

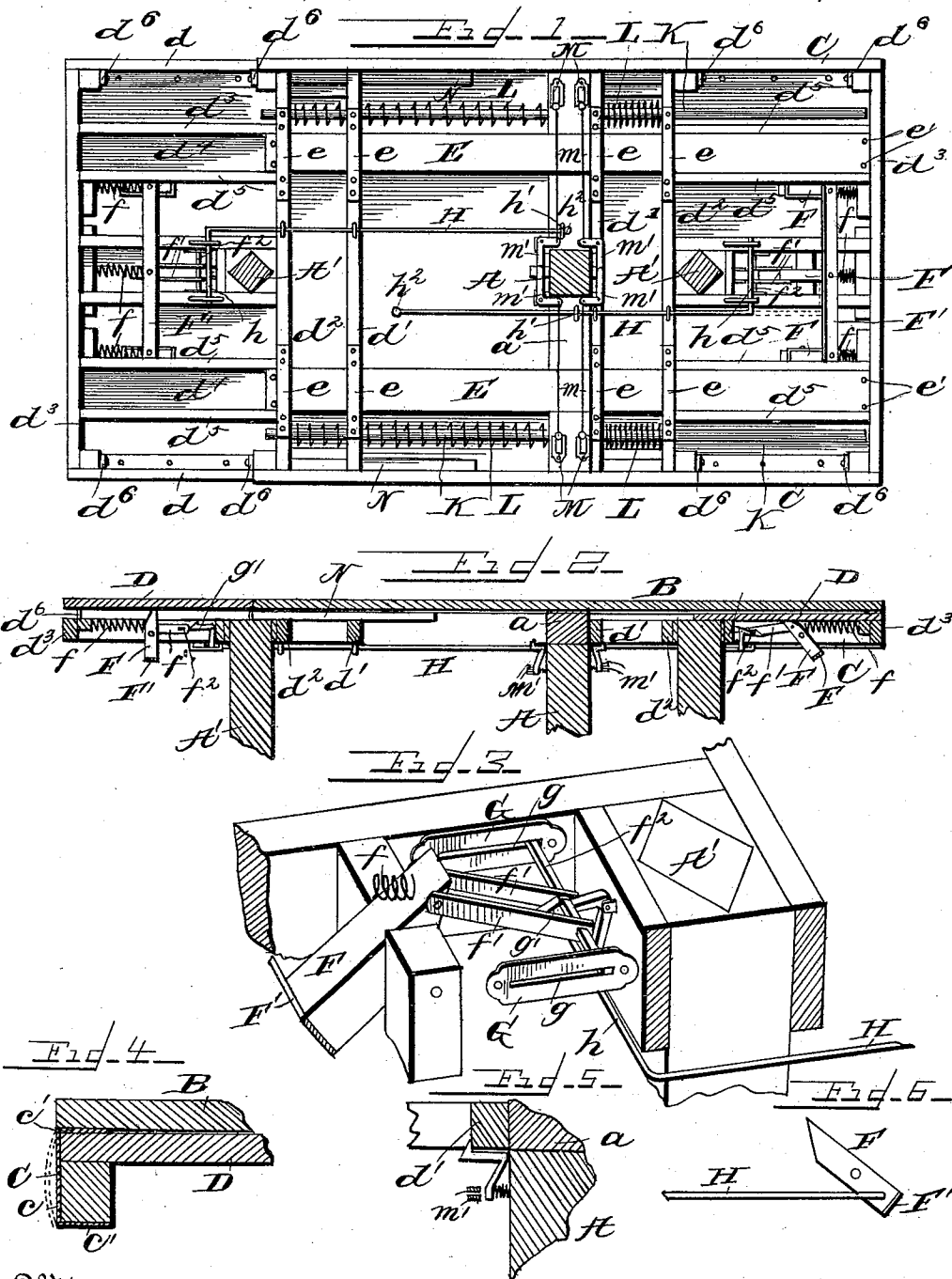
(No Model.)

2 Sheets—Sheet 1.

F. P. COBHAM.
EXTENSION TABLE.

No. 464,115.

Patented Dec. 1, 1891.



