2 Sheets—Sheet 1.

C. FISHER.

TABLE EASEL.

No. 189,617. Patented April 17, 1877.

Fig. 1

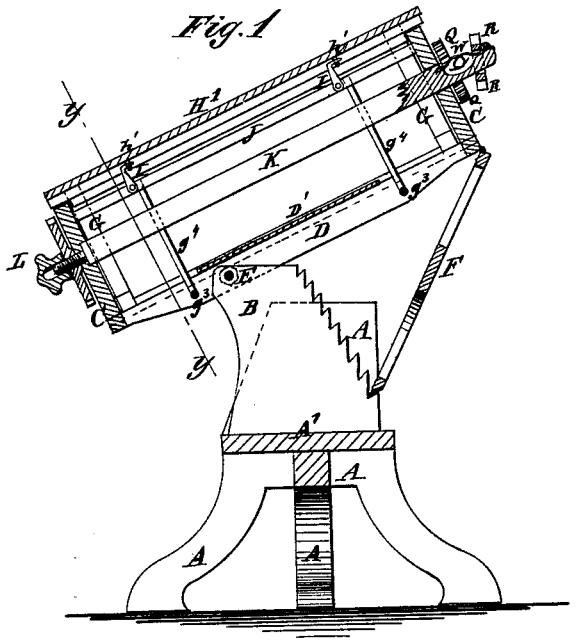
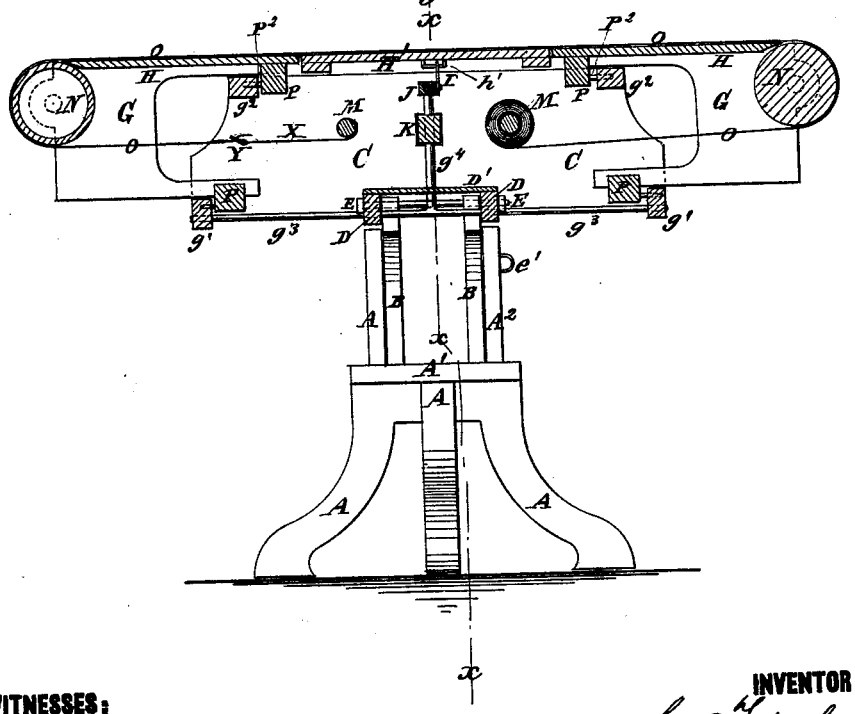


Fig. 2



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INVENTOR:

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2 Sheets—Sheet 2.

