

No. 737,492.

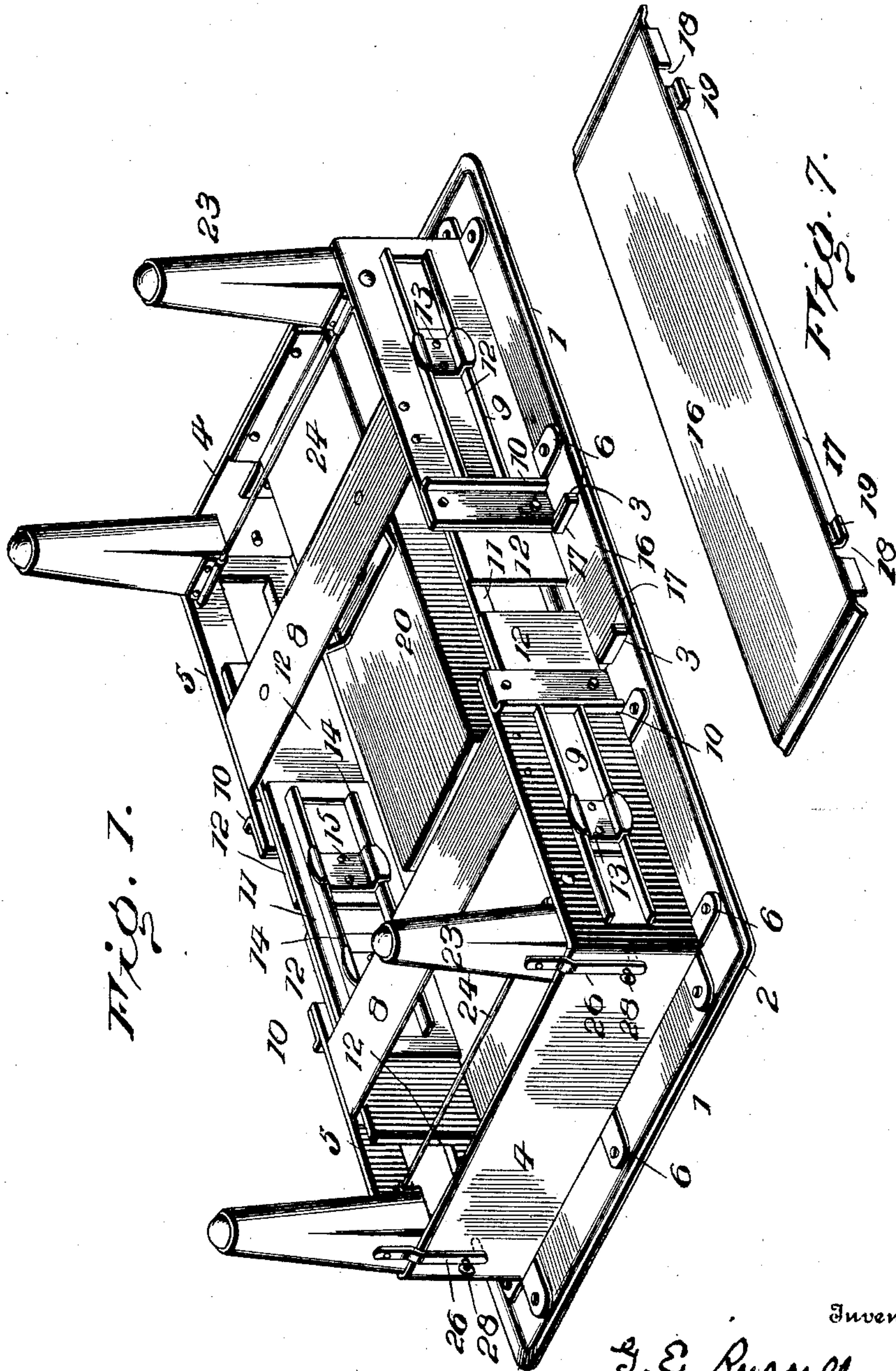
PATENTED AUG. 25, 1903.

G. E. RUSSELL.
EXTENSION TABLE.

APPLICATION FILED JULY 21, 1902.

