(No Model.)

S. J. LAUGHLIN & J. HOUGH.

DRAWING TABLE.

No. 563,931. Patented July 14, 1896.

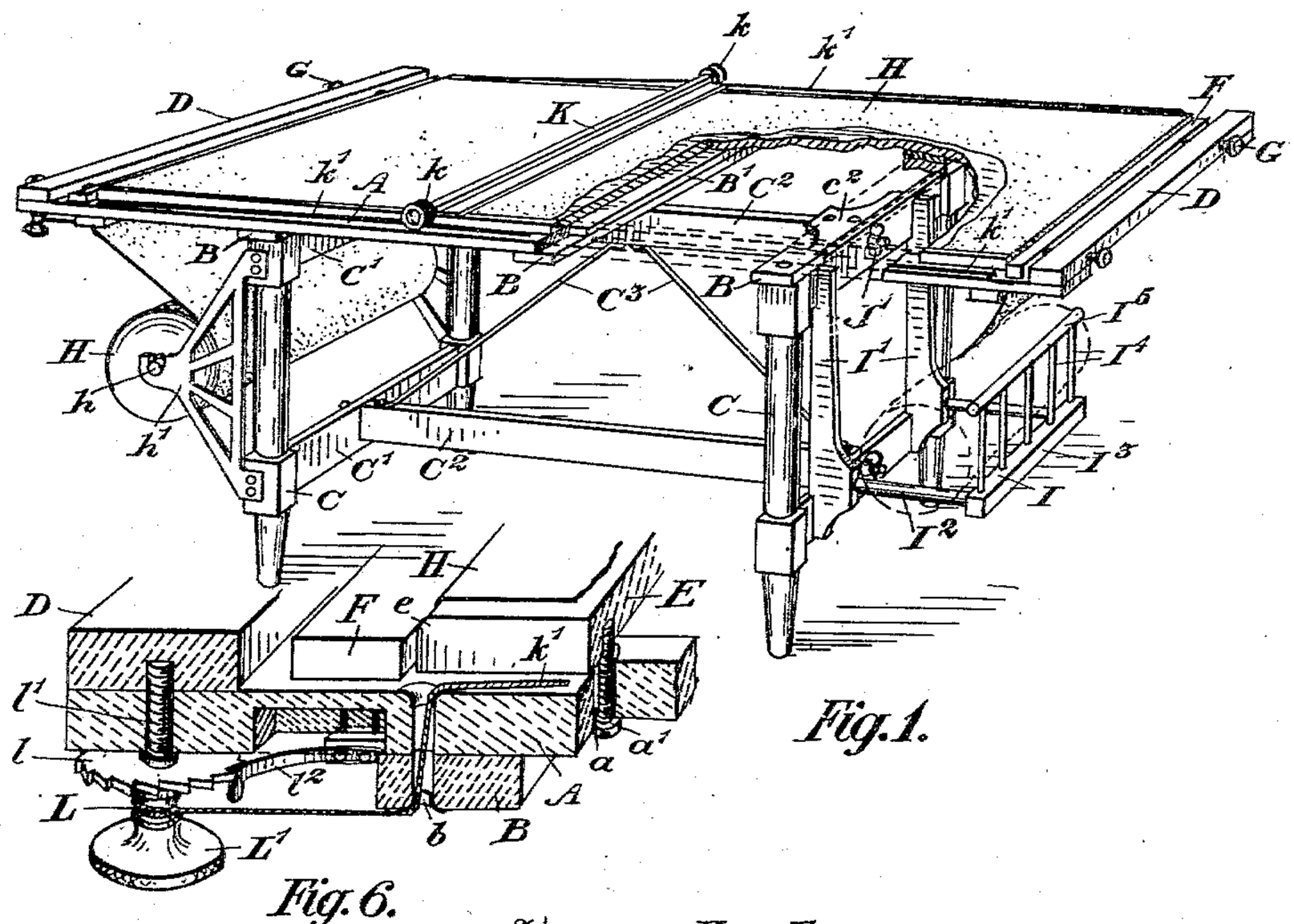

Fig. 1.

