(No Model.)

W. MUSHOFF.

BLACKBOARD.

No. 579,767. Patented Mar. 30, 1897.

Fig. 1.

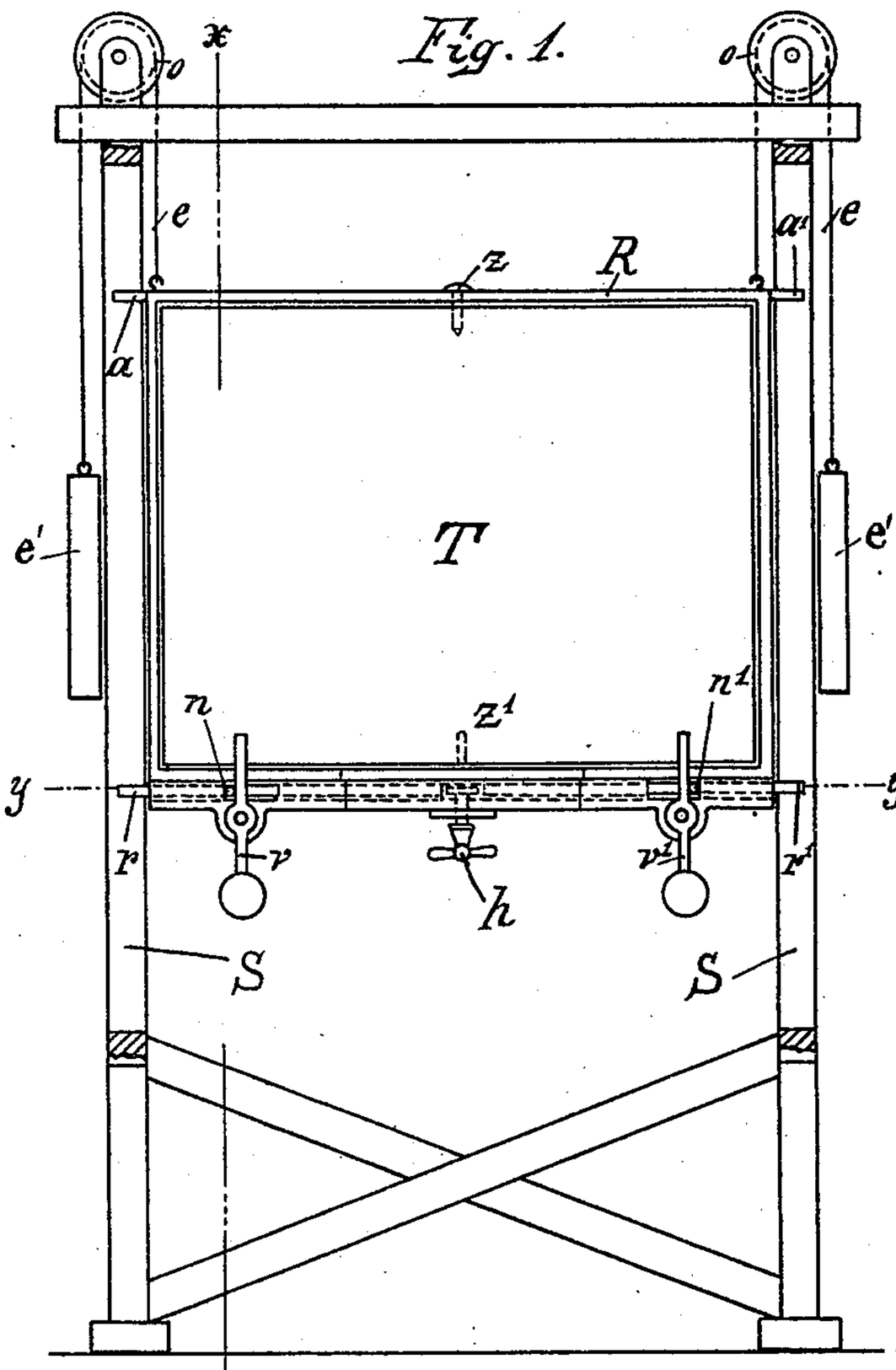

Fig. 2.