NO MODEL

3 SHEETS—SHEET 1.



Witnesses

Wm. M. Peck
E. R. Peck

Inventor

G. E. Russell

By

Hubert E. Peck

Attorney

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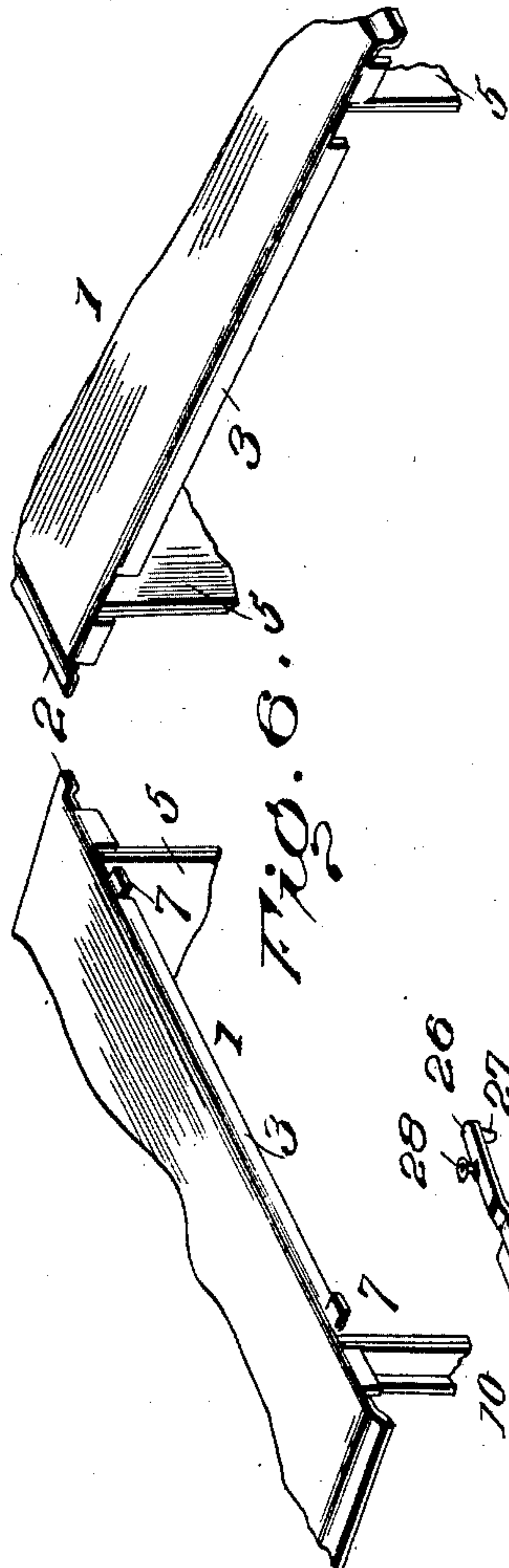


Fig. 1.

