No. 762,666.

PATENTED JUNE 14, 1904.

A. A. WALLMAN.

BULLETIN BOARD.

APPLICATION FILED AUG. 27, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

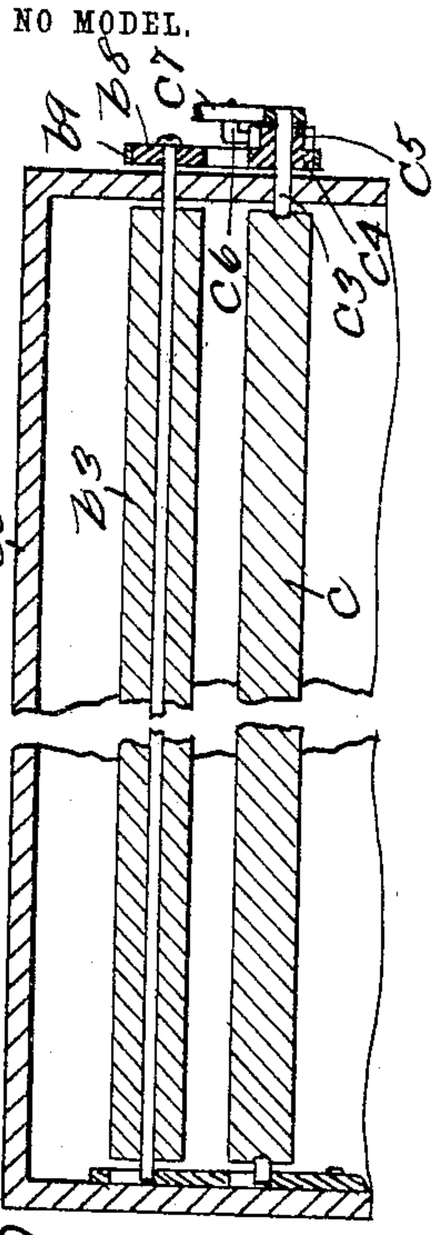

Fig. 6.

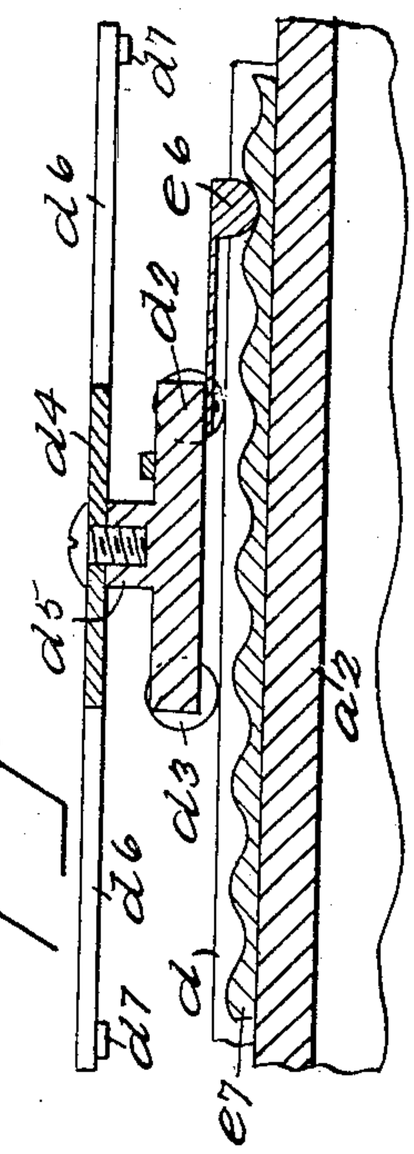

Fig. 7.