Witnesses

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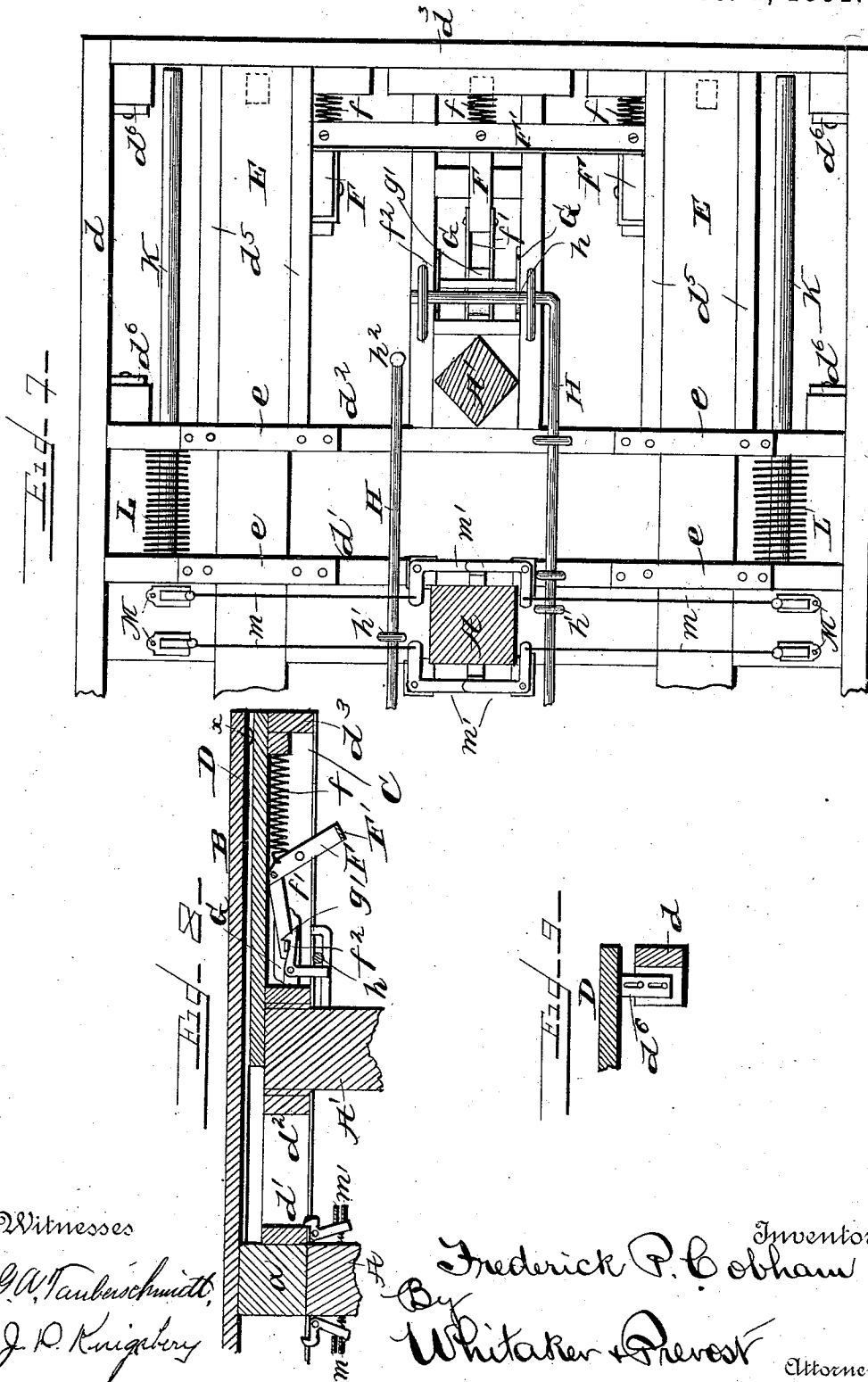
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Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK P. COBHAM, OF WARREN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO FRED. MORCK AND AUGUST C. MORCK, JR., OF SAME PLACE.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 464,115, dated December 1, 1891.

Application filed March 14, 1891. Serial No. 385,070. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK P. COBHAM, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Extension-Tables; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in extension-tables; and it consists in the novel features of construction and combination of parts hereinafter fully described.

In the accompanying drawings I have illustrated one form in which I have contemplated embodying my invention, and the same is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 is a bottom plan view of my improved extension-table. Fig. 2 is a central longitudinal section of the same. Fig. 3 is an enlarged perspective view of part of the mechanism. Figs. 4, 5, and 6 are details of parts of the mechanism. Figs. 7, 8, and 9 are enlarged detail views of parts of the construction.

In the drawings, A represents the central leg of the table, and *a* is a central transverse bar supported thereby. To this bar *a* is secured the table-top B. The sides C C of the table are formed of metal, and are preferably in the form shown in Fig. 4, having a vertical wall *c* and two inwardly-turned flanges *c'* *c'*. One of these flanges is secured to the under side of the table-top in any desired manner, and the lower flange serves as a guide for the folding extension-frames, which will be presently described.

The metal sides C C will be preferably made of steel or galvanized iron, and the flanges *c'* *c'* will assist in giving them the requisite rigidity, so that quite thin metal can be employed. The metal forming the sides is also covered with veneer or painted to give it the appearance of wood.

