(No Model.)

W. L. H. HALL.

EXTENSION TABLE.

No. 509,894. Patented Dec. 5, 1893.

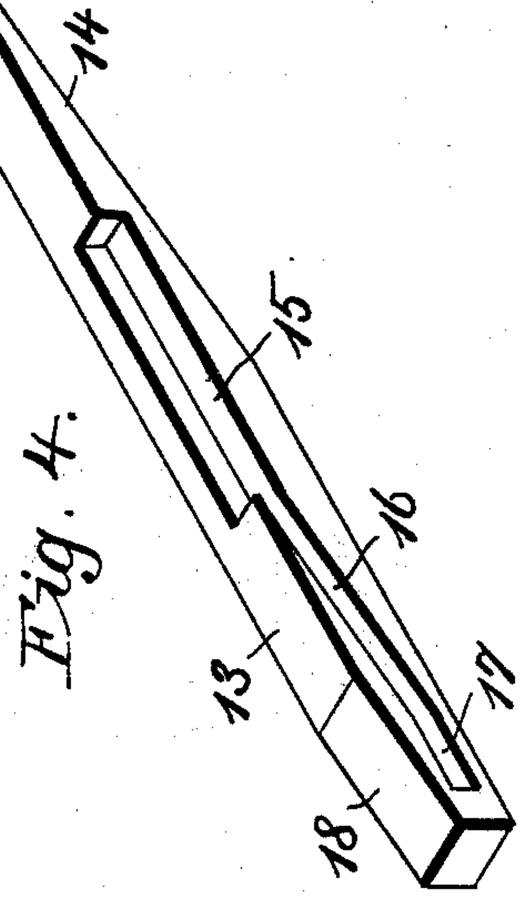

Fig. 4.

