(No Model.) 2 Sheets—Sheet 1.

C. B. COTTRELL.

RECEIVING TABLE FOR PRINTING MACHINES.

No. 369,777. Patented Sept. 13, 1887.

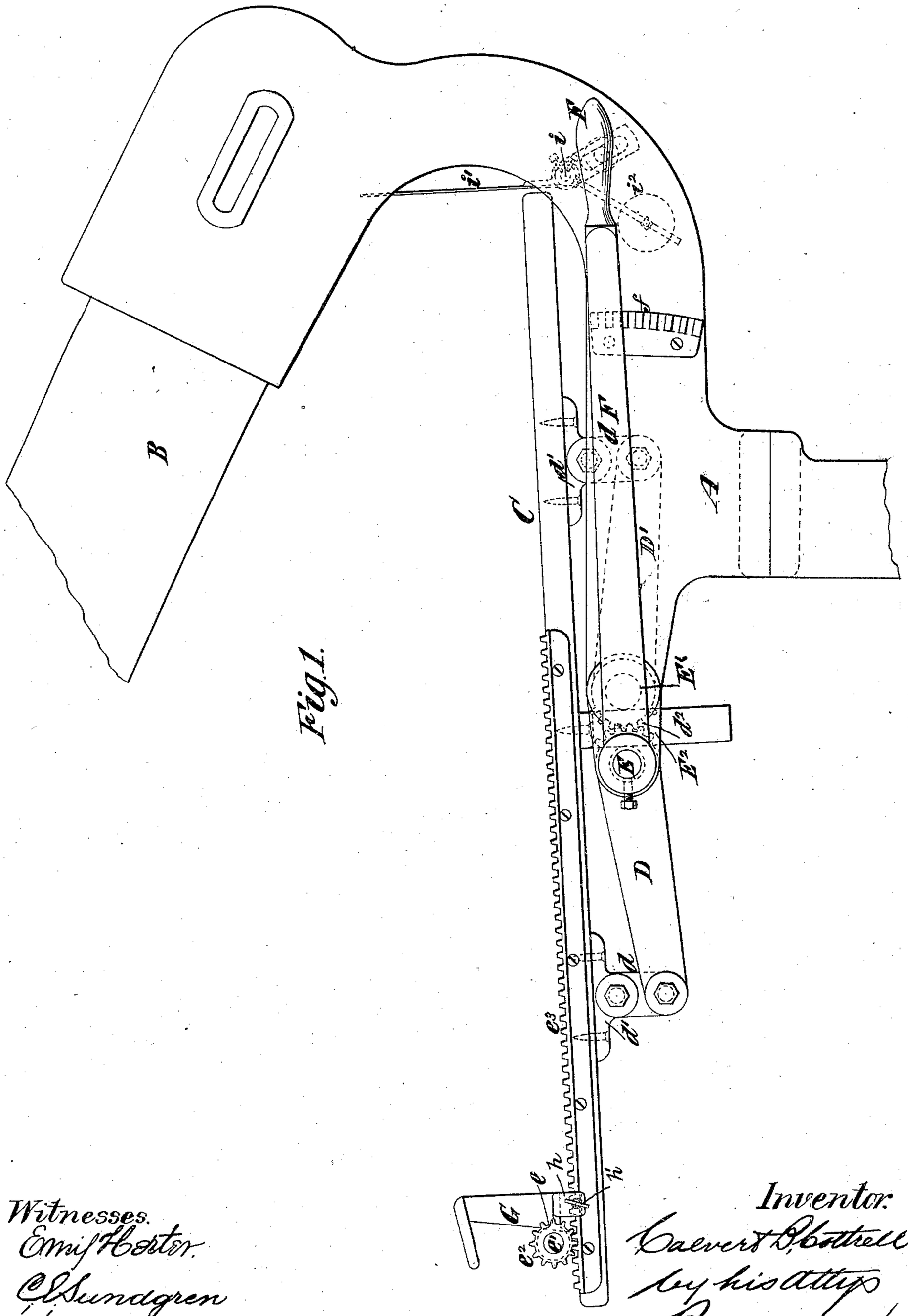

Fig. 1.

Witnesses.
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Inventor.
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(No Model.) 2 Sheets—Sheet 2.

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RECEIVING TABLE FOR PRINTING MACHINES.

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Fig. 2.

