

(No Model.)

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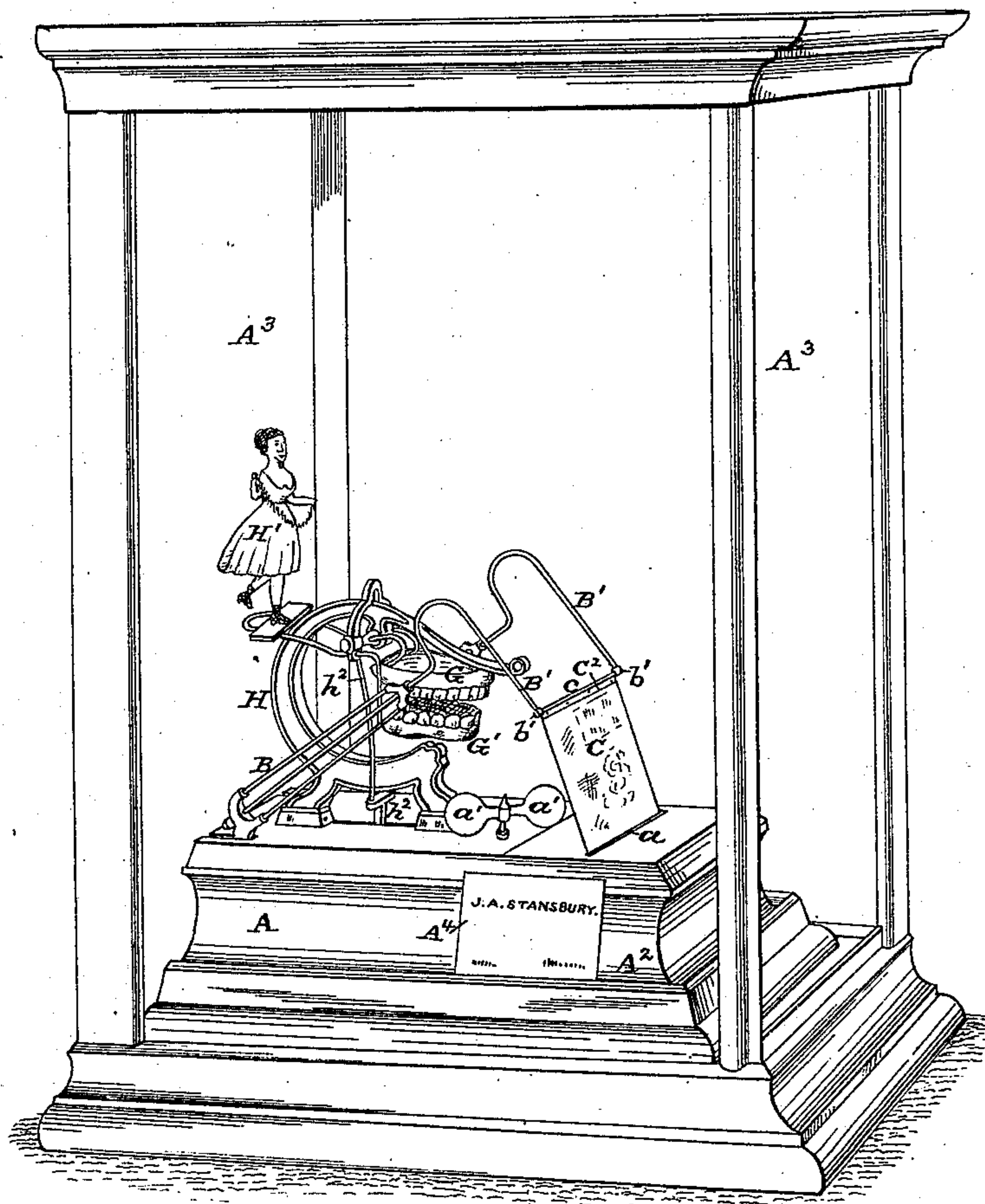
J. A. STANSBURY.

