(No Model.) 2 Sheets—Sheet 1.

E. H. COTTRELL.

HOLDER FOR ELECTROTYPE AND STEREOTYPE PLATES.

No. 572,695. Patented Dec. 8, 1896.

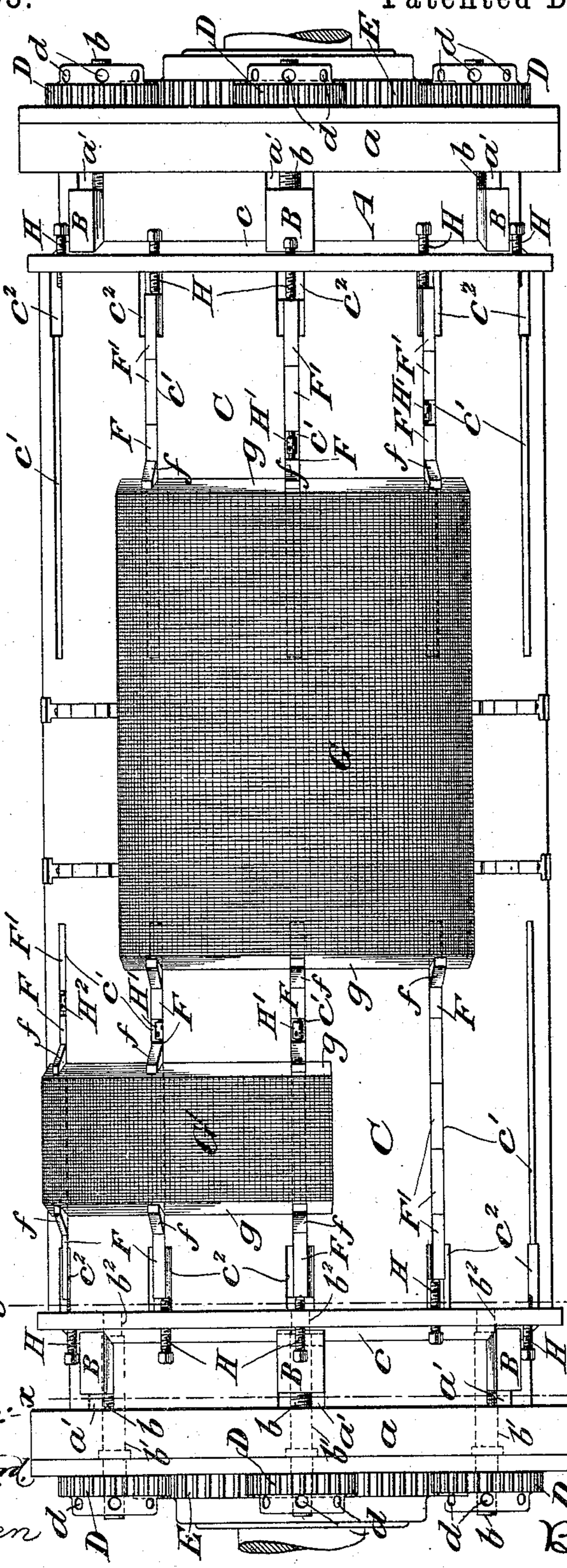

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

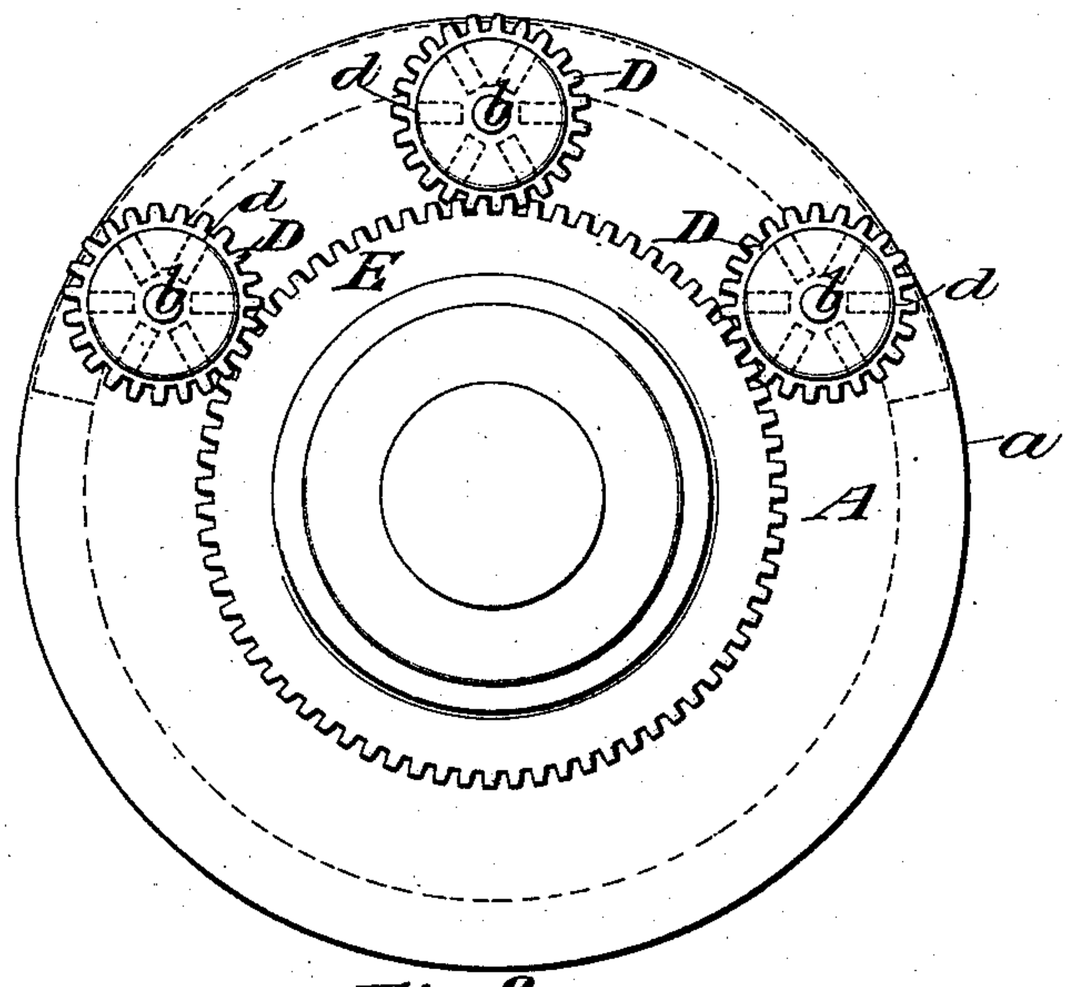
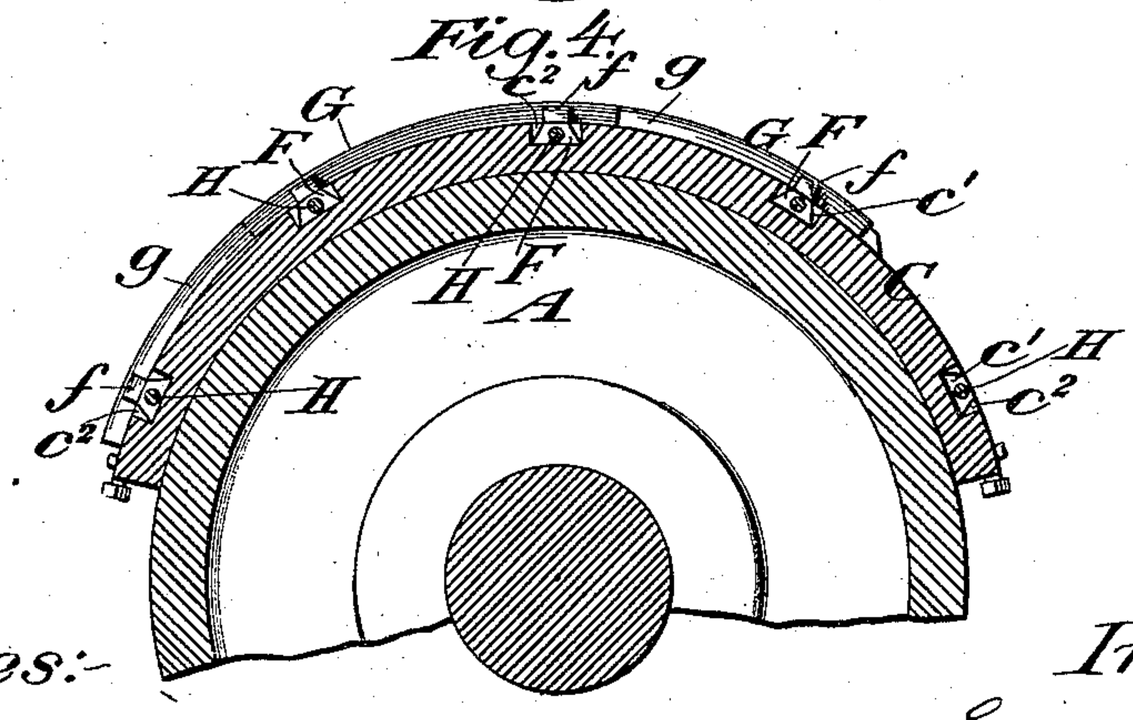


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

EDGAR H. COTTRELL, OF STONINGTON, CONNECTICUT, ASSIGNOR TO C. B. COTTRELL & SONS, OF WESTERLY, RHODE ISLAND.

HOLDER FOR ELECTROTYPE AND STEREOTYPE PLATES.

SPECIFICATION forming part of Letters Patent No. 572,695, dated December 8, 1896.

