

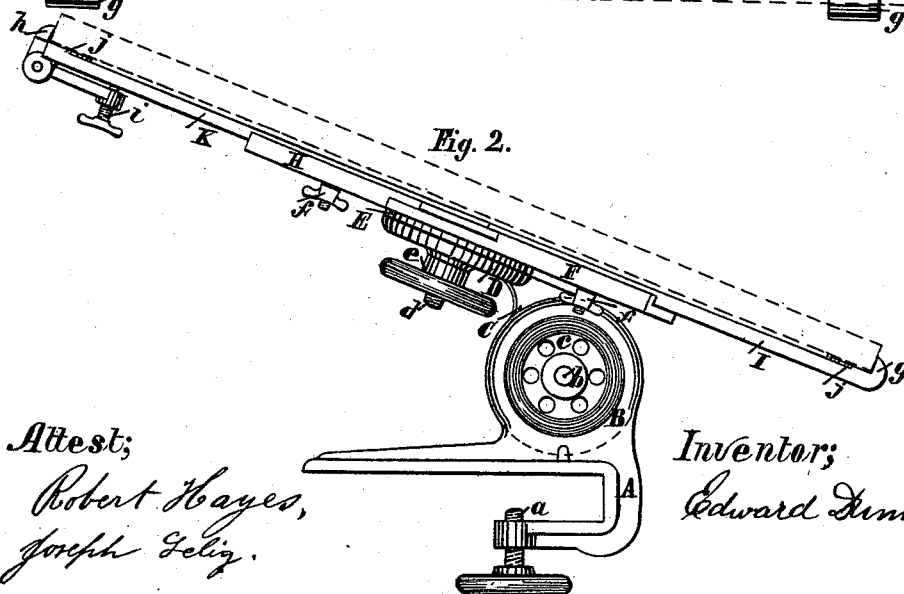
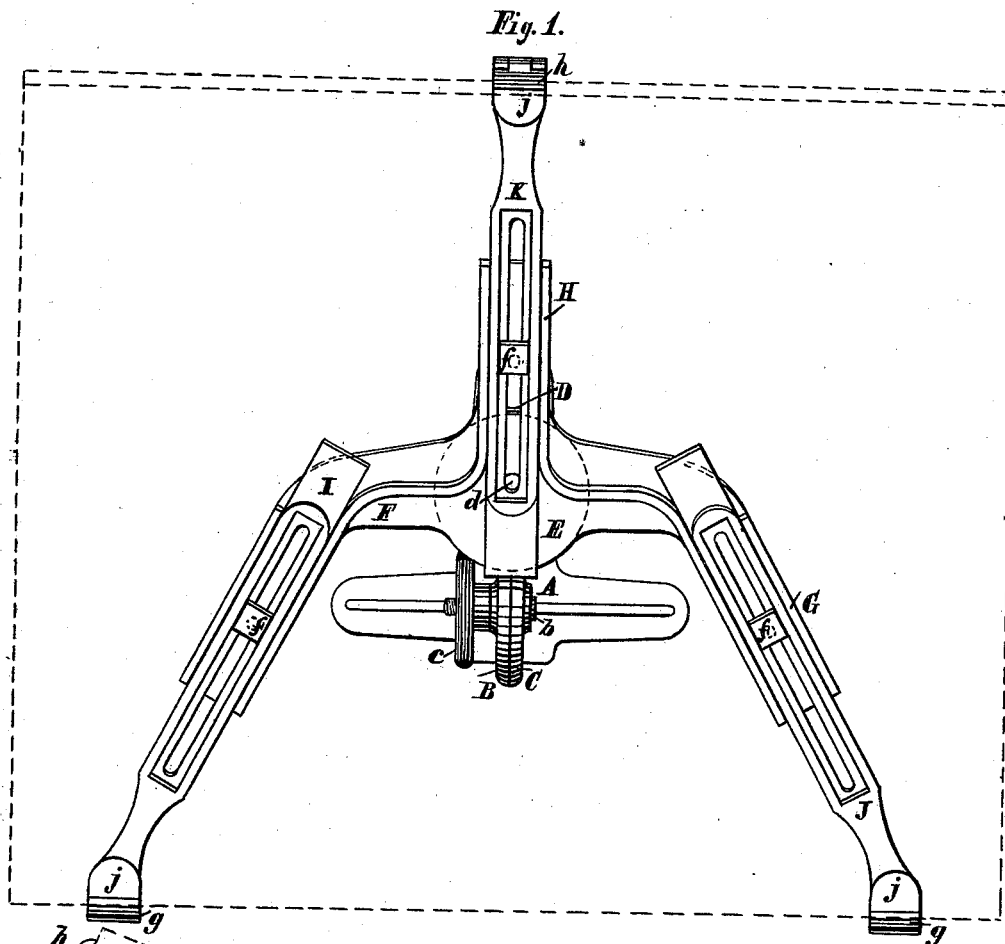
(No Model.)