AUTOMATIC ADVERTISING DEVICE.

No. 291,103.

Patented Jan. 1, 1884.

FIG. 1.



ATTEST:

INVENTOR:

Geo. F. Dexter

Joseph A. Stansbury

A. Campbell

per

Robert Buins

ATTORNEY.

(No Model.)

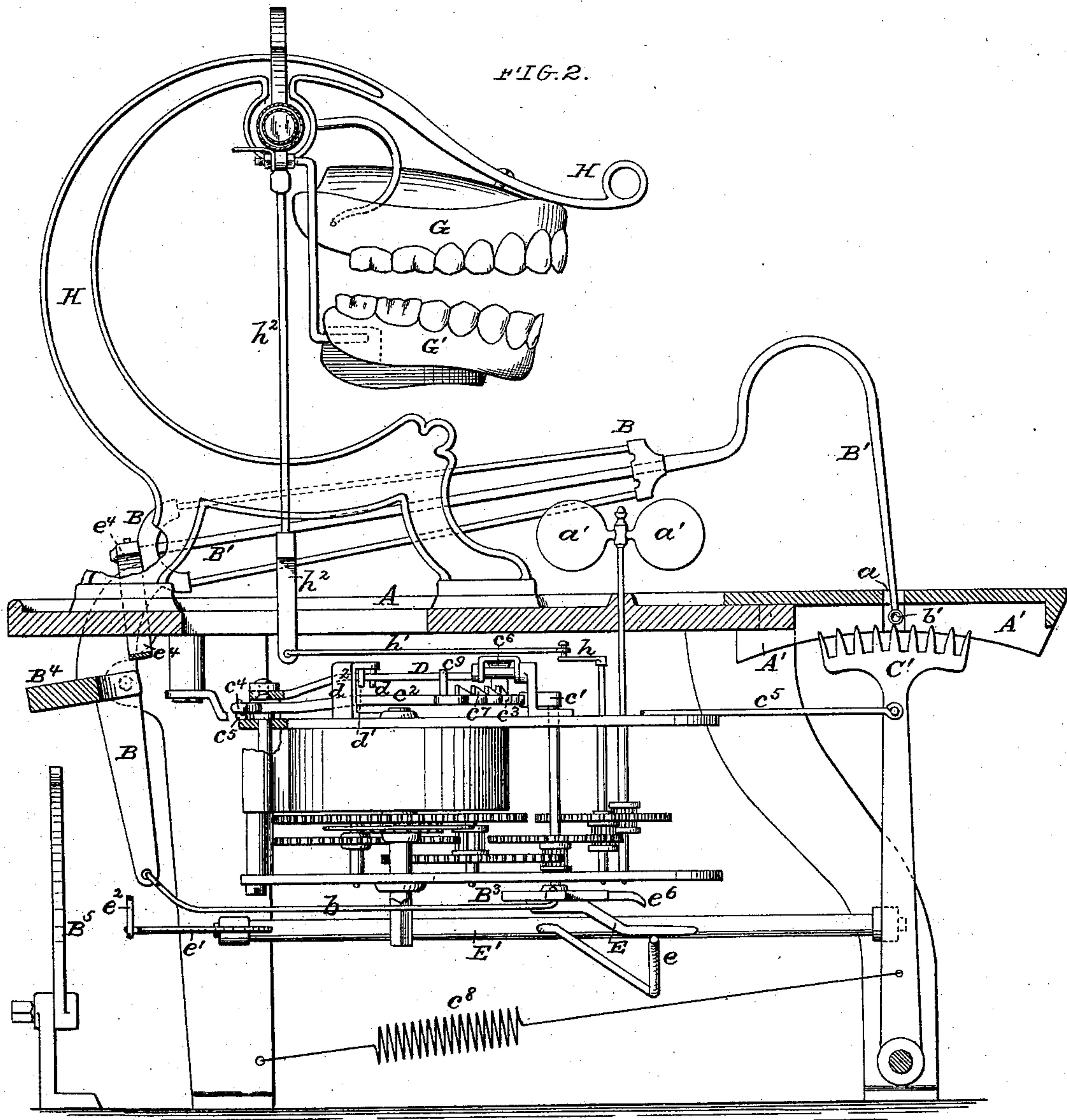
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