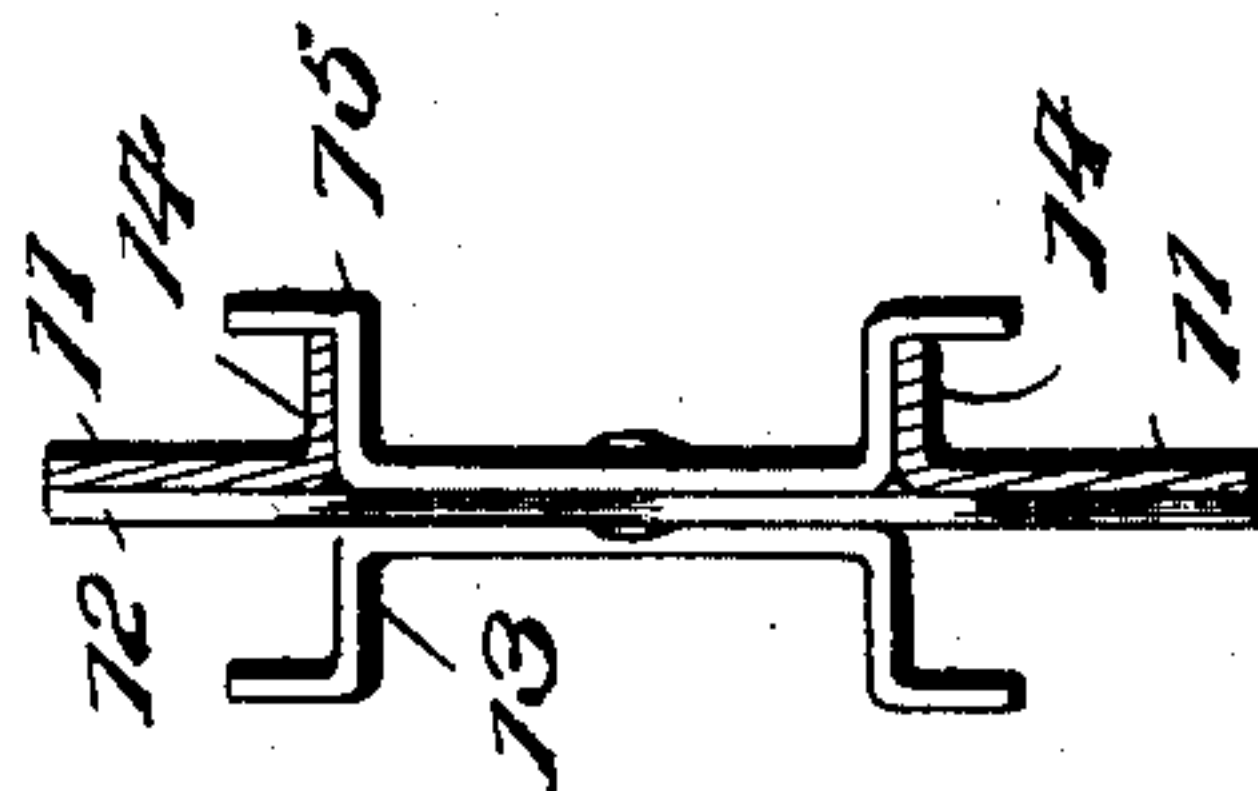


Fig. 8.