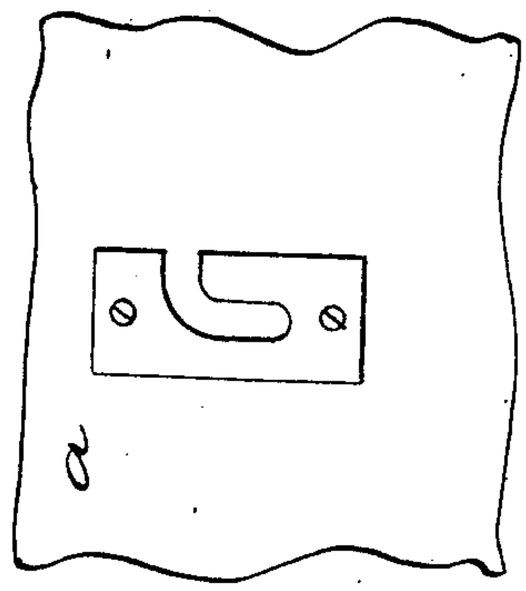

Fig. 8.

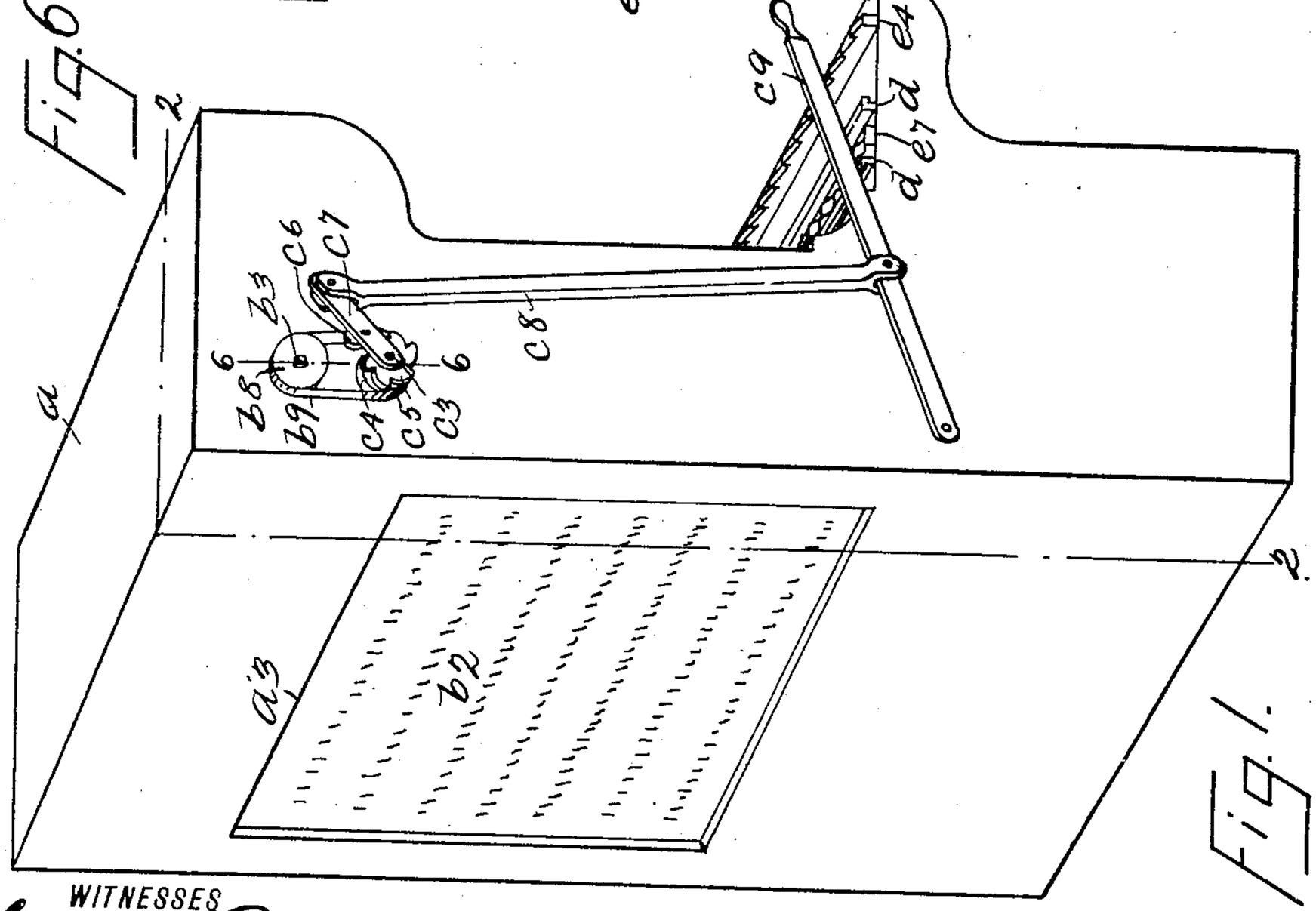

Fig. 1.