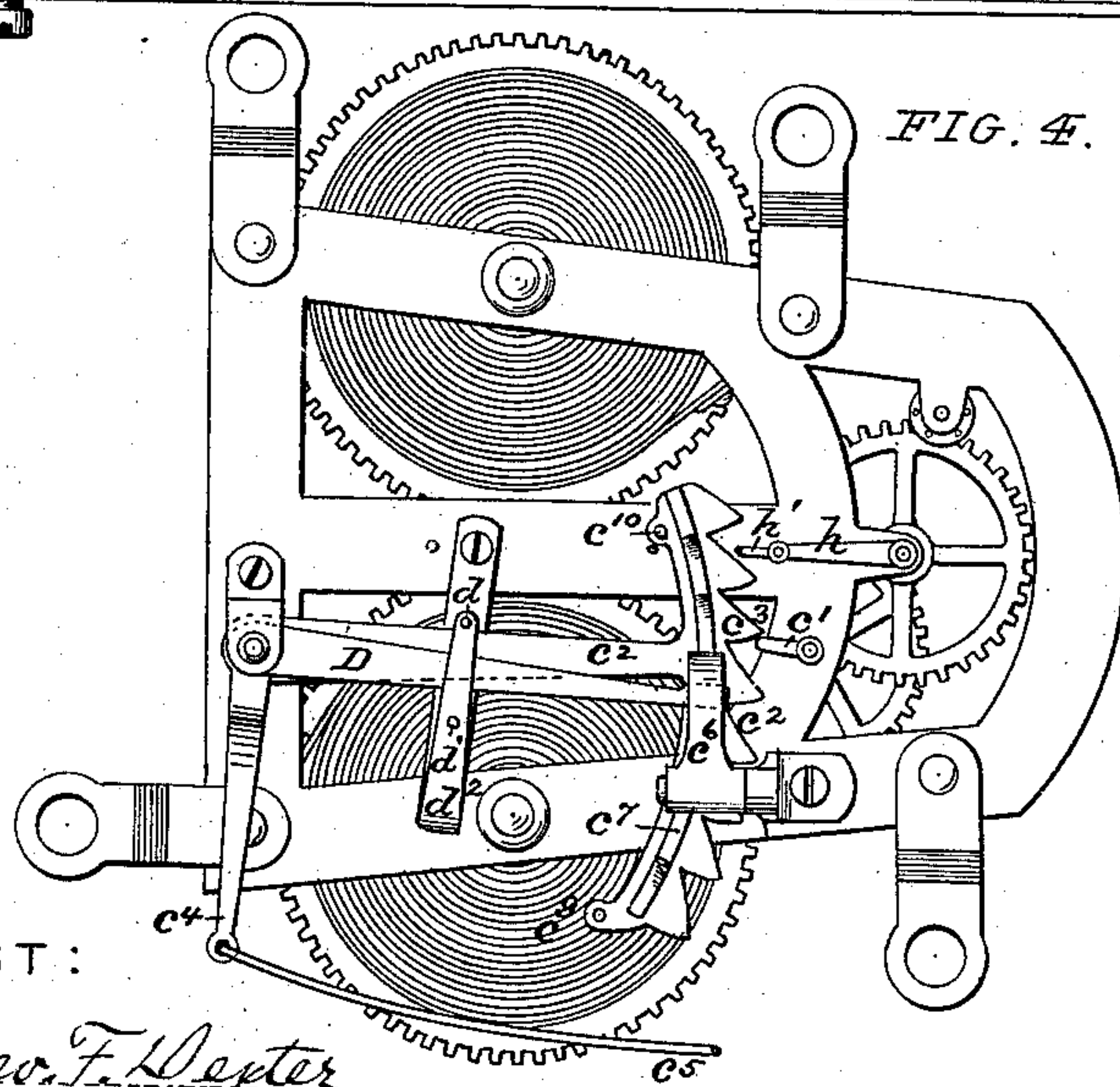
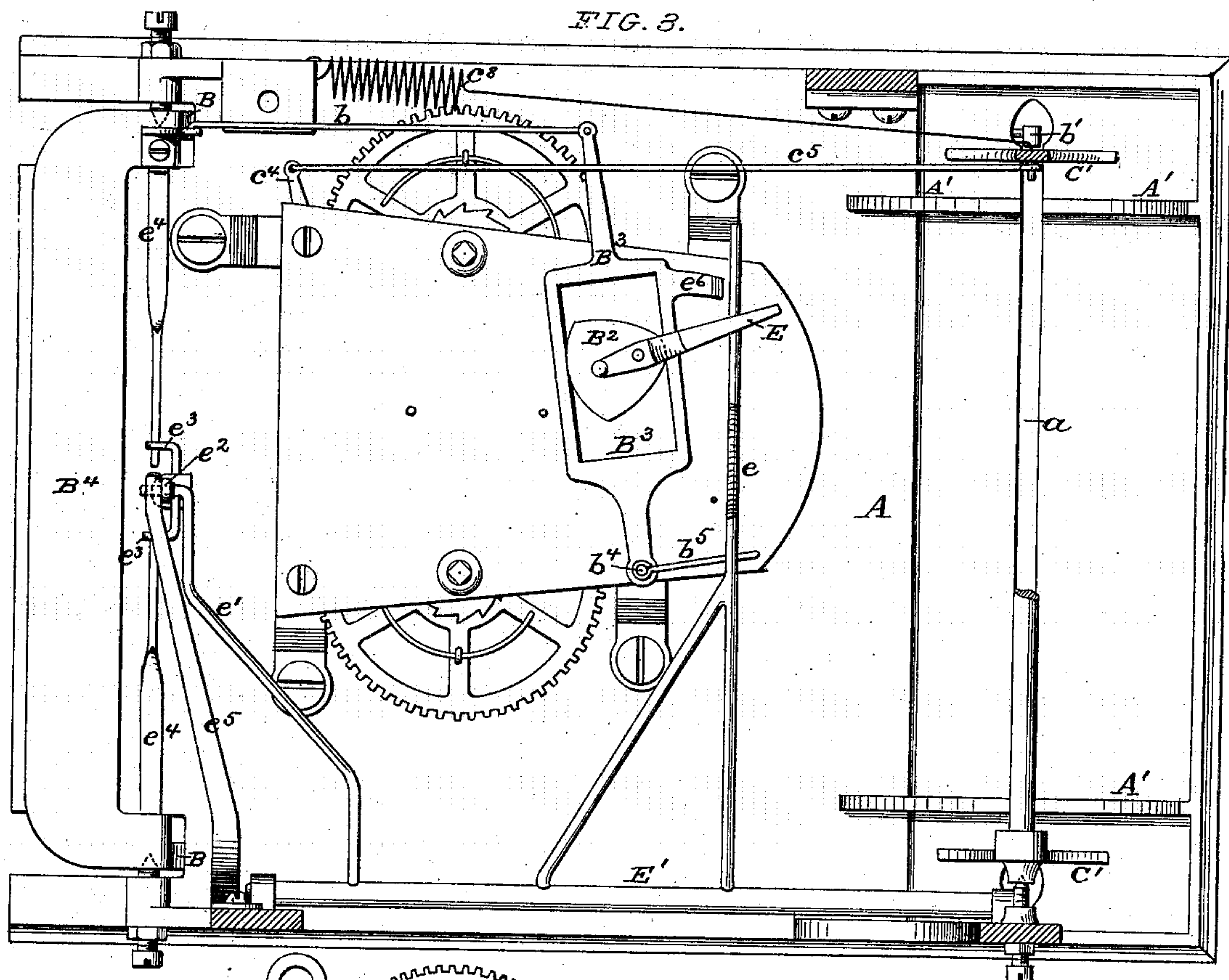
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