2 Sheets—Sheet 1.

E. DUMMER.
DRAFTSMAN'S EASEL.

No. 418,866.

Patented Jan. 7, 1890.



Attest;
Robert Hayes,
Joseph Feliz.

Inventor;
Edward Dummer

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

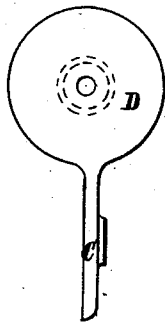


Fig. 4.

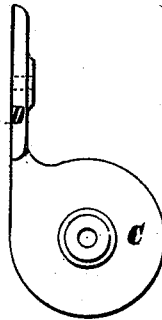


Fig. 5.

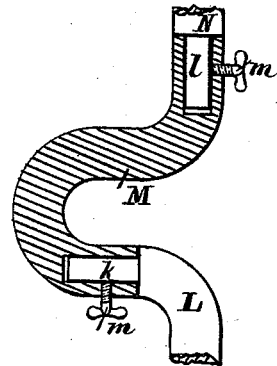


Fig. 6.

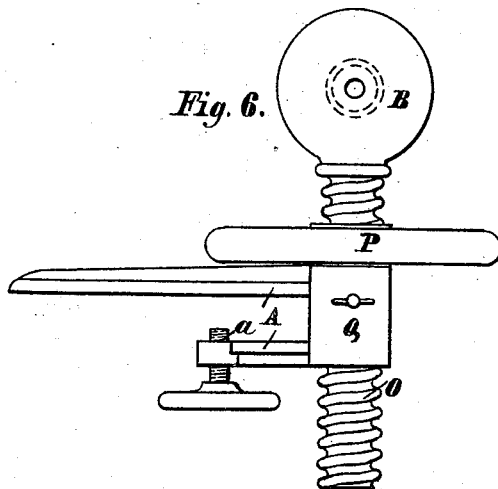
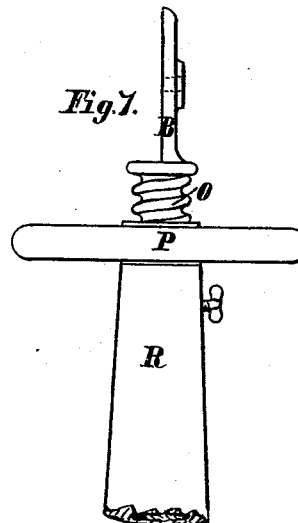


Fig. 7.



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UNITED STATES PATENT OFFICE.

EDWARD DUMMER, OF BOSTON, MASSACHUSETTS.

DRAFTSMAN'S EASEL.

SPECIFICATION forming part of Letters Patent No. 418,866, dated January 7, 1890.

Application filed February 23, 1883. Serial No. 85,931. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DUMMER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Draftsman's Easel, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a stand or table especially adapted to facilitate the work of draftsmen, and hence styled "a draftsman's easel."

The object of my invention is to produce a draftsman's easel embodying two important features, or either of the two—namely, first, a drawing-board so held and pivoted that it may be inclined at any desired angle, be confined to the plane of inclination, and be revolved in its own plane when so inclined; second, an adjustable supporting-frame for a drawing-board, whereby a drawing-board of any desired size may be firmly clamped in place in a manner suitable for the work and instruments of a draftsman.