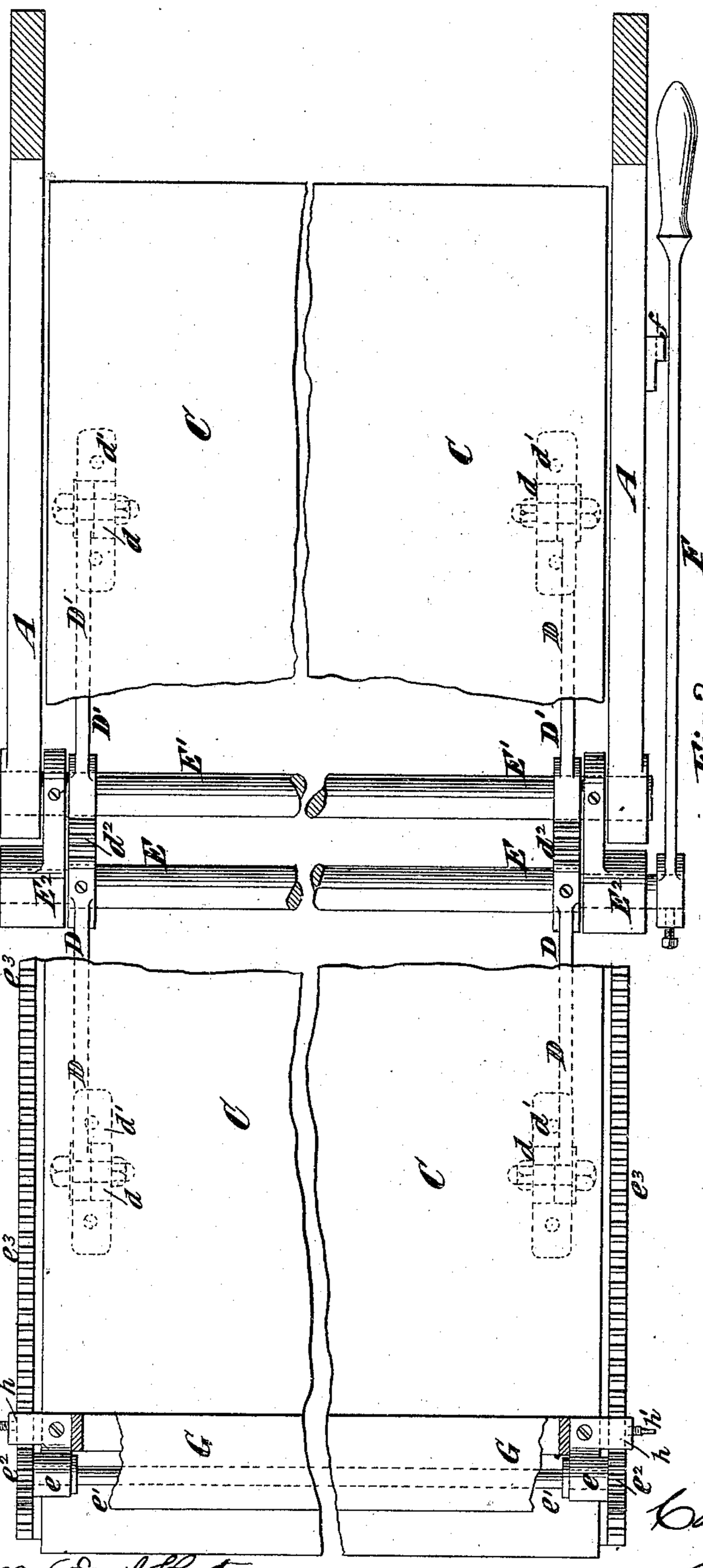
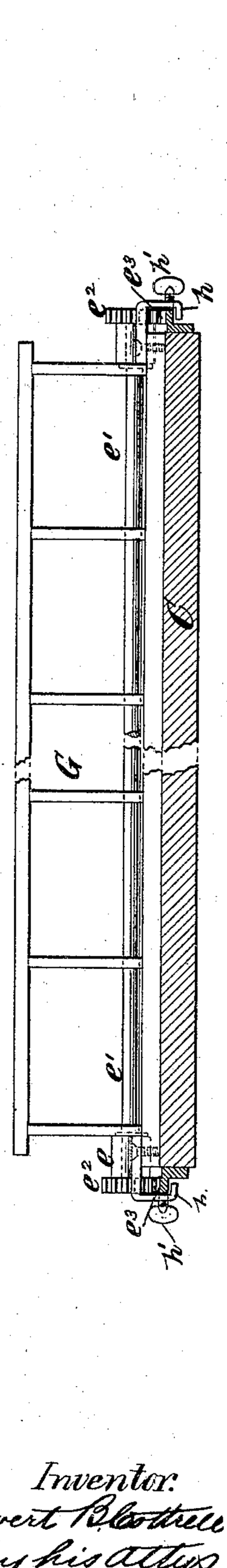


Fig. 3.



Witnesses. Emil Hester.
C. Sundgren

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UNITED STATES PATENT OFFICE.

CALVERT B. COTTRELL, OF STONINGTON, CONNECTICUT.

RECEIVING-TABLE FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 369,777, dated September 13, 1887.

Application filed May 6, 1886. Serial No. 201,273. (No model.)

To all whom it may concern:

Be it known that I, CALVERT B. COTTRELL, of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Receiving-Tables for Printing-Machines, of which the following is a specification.

The object of my invention is to provide a convenient means whereby the receiving-table of a printing-machine may be raised and lowered without altering the horizontal or inclined position, whichever it may have, and to also so combine a back-stop or back-gage with the table that in moving or adjusting the back-stop equal movement of its two ends will be insured, and it will not therefore cant and bind upon the table.