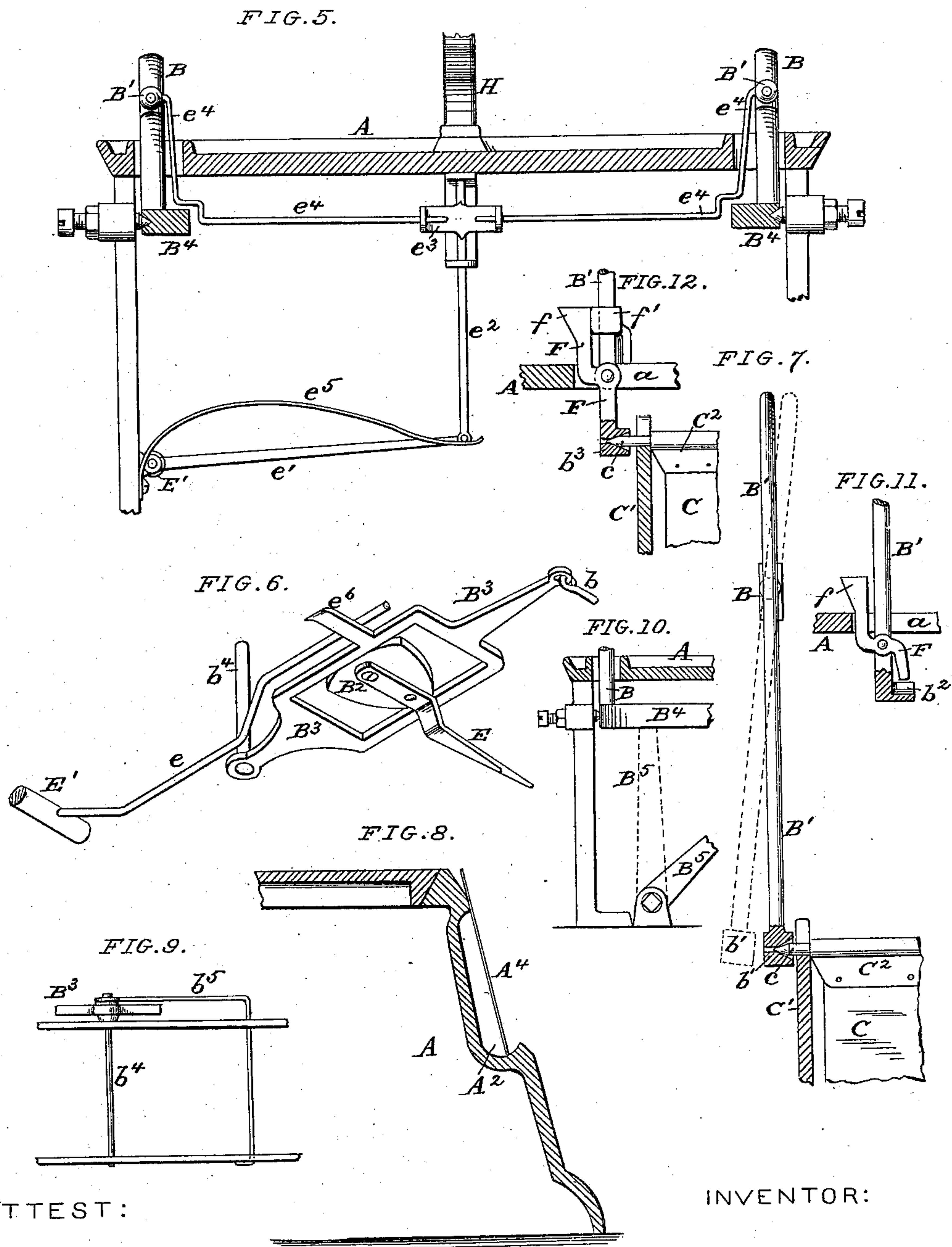
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a. Campbell