WITNESSES

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3 SHEETS—SHEET 2.

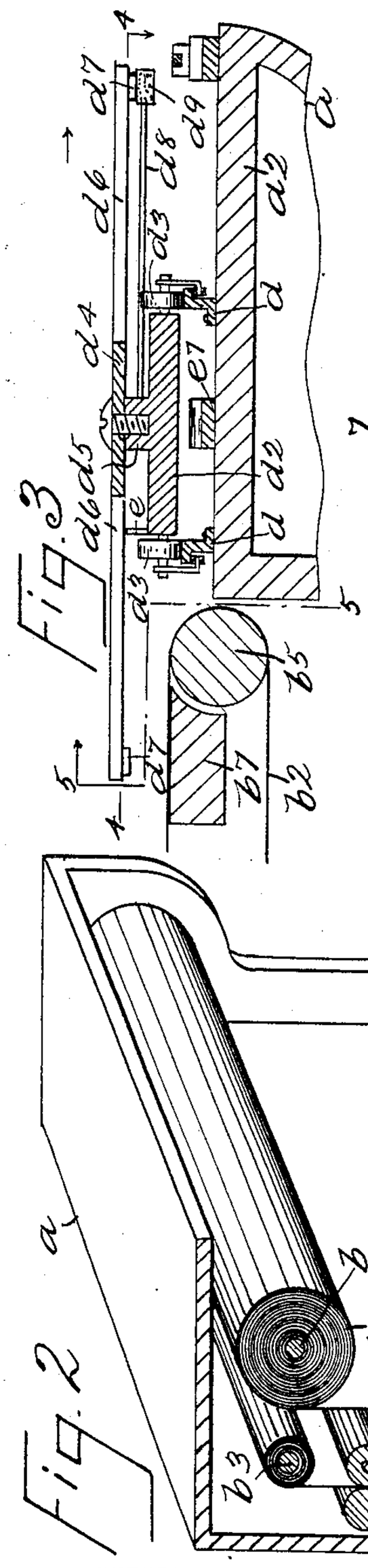

Fig. 3

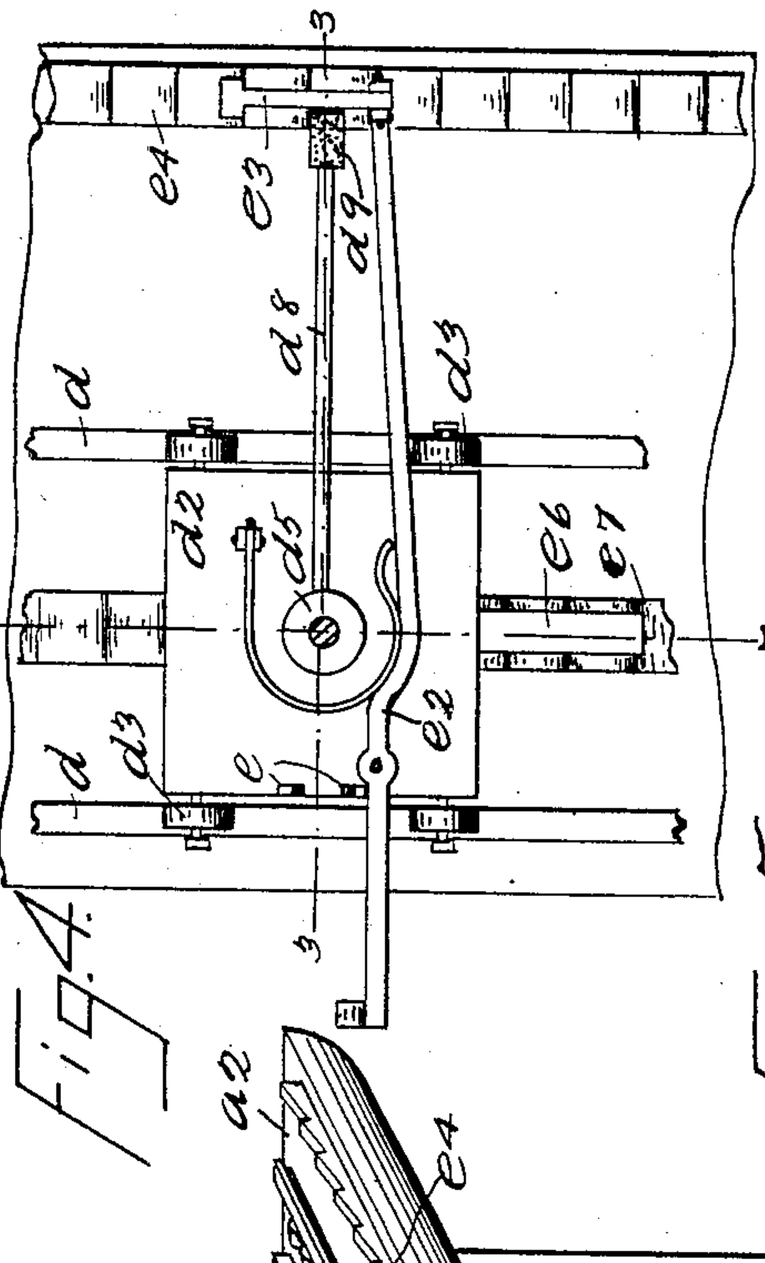

