E. HANTSCHE & A. WAGNER.

Extension-Table.

No. 168,154. Patented Sept. 28, 1875.

Fig: 1

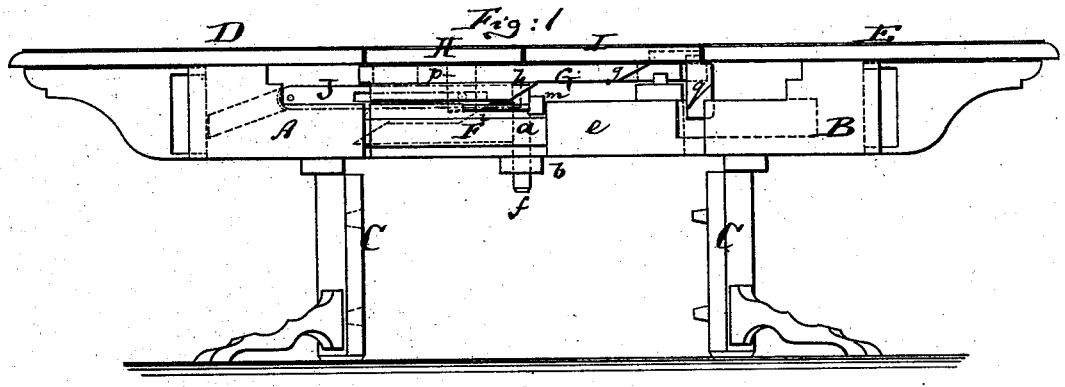


Fig: 2

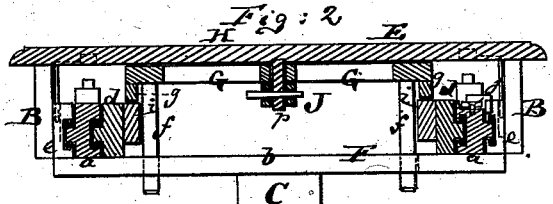


Fig: 3

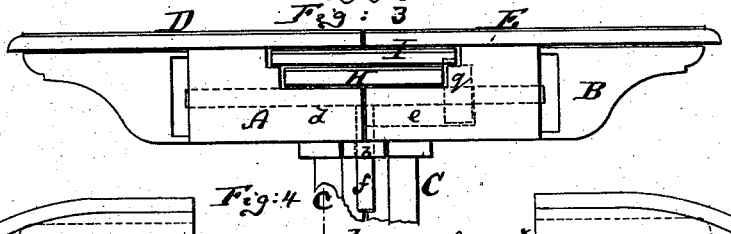
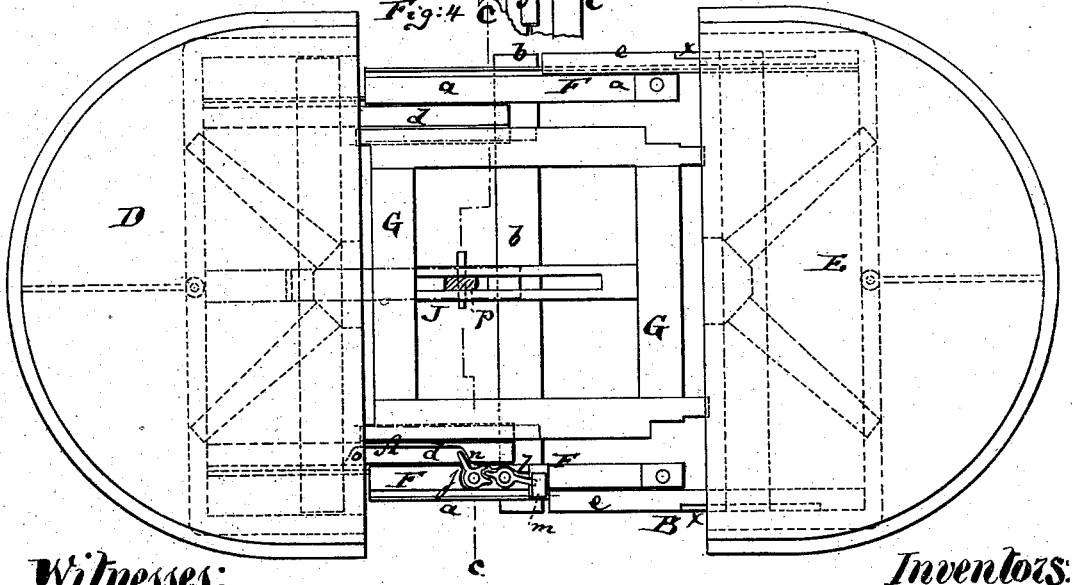


Fig: 4



Witnesses:

A. Moraga.

O. Preidner.

Inventors:

E. Hantsche

A. Wagner

by their Attorney

A. v. Briesen

UNITED STATES PATENT OFFICE.