My invention consists in a draftsman's easel accomplishing said object, and in the construction and combination of parts of the device, as hereinafter set forth, and specifically pointed out in the claims.

In the drawings—two sheets—Figure 1 is a plan view of the easel as adapted to be clamped on a table or like structure, and without the elevating-screw. Fig. 2 is a side view of the same. Figs. 3 and 4 are two views of the piece forming the two plates C and D. Fig. 6 shows the elevating-screw; and Figs. 5 and 7 are illustrative of modifications hereinafter specified.

To a base A is attached by suitable means a plate B. This base is adapted, as by means of an arm and the screw *a*, or other ordinary contrivance, to be clamped on a table or like structure. The plate B has a face in a vertical plane, against which is another plate C. A pin *b*, or stud, forms a pivot, so that the plate C may be rotated in a vertical plane. By means of a nut and hand-wheel or piece *c*, screwing on the pin *b* or stud, the plate C may be so pressed against the plate B as to be held firmly in the desired position. To the plate C is rigidly connected a plate D, having a face in a plane at right angles to the

plane of the contiguous faces of the plates B and C. Against the plate D is another plate E. There is a pin *d* or stud, forming a pivot, so that the plate E may revolve on the plate D. A nut or hand-wheel or piece *e* screws on the threaded pin *d* or stud, so that the plates D and E may be clamped firmly together.

To the plate E are rigidly joined three arms F, G, and H. Rods or bars I, J, and K are fitted to slide longitudinally on the arms. Each rod or bar may be clamped firmly in any desired position on its arm by means of a bolt or screw and nut *f*. Each of the rods or bars I and J has a projection or lip *g*, which extends onto the edge face of the drawing-board, which is represented by dotted lines. A similar projection or lip *h* is pivoted to the rod or bar K, and has a screw *i* connected therewith, so that this projection or lip may be swung and pressed against the other of the two opposite edge faces of the board.

It is very desirable that the projections or lips *g h* should not only not extend above the plane of the upper surface of the drawing-board, but should not reach quite to this surface, as illustrated in the drawings, in order that they will not interfere with the free use of the draftsman's instruments, especially the T-square. For this reason I make these projections or lips of a length equal to only a part of the thickness of the thinnest drawing-boards commonly used. There are raised bearing-surfaces *j* near the ends of the rods or bars I, J, and K, so that the board will bear evenly and be held steadily.

Any one of drawing-boards of various widths, ranging from one that is quite wide to one that is quite narrow and of any length, may be placed on the rods or bars. The rods or bars are slid on the arms and the projections or lips *g* brought up to one edge face of the board, and the projection or lip *h* to the opposite edge face. The rods or bars are then clamped to the arms by means of the screws and nuts *f*, and the projection or lip *h* pressed against the board by means of the screw *i*, so that the board is clamped very securely and firmly in place. By means of the plates B and C and the pivot and nut thereat the board may be swung to any desired inclination and firmly secured in such inclined plane. By means of the plates D and E and pivot thereat

the board may be revolved in its own plane while confined to the inclined plane, and by the nut *e* may be firmly held in any position obtained by such revolution.

5 There may be more than the three arms F, G, and H, and rods or bars to slide thereon; but it is believed that three arranged as shown are preferable.

The purposes of the plates, pivot-pins, and
10 nuts are to provide for movements about two pivotal lines which are at right angles to each other and to clamp the parts in the desired positions. These results may be attained by devices somewhat different in construction.
15 One modification of this part of the invention is illustrated in Fig. 5. The support L has a horizontal pintle *k* attached thereto, upon which a connecting-piece M may swing. A piece N, which is joined to the board or arms
20 for supporting the same, has a pintle *l* set at right angles to the pintle *k*, which may revolve in the connecting-piece M. Set-screws *m* may be employed with this arrangement to prevent the pintles from turning, and hence
25 to clamp the parts.