Fig. 4.

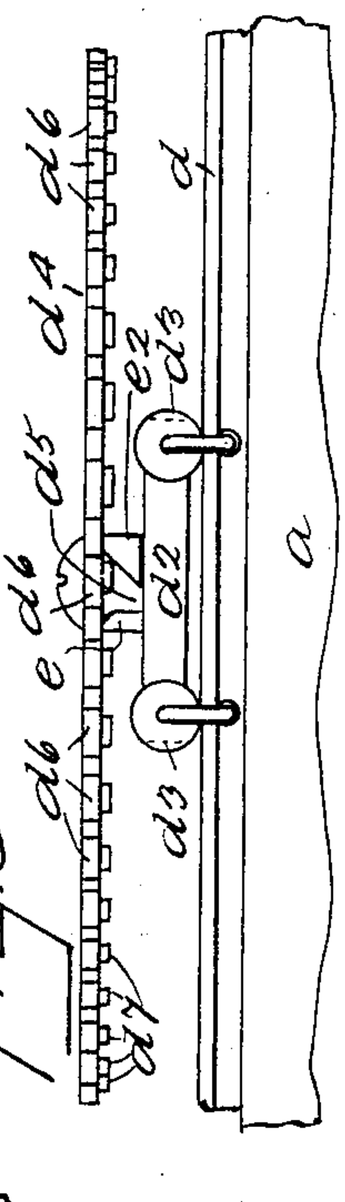

Fig. 5.

Fig. 2

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APPLICATION FILED AUG. 27, 1903.

NO MODEL. 3 SHEETS—SHEET 3.