Application filed November 26, 1892. Serial No. 453,175. (No model.)

To all whom it may concern:

Be it known that I, EDGAR H. COTTRELL, of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Holders for Electrotype and Stereotype Plates, of which the following is a specification.

My invention relates to an improvement in holders for electrotype and stereotype plates in which a plate-support, commonly called a "turtle," is made readily removable from the cylinder and adapted to hold the plates in various removable adjustments thereon, so as to render it feasible to adjust the plate or plates to be employed upon turtles which are temporarily out of use and to replace the turtle last in use by a turtle upon which the plates to be next employed have been arranged, thereby materially economizing time.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a plan view of the plate-holder in position on the cylinder. Fig. 2 is an end view of the cylinder and holder, showing the mechanism for operating the turtle-clamps. Fig. 3 is a partial transverse section through line $x\ x$ of Fig. 1, and Fig. 4 is a partial transverse section through line $y\ y$ of Fig. 1.

The cylinder for the reception of the turtle is represented by A. It is provided at its ends with annular rims a, which project outwardly beyond the face of the body of the cylinder a distance equal to the combined thickness of the turtle and plate held thereon, to form a bearing for the impression-roller (not shown) to prevent the impression-roller from bearing too hard upon the type plate or plates. The rims a may be integral with the cylinder or may be formed separately and secured thereto, as found most expedient.

The ends of the cylinder A in proximity to the rims a are provided with recesses a' for the reception of the clamping-nuts B. The clamping-nuts B have their inner ends beveled to overlap the beveled edges c of the turtle C.

Nut-operating spindles b are seated in sockets b' and b^2, the former extending through the ends of the cylinder within the rim portions a and the latter located at the inner ends of the recesses a'. The outer ends of the spindles b are provided each with a gear-wheel D, which intermesh with a gear-wheel E, mounted concentric with the cylinder, so that the movement of either one of the wheels D or common wheel E will impart motion simultaneously to the others. The clamping-nuts B are engaged with screw-threaded portions of the spindles b, so that as the spindles are rotated in one direction or another the clamping-nuts will be moved toward or away from the edge of the turtle, as may be desired. I find it convenient to provide the gear-wheels D with sockets d for the reception of a lever for operating them.

The turtle C in the form which I have chosen to illustrate my invention is somewhat less in width than a semicircumference of the cylinder and is made to fit the curved surface of the cylinder. It consists of a slab of metal or other suitable material, preferably of sufficient thickness to retain its form when removed from the cylinder and to provide for grooves of sufficient depth to retain the plate-holding clamps.

The bevel-edged ends c of the turtle are preferably made separate and bolted or otherwise firmly fixed to the ends of the body portion. The opposite ends of the body portion of the turtle are provided on their outer faces with dovetail grooves c', extending from the ends toward the central portion of the turtle, the grooves being widened at their ends, as shown at c^2, to permit the dovetail clamps and their follow-blocks to be inserted into position from the face of the turtle.

The dovetail clamps are denoted by F. The group of dovetailed grooves at each end of the turtle is provided with its own set or series of sets of clamps independent of the clamps in the group of grooves at the opposite end. The clamps have bevel-faced noses f, which project from the face of the turtle in position to overlap the beveled edges g of the electrotype or stereotype plate G.

Set-screws H are engaged in screw-threaded sockets in the ends c of the turtle and project into the grooves in the face of the turtle to crowd the clamps into snug engagement with the edges of the plate. Follow-blocks F′ are provided intermediate of the set-screws H

and the clamps F to transmit the pressure of the set-screws to the clamps whenever the plate is to be adjusted to a position farther from the end of the turtle than the set-screws and clamps will conveniently reach.

In cases where it is desirable to locate different plates in proper position upon the turtle, as, for example, the plates G and G′ in Fig. 1, and one plate is required to overlap another on the face of the turtle, I introduce a right and left hand set-screw H′ between two oppositely-facing clamps and having a screw-threaded engagement with the clamps or follow-blocks adjacent thereto, or I employ a single set-screw H^2, having a screw-threaded engagement with one clamp or block and a bearing against another to force them apart to clamp the opposite edges of the plates. In practice while one turtle with its plate or plates is in use another may be prepared by adjusting the plate or plates on it in the positions required, and the one in use may be exchanged for another which has been prepared by simply releasing the clamping-nuts by a turn of the gear-wheel in the opposite direction.

The turtle will be truly adjusted by the simultaneous movement of the several clamping-nuts at one end and the plates may be truly adjusted on the turtles by the grooves, which are made with great care to run parallel with the elements of surface of the curved face of the turtle.

What I claim is—

The slab or turtle provided with dovetail grooves along its surface, said grooves having widened portions, clamps and follow-blocks seated in the grooves, and adjusting-screws for forcing the clamps and blocks along the grooves, in combination with means for supporting the slab or turtle in position to receive a printing-plate, substantially as set forth.

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