At each side of the central cross-bar *a* is a sliding extension-frame formed of the side pieces *d d* and cross-bars *d'* *d'* *d'*, the bars *d'*

forming the ends of the table when the extension-frames are pushed in. The side pieces *d d* of these frames engage and slide in the metallic sides C C of the table, and the said frames are further guided in their movements by the longitudinally-extending guides E E, secured to the central cross-bars *d'* *d'* of the sliding frames. The said cross-bars *d'* *d'* are provided with retaining-strips *e e*, which hold the guides E E in engagement with the frames. I provide a stop or stops to limit the outward movement of the sliding frames, and I have shown the guides E provided at or near their ends with pins or lugs *e'* *e'*, which are adapted to engage the retaining-strips *e e* and stop the frames. The frames are provided with longitudinally-extending strips *d'*, having side strips *d'' d''* on either side to engage the guides E and assist in guiding the sliding frame in its movements. Each of the sliding frames is provided with a supplemental supporting-leg A' and a supplemental leaf D, which is capable of vertical movement. To this end the leaf D is provided with a number of slotted plates *d''*, secured thereto in any desired manner, and preferably adjacent to the corners of the leaf. These slotted portions of the plates extend downward from the leaf and are secured to stationary portions of the frame by means of bolts passing through said slots. These slotted plates and securing-bolts form guides to insure the leaf being raised in an even and regular manner. The leaf D, when it lies upon its supporting-frame, is in a plane slightly below the lower face of the table-top, so that when the leaf is down and the frame pushed in the leaf D lies beneath the top of the table.

The leaf D is raised in this instance by means of pivoted lifting-levers F F, which are secured to rigid portions of the frame and have their lower ends connected by a rigid bar F' to secure a simultaneous movement of all of said levers. The upper ends of the levers F engage the under side of the leaf at different points along its surface, and when said levers are moved on their pivots in the required direction the leaf will be raised evenly into the plane of the table-top, the slotted plates guiding said leaf and limiting

its upward movement, so that it cannot be raised higher than the table-top. These levers can be operated by hand, but I prefer to operate them automatically by the drawing out of the frame, so that when the frame reaches its most outward position the leaf will be raised into position. In the drawings I have shown each lever provided with an operating-spring f , which tends to draw the lever in a direction to cause it to raise the leaf. A less number of springs might, however, be employed. The central lever F is connected by means of suitable links $f' f''$ with a horizontal sliding bar f^2 . The ends of this sliding bar are of unequal diameters and engage and move in slots g in plates G , which are secured to portions of the frame, as shown in the drawings. A spring-catch g' is secured to the frame in position to engage the sliding bar when the leaf-engaging end of the lever F is depressed and the leaf is down, thus holding the parts in that position until released. When the catch is operated to release the sliding bar f^2 , the springs f will operate the levers and raise the leaf. In order to cause the spring-catch to be released automatically, I provide the frame with a trip-rod H , (see Figs. 1, 2, and 3,) which loosely engages guide-staples in the frame, and has a bent portion h turned into a position to engage and release the spring-catch when the trip-rod is moved inward with respect to the frame. The other end of the trip-rod loosely engages a staple h' on the central cross-bar of the main table-frame, and said trip-rod is provided with a head or shoulder h^2 , adapted to engage the said staple h' just before the frame has reached the limit of its outward movement and stop said rod, which normally moves with the frame. This causes the bent portion h of the trip to engage and release the catch, and thus permit the springs f to raise the leaf into position.

If desired, I may connect the trip-rod H directly with one of the levers F and dispense with the springs f and retaining devices, thus enabling the trip-rod, when its shoulder or head strikes against the staple h' , to draw positively on the lever itself and raise the leaf without the use of the operating-springs before described.

The sliding frames may be drawn out by hand or in some other manner, as desired or found most convenient. I have shown an arrangement for forcing said sliding frame outwardly by means of compression-springs, which are released by devices located adjacent to the edge of the table, within easy reach of the operator. In carrying this feature of my invention into effect I provide the central cross-bar a with two or more guide-rods $K K$, which extend through suitable openings in the cross-pieces $d' d^2$ of the respective frames. Around these bars are placed the compression-springs L , which preferably pass through an enlarged opening in the cross-piece d of the frames and engage the cross-piece d^2 in order to allow a longer spring to

be used. The central leg or central cross-bar a is provided with a spring-catch or locking device on either side to engage a suitable portion of the sliding frame and lock it when it has been forced inward against the pressure of the springs, thereby compressing the latter.

A knob or releasing device M is located at each side of the table for each frame and connected for operation with one of said locking devices for releasing the same, so that either of said frames can be released from either side of the table. In the drawings I have shown each of the knobs M connected by a wire or rod m with a bell-crank lever m' , pivoted to some stationary part of the central cross-bar a and having one end in position to engage one of the locking devices for releasing the same.