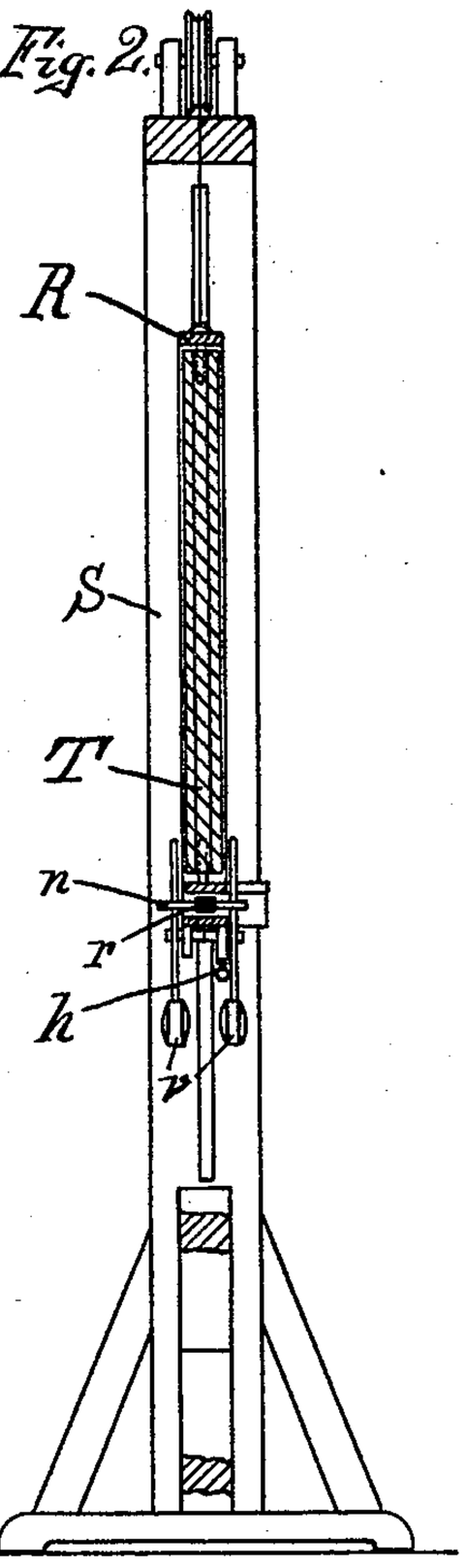

Fig. 3.

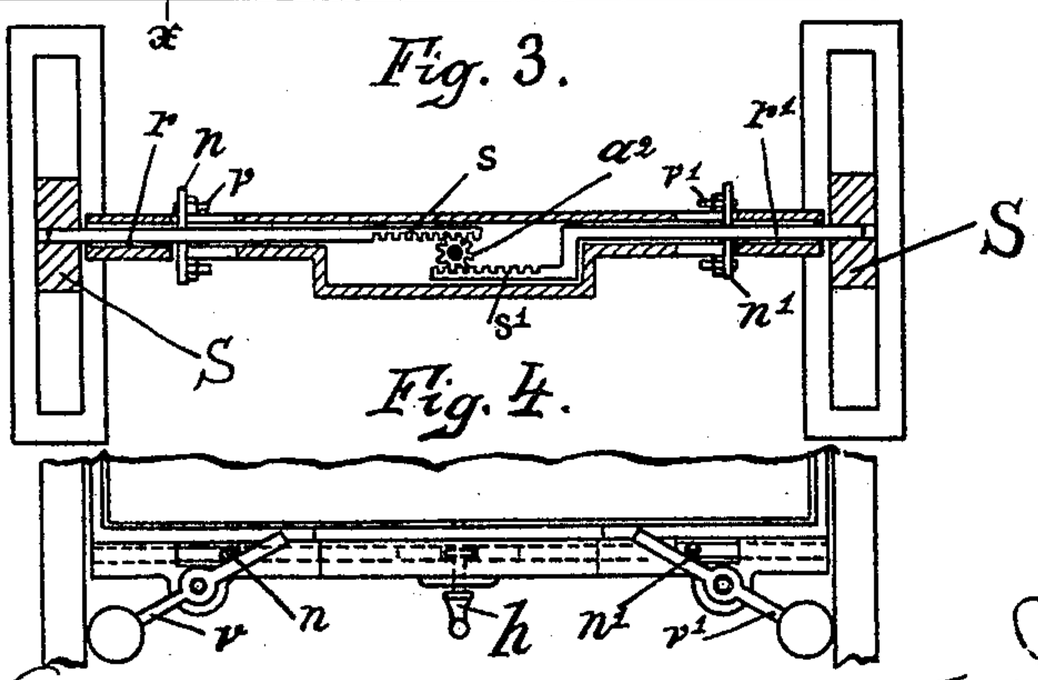

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILHELM MUSHOFF, OF BUER, GERMANY.