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ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH A. STANSBURY, OF CHICAGO, ILLINOIS.

AUTOMATIC ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 291,103, dated January 1, 1884.

Application filed April 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. STANSBURY, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Advertising Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to certain improvements in that class of advertising apparatus in which a series of advertising or other cards are displayed to view successively; and the objects of my improvement are, first, to provide a means whereby a set or series of independent detached advertising or other cards will be taken up and exposed in rotation; second, to furnish means whereby an intermittent motion is imparted to the card-lifting mechanism, so as to expose the card in a stationary condition for a given space of time; third, to afford means for automatically releasing the card-carrying rack and returning it back after it has completed its forward movement; fourth, to provide means for automatically engaging and disengaging the card-lifting arms from the cards, and for locking the parts in position during the movement of such arms in exposing the cards to view; fifth, to afford means for readily stopping the action of the apparatus when desired; sixth, to furnish means for displaying cards or other miscellaneous articles in connection with my improved apparatus; seventh, to provide a means for imparting motion to a set of dental plates or similar articles articulated on a frame placed on the housing or table of the apparatus. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, illustrating the general arrangement of my improved apparatus. Fig. 2 is an enlarged vertical longitudinal section of same; Fig. 3, a bottom plan, partly in section; Fig. 4, a detail top plan of operating mechanism. Fig. 5 is a detail transverse section of a portion of the mechanism for operating the card-holding jaws or grippers. Fig. 6 is an isometric view of cam and yoke

for imparting an intermittent vibratory and opening and closing motion to the card-lifting jaws. Fig. 7 is a detail section, illustrating the manner in which the lifting-arms engage and disengage the advertising-cards. Fig. 8 is a detail sectional elevation of the housing of the apparatus, illustrating the tray or receptacle for cards or other miscellaneous articles intended for display. Fig. 9 is a detail view, illustrating the mode of securing the cam-plate pivot in position. Fig. 10 is a detail rear elevation, illustrating the means employed for stopping the action of the apparatus. Figs. 11 and 12 are detail views of modified forms of card-lifting arms or grippers.

Referring to the drawings, A represents the base or housing that incloses the operating mechanism of my improved apparatus, the motive power of which may be a train of spring-operated gearing, as indicated in the drawings, or, instead, an electric or other suitable motor may be used, as found most desirable or convenient.

B B are the card-lifting arms, pivoted at the rear of the housing, as shown, and receiving an intermittent motion from the heart-shaped cam B² through yoke B³ and connecting-rod b. (See Figs. 2, 3, and 6.) The advertising or other cards, C, are formed with projecting pintles c, by which they are supported in the sector-racks C'. Such pintles also furnish a means for the card-lifting arms to engage in lifting the cards into view through the card-opening a. The sector-racks C' have a step-by-step motion imparted to them, so as to bring the cards C successively in position under the card-opening a and in line with the card-lifting arms B B', by the following mechanism, as shown in Figs. 2 and 4:

c' is a crank or wiper upon one of the shafts of the operating mechanism, which on each rotation moves the ratchet-sector c² the distance of one of its teeth c³. This ratchet-sector has a lever, c⁴, connected by rod c⁵ with the card-holding sector C', so that an intermittent movement of sector c² will impart a corresponding movement to the card-holding sector-rack C'.

c⁶ is a dog or pawl engaging the ratchet c⁷ to hold the ratchet-sector c² from a retrograde movement when free from the crank or wiper

c' . When the ratchet-sector c^2 has completed its movement, it is automatically released, so as to be drawn back by the action of the spring c^8 , by the arrangement of parts illustrated in Fig. 4, in which D is a loosely-pivoted spoon or arm, the free end of which rests under the dog or pawl c^6 , and has its motion limited by pins or stops d d' . As the ratchet-sector c^2 is near the end of its movement its pin projection c^9 pushes the arm or spoon D under the point or the pawl c^6 , so as to raise it out of engagement with the ratchet c^7 and permit the spring c^8 to draw back such ratchet-sector c^2 . The pin projection c^9 can be made adjustable, if desired, so as to control the feed of the ratchet c^2 , and thereby the movement of the card-holding rack C' , and regulate the number of cards that would be presented for show.

c^{10} is a pin projection which, as the sector c^2 is reaching its back position, pushes said spoon or arm D back to allow the pawl c^6 to fall into engagement with the rack c^1 . The frame d^2 , that carries the stops d d' , acts also to limit the backward movement of the ratchet-sector c^2 .