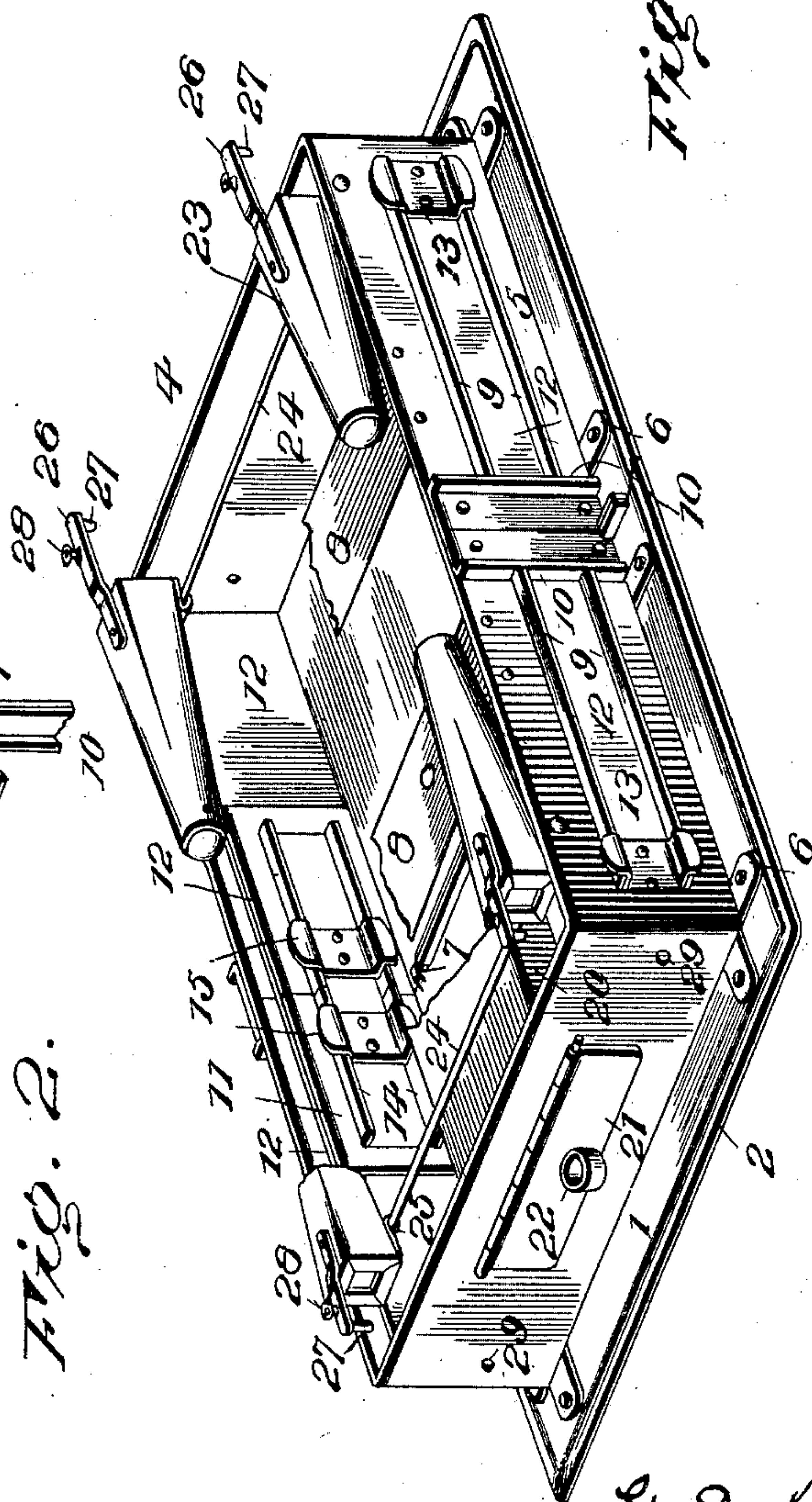


Fig. 2.

Witnesses

John J. Moore
E. R. Peck

Inventor

G. E. Russell
Hubert E. Peck
Attorney

No. 737,492.

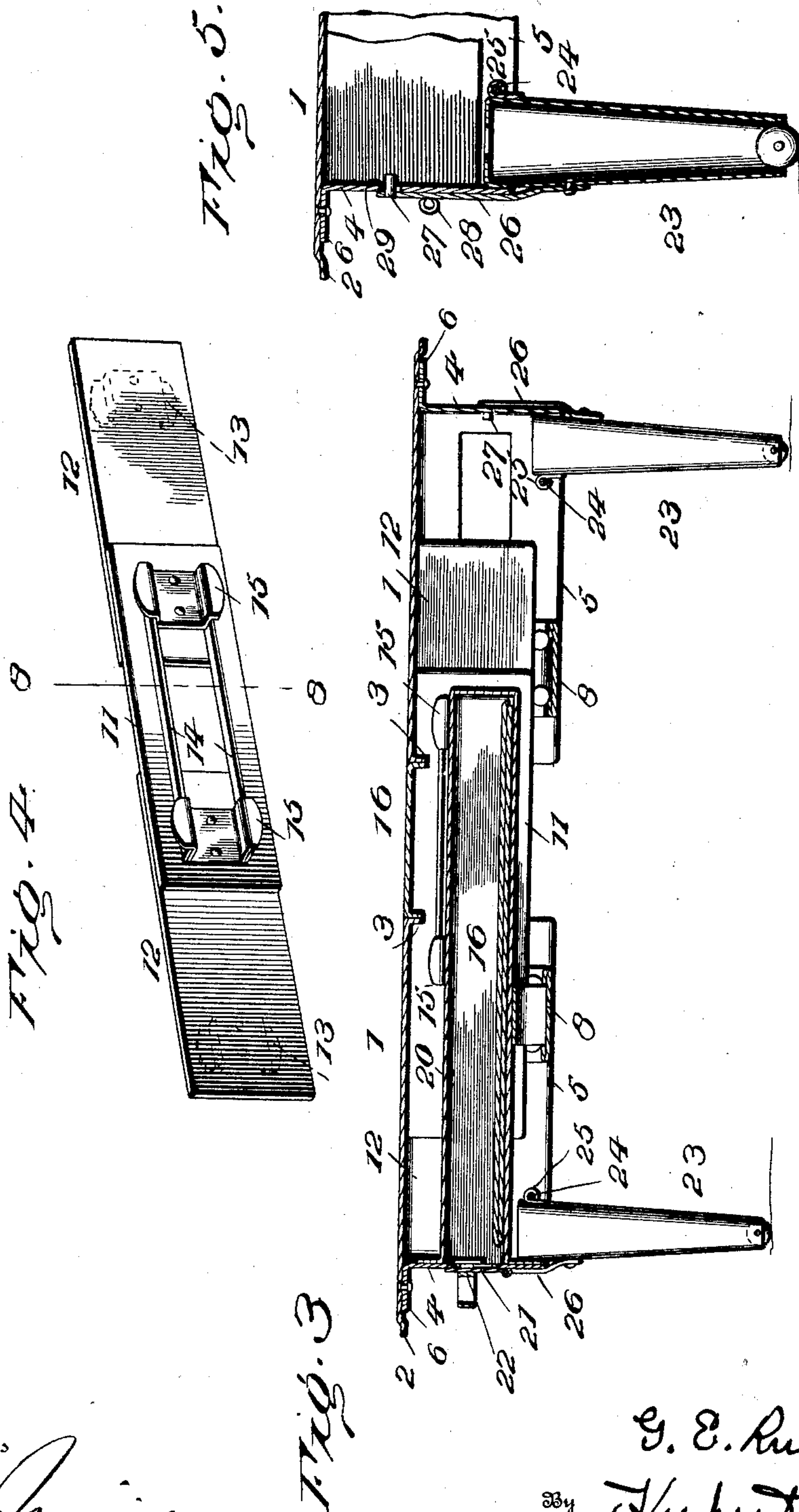
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3 SHEETS—SHEET 3.