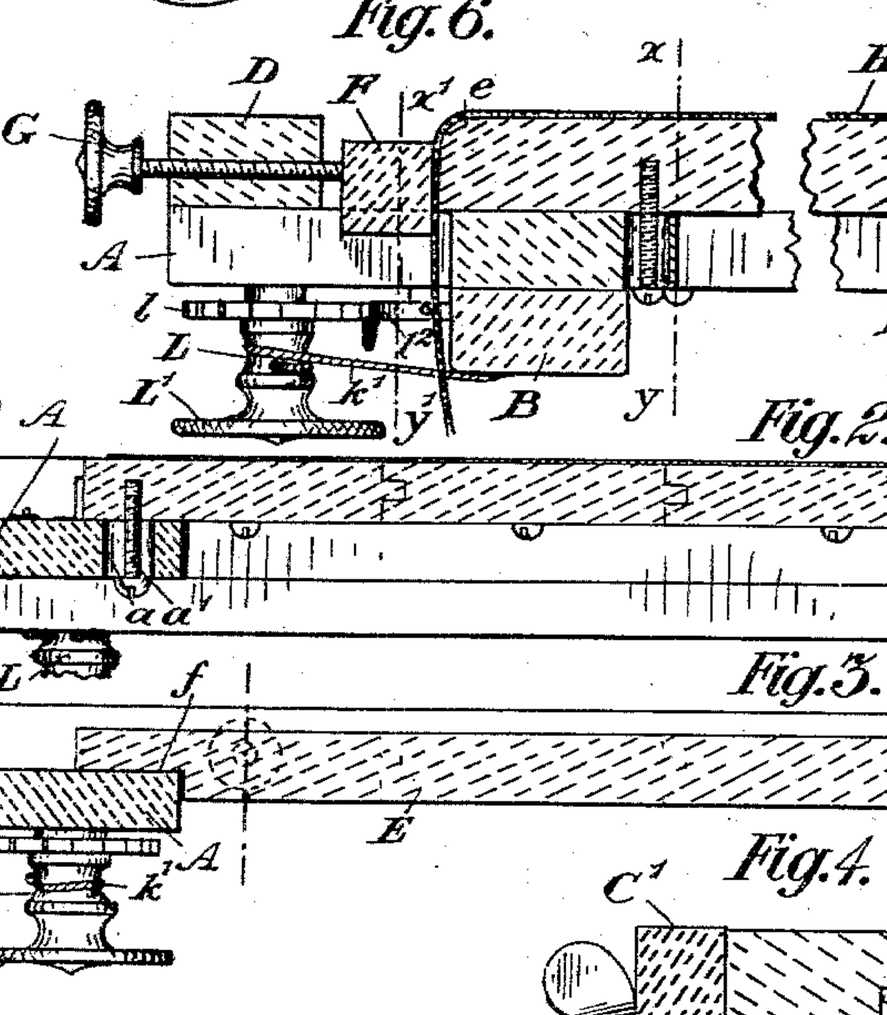

Fig. 6.

Fig. 2.

Fig. 3.

Fig. 4.

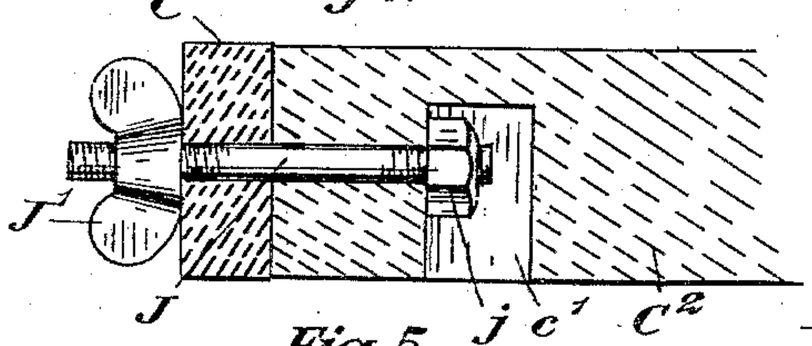

Fig. 5.

Witnesses.

W. J. Throw.

E. R. Case

Inventors.

S. J. Laughlin

J. Hough

by Fetherstonhaugh & Co

Atty.

UNITED STATES PATENT OFFICE.

SAMUEL JOHN LAUGHLIN AND JAMES HOUGH, OF GUELPH, CANADA.

DRAWING-TABLE.

SPECIFICATION forming part of Letters Patent No. 563,931, dated July 14, 1896.

Application filed August 10, 1895. Serial No. 558,934. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL JOHN LAUGHLIN, mechanic, and JAMES HOUGH, printer, of the city of Guelph, in the county of Wellington, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Drawing-Tables for Detail Work, of which the following is a specification.

Our invention relates to improvements in drawing-tables more especially designed for detail work, and the object of the invention is, first, to make a table of convenient and suitable construction for detail work; secondly, to design a simple means for holding the portion of the roll of paper which is being drawn upon securely in position without the aid of thumb-tacks or pasting it down upon the top of the drawing-table; and it consists, essentially, in the construction and arrangement of the table, as hereinafter more particularly explained, and pointed out in detail.

Figure 1 is a perspective view of a drawing-table for detail work, the table being partially broken away to exhibit the construction. Fig. 2 is a longitudinal section intermediately broken away through one of the side rails of the table, showing the holding screws and bars. Fig. 3 is a cross-section of the table through the lines x y, Fig. 2. Fig. 4 is a cross-section of the table through the line x' y', Fig. 2. Fig. 5 is a section through one of the cross-bars connecting the legs and its corresponding longitudinal bar, showing the means of construction. Fig. 6 is a detail of cord-tightener.

In the drawings like letters of reference indicate corresponding parts in each figure.