My invention is more particularly useful in connection with presses having a front sheet-delivery, which comprises an endless carrier provided with delivery-grippers, and having a progressive movement continually in one direction, whereby it is caused to take the printed sheets from the impression-cylinder and carry them over the inking apparatus to the receiving-table, which is at the farther end of the press. An example of such a sheet-delivery apparatus is shown in my United States Letters Patent No. 319,460, granted June 9, 1885.

My invention consists in novel combinations of parts, which are hereinafter described, and pointed out in the claims, and which include pairs of arms swinging upon parallel axes, extending in opposite directions from their axes, and geared together by gear-sectors at their adjacent ends and pivotally connected with the table at their outer ends, and a hand-lever whereby the arms may be simultaneously swung to raise or lower the table.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a printing-machine frame and a receiving-table supported according to my invention. Fig. 2 is a plan of the table and its supports, a part of the table being broken away to show more clearly the supports beneath it; and Fig. 3 is a transverse section of the table.

Similar letters of reference designate corresponding parts in the several figures.

A designates portions of the upper frame of the machine, and B designates portions of guides or ways which are most distant from the impression-cylinder and along which the endless carrier for the delivery-grippers travels, as described in my aforesaid patent.

C is the receiving-table, and D D′ designate pairs of levers, which are fulcrumed at about the middle of the length of the table and extend in opposite directions from their fulcrums. At their outer ends these levers D D′ are connected by short links *d* with brackets or ears *d′*, secured to the under side of the table, and in this manner the levers are pivotally connected with the table. As here represented, the levers D′ are supported by a bar, E′, which extends across the machine and has its bearings in the frame portions A, and the levers D are secured fast to a rock-shaft, E, which is journaled in bearings E^2, as best shown in Fig. 2. The rock-shaft E may be turned in the bearings E^2, and the bearings themselves are held in proper position by being fast upon the cross-bar E′. To one end of the rock-shaft E is secured a hand-lever, F, whereby the shaft may be turned to raise or lower the arms D, and the arms D′ are caused to move simultaneously with the arms D by reason of their being connected with the arms D by gear-sectors d^2 upon their adjacent ends. The hand-lever F is held in any desired position by engaging with a notched plate, *f*, (shown in Fig. 1,) and when said handle is lowered the arms D D′ will be raised and elevated above the ends of the table equally, while when the hand-lever is raised the said arms will be lowered, in order to equally lower both ends of the table.

Upon the table C is the usual back-stop or gage, G, which is adjustable lengthwise of the table, as is usual in printing-machines. In order to insure the equal movement of both ends of the back-stop G, and to prevent it from canting and binding on the table as it is moved, I support in bearings *e* upon the back-stop a pinion-shaft, *e′*, which has upon its ends pinions e^2, engaging with racks e^3 upon the opposite sides of the table, as best shown in Figs. 2 and 3. Consequently it will be seen that even if the back-stop be taken hold of near one end to adjust it on the receiving-table both ends of the stop will be moved equally by reason of the synchronous rotation of the pinions engaged with the two racks.

In order to prevent the lifting of the back-

stop on the table, I have represented it as having at the ends lips or flanges *h*, which overhang the racks e^3 and project inward beneath flanges or ribs which are formed integral with and support the racks at the sides of the table. The table C is usually of wood, and each rack e^3 and the flange on which it is formed constitute a single piece of casting to be secured to the table, and hence the pinions are always held in proper relation to the rack, and it is impossible for the rack and the flange with which the lip *h* engages to get out of their proper relation to each other; hence this construction necessitates less adjustment than would be necessary if the racks e^3 and the flanges with which the lips *h* engage were formed separate from each other and separately secured to the table C. The lips or flanges *h* prevent the back-stop from lifting on the table and serve to hold the pinions e^2 in proper engagement with the racks e^3. After the back-stop has been properly adjusted, it may be held in place by set-screws *h'*, which are provided at its ends, and which, when set up, bear against the sides of the racks e^3, as best shown in Fig. 3. I have also shown at the front edge of the table C a sheet-straightening device which is similar to that forming the subject of my Letters Patent No. 338,391, granted March 23, 1886. This back-stop consists of a rock-shaft, *i*, having fingers *i'*, which project upward at the front of the table and are moved toward the table by means of a weight, i^2, or by an equivalent spring. This sheet-straightening device is operated in the manner set forth in my last-mentioned patent.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a receiving-table, of pairs of arms swinging on parallel axes, extending in opposite directions from their axes, and geared together by gear-sectors at their adjacent ends and pivotally connected with the table at their outer ends, and a hand-lever whereby the arms may be simultaneously swung to raise or lower the table, substantially as herein described.

2. The combination, with the frame portion A, the non-rotary bar E', secured thereto, and the table C, of the bearings E^2, carried by the bar E', the rock-shaft E, journaled in said bearings, the arms D D', geared together by sectors and pivotally connected with the table, the arms D being secured to the rock-shaft and the arms D' being free to turn on the bar E', and the hand-lever F on the rock-shaft, for operating said arms simultaneously, substantially as herein described.

CALVERT B. COTTRELL.

Witnesses:
FREDK. HAYNES,
HENRY MCBRIDE.