Witnesses

J. M. Mire
E. R. Peck

Inventor

G. E. Russell

By

Hubert E. Peck

Attorney

UNITED STATES PATENT OFFICE.

GEORGE E. RUSSELL, OF LEAVENWORTH, KANSAS, ASSIGNOR OF ONE-FOURTH TO A. L. KUNZ, OF LEAVENWORTH, KANSAS.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 737,492, dated August 25, 1903.

Application filed July 21, 1902. Serial No. 116,469. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. RUSSELL, a citizen of the United States, residing at Leavenworth, Leavenworth county, Kansas, have
5 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
10 it appertains to make and use the same.

This invention relates to certain improvements in tables, and relates more particularly to improvements in extension dining-tables.

An object of the invention is to provide an
15 exceedingly light-weight and durable knock-down extension-table of sheet metal.

Another object of the invention is to provide an extension dining-table embodying certain improvements in sheet-metal extension sides whereby the table is capable of
20 easy expansion and contraction and the use of fifth-legs or intermediate supports can be avoided.

Another object of the invention is to provide an improved sheet-metal extension dining-table embodying, among other novel features, an improved arrangement of receptacle to receive the table-leaves or cover-sections when not in use.

Another object of the invention is to provide certain improvements in details and constructions of parts whereby a highly efficient and advantageous sheet-metal extension dining-table is produced.

The invention consists in certain novel features in construction and in details, arrangements, and combinations of parts, as more fully and particularly pointed out and set forth hereinafter.

Referring to the accompanying drawings, which show constructions for the purposes of explanation as examples among others within the spirit and scope of my invention, Figure 1 is a perspective view of the table,
45 showing the same reversed and extended with one of the cover or top leaves in place. Fig. 2 is a bottom perspective view of the table with the legs folded down and the table contracted and all leaves removed, parts being
50 broken away to show the inner faces of one of the extension sides or bars. Fig. 3 is a longi-

tudinal sectional view through the table, showing one leaf therein and showing other leaves in the storing-box therefor. Fig. 4 is a detail perspective view of one of the exten-
55 sible side or extension bars detached and extended. Fig. 5 is a detail section showing the manner of hinging and locking each leg. Fig. 6 is a detail perspective showing the formation of the inner meeting edges of the
60 table-top. Fig. 7 is a detail perspective of one of the table-top leaves or removable sections. Fig. 8 is a detail cross-section on the line 8 8, Fig. 4.

