H. SCHIER.

TABLE-LEAF SUPPORTS.

No. 186,171. Patented Jan. 9, 1877.

Fig. 1.

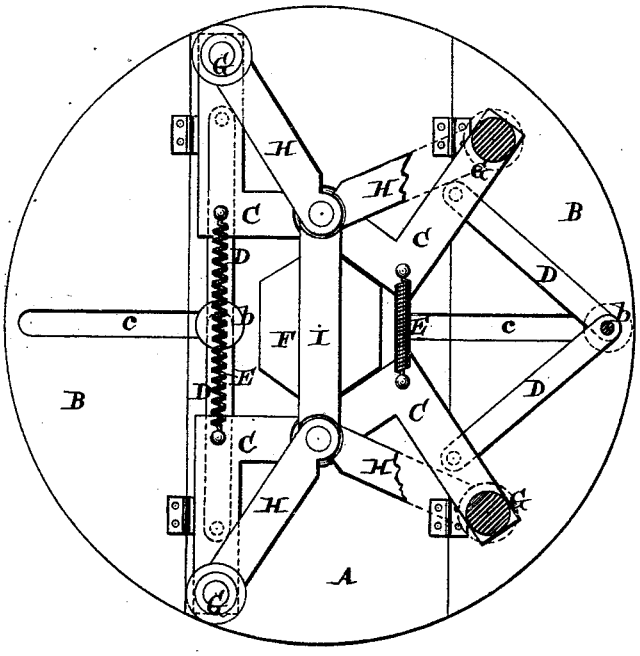
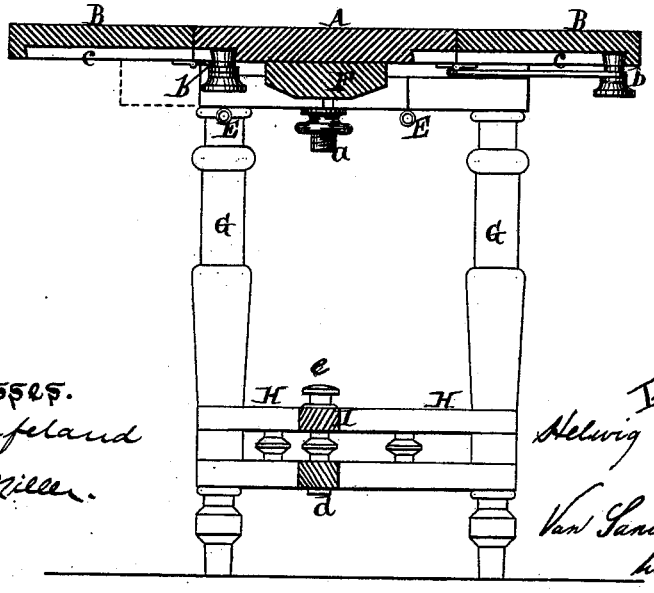


Fig. 2.



Witnesses.
Otto Stupeland
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UNITED STATES PATENT OFFICE.

HELWIG SCHIER, OF NEW YORK, N. Y.

IMPROVEMENT IN TABLE-LEAF SUPPORTS.

Specification forming part of Letters Patent No. **186,171**, dated January 9, 1877; application filed December 13, 1876.

To all whom it may concern:

Be it known that I, HELWIG SCHIER, of the city, county, and State of New York, have invented a new and useful Improvement in Folding Tables, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents an inverted plan view of a table containing my improvement. Fig. 2 is a side elevation thereof, partly in section.

Similar letters indicate corresponding parts.

My invention consists in a folding table in which the arms for supporting the leaves are arranged in pairs with respect to each of the leaves, and connected together by means of toggle-joints, so that they can be moved simultaneously with each other. The studs by which the two parts of the toggle-joints are connected together move in a groove formed on the under surface of the table-leaves, and thus the toggle-joints are steadied or guided, and caused to exert their action simultaneously on each pair of supporting-arms. Each pair of supporting-arms is connected together by a spring, by the action of which the movement of the arms is materially facilitated, and they are locked in position when moved outwardly. The legs of the table are fastened to the supporting-arms, so as to move therewith, and the legs, moreover, are connected together, near their lower ends, by means of rails or stretchers, which are pivoted to each other, and to a central rail or stretcher, whereby the legs are permitted to be moved with the supporting-arms, and at the same time great strength is given to the latter.

In the drawing, the letter A designates the top of my table, and B are leaves, which are hinged to said top in the usual way. C are the arms which serve to support the leaves B, and which are arranged under the top A, on pivots *a*, so that they can be swung in or out. The said supporting-arms C are placed in pairs, near each of the sides or edges of the table to which the leaves are hinged, as shown in Fig. 1. Each two of said supporting-arms C are connected together by a toggle-joint, the parts D of which are pivoted together by a stud, *b*, and pivoted to the said arms at each end, as shown. When either of the toggle-joints D is drawn out, the two supporting-arms to which it is connected are carried with it, and are brought in position to form a support for one of the leaves B. The leaves B are provided with a groove, *c*, on their under surfaces, in which the stud *b* is fitted, and when the toggle-joints D are moved in or out the said stud *b* travels in the groove *c*, whereby the toggle-joints are steadied or guided, and are caused to exert their action simultaneously on each pair of supporting-arms.

The letter E designates springs, arranged to connect each pair of supporting-arms C together. These springs E may be made of coiled wire or india-rubber, and they are fastened at their ends to the supporting-arms C in any suitable way. These springs E are so arranged that they have a tendency to draw the supporting-arms C toward each other, and when the arms are drawn out by the action of the toggle-joints, as before stated, the springs materially facilitate this operation. The springs E, moreover, serve to lock the supporting-arms C in position when they are moved to their outer position. The outward motion of the supporting-arms C is regulated by a stop, F, which is so arranged as to cooperate with each of the arms.

The letter G designates the legs of my table. These legs are secured to the supporting-arms C, so as to move therewith, and they are connected together at any suitable point by means of rails or stretchers H, which are pivoted together and to a central rail, I, as at *d e*. The pivots *d e* are so arranged as to coincide with the pivots *a* of the supporting-arms C, and thus the legs G are permitted to move with the supporting-arms, while the table is greatly strengthened.

The rails or stretchers H and I are preferably duplicated, not only for the purpose of gaining more strength, but also so as to obtain a space for ornamentation; but each of said rails or stretchers may also be constructed of one piece of wood, and the same be perforated, for the purpose of ornamentation.

I am aware that tables have heretofore been

constructed with folding legs, combined with toggle-joints for holding them in position when unfolded; but in such tables the legs performed no part in holding up the folding leaves of the table when opened out.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of toggle-joints D with the supporting-arms C and leaves B of a folding table, the said supporting-arms being arranged in pairs with respect to each of said leaves, and the whole being adapted to operate substantially as described.

2. The combination of the table B, having guide-grooves *c*, with the studs *b* of the toggle-joints D, substantially as described.

3. The combination of springs E with the supporting-arms C and the toggle-joints D, substantially as and for the purpose described.

4. The combination of the pivoted rails H and the central rail I with the table-legs G and supporting-arms C, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 9th day of December, 1876.

HELWIG SCHIER. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.