I have shown in Figs. 1 and 2 the plate B as rigidly fixed to the base and clamping device A; but to provide for placing the drawing-board at any desired elevation the plate
30 B may be joined to a spindle O, which has a screw-thread formed thereon, as shown in Figs. 6 and 7. On this screw works a nut P, having, as one piece therewith, a hand-wheel. The nut P rests on a support, which may be
35 a projection Q of the base and clamping device A. It may be desirable to employ parts of the invention with a support resting directly on the floor. The elevating-screw may enter and the nut P rest on a standard R,
40 which may be a part of such support.

I am aware that it has been proposed to make a carriage-painter's easel on which a carriage-body may be temporarily secured to arms and by which the carriage-body may be
45 inclined and revolved in plane of inclination. Such easel has, however, no provision whereby the parts, which are pivoted to each other and by which the carriage-body may be revolved in plane of inclination, may be clamped
50 firmly to each other, as by means of a screw, so that the arms or supports for the carriage-body may, with respect to the movement at this pivot, be rigidly and steadily held. In my easel the arms or upper support may be
55 rigidly clamped to the intermediate or connecting piece whenever desired, so that—the latter being rigidly clamped to the base or lower support—said arms or upper support, and hence the board fastened thereon, will be
60 firmly and steadily held. This is necessary at times in order that the draftsman's work may be successfully and accurately executed.

I claim as my invention—

65 1. The combination of rods or bars provided at their outer ends with lips or projections to bear against the opposite edge faces

of a drawing-board, a central supporting-piece, and a clamp for clamping each of said rods or bars to said central supporting-piece, there being as many clamps as there are of
70 said rods or bars, substantially as and for the purposes set forth.

2. The combination of rods or bars provided at their outer ends with lips or projections to project onto the edge faces of a drawing-board, a central supporting-piece provided with ways or guides for said rods or bars, and clamps for clamping said rods or bars firmly on said ways or guides, substantially as and for the purposes set forth.
80

3. The combination of rods or bars provided at their outer ends with lips or projections to press against the opposite edge faces of a drawing-board, a central supporting-piece provided with a way or guide for each
85 of said rods or bars, and clamps to firmly secure said rods or bars on said ways or guides, there being a clamp for each of said rods or bars and operated independently of the others of said clamps, substantially as and for
90 the purposes set forth.

4. The combination of rods or bars, one of which is provided with a movable lip, and means for forcing the said lip against the edge face of a drawing-board, and each of the
95 other rods or bars provided with a lip or projection to project onto the edge face of the drawing-board, a support for said rods or bars, and a clamp for clamping each of said rods or bars to said central support, substantially as and for the purposes set forth.
100

5. The combination of a central support provided with radiating arms F G H, firmly fixed thereto and provided with guiding-ways, rods or bars fitted to said ways, whereby they
105 are guided in an endwise movement thereon, and clamps for clamping said rods or bars firmly to said arms, there being a clamp for each of said rods or bars operated independently of the others of said clamps.
110

6. The combination of a plate E, adapted to be secured to a drawing-board and in a plane parallel therewith, a plate D, parallel with the plate E, a plate C, joined to plate D, a plate B, parallel with plate C, devices, as
115 studs or pins *b* and *d* and nuts *c* and *e*, for pivoting and clamping said plates, and a support fixed to plate B, maintaining the face of this plate in a vertical plane, the adjacent faces of the plates B and C being at right angles to the adjacent faces of the plates D and E, substantially as and for the purposes set forth.
120

7. In combination with the arms or upper support providing means for clamping a
125 drawing-board by pressure against its edge faces, a base or lower support, and an intermediate or connecting piece, two pivots providing for inclination of said upper support and revolution of the same in plane of inclination, and means, including a screw,
130 whereby said upper support may be rigidly

clamped to the intermediate or connecting piece, substantially as and for the purposes set forth.

8. In combination with the arms or upper
5 support, providing means for clamping a drawing-board by pressure against its edge faces, a base or lower support embodying a clamp, and an intermediate or connecting
10 piece, two pivots providing for inclination of said upper support and revolution of the

same in plane of inclination, and means, including a screw, whereby said upper support may be rigidly clamped to the intermediate or connecting piece, substantially as and for the purposes set forth.

EDWARD DUMMER.

Witnesses:

ALBERT L. LINCOLN, Jr.,

WM. H. DRURY.