1 1 are the two sections or ends of the per-
65 manent table top or cover. Each section is formed by a sheet-metal plate or blank upset, flanged, or dished at its outer edges 2 to stiffen the plate against buckling or bending and to give the table-top the finished appear-
70 ance desired. The inner transverse edges of the two sections are straight and parallel and arranged to close together or abut against each other and throughout their lengths when
75 the table is closed or reduced to its small size. Said inner edges of the fixed sections of the table-top are turned down to form the vertically-disposed flanges 3, forming the
80 abutting or engaging faces of the two sections. Each fixed table-top section is rigidly secured to a depending bottom frame, apron,
or side and end bars. Each bottom frame can be struck up from a single sheet-metal blank to form the end 4 and parallel sides 5 5,
85 or the end and sides can be formed of separate blanks suitably bolted or otherwise secured together at their meeting-end edges. Suitable means are provided for securing the
90 top sections on the said bottom frame. As a means which can be employed for this purpose I show series of ears 6, extending horizontally from the upper edges of said frame,
the top sections being secured to said ears in any suitable manner, as by bolts or rivets
95 passed through the top sections and ears. As at present advised I prefer to employ nuts and bolts for the fastening means, so that the sections can be easily applied and
100 secured to said frames, rendering the parts easily put together or connected.

The inner vertical end edges of the parallel sides 5 are preferably arranged in the

same vertical planes with the inner edges of their respective top sections, and when the table is contracted to its small size the said inner vertical edges of the opposing sides abut against each other. The vertical flanges 3 at the inner edges of the top sections are cut away to receive the top edges of the sides, and one top section is formed with the inward projections 7 7, arranged to project under the opposing top section and beside the sides 5 thereof and through the openings cut in the flange 3 thereof. These projections 7 hold the top sections in proper position and against independent horizontal or vertical play when the table is reduced to its small size.

The sides 5 of each table-section are preferably braced and rigidly secured together near their inner ends by cross-pieces 8, suitably formed of sheet metal and having upturned ends bolted or otherwise secured to the sides 5. These cross-pieces preferably extend between the lower edges of the sides 5, usually being located in the horizontal plane, including the lower edges of sides 5 and end pieces 4. The sides 5 of the two end table-sections are connected together by suitable longitudinally-extensible sliding continuations or connections. For instance, I show each rigid side plate 5 longitudinally slotted, the slots being closed at the ends. Each side 5 is formed with parallel horizontal outturned flanges 9 9, forming tracks or guideways along and throughout the lengths of the longitudinal edges of the slot. The inner end of each slot is closed by and the inner ends of the flanges 9 9 abut against the end flanged stop-piece 10, secured vertically at the inner end of each side 5.

The two parallel extensible continuations at opposite sides of the table and between each pair of sides 5 are preferably similar in construction, and each can be composed of several parallel sheet-metal plates overlapping each other and adapted to slide longitudinally on each other as the table end sections are moved together or apart. In the specific example illustrated each extensible continuation or connection consists of three sheet-metal plates—viz., the central oblong longitudinally-slotted plate 11 and the two similar oblong sliding end plates 12 12. The end plates 12 overlap the sides 5 5 and are arranged longitudinally at the inner faces thereof, and each end plate is in length approximately equal to the length of the side plate 5, to which it is confined, and the upper edges of the plates 5, 11, and 12 are all arranged in approximately the same horizontal plane. The outer end of each sliding end plate 12 is confined to a fixed side plate 5 to support said sliding plate against independent vertical and lateral play. I show each sliding plate 12 confined to its fixed side 5 by a clip 13, arranged transversely at the outer face of side 5 and across the slot thereof with its ends fitted to the flanges 9 9 to slide longitudinally thereon. The center of the clip is

dished inwardly through the slot to fit against the flat outer side of sliding plate 12 and is suitably secured rigidly to the outer end portion of said sliding plate. I usually employ small removable threaded bolts provided with nuts for securing the clips 13 to the plates 12, so that these parts can be readily coupled together or separated if need be. The plates 12 can slide longitudinally of the sides 5, the sliding movement being limited only by the lengths of the longitudinal slots in the sides 5. The stops 10 limit the movement of the plates 12 beyond the inner ends of sides 5, while the opposite end walls of the slots can limit the opposite movement of plates 12 when the table is contracted to its small size.