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Fig. 3

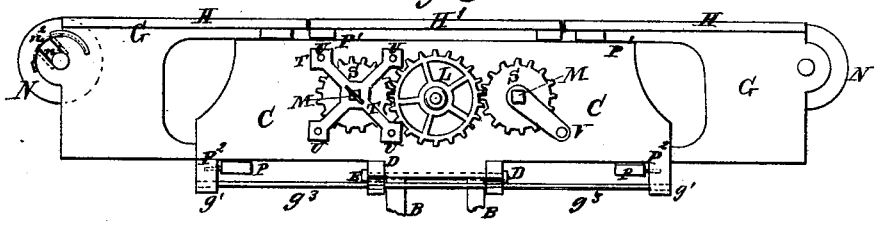


Fig. 4

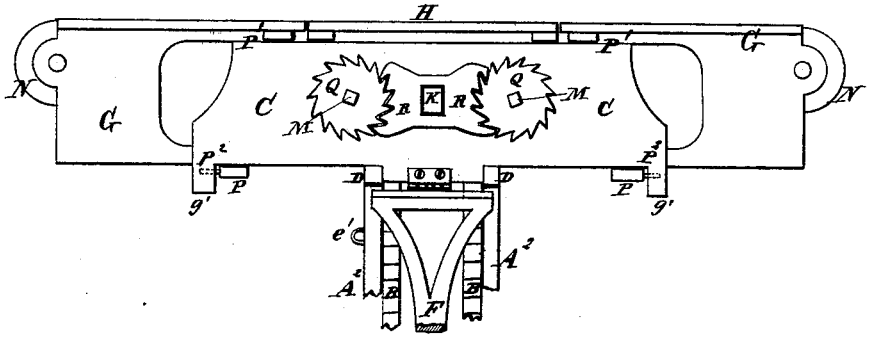


Fig. 5

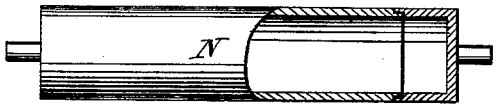
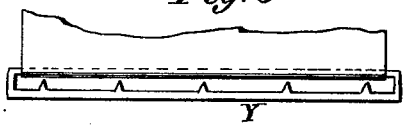


Fig. 6



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTINE FISHER, OF SALISBURY, NORTH CAROLINA.

IMPROVEMENT IN TABLE-EASELS.

Specification forming part of Letters Patent No. **189,617**, dated April 17, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that I, CHRISTINE FISHER, of Salisbury, in the county of Rowan and State of North Carolina, have invented a new and useful Improvement in Table-Easel, of which the following is a specification:

Figure 1, Sheet 1, is a vertical cross-section of my improved table-easel taken through the line *x x x*, Fig. 2. Fig. 2, Sheet 1, is a front view of the same, partly in section, through the line *y y*, Fig. 1. Fig. 3, Sheet 2, is a front view of the same, the base and stand being broken away. Fig. 4, Sheet 2, is a rear view of the same, the base and part of the stand being broken away. Fig. 5, Sheet 2, is a detail side view of one of the rollers, partly in section, to show the construction. Fig. 6, Sheet 2, is a detail view of one of the buckles.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a table-easel for the use of architects, civil engineers, and others, which shall be so constructed that it may be adjusted to have a level top, or to give its top any desired inclination, and will enable paper of any desired length to be used, holding the part being worked upon smoothly and firmly.

The invention consists in the combination of the legs, the base, the uprights, the notched uprights, the pivots, the frame, and the hinged pawl with each other, to enable the table to be adjusted to any desired inclination; in the combination of the sliding frames, provided with the pins, with the main frame, to enable the table to be expanded and contracted; in the combination of the two cylinders, the two shafts, the two gear-wheels, the intermediate detachable gear-wheel, the two ratchet-wheels, the ratchet-wheel catch, and the double spring, with each other, and with the main frame, the two sliding frames, and the cross-bar; and in the combination of the four-armed lock frame or spider and the pins with the gear-wheel and the side board of the main frame, as hereinafter fully described.

A represents the legs of the device, the upper ends of which are attached to the base-plate A^1.

To the upper side of the plate A^1 are attached the lower ends of two parallel upright boards, A^2.

To the plate A^1, and to the inner sides of the uprights A^2, are attached two upright boards, B, which rise a little higher than the uprights A^2, and have their forward edges inclined and notched, to adapt them to serve as ratchets.

The rear parts of the upper ends of the uprights B project, and have holes formed through them to receive the rod or bolt E, which passes through them, and through the rear parts of the bars D. The rod or bolt E may be replaced by short pivots, if desired.

When not in use, the rod or bolt E may be placed in the staples e', attached to one of the uprights A^2.

The bars D are placed upon the outer sides of the upper ends of the uprights B, directly over the upper ends of the uprights A^2, and their middle parts are connected by a plate, D'.

To the forward and rearward ends of the bars D are attached the lower edges of the two boards C, which form the front and rear sides of the middle or stationary part of the table-frame. The upper corners of the boards C may be cut away with a gentle curve, so as to make their upper edges a little shorter than their lower edges, as shown in Figs. 2, 3, and 4.

The lower corners of the boards C are connected by cross-bars g^1, and their upper corners are connected by cross-bars g^2. The four bars g^1 D D g^2 are connected toward their ends by rods g^3.

To the lower edges of the rear board C is hinged the upper end of the pawl E, the lower end of which is made wide, so that it may engage with the notches of both the uprights B at the same time. The pawl E enables the top of the table-easel to be placed exactly level, or adjusted at any desired inclination.

G are the front and rear side boards of the end or extension parts of the table-frame, which are placed at the inner sides of the end parts of the side boards C, and have the middle part of their inner ends cut away so as to leave the upper arms thus formed a little the longer.