EMIL HANTSCHE AND ADOLPH WAGNER, OF NEW YORK, N. Y.

IMPROVEMENT IN EXTENSION-TABLES.

Specification forming part of Letters Patent No. **168,154**, dated September 28, 1875; application filed February 26, 1875.

To all whom it may concern:

Be it known that we, EMIL HANTSCHE and ADOLPH WAGNER, both of the city of New York, in the county and State of New York, have invented an Improved Extension-Table, of which the following is a specification:

Figure 1 is a side view of our improved extension-table, showing it extended. Fig. 2 is a cross-section thereof, on the line *c c*, Fig. 4. Fig. 3 is a side view thereof, showing it contracted. Fig. 4 is a top view thereof, extended, the middle leaves being withdrawn.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has for its object to produce an extension-table whose extension-leaves will be raised automatically into line with the end leaves of the table whenever the latter are extended, while they will also be automatically carried down beneath the end leaves whenever the table is contracted. The handling of the leaves, the difficulty of fitting them into their respective places, &c., are thus entirely avoided, and a table produced which, without material addition to its cost, will, in its operation, save considerable labor to its owner.

Our invention consists, principally, in applying a rising and falling platform beneath the intermediate leaves, said platform being, by inclines that are attached to the slides of the table, gradually raised or lowered as the table is either extended or contracted, so that it will gradually raise or lower the intermediate leaves, and automatically store them away, when lowered, beneath the end leaves of the table. The invention also consists in a peculiar lock for the slides, whereby the requisite consecutive motion of the parts of the table is insured, all as hereinafter more fully described.

In the accompanying drawing, the letter A represents one end frame of our improved table, and B the other end frame of the same, each of said end frames being supported by a pillar, or by legs C, in suitable manner. To the frame A is rigidly secured one of the end leaves, D, of the table, and to the frame B is rigidly secured the other end leaf, E, of the table, the two end leaves, when the table is contracted, meeting at the middle to complete the top of a short table. F is the middle frame or slide of the table, being the connection of the two frames A and B, and consists of two side rails, *a a*, which are connected beneath by a cross-bar, *b*. The frame A has projecting slides *d* firmly attached to it, which slides are, by tongue-and-groove connection, joined to the inner face or faces of the slides or rails *a*. The frame B has similar slides or rails *e*, that are, by tongue-and-groove connection, joined to the outer face of the side rails *a*. When the table is extended the slides *d e* are no longer in line with each other transversely, but when the table is contracted these side slides hug opposite sides of the slides *a* of the frame F. G is the elevating-platform for the intermediate leaves H and I, being a frame-work of sufficient length to extend along the space that is formed between the leaves D E when the table is entirely extended. This frame or platform has downwardly-extending pins *f*, that pass through holes on the cross-bar *b* of the frame F, and serve to prevent horizontal displacement of the frame G, and also to guide it during its upward and downward movement. The platform G has its sides formed into steps *g h*, said steps being inclined, as clearly shown in Fig. 1, and resting on lugs *i*, that are attached to the slides *d* of the table-frame A, said lugs *l* having also slanting upper edges, as indicated by dotted lines in said figures.

Now, when the table is contracted, the lugs *i* are first pushed with the slides *d* from under the lowermost step *h* of the platform G to under the next higher step *g* of the platform, and thereby the said platform is lowered to the extent of the height of the said steps. The continued movement of the slides *d* will cause the platform to descend still farther, until the inclined edge of the step *g* bears against the inclined edge of the lug *i*. When from the contracted position the table is extended, the lugs *i* will gradually cause the platform G to be elevated as the lug *i* enters from beneath *g* to beneath the step *z*.