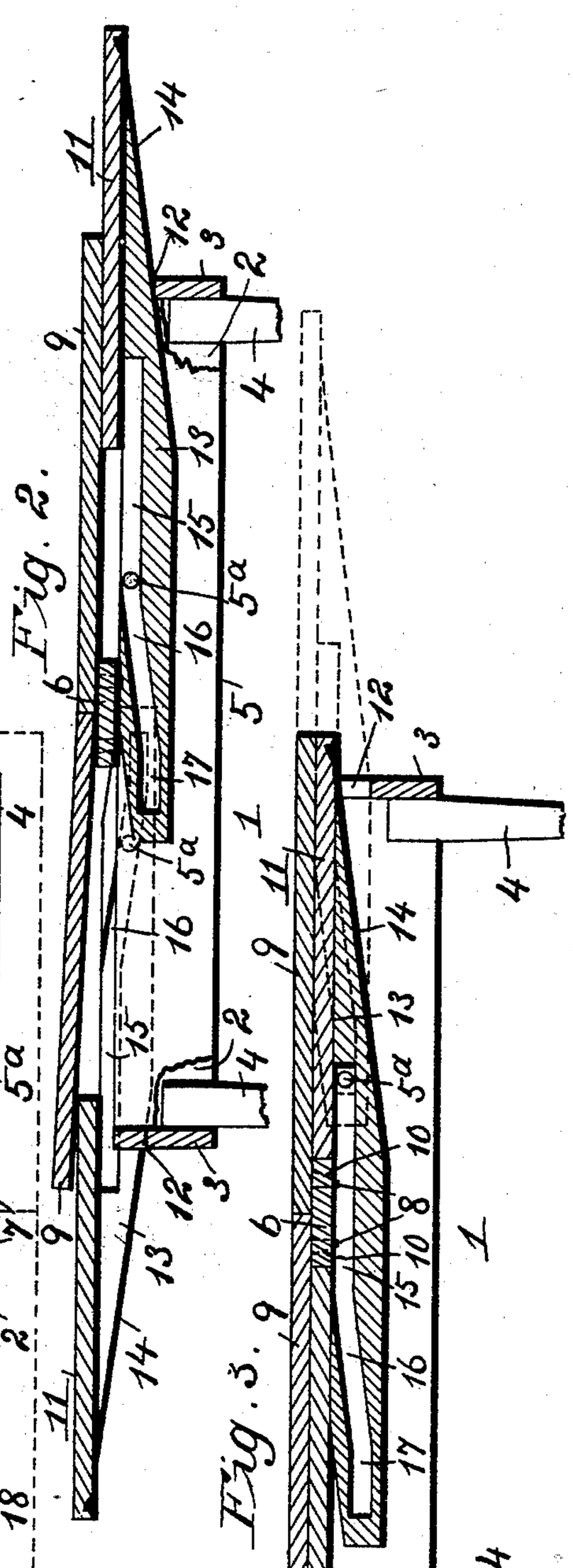

Fig. 2.

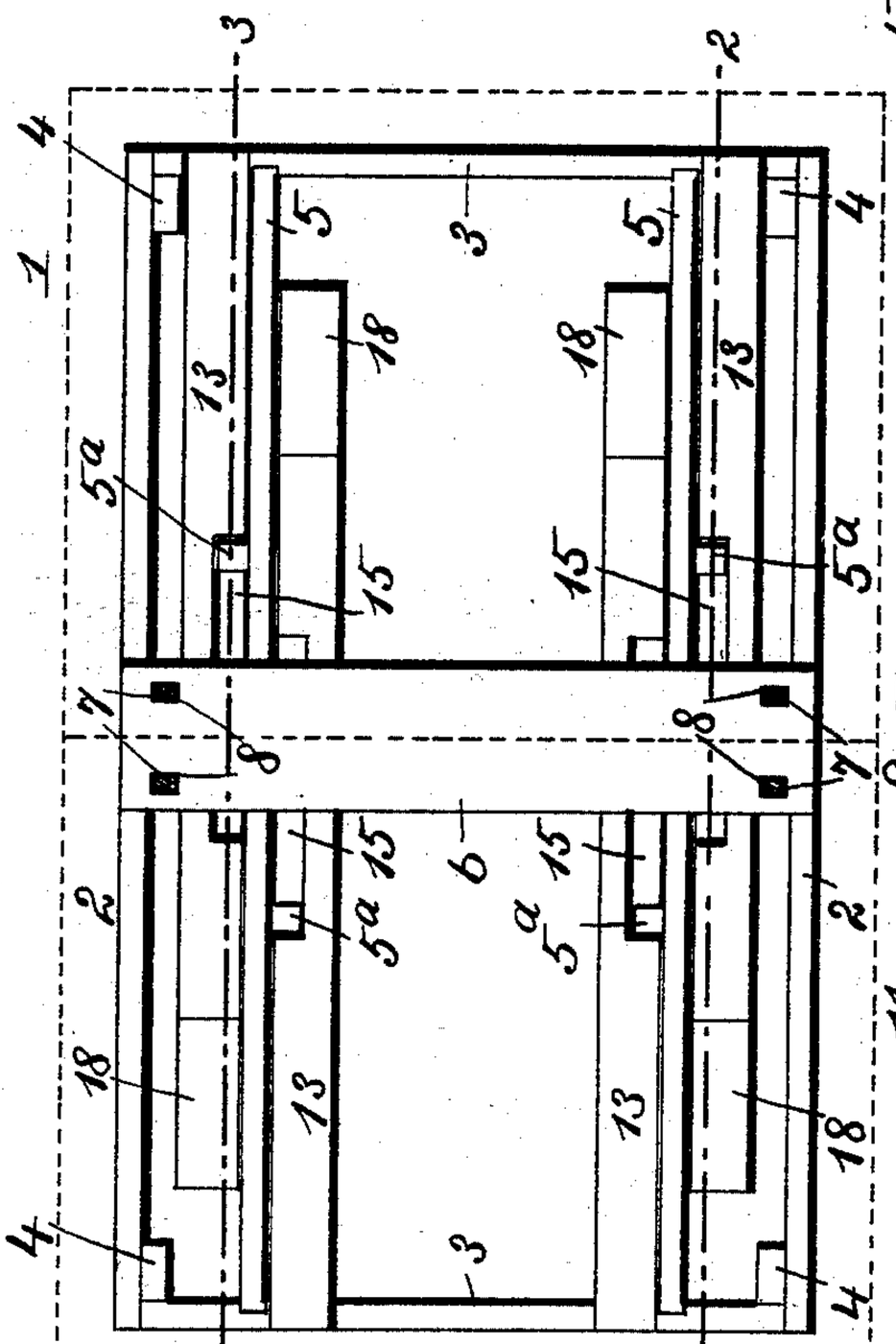

Fig. 1.