A' A' are downwardly-projecting ribs on the housing A, the purpose of which is to retain the cards C in place in their racks C' , except when beneath the card-opening a , and prevent their being accidentally jarred out of the same.

The card-lifting arms B' B' are caused to engage and disengage from the pintles c of the cards C by the following arrangement of parts: The arms are formed of main members B and auxiliary members B' , journaled in same so as to be capable of a spreading motion of their card-holding jaws or grippers b' , the object being to replace a card in the card-rack C' and remain spread while such rack is moving to bring a fresh card into position. Such spreading movement is attained by the following arrangement of parts, as indicated in Figs. 2, 3, 5, and 6, in which E is a rotating arm or wiper secured to the cam B^2 , so as to turn therewith, and which in its rotation comes in contact with the inclined face of lever e of a rock-shaft, E' , so as to depress the same. This movement is communicated to the auxiliary members B' through lever e' on shaft E' , connecting-rod e^2 , having cross-head e^3 , and bell-crank levers e^4 , connected to the auxiliary turning members B' , as indicated in Fig. 5.

c^6 is a spur projection on the cam-yoke B^3 , which engages under the lever e to lock the above-described mechanism in position and prevent any accidental movement of the same except at the proper time. The cards C are attached to their pintle-rods c by a metallic clip-piece, C^2 , the corner edges of which are beveled, as shown in Fig. 7, so as to act as guides to direct the cards into proper position in the supporting-racks C' . The card-lifting arms B B' are counterbalanced by having their inwardly-projecting connecting-bar B^4 made of the required weight. (See Figs. 2 and 3.) The parts are locked, when it is desired to

stop the movement of the operating mechanism, by means of a rock-arm, B^5 , which can be turned up under the connecting-bar B^4 of the card-lifting arms B B' , so as to prevent any further movement of the same. (See Figs. 2 and 10.)

In Fig. 9 is shown the method of pivoting the cam-yoke B^3 , so as to permit of its ready removal as required. In this the cam-yoke is provided with a fixed pivot-pin, b^4 , that has bearing in both plates of the driving-gear frame, as shown.

b^5 is a spring, having bearing on top of the cam-yoke, so as to hold the parts in position, and which can be readily sprung aside to permit of the removal of the cam-yoke when desired.

In order to furnish a means for holding cards A^1 or other articles for display in connection with my improved apparatus, I form the inclosing housing or table A with a recess or tray, A^2 , (see Figs. 1 and 8,) which acts to receive such articles in a very convenient manner and display them to the best advantage. It is preferred that the fan a' or other escapement used to control the speed of the driving mechanism be arranged above the table A, so as to act as an additional attraction to the apparatus.

When my apparatus is used as a dental sign, a pair of dental plates, G G' , will be articulated on the supporting-frame H in manner substantially as indicated in Figs. 1 and 2, the lower plate or jaw, G' , receiving constant motion from the driving mechanism through crank h , connecting-rod h' , and swing-arm h^2 . (See Figs. 1 and 2.) Additional figures may be used and connected to the moving supports of the lower dental plate, G' . In Fig. 1 I illustrate such figure, H' , as having a swing motion at the rear of the supporting-frame H. When the apparatus is used for any other special business, the dental plates will be replaced by such articles as it is intended to advertise.