To the lower arms of the side boards G are

attached cross-bars P, and to the upper arms of said side boards are attached cross-bars P^1 in such positions that when the end or extension parts of the table-frame are drawn fully out the outer sides of the bars P P^1 may rest against the inner sides of the bars g^1 g^2. The end or extension parts of the table-frame are kept in place, when fully drawn out, by pins P^2, attached to the bars P P^1, and which enter holes in the bars g^1 g^2.

To the upper edges of the side boards G are attached the leaves or top H of the table. The space between the inner edges of the leaves H, when the end or extension frames G are drawn fully out, is filled by a detachable leaf, H′, which rests upon the upper edges of the side boards C, and to the lower side of which are attached staples h', to receive hooks I, attached to the cross-bar J, to hold the said leaf H′ securely in place.

The ends of the cross-bar I are attached to the upper middle part of the side boards C, and to said cross-bar are attached the upper ends of the short rods g^4, which pass down through the cross-bar K, and their lower ends are attached to the rods g^3. The ends of the cross-bar K are made square, and pass through square holes in the centers of the side boards C.

To the front end of the cross-bar K is attached a pivot to receive the gear-wheel L, which is secured in place by a hand-nut.

The teeth of the gear-wheel L mesh into the teeth of two gear-wheels S, attached to the ends of the shafts M, which ends project beyond the wheels S, and are squared off to receive the crank V, by means of which the said shafts M are turned.

The other end of the cross-bar K projects, and has a recess formed in its upper side, to receive the double spring W, by which the catch R is held in place both when in gear and when out of gear with the teeth of the ratchet-wheels Q, attached to the ends of the shafts M. The ends of the catch R are made wide, and have a number of notches formed in them to receive and fit upon a number of the teeth of the said ratchet-wheels Q, and thus prevent the shafts M from moving.

The catch R is kept from dropping from the end of the bar K, when drawn back from the ratchet-wheels Q, by a flange formed upon the upper side of the end of the bar K, or by a cap attached to said end.

To the upper part of the ends of the side boards G, or to projections or bearings formed upon said ends, are pivoted the ends of the cylinders N. The cylinders N are made detachable by placing their journals in inclined slots, which are closed after the journals have been inserted by blocks n^1 placed in them, and kept in place by bolts n^2.

The cylinders N are made hollow, and in two parts, as shown in Fig. 5, so that they may serve as receptacles for drawing-tools, paper, &c.

In arranging the table-easel for use it is brought to a level position and the roll of paper is laid upon it. One of the pieces of cloth X is then brought up around one of the cylinders N, and is buckled to the end of the paper. The catch R is then drawn back, and the intermediate gear-wheel L is detached. The crank V is then placed upon the squared end of the journal of the roller M, and the said roller M is turned to wind the paper upon it. When the paper has been wound up to a suitable distance from its end the four-armed spider or frame T, which has a square hole through its center, is placed upon the squared end of the roller M, upon which the paper has been wound, and the pins U are inserted through holes in the ends of the arms of said frame T, and into holes in the side board C, so as to lock the said roller M in place. The other cloth X is then brought up around the other cylinder N, and is buckled to the other end of the paper. The crank V is then applied to the squared end of the journal of the roller M and turned in the opposite direction from the other roller M, to wind up the cloth X and bring the paper to the required tension. The intermediate gear-wheel L is then secured in place, and the lock-frame T is detached and hung upon a pin attached to one of the uprights B. The crank V is then applied to the journal of one of the rollers M and turned to adjust the paper in the desired position upon the table. The catch R is then applied to the ratchet-wheels Q, and the paper is secured smooth and straight and ready for use.

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

1. The combination of the legs A, the base A^1, the uprights A^2, the notched uprights B, the pivots E, the frame C D g^1, and the hinged pawl F, with each other, to enable the table to be adjusted to any desired inclination, substantially as herein shown and described.

2. The combination of the sliding frames G P P^1, provided with the pins P^2, with the frame C D g^1 g^2, to enable the table to be expanded and contracted, substantially as herein shown and described.

3. The combination of the two cylinders N, the two shafts M, the two gear-wheels S, the intermediate detachable gear-wheel L, the two ratchet-wheels Q, the ratchet-wheel catch R, and the double spring W, with each other, and with the main frame C D g^1 g^2, the two sliding frames G P P^1, and the cross-bar K, substantially as herein shown and described.

4. The combination of the four-armed lock-frame or spider T, and the pins U, with the gear-wheel S and the side board C of the frame C D g^1 g^2, substantially as herein shown and described.

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Witnesses:
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HORATIO N. WOODSEN.