A are the side rails of the top of the table.

B are the cross-bars, which are connected to and extend underneath the side rails A.

B′ is a supplemental bar extending on top of the cross-bar and of the same depth as the side rails A, so that the top of it is flush with the top of the side rails. In the present table as constructed there are five cross-bars B with their supplemental bars B′. Underneath each cross-bar, next to the cross-bar at each end, are secured the legs C of the table, each pair of which at each end is connected together by the cross-bars C′.

At each end of the side rails A and secured to the top of them we provide cross-rails D.

E are the longitudinal boards, which form the top of the table, as shown in Fig. 3. This longitudinal board rests upon the top of the supplemental cross-bars B′, and the outer edges of the board E extend over the inner edges of the side rails A, as shown in Fig. 3. The side rails A are provided with slots a at desired distances apart through their length, the slots being longest from side to side.

a' are set-screws, the heads of which rest against the sides of the slots, the screws being screwed into the top board E on the outer sides and through the supplemental bars B′. It will be seen that the slots a and screws a' serve to hold the top board E down and yet permit of contraction or expansion of the said board E.

F are holding-bars, which extend across the table within the end bars D and in proximity to the ends of the longitudinal board E, forming the top of the table. The ends of the longitudinal board are rounded off at e, as shown.

C are hand-screws, which extend through the end bars D and bear against holding-bars F.

H is a roll of paper, which is supported on a spindle h, held in the end brackets h', secured to the legs of the table, as shown. The roll H passes up through the table, between the holding-bar F and the end of the board E at this end of the table. The paper passes along the top of the table and down at the opposite end, between this end of the board E and the holding-bar F. The paper then passes down to a holding-rack I, comprised of the upper vertical bars I′, secured to the cross-bars C′, the outwardly-extending spindles I^2, connected by the cross-bar I^3 and having the end rungs I^4 extending up from them and connected by the top rail I^5. It will be noticed that the holding-bar has notches f cut out of the opposite ends underneath, so as to hold it in position laterally upon the side rails A. The cross-bars C′ are connected at the top and bottom by longitudinal rails C^2. The top rail C^2 has at each end, however, a bracing-bracket c^2, which is secured to the top of the rail and abuts the top cross-bars C′. Both cross-rails C^2 are connected at each end to the

cross-bars C′ by bolts J, the inner ends of which extend into recesses *c′* in the cross-rails C^2 and are threaded and have nuts *j* screwed on to their inner ends. The outer ends of the bolts J are also threaded and are provided with thumb-nuts J′. It will be seen that by this simple device the pairs of legs of the table may be taken apart by simply unscrewing the thumb-nuts, and this will be found very convenient for shipping.

C^3 are braces for connecting the top and bottom rails C^2.

K is the ruler, which is designed to move longitudinally over the table, and has end rollers *k*, the same as described in a former application of ours, the serial number being 543,356,

k′ are the cords which are fastened at one end of the table in the side rails, as shown, and are wound around the roller and pass through holes *b*, made through the side rails and one of the cross-bars B at this end of the table, to spools L, provided with turning knobs L′ and ratchet-pinions *l*, secured on the lower ends of the screw-spindles *l′*.

l^2 are spring-dogs, which engage with the ratchet-pinions *l*, and are secured underneath the side rails.

By turning the knobs L′ the cords *k′* may be tightened sufficiently so as to insure the accurate movement of the ruler K over the table.

It will be seen from the construction of our table that by unscrewing the screws G the paper may be shifted as desired, and that by again screwing up, after first stretching the paper sufficiently, such paper may be held taut and secure. It will also be seen that from the construction of the table it may be taken apart very readily and laid down flat, ready for shipment.

What we claim as our invention is—

1. In combination in a drawing-table, the frame, the top board supported thereby, the end bars having hand-screws working therein, and the end sliding bars F operated by said screws, substantially as described.

2. In combination in a drawing-board, the frame, the top board supported thereby, the end bars D having the thumb-screw working therein, and the sliding bars F freely movable and guided by said frame, said bar F being adapted to be held in position by said screws.

3. In combination in a drawing-board, the side rails A, the end bars D, the frame supporting the same, the top board E supported by said rails A, said board being of less length than the distance between the end bars D whereby a space is left between each end of said board and said bars, whereby paper may be fed from beneath the board around the edge thereof and across the top of the same, the freely-movable sliding bars F interposed in said spaces, and the means for clamping said bars against the ends of the said board, substantially as described.

4. In combination in a drawing-table, the end bars, the top board fitting between the same leaving a space at each end thereof, the brackets supported from the front legs of the table, the spindle carrying a paper-roll journaled in said brackets, said paper being adapted to be fed through said spaces and the means for clamping the same against the edges of said board, substantially as described.

SAMUEL JOHN LAUGHLIN.
JAMES HOUGH.

Witnesses:
D. E. MACDONALD,
ALF WATSON.