Fig. 3.

Witnesses:
F. G. Fischer
G. B. Thorpe

Inventor
Walter L. H. Hall
By Higdon & Higdon
Attys.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER L. H. HALL, OF KANSAS CITY, MISSOURI.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 509,894, dated December 5, 1893.

Application filed March 31, 1893. Serial No. 468,501. (No model.)

To all whom it may concern:

Be it known that I, WALTER L. H. HALL, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Extension-Tables, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in extension tables, and the object of my invention is to produce a table which may be easily and quickly lengthened or contracted to its normal size, by means of sliding leaves, and which is simple, strong, durable and comparatively inexpensive of construction.

To the above purpose, my invention consists in certain peculiar and novel features of construction and arrangement, as will be fully described and claimed hereinafter.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, represents a top-plan view of the table in its closed position, and with the top and extension leaves removed. Fig. 2, is a vertical longitudinal section, taken on the line 2—2 of Fig. 1, and showing the top and the extension leaves partly extended. Fig. 3, is a vertical sectional view, taken on the line 3—3 of Fig. 1, and showing the top and the extension leaves in their closed position. Fig. 4, is a detail perspective view of one of the lifting attachments carried at the under side of the extension leaves.

Referring to the drawings, 1 designates a table of rectangular form, consisting of the longitudinal side rails 2, connected together at their opposite ends by the transverse end rails 3. Supporting legs 4 of any desired configuration are secured at their upper ends to the rectangular framework thus formed, in any suitable manner. Guide rails 5 also extend longitudinally a suitable distance inward of the side rails 2, and are secured at their opposite ends to the inner sides of the end rails 3, and a stationary rail 6 extends transversely and centrally of the framework, and is secured at its opposite ends upon the side rails 2. This cross-rail 6, is provided with vertical openings or holes 7, preferably one near each corner of the said rail, and these openings are designed to receive the lugs 8 depending from the under side of the sections 9 of the top of the table; the lugs being so positioned that the inner margins of said sections 9 shall lie closely together. The depending lugs or pins 8, are also formed preferably with outer inclined sides 10, to allow for a slight play in the vertical openings or holes 7 of said depending lugs, as the outer end of the sections 9 are pivotally raised for a slight distance, as will be hereinafter referred to. It is to be understood however, that the openings or holes may be made sufficiently large to allow of the pivotal movement therein of the depending lugs, without forming said lugs with the outer inclined sides. When the table is in its normal or contracted position, the stationary sections 9, form the top of the table, (as shown in Fig. 3) and are supported in a horizontal position, by the folded or contracted leaves 11, which rest upon the upper edges of the side rails 2 and the end rails 3; the inner margins or edges of said sliding leaves, bearing against opposite sides of the cross rail 6, and the outer margins or edges being flush with the outer margins or edges of the sections 9.

In order to transform the table thus constructed into an extension table, it is necessary to provide means whereby as the extension leaves are drawn outward, they must be elevated to lie in the same horizontal plane as the pivotal sections, and to accomplish this purpose, I form recesses or notches 12 in the upper edges of each end rail 3; the notches in one rail being preferably arranged outward of, and the notches of the opposite end rail being preferably arranged inward of the ends of the guide rails 5. Secured longitudinally to the under side of each slidable leaf 11, are two lifting attachments 13, these lifting attachments being adapted to operate through their respective notches or recesses; the attachments of one leaf, being adapted to work upon the outer sides, and the attachments of the other leaf, being adapted to work against the inner sides of the guide rails 5. These attachments are about twice the length of the slidable extension leaves, and project beyond the inner margins thereof, and under the opposite extension leaf, when the table is in its contracted position, and beneath the adjacent

pivotal section 9, when the table is in its extended position, as shown in Fig. 2. In order to vertically elevate the extension leaves as they are drawn outward, the attachments are formed with an inclined under side 14, extending from a point vertically beneath the inner margin of the extension leaf, to their outer end at the lower margin of the outer edge of the extension leaf.