It will be seen that the main support for the table-top B is the central leg, and in order to prevent the outer ends of said leaf from sagging downward upon the leaf and scratching the same as the frame is pushed out I provide the under side of said table-top with a series of rollers X , having surfaces of rubber, felt, or other flexible material, when the latter is closed in, to prevent sagging and to hold said top out of contact with the leaf as the leaf is forced out beneath it, thus preventing the leaf from becoming marred or scratched. Each frame is also provided at its inner end, and preferably adjacent to its sides, with inwardly-extending braces or strips $N N$, as shown in the drawings. These braces or strips slide along in engagement with the top of the table, and when the frame is in its most outward position they serve the double purpose of preventing the outer edge of the table-top B from sagging, and also, by extending inward on the side of the supplemental leg A' opposite to that of the main portion of the frame, they prevent the frame and leaf from tilting downward at its outer end, which might otherwise result.

The operation of my improved table will be apparent from the foregoing description. When it is desired to extend the table at one or both ends, the operator reaches beneath the table and operates one or both of the knobs which are located there. This releases the locking devices of the frames, and the springs expand and force the frames outward until they are arrested by the pins $e' e'$ coming into contact with the retaining-strips $e e$. The guides E and strips $d^1 d^2 d^3$ will serve to guide the frames in their movements. Just before the frames reach their most outward position the head or shoulder of the trip-rod of each frame strikes the staple h' and releases the spring-actuated lifting-levers, which raise the supplemental leaves into position, as before described. It is obvious that one or both ends of the table can be extended as desired.

By employing metallic sides in constructing my improved table I am enabled to use supplemental leaves which are of substantially the same width as the table-top, the only

difference being the thickness of the metal, and this can be avoided by making the side wall curved, as indicated in dotted lines, Fig. 4.

By this means, when the leaf is thrown up to form a continuation of the table, it will be of the same width as the table-top, thus presenting a neat and uniform appearance, which would not be obtained if wood side pieces were employed.

When it is not desired to use the extension-frames, the lifting-levers are retracted by hand until the cross-rod is caught and held by its locking device, and the leaf is then in its lowest position. The frame is then pushed inward against the force of its springs until it is engaged by its locking device, when it will be securely held until released by the lock-releasing devices located adjacent to the edges of the table, as before described.

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

1. In an extension-table, the combination, with the fixed table-top provided with metallic side portions forming guides, of sliding extension-frames engaging said metallic sides, carrying supplemental leaves movable vertically with respect to said frames, said frames and leaves being of substantially the same width as the table-top and adapted to lie beneath the same when not in use, and lifting devices for lifting said leaves into the plane of and flush with the fixed table-top when the frames are drawn out, substantially as described.

2. In an extension-table, the combination, with the fixed table-top and supports for the same, of the sliding extension-frames carrying supplemental leaves having a vertical movement with respect to said frames, adapted to lie beneath the table-top when not in use, and means for drawing out said leaves in the plane which they occupy beneath the table, and means for raising said leaves into the plane of the fixed table-top after they reach the limit of their outward movement, substantially as described.

3. In an extension-table, the combination, with the table-top and supports for the same, of the sliding extension-frames carrying supplemental leaves having a vertical movement with respect to said frames, adapted to lie beneath the table-top when not in use, the

lifting-levers, and devices for guiding said leaves in their vertical movements and limiting the movement of said leaves, substantially as described.

4. In an extension-table, the combination, with the table-top and supports for the same, of the sliding extension-frames carrying the supplemental leaves having a vertical movement with respect to said frames, the lifting-levers, and the slotted guide-plates for guiding said leaves and limiting their movements, substantially as described.

5. In an extension-table, the combination, with the table-top and supports, of the sliding extension-frames provided with supplemental leaves, the lifting-levers, and the trip-rods adapted to control the operation of said levers when the extension-frames are drawn out, substantially as described.

6. In an extension-table, the combination, with the table-top and supports, of the sliding extension-frames provided with supplemental leaves, the spring-actuated lifting-levers, the locking devices therefor, and the trip-rods for releasing said locking devices, substantially as described.

7. In an extension-table, the combination, with the table-top and supports, of the sliding extension-frames carrying supplemental leaves having a vertical movement with respect to said frames, adapted to lie beneath said top when not in use, and the spring-actuated lifting-levers for raising said leaves when the frames are drawn out, substantially as described.

8. In an extension-table, the combination, with the table-top and supports, of the sliding extension-frames provided with movable leaves, the lifting-levers for said leaves, springs for forcing out said frames, locking devices for said frames adapted to secure and release said frames, and the trip-rods for controlling the operation of the lifting-levers automatically when the frames are forced out by said springs, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK P. COBHAM.

Witnesses:

L. P. WHITAKER,
J. D. KINGSBERRY.