(No Model.) 2 Sheets—Sheet 1.

M. LEVY.

HOLDER FOR PLATES IN THE MANUFACTURE OF PHOTO-ENGRAVINGS.

No. 504,597. Patented Sept. 5, 1893.

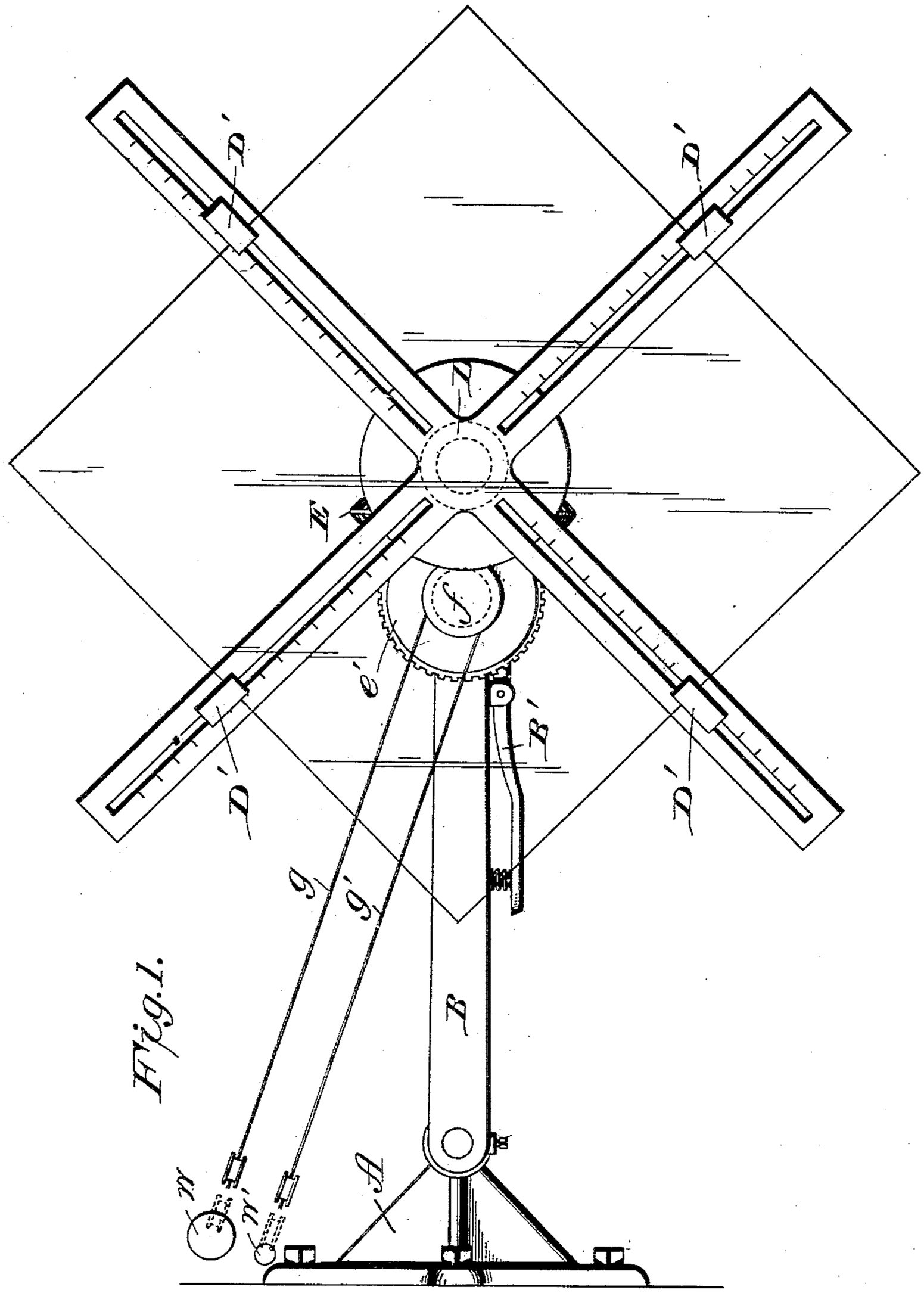

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