It will be seen from Fig. 2, that after the extension leaf is partly extended, the inclined under side 14 of the attachment 13 will come in contact with the bottom of the notch, and the continued withdrawal of the leaf will cause said leaf to be elevated. Now, as it is necessary to raise or elevate the extension leaf to the same horizontal plane with the pivotal sections 9, it is essential that the rear end of the attachments be elevated simultaneously with the front end thereof, and when the proper horizontal plane is reached be there supported. To this end, each attachment 13 is formed in its upper side margin adjacent to the guide rails 5, with a horizontal groove 15; this groove engaging the guide pin 5^a projecting from the adjacent side of the said guide rail, and also being of length to correspond with the distance the leaf travels when being extended, before the inclined side 14 of the attachment comes into contact with the bottom of the notch 12, and extending longitudinally a distance under the inner end of its respective leaf 11, corresponding to the distance from the guide and stop pin 5^a to the adjacent edge of the cross-rail 6 at its opposite end, the groove 15 forms a junction with the inclined groove 16; this inclined groove 16, being formed in the inner vertical side of the attachment and arranged parallel with the inclined under side 14 of the attachment 13, and also being of length to correspond with the lifting distance of said inclined surface. The lower end of said inclined groove 16 forms a junction with the horizontal and longitudinal groove 17, which is also formed in the vertical side of the attachment 13, and the upper wall of which is adapted to rest upon the guide pin 5^a at the same time the horizontal lower side of the attachment rests upon the bottom of the notches or recesses 12.

To extend the table from the contracted position shown in Fig. 3, the leaf is grasped and pulled outward. The leaf moves in a horizontal plane, the groove 15 sliding on the guide pins 5^a, until the inclined under side 14 and the upper wall of the inclined groove 16, come in contact respectively, with the bottom of the notch 12 and the guide pin 5^a. The continued movement outward now causes the inclined wall of groove 16 and inclined under side 14 to ride upward and raise the extension leaf. This movement causes the outer end of the section 9 to be pivotally raised or elevated a slight distance and also necessitates the beveling at 18 of the rear upper side of the attachment, to allow said attachment to be elevated gradually without coming in contact with the under side of the cross rail 6 of the table. Immediately the outward movement of the sliding leaf is completed, by the inner margin of the said leaf clearing the outer margin of the pivotal leaf, the outer end of said pivotal leaf drops down and is supported upon the upper side of the attachments 13, carried by the sliding leaf. The outer movement of the extension leaves is limited by the guide pins 5^a coming in contact with the closed end of the grooves 17.

From the above description it will be seen that I have provided a table that can easily and quickly be extended or contracted, and which is simple, strong, durable and inexpensive of construction.

Having thus described my invention, what I claim as new, and desire to protect by Letters Patent, is--

An extension table, comprising a suitable supporting frame-work, having notches or recesses in the end rails thereof, longitudinally extending guide rails connecting said end rails having laterally projecting guide stop pins, slidable leaves supported upon said framework, and lifting attachments secured to the under side and extending longitudinally of said slidable leaves, and having an inclined under side tapering from the front end to within a suitable distance of the rear end, and an inclined groove, parallel with the inclined under side, in the vertical side of said attachment and near its rear end, and a guide groove and a guide supporting groove, communicating with the inclined groove at its opposite ends, the guide groove sliding upon the guide stop pin during the first portion of the outward movement of the sliding leaves, and the inclined groove and under-surface then riding upon the guide stop pin and bottom of the notches to elevate the leaves automatically, and the guide supporting groove being adapted to support the inner end of said attachments, when the slidable leaves are fully extended, substantially as set forth.

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

WALTER L. H. HALL.

Witnesses:
MAUD FITZPATRICK,
M. P. SMITH.