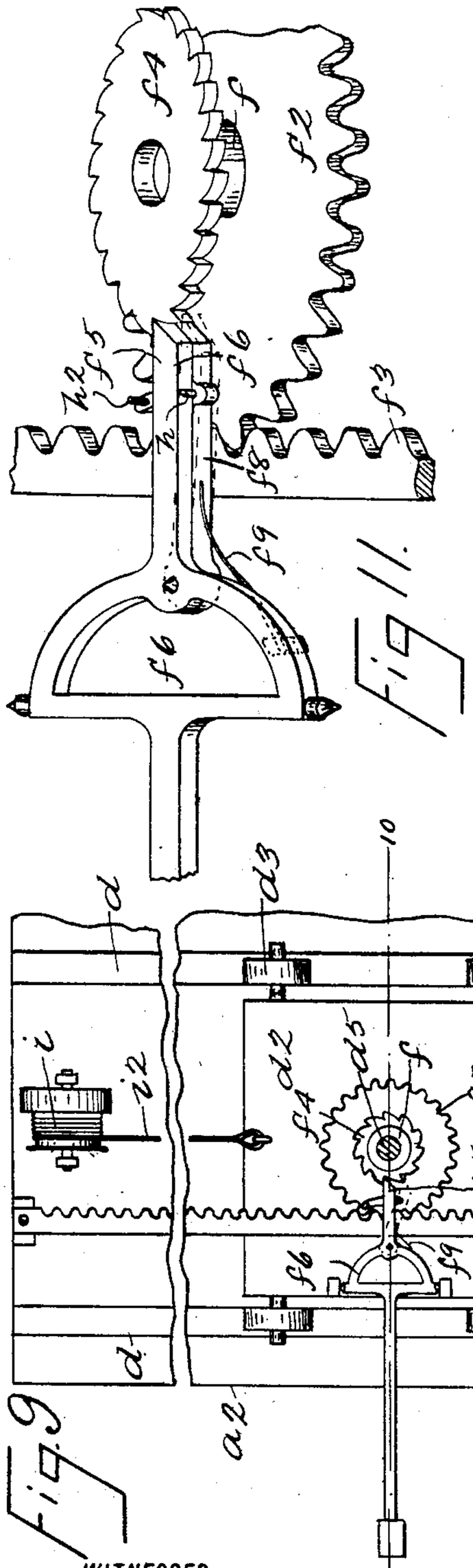

Fig. 11.

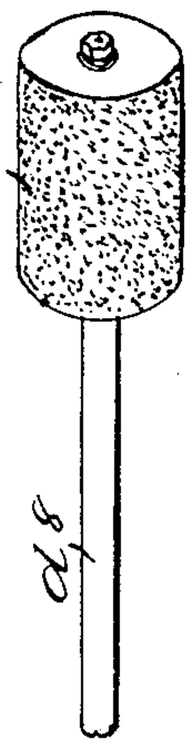

Fig. 12.

Fig. 9.