Each side of the table is provided with two rigid side plates 5 and two sliding plates 12, and the otherwise free ends of the two plates 12 are loosely connected by the intermediate or central plate 11, parallel with and overlapping the inner faces of the two plates 12. Said intermediate or connecting plate 11 is longitudinally slotted, the ends of the slot being closed, and the plate is formed along its inner face with the parallel intumed flanges 14 throughout the lengths of the longitudinal side walls of the slot. The inner end of each plate 12 is confined to the connecting-plate 11 to slide longitudinally thereof by means rigid with plates 12 and projecting through the slot in the connecting-plate and overlapping and sliding on said flanges 14. For instance, clips 15, similar in construction to clips 13, can be employed for this purpose. Each clip 15 is arranged transversely at the inner face of the connecting-plate 11 and is rigidly yet preferably removably bolted to the end of its plate 12. When the table is contracted to its small size with the fixed top sections abutting, the inner ends of fixed side plates 5 abut, the inner ends of sliding plates 12 abut at the central portions of the connecting-plates 11, and the plates 12 and 11 are nested together at the inner faces of the sides 5. As the table end sections are separated, the plates 12 move toward the inner ends of the fixed side plates 5 and the plates 12 and 11 bridge the break between the separated side plates 5. When the table end sections are separated to the limit, the clips 13 will be located at the inner ends of the fixed side plates 5 and the clips 15, connecting each pair of plates 12 to a plate 11, will be located at the opposite ends of the plate 11, which will bridge the space between its pair of plates 12. The flanges forming the guide or slide ways for the clips 13 15 not only stiffen and brace the plates, but brace and stiffen the parts to sustain weight of the leaves and articles thereon and hold the parts against lateral and vertical play. By employing the clips and removable securing devices the table can be easily knocked down and can also be shipped or moved knocked down and easily put together again.

Each table-leaf 16 is preferably struck up

from a single sheet-metal blank with its end edges conforming in shape to the outer edges of the fixed table-top sections. Each leaf is provided with the depending flanges 17 throughout the lengths of its longitudinal side edges to coincide with the corresponding flanges 3 of the fixed top sections and with the corresponding flanges of adjacent leaves. The flanges 17 are notched or cut away at 18 to receive the extensible frame sides, whereby each leaf throughout its full width will rest directly on the upper edges of the extensible frame sides which pass through said notches. Along one longitudinal edge each leaf has portions of its flange at notches 18 turned outwardly and horizontally to form the projections 19, corresponding to projections 7, hereinbefore referred to. The notches 18 at the opposite edge of the leaf will receive projections 19 of the adjacent leaf or the projections 7 of the fixed top section. The notches and projections lock and hold the leaves in proper position and against endwise or vertical play.

In the specific example illustrated the table is shown provided with a peculiarly-arranged receptacle to receive the leaves not in use to form a part of the table-top.

20 is an oblong box arranged centrally and longitudinally beneath the table-top and carried by one of the table end sections. The open end of the box is rigidly secured to the end plate 4 of said end section and coincides with an opening through said end provided with an exterior swinging lid or cover 21, having fastening means, such as a turn-button 22, for locking the lid in its closed position. The box is arranged above and rigidly secured to the bottom cross-brace of said table end section. The leaves can be easily and conveniently inserted and removed from the box through said end opening, and the box is hidden from view beneath the table and by reason of its location and arrangement tends to brace and strengthen the table.

I preferably provide the table with folding legs 23. I show four legs 23 arranged at the corners of the table.

Strong cross bars or shafts 24 24 are mounted at the two ends of the table in the fixed side plates 5, near the lower edges of the outer ends thereof. The legs 23 are mounted or hinged at the inner edges of their upper ends, (see 25) to swing on said cross-bars, two legs being mounted on each cross-bar at the inner faces of the fixed plates 5, so that the legs can be folded down onto the bottom cross-braces of the table end sections. When in their normal operative vertical positions, the upper end of each leg fits into the inner angle between a side plate 5 and end plate 4, and suitable means are provided to lock the legs in their said vertical positions. For instance, I show each leg provided with a projecting plate-spring 26, secured at its lower end to the leg and extending upwardly longitudinally thereof with its free inwardly-

springing end projecting upwardly beyond the upper end of the leg and provided with a rigid lateral stud 27 and with a handle, 70 finger-hold, or knob 28 at the outer side of its free end. When the