end extends, preferably, some distance back of the bracket-arm 25, beneath which the plate is located. The lever 29 at the rear of its fulcrum has pivoted thereon a dog 37, which engages with the ratchet-wheel 32 at its lower end, and at its upper end an engagement is made with a guide-pin located upon the bracket, whereby the dog is compelled to travel in a vertical plane, irrespective of the movement of the lever.

In operation the spring-plate 36 is pressed downward, carrying thereby the two feed-wheels out of engagement, and the check or article to be perforated is passed between the wheels, so that a portion will be brought beneath the male dies of the keys. The spring-plate is thereupon released and the article to be perforated is held between the feed-wheels. The table is then carried in the direction of either end of the frame of the machine until the lever 29 is immediately over the key bearing the character or numeral to be perforated or over the date-key. When this position of the table has been assumed, the lever is pressed downward and the head 28 of the spring-pressed plunger will be brought in engagement with the head of the key beneath the lever, and the key will be depressed a sufficient distance to force the male die carried thereby through the check or document to an engagement with its female die. As the lever is pressed downward the dog 37 is carried downward with it, and the moment the lever is released the spring controlling the plunger will carry the lever upward to its normal position, and with it the dog, and as the dog upon its downward movement had engaged with one of the lower teeth of the ratchet-wheel 32 upon its upward movement it turned the said wheel, communicating thereby sufficient movement to the feed-wheels to feed the paper a distance equal to the proper spacing between numerals. The table is then again carried along its bearings until the lever is over the key bearing the next character or numeral to be perforated in the article, and the operation above described is repeated.

It will be observed that the machine is exceedingly simple, economic in construction, and not liable to become disarranged in any of its parts, which are but few in number and positive in their action, and that the machine may be conveniently and expeditiously manipulated, the feed being automatic and the arrangement of the keys and the dial upon the keyboard such that a mistake in the key to be pressed is hardly possible.

If in practice it is found desirable, the female dies may be formed directly in the board or plate 18; but the female die of the dater is preferably made removable.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the frame having the die-board and a keyboard thereabove provided with vertically-movable die-carrying keys, of the transverse sliding table beneath the die-board and provided with a yielding feed-roller, a bracket projecting up from the sliding table and overhanging the keyboard, a short shaft journaled in the bracket

and provided with a feed-roller engaging the lower roller and provided with a ratchet, a vertically-reciprocating plunger in the outer end of the bracket, a lever pivoted at one end to the bracket and between its ends to the lower end of the plunger to bring it down upon the keys, and a pawl depending from the lever and engaging the said ratchet, substantially as set forth.

2. In a machine of the character described, the combination, with the die-board and keys, of the sliding table having a bracket provided with the feed-rollers, the upper one of which has a ratchet, a lever extending from the said bracket across the keys, a depending pawl pivoted below its upper end to said lever and engaging the said ratchet, and a pin or stud on the bracket engaging the forward edge of the pawl above its pivotal point, substantially as set forth.

3. In a machine of the character described, the combination, with a keyboard, a series of spring-controlled keys carried thereby having sockets at their lower extremities, male dies removably located in said sockets, a die-board located beneath the keys, and female dies removably placed in said board in vertical alignment with the key-dies, of a table having a sliding movement beneath the die-board, a bracket projected upward from the table and having a recess in its upper edge, a spring-controlled plunger having movement in the recess of the bracket, and a head located outside of said recesses and adapted for engagement with the keys, a lever pivoted upon the bracket and connected with the head of the plunger, a spring-plate fastened at one end only and attached to the under side of the table, a feed wheel or roller carried by the spring-plate and extending upward within the recess of the table, a second feed wheel or roller carried by a shaft attached to the bracket above the table and meshing with the lower feed roller or wheel, a ratchet-wheel attached to the upper feed wheel or roller, and a dog depending from the lever and engaging with the ratchet-wheel, substantially as shown and described.

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