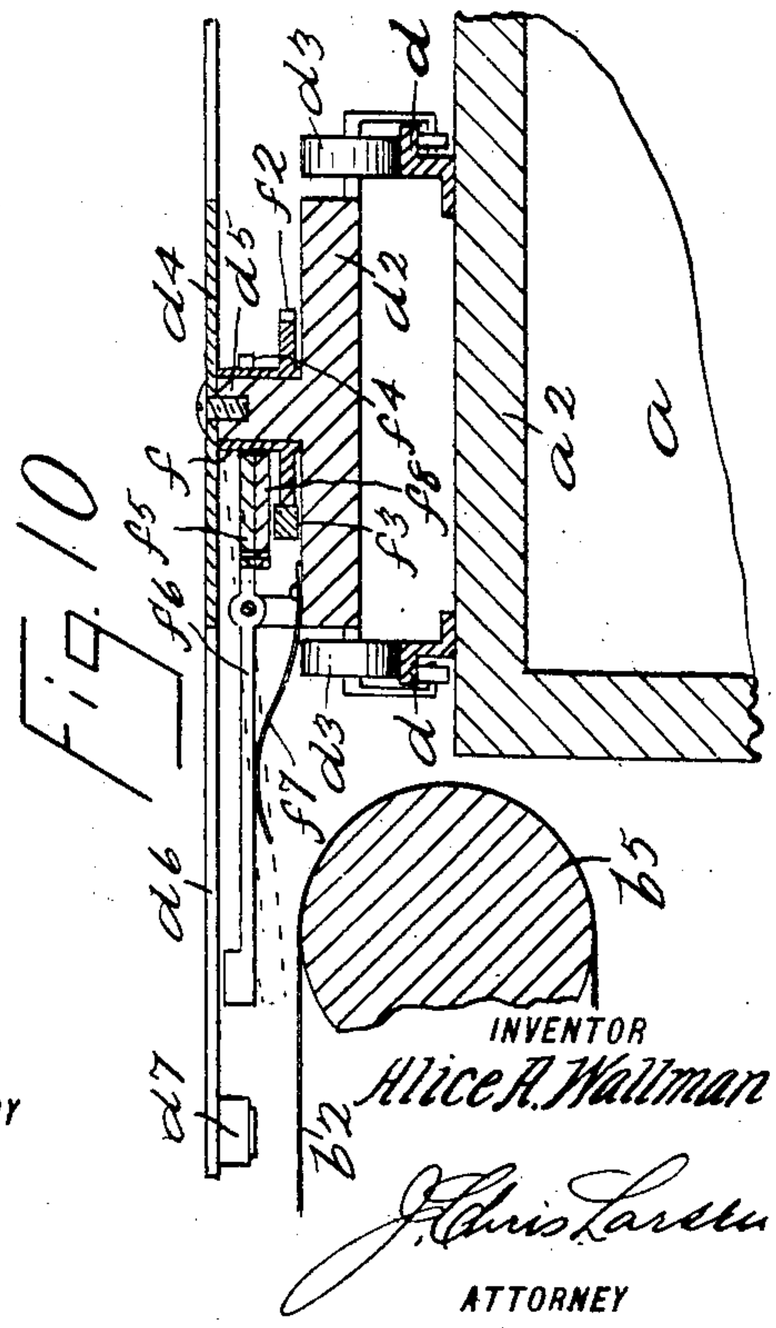

Fig. 10.

WITNESSES

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No. 762,666. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

ALICE A. WALLMAN, OF NEW YORK, N. Y.

BULLETIN-BOARD.

SPECIFICATION forming part of Letters Patent No. 762,666, dated June 14, 1904.

Application filed August 27, 1903. Serial No. 170,902. (No model.)

To all whom it may concern:

Be it known that I, ALICE A. WALLMAN, a citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bulletin-Boards, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a bulletin-board or display-board for news or advertising purposes whereby the display of notices of various kinds may be read outside of a window in which the apparatus is placed and whereon such notices may be written or printed from within or at the back of the apparatus, a further object being to provide such a bulletin or display board which may be used in conjunction with a type-writing machine operated out of the sight of persons reading the notices on said bulletin and also to provide such an apparatus which is simple in construction and operation and comparatively inexpensive.

The invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts of the invention are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a perspective front view of my invention; Fig. 2, a perspective back view thereof and taken on the line 2 2 of Fig. 1; Fig. 3, a section on the line 3 3 of Fig. 2; Fig. 4, a plan view of a part of the apparatus, taken on the line 4 4 of Fig. 3; Fig. 5, a front view of a carriage which I employ, taken on the line 5 5 of Fig. 3; Fig. 6, a section on the line 6 6 of Fig. 1; Fig. 7, a section on the line 7 7 of Fig. 4; Fig. 8, a detail view of a hanger which I employ; Fig. 9, a view similar to Fig. 4, but showing a modification thereof; Fig. 10, a section on the line 10 10 of Fig. 9; Fig. 11, an enlarged view of an escapement which I employ, and Fig. 12 an enlarged view of an ink-roll which I employ.

In the drawings forming part of this specification I have shown a casing a, comprising a front, top, and side members, the side members of which are projected backwardly to form a support for a table member a^2, which is about the same height from the floor as an ordinary desk-top and which extends entirely across between the side members of the casing, and, as will be seen in Fig. 1, the front member of the casing is provided with an opening a^3, slightly less in width than the casing a.

In the top of the casing a is detachable rod b, adapted to receive a roll of paper b^2, rotatably mounted thereon and extending nearly across the casing, and the free end of the paper strip b^2 is passed downwardly, backwardly, forwardly, and upwardly and secured to a supplemental rod b^3, adjacent to the rod b, and the paper strip is held in this position by means of rollers b^4, b^5, and b^6, and beneath the paper strip b^2 and adjacent to the roller b^5 is a bar or plate b^7, which extends entirely across the casing a and is adapted to serve as a platen for the action of the type of a writing-machine, afterward described.