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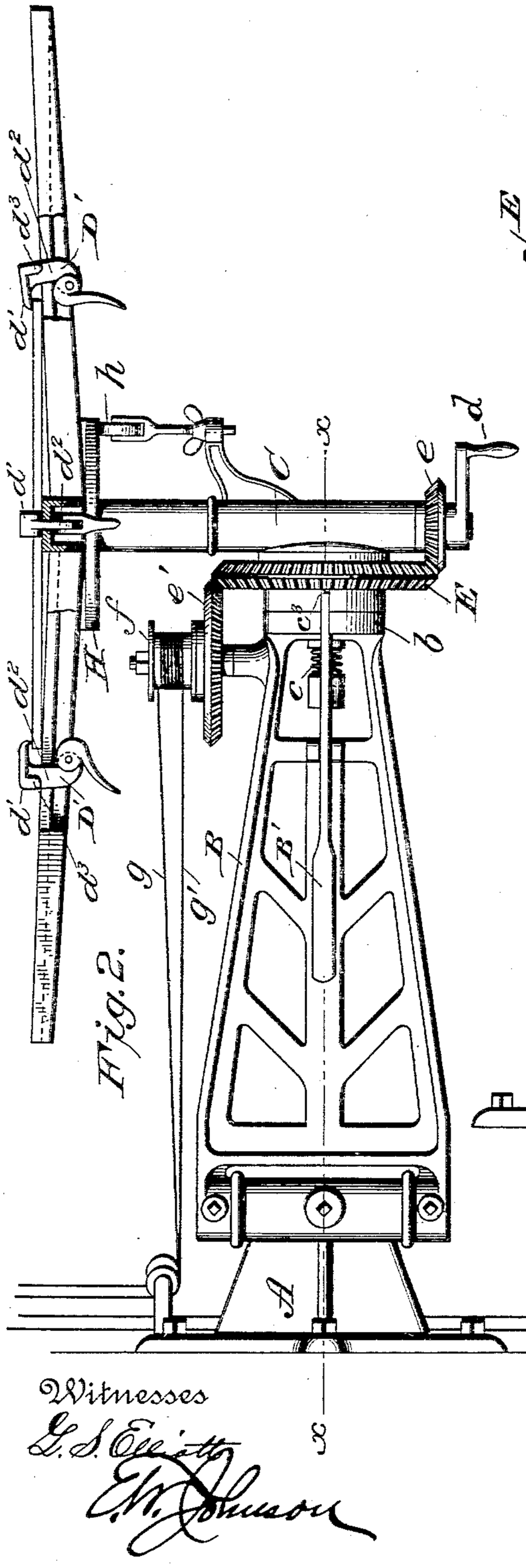

Fig. 2.

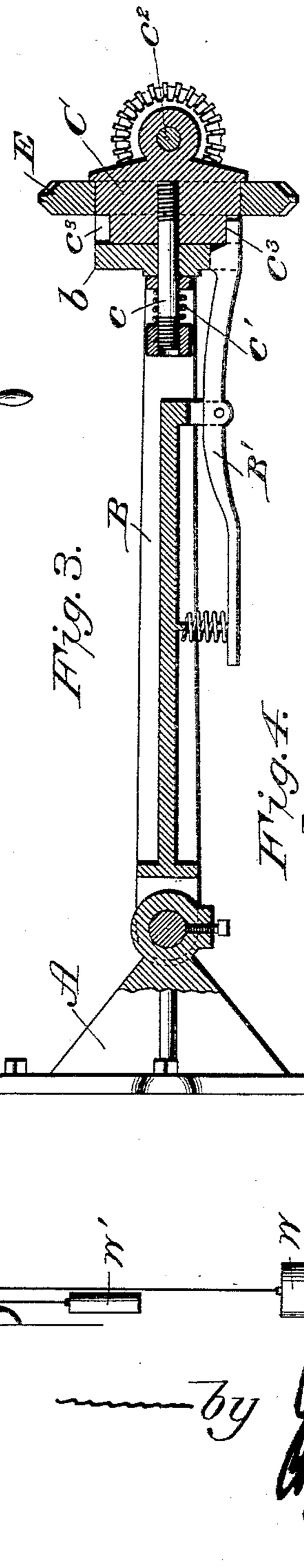

Fig. 3.

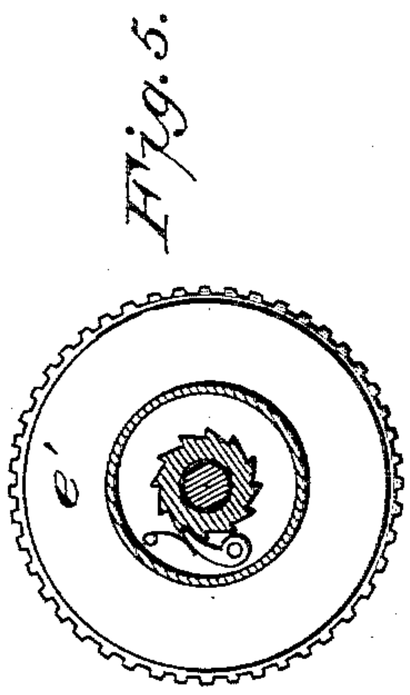

Fig. 5.

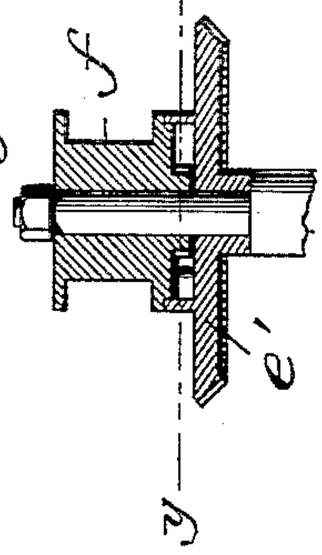

Fig. 4.