BLACKBOARD.

SPECIFICATION forming part of Letters Patent No. 579,767, dated March 30, 1897.

Application filed September 28, 1896. Serial No. 607,254. (No model.) Patented in Germany December 10, 1895, No. 87,272.

To all whom it may concern:

Be it known that I, WILHELM MUSHOFF, a subject of the German Emperor, residing at Buer, Germany, have invented certain new and useful Improvements in Blackboards, (for which I have obtained a patent in Germany, No. 87,272, dated December 10, 1895,) of which the following is a specification.

My invention relates to a blackboard, and has for its object to provide a simple and cheap construction, so that the board can be readily adjusted at any desired height and is also capable of being turned horizontally, so as to present either side to view. I have illustrated such improved blackboard in the annexed drawings, making a part of this specification, same parts being designated by the same letters of reference in the several figures, and wherein—

Figure 1 shows a front elevation of the blackboard and supporting-frame, partly in section. Fig. 2 shows a section on the line $x\ x$ of Fig. 1. Fig. 3 shows a section on the line $y\ y$ of Fig. 1, and Fig. 4 shows the lower part of the blackboard when in position for being turned.

The blackboard proper, T, is mounted in a frame R and held therein by the two vertical pinions $z\ z'$. The blackboard thus framed is arranged in and carried by the upright frame S and held therein by means of cords e passed over pulleys o, provided at the top of the upright frame S. The free ends of these cords are weighted by counterweights e', as shown. The frame R, surrounding the blackboard, is equipped at its upper end with studs $a\ a'$, that are engaged in grooves provided in the uprights of frame S or in the space provided between the slats of the uprights, if same are formed in two pieces, as shown in the drawings. The horizontal motion of the blackboard is normally prevented by means of the weighted catches $v\ v'$. These catches are pivoted to the lower part of frame R and will prevent the blackboard from turning on its pivots $z\ z'$, as clearly shown in Fig. 1. Within the hollow lower part of this frame R are also provided two bolts r and r', normally projecting beyond said frame and catching in the grooves provided in the uprights of the frame S. Toward the center of the lower part of frame R these rods are formed into racks s and s', that are acted upon by a pinion a^2, mounted on the lower pivot z', which pivot is also provided with a handle h, as shown, so that it may be readily turned by hand. The bolts r and r' are also equipped with projections n and n', protruding through openings provided in the lower part of the frame R, and when the bolts are withdrawn from the slots in the uprights these projections will move the weighted catches v and v' into the position shown in Fig. 4. In this position the blackboard may be moved up or down or turned in its own frame R at will. As soon as the blackboard is in the desired position the handle h is moved in the opposite direction. The weighted catches v and v' will then again drop into their normal positions and the bolts r and r' will reënter into the grooves of the uprights, thus firmly holding the blackboard in the desired position.

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

1. In a blackboard, the combination of supporting-standards, a frame vertically movable upon said standards, a blackboard supported by said frame, counterweights carried by said standards and connected to said frame, retaining-bolts horizontally located at opposite sides of said frame and provided with rack-teeth at their inner ends, and a pinion provided with an operating-handle and engaging the teeth on both of said bolts to simultaneously move said bolts in opposite directions to engage said standards and support the frame in its adjusted position, substantially as described.

2. In a blackboard, the combination of supporting-standards, a vertically-sliding frame carried by said standards and having pivoted therein a blackboard, means to prevent the rotation of said blackboard upon its pivots, retaining means to hold the frame at its vertical adjustment, and projections from said retaining means adapted when retracted to engage and release the means which prevent the rotation of the blackboard, substantially as described.

3. In a blackboard, the combination of supporting-standards, a vertically-sliding frame

carried by said standards and having pivoted therein a blackboard, counterweighted pivoted catches attached to said frame to prevent rotation of the blackboard, sliding bolts carried by said frame to retain the same at its vertical adjustment by engagement with said standards, and projections extending from said bolts and adapted to engage and release said pivoted catches when the bolts are moved to retract the same, substantially as described.

Signed at Dusseldorf, Germany, this 30th day of July, 1896.

WILHELM MUSHOFF.

Witnesses:
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