Near the top of the opening a^3 and within the casing a are two friction-rollers c and c^2, which hold the paper strip firmly between them, the roller c of which is provided with a shaft c^3, which passes through the casing and carries a band-wheel or pulley c^4 and ratchet-wheel c^5, with which a pawl c^6 mounted on a crank-lever c^7, is adapted to operate, the crank-lever c^7 being connected to a rod c^8, which in turn is connected to a hand-lever c^9, and, as will be seen, when the hand-lever c^9 is depressed the pawl c^6 and ratchet-wheel c^5 operate to revolve the friction-roller c, and thereby the paper strip b^2 is caused to move, this movement being regulated to the desired space between two lines of printed matter on the paper strip, and connecting the band-wheel c^4 with a similar one, b^8, on the shaft of the rod b^3 is a belt b^9, which operates to turn the bar b^3 when the roller c is revolved; but as this movement increases as the paper wound on the bar b^3 increases the belt b^9 is slack enough to permit sliding when the rotary movement of either of the bar b^3 or roller c is too great for the other one thereof, and by this means the paper strip is wound on the bar b, whence it may be removed when entirely thereon.

In the form of construction shown in Figs. 1 to 7, inclusive, I mount tracks d on the table member a^2, and upon which is placed a carriage d^2, provided with wheels d^3, and a rotatable disk d^4 is mounted upon a centrally-arranged neck member d^5 of the carriage d^2, the disk d^4 being provided with radial slots, thereby forming radial fingers d^6, upon the bottom of the end of each of which is secured a type d^7, any one of which when in its operative position is directly above the platen b^7, and the disk d^4 is composed of spring metal, so that if any finger d^6 thereof be depressed in the operation of forcing the type d^7 into contact with the paper strip b^2 above the platen b^7, and thereby printing on said paper, the said finger d^6 will resume its normal position upon being released, and secured to the carriage d^2 is an arm d^8, upon the end of which is mounted an ink-roll d^9, which bears against the type d^7, said type being inked in the rotation of the disk d^4.

At the middle of the front portion of the carriage d^2 I preferably mount two upright guides e, which prevent movement of the fingers d^6 when forced thereinto in the operation of printing, and pivotally mounted on the carriage d^2 is a lever e^2, as shown in Fig. 4, which is provided at its outer end with a pawl e^3, which engages the teeth of a rack e^4, mounted on the table member a^2, and at the inner end of the lever e^2 is a block, which is inclined on its face adjacent to the type-finger d^6, against which it is adapted to bear, and when said finger is depressed in writing the lever e^2 swung on its pivot and the pawl e^3 passing over the next tooth on the rack e^4, engages the same, the lever e^2 being forced into its normal position by a spring e^5 when released, this movement carrying the carriage the distance of one tooth each time the lever e^2 is operated, which corresponds to the spacing between letters in the writing, and the too free movement of the carriage is prevented by a spring-operated drag e^6, operating in an undulating rack e^7, secured to the table member a^2, and the undulations of which correspond to the length of the teeth of the rack e^4.

In Figs. 9, 10, and 11 is shown a modification of the carriage-operating mechanism last described, the tracks d and carriage d^2 being substantially the same, but with the difference that the neck member d^5 is provided with a collar f, to which are secured a gear-wheel f^2, engaging a rack f^3, connected with the casing a, and a ratchet-wheel f^4, mounted thereover and with which a beveled arm f^5 of a pivoted lever f^6 is normally engaged, the other end of said lever extending to a point beneath the end of the finger d^6, which is in operative position for printing and which is depressed when said finger is depressed, and when said finger is released the lever is forced into its normal position by means of a spring f^7, secured to the carriage d^2.