In use I inclose the apparatus in a glass case, A^3 , of any desired form and construction, as indicated in Fig. 1. While it is preferred to use the pivoted sector-racks C' for carrying the advertising-cards C, yet a straight rack can be used instead; or a circular rack can be employed, with the confining-rib A' made in the shape of a circular confining-flange. The mode of spreading the jaws or grippers b' b' can also be modified from the precise mechanism shown without departing from the spirit of my invention—such, for instance, as a crank-shaft on the end of the member B' , which moves in a cam-slot in a fixed plate secured to the table or housing A.

Modifications of the mechanism by which the cards C are picked up and replaced in the holding-rack C' are shown in Figs. 11 and 12. In Fig. 11 the card-lifting arms have inwardly-projecting cup-shaped receivers b^2 for the projecting pintles c of the cards C, which, when

the lifting-arms are in their upward position, are held from disengagement by a weighted latch, F, and which, when the card is being replaced in its supporting-racks C', are forced outward to release the card-pintles by their inclined upper portions, f, coming in contact with the edges of the card-opening a. In Fig. 12 the card-holding jaws or grippers b³ are made separate from the card-lifting arms and pivoted thereto, as shown. They are locked, so as to hold the card-pintles c during the movement of the lifting-arms, by a sliding sleeve, f', which, as the arms descend to replace the card last shown into the holding-racks C', are moved out of engagement with said holding-jaws by coming in contact with the top of the table or housing A. These jaws or grippers are also provided with inclined upper portions, f, similar to those above described in connection with Fig. 11, for the purpose of releasing the card-pintles and holding such jaws open while the card-holding rack is moving forward to bring a fresh card into position.

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

1. In an automatic advertising apparatus, a set of independent cards supported in an intermittingly-moving rack arranged within a suitable housing, in combination with vibrating lifting-arms that successively engage such cards and brings them into view, substantially as described, and for the purpose set forth.

2. In an automatic advertising apparatus, a series of independent detached cards supported in an intermittingly-moving rack, in combination with a pair of intermittingly-vibrating arms, substantially as described, and for the purpose set forth.

3. In an automatic advertising apparatus, the combination of the intermittingly-moving card-holding racks C' C' with the table A, having card-opening a, and projecting ribs A', substantially as described, and for the purpose set forth.

4. In an automatic advertising apparatus, the combination of the card-lifting arms B B',

wiper E, lever e', and rock-shaft E' with the cam-yoke B³, having a spur projection, e⁶, as described, and for the purpose set forth.

5. In an automatic advertising apparatus, as herein described, the combination of the card-holding rack C' with the wiper e', ratchet-sector c² c³ c⁷, lever c⁴, rod c⁵, pawl c⁶, arm D, spring c⁸, and pin projections c⁹ c¹⁰, substantially as described, and for the purpose set forth.

6. In an automatic advertising apparatus, as herein described, the combination of the card-lifting arms B B', heart-shaped cam B², cam-yoke B³, and connecting-rod b, as described, and for the purpose set forth.

7. In an automatic advertising apparatus, as herein described, the combination of the card-lifting arms B B' with the bell-crank levers e⁴, connecting-rod e², lever e', rock-shaft E', inclined-faced lever or arm e, and rotating arm or wiper E, as described, and for the purpose set forth.

8. In an automatic advertising apparatus, the combination of intermittingly-moving card-lifting arms and card-holding racks with the advertising-cards C, provided with pintle-rods c, as described, and for the purpose set forth.

9. In an automatic advertising apparatus, the combination of intermittingly-moving card-lifting arms and card-holding racks with the advertising-cards C, having pintles c, and attaching-clips C², having beveled ends, as described, and for the purpose set forth.

10. In an automatic advertising apparatus, as herein described, the combination of the locking rock-arm B⁵ with the connecting-bar B⁴ of the lifting-arms B B', as described, and for the purpose set forth.

In testimony whereof, witness my hand this 6th day of April, 1883, at Chicago, Cook county, State of Illinois.

JOSEPH A. STANSBURY.

In presence of—

ROBERT BURNS,
JOS. E. WADDELL.