In order to make the upward and downward motion of the platform G positive, and insure that by the extension or contraction of the table the raising or lowering of the platform G is made absolute, it is necessary to construct a lock that will prevent the frame

F from moving on the frame B as long as the elevating or lowering process of the frame G has not been completed, it being understood that the raising or lowering lugs *i* are connected with the frame A. This lock we have represented in Fig. 4. It consists of two levers, *j l*, both pivoted to the top of the rail *a*, which is mortised so they can be sunk beneath the upper edge. The lever *j* is forked, and receives a projecting lug from the lever *l*. The other end of the lever *l* carries a laterally-sliding bolt, *m*, that is movable in a transverse groove of the rail *a*. When the table is fully extended, a projecting lug of the lever *j* is struck by a shoulder, *n*, on the slide *a*, and the lever thereby turned on its pivot, so it will move also the lever *l* and carry the bolt *m* outwardly into the way of the end of the slide *e*, as in Fig. 4. When, thereupon, the table is contracted, the bolt *m* will prevent the slide *e* from moving on the slide *a*, and will, in fact, lock the two slides or frames B and F together, and cause the only displacement to take place in the relative positions of the frames A and F. Not until the frame G has been lowered to the level of the several slides *a d e* will another shoulder, *o*, on the slide *d* strike the end of the lever *j*, and thereby cause the bolt to be withdrawn from its position in the way of the slide *e*, and allow the said slide and the frame B to move toward the frame A. The intermediate leaves H I rest on the platform G, one leaf, H, having a downwardly-projecting lug, *p*, that passes through a slot in the frame G, and into a slotted link, J, which is pivoted to the frame A, so that said leaf H will be controlled in its lengthwise movement by the motion of the frame A. The other leaf, I, has downwardly-projecting ears *q q*, that enter recesses *x* at the sides of the slides *e*, and is therefore controlled in its longitudinal motion by the movement of the frame B. Now, when the table is extended, both leaves H and I rest on the platform G, which platform is elevated so that said intermediate leaves will be in line with the end leaves D E of the table. When it is desired to contract the table, it is only necessary to slightly extend it in order to separate the two leaves H I, and then to put the end of the leaf I upon the leaf H, so that H may slide under I. When, then, the table is contracted, the platform G will at once commence to descend, and to take the leaf H, that rests on it, down with it, until such leaf is below the level of the leaf D. The slide G, being now moved into the frame A, takes the leaf H along with it, until the leaf H is partly concealed under the leaf D. The platform G descends still farther, allowing the inner part of the leaf I to drop down upon the leaf H, and a continued contracting motion of the whole table will allow the leaves D E to close over the concealed leaves H I. Upon drawing the table apart, the frame B will first take the leaf I along with it by means of the ears *q q*, until said leaf clears the under side of the leaf D, whereupon the platform G will commence to be raised, and to carry the leaf I up into a level with the leaf E. The continued extension will cause the leaf H to be withdrawn by the frame G from under D, until it also finds its place on a level with the leaf D, whereupon the whole table is extended.

It can readily be seen that this system can be used with a larger number of intermediate leaves—that is to say, a third leaf can be put between the leaves H and I, while if any number beyond three leaves is used they will have to be attached by hinges to the remaining intermediate leaves.

We claim as our invention—

1. In an extension-table for automatically storing away and raising the intermediate leaves, the combination of the self-raising platform G, having the inclined steps *g h*, and bearing on inclined lugs *i*, that are attached to the slides *d* of the end frame A, with the downwardly-projecting pins *f*, that extend through the middle frame F, and with the end frame B of the table, all arranged so that the platform G will be raised by the act of extending and lowered by the act of contracting the table, substantially as specified.

2. In combination with the middle frame F of an extension-table, having self-storing leaves, the lock composed of the forked lever *j*, and of the lever *l* and bolt *m*, said lock being applied to the rail *a* of the frame F, substantially as and for the purpose specified.

3. The combination of the end frames A B of a self-storing extension-table with the intermediate leaf H, having the lug *p*, that joins it to the link J of the frame A, and with the intermediate leaf I, having ears *q*, that connect it with the frame B, substantially as herein shown and described.

EMIL HANTSCHE.
ADOLPH WAGNER.

Witnesses:
A. V. BRIESEN,
A. MORAGA.