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UNITED STATES PATENT OFFICE.

MAX LEVY, OF PHILADELPHIA, PENNSYLVANIA.

HOLDER FOR PLATES IN THE MANUFACTURE OF PHOTO-ENGRAVINGS.

SPECIFICATION forming part of Letters Patent No. 504,597, dated September 5, 1893.

Application filed May 4, 1893. Serial No. 472,997. (No model.)

To all whom it may concern:

Be it known that I, MAX LEVY, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Holders for Plates in the Manufacture of Photo-Engravings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in holders for plates which are to be etched in the manufacture of half-tones or art of producing photo-engravings.

The object of the invention is to provide a holder for the plate by means of which the coating can be placed on the plate equally.

In the accompanying drawings: Figure 1 is a plan view. Fig. 2 is a side view of an apparatus for holding plates to be coated. Fig. 3 is a sectional view, taken on the line *x*—*x* of Fig. 2 and Figs. 4 and 5 are detail views.

A designates a bracket, which is secured to a suitable support and is provided with vertical bearings to which a swinging arm B is attached. To the outer end of the arm is formed or secured a face-plate *b* against which bears a face-plate formed on a support C; said support being pivoted to the arm by a bolt *c* which extends through the face-plate *b* and within the arm, where it is encircled by a helical spring *c'* which bears against the arm and a head formed on the bolt so as to retain the support C in position against the end of said arm. Through the support C passes a shaft c^2, which carries at one end a handle *d* for turning the same and at the other end a table or support D. The table consists of four arms which radiate from the center and are slotted to receive clamps D', provided for holding the plate upon the arms or table. These clamps are made up of a plate *d'* and a depending plate d^2 which projects through the slot in the arm and carries at its lower end a cam adapted to be operated to draw the plate *d'* toward the upper surface of the arm, the rear end of said plate having depending lugs d^3 which bear upon the arm and cause the front end to be tilted when the cam is operated.

Upon the arm B is pivoted a spring catch or lever B', the end of which engages with a notch in the edge of the face-plate *b* and with the notches c^3 in the edge of the face-plate of the support C, the notches c^3 being positioned diametrically opposite each other so that the table can be supported in a horizontal position with the face of the plate up or in a horizontal position with the face of the plate down. In the latter position the plate is brought over the heating medium which is employed to dry the coating. It will be understood that the end of the lever B' exactly fits the notches in the face-plates, so that the table will be supported in a perfectly horizontal position either up or down.

When it is desired to rotate the support or table D by mechanical means instead of manually I provide the support C with a double-faced gearwheel E, which is free to rotate, and the end of the shaft c^2 farthest from the table is provided with a pinion *e* which meshes with said gearwheel. The gearwheel E is driven by a pinion *e'* mounted on a pin projecting from the bracket-arm, and upon said pin to one side of the pinion is a drum *f* having a pawl which engages with ratchet-teeth on the side of the pinion *e'*. Upon the drum is wound a suitable flexible connection or cord *g*, which is guided over pulleys and has attached thereto a weight W, and wound upon the drum in an opposite direction from the cord *g* is a cord *g'*, which is also guided over a pulley and carries a weight W', the latter weight merely being of sufficient size to rotate the drum to wind the cord *g* thereon when the weight W is lifted. It will be noted that when the weight W descends it rotates the drum so that the pawl will engage the ratchet-teeth and revolve the pinion, the same movement of the drum winding up the cord *g'* to elevate the smaller weight W'. The table may have a suitable plane surface or track H on its under side, and the support C may be provided with a disk, as *h*, so that by properly adjusting this disk against the plane surface of the table the rotation of said table

can be regulated to suit the requirements and the density of the solution with which the plate is to be coated.

Having thus described my invention, I claim—

1. In a plate holder, the combination, of a horizontally movable bracket arm, a reversible support carried thereby and a table mounted on the support said table having clamps for attaching a plate thereto, together with means for rotating the table, for the purpose set forth.

2. In a plate holder for the purpose set forth, the combination of a swinging arm suitably secured to a support, said arm carrying a rotatable table support, the table which is mounted thereon having slots, and clamps D′ carried by the table, substantially as shown, and for the purpose set forth.

3. In combination with a swinging bracket, of a rotatable table support having notches, or projections, opposite each other, of a catch carried by the bracket which is adapted to engage with said notches to hold the table in a horizontal position above or below the bracket, substantially as shown.

4. In combination with a bracket and table support having suitable gearing, of a drum containing a spring, a cord which is adapted to be wound upon the drum by the action of said spring, suitable clutch mechanism between the drum and gearing, and a weight attached to the cord, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MAX LEVY.

Witnesses:
JOHN F. TURNER,
H. C. WHIPPLE.