Pivotally mounted beneath the arm f^5 is a similarly-shaped pawl f^8, which is normally held in line with said arm by a spring f^9, and the pawl f^8 is also provided with stops h and h^2, which limit the movement thereof.

At the right-hand end of the table member a^2 is mounted a spring-operated drum i, upon which is wound a cord i^2, the other end of which is secured to the carriage d^2, and the spring-operated drum i operates to draw the carriage to the right-hand end of the table member a^2, as will be readily understood; but the carriage is held in position by means of the rack f^3 and the gear-wheel f^2, said gear-wheel not being able to revolve normally, because of the ratchet-wheel f^4 and arm f^5 of the lever f^6.

When in the operation of the apparatus the finger d^6 is depressed, the outer end of the lever f^6 is also depressed, the inner end f^5 thereof being raised far enough to permit it clearing the ratchet-wheel f^4, at which time the pawl f^8 engages the same tooth of the ratchet-wheel, and as the spring of the drum i is more powerful than the spring f^9 the carriage is moved the distance of one tooth, which corresponds to the space between letters, for the reason that the ratchet-wheel having revolved the distance of one tooth the gear-wheel f^2 also moves that distance over the rack f^3, and in practice I provide a space-finger d^6 to space between words.

As will be seen, the operation of one of the fingers d^6 in the operative position for printing not only prints upon the paper strip b^2 above the platen b^7, but also automatically moves the carriage the distance of one letter, and when the line of matter has been printed in this manner the operation of the hand-lever c^9 moves the paper strip the distance between lines of matter, and this operation being continued the printed matter appears in the opening a^3 of the casing a and may be read from without, and when the paper strip is unwound from the feed-roll on the rod b and wound on the rod b^3 the same may be removed and a new roll substituted therefor, the rods and rollers all being detachable from the casing a by means of the hangers shown in Fig. 8 of the drawings.

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

1. A bulletin-board, comprising a frame, a roll of paper in the top thereof, the free end of said paper being carried downwardly, backwardly, forwardly and upwardly, a rod in the top of said frame upon which the free end of said paper is wound, friction-rollers bearing on said paper adjacent to said rod, a pulley on said rod, a pulley on the shaft of one of said friction-rollers, a ratchet-wheel on said last-

named shaft, a pawl in operative connection therewith, a hand-lever in operative connection with said pawl, a belt connecting said pulleys and means for printing characters on said paper, substantially as shown and described.

2. A bulletin-board, a roll of paper mounted in the top thereof, said paper being carried downwardly, backwardly, forwardly and upwardly, a rod upon which the free end of said paper is adapted to be wound, devices for moving said paper step by step, a platen mounted beneath the backwardly-directed portion of said paper strip, rollers guiding said paper in said directions, and means for imprinting characters on said paper above said platen, substantially as shown and described.

3. A bulletin-board, comprising a casing, a backwardly-directed portion thereof adapted to serve as a table, an opening in the front of said casing, a roll of paper in said casing and carried downwardly, backwardly, forwardly and upwardly to the rear of said opening, devices for moving said paper step by step, a platen beneath the backwardly-directed portion of said paper, tracks laterally arranged on said table member of said casing, a carriage on said tracks, a rotatable disk on said carriage, radial slots in said disk forming radial fingers or arms, a type at the end of each of said arms adapted to strike said paper above said platen, an ink-roll for said type and means for moving said carriage step by step substantially as shown and described.

4. In a bulletin-board of the class described, a table, a plurality of tracks mounted thereon, a carriage on said tracks, a rotatable disk on said carriage, radial fingers or arms on said disk, a type beneath the end of each of said fingers, a rack on said table, an undulating rack between said tracks, a spring-operated drag connected with said carriage and operating on said undulating rack, a lever pivoted on said carriage one end of which extends over said first-named rack, a pawl on said lever acting on the teeth of said rack, a beveled block on the inner end of said lever adjacent to one of said fingers when in operative printing position and the depression of which moves said lever radially, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 22d day of August, 1903.

ALICE A. WALLMAN.

Witnesses:
GEORGE L. BLUMERS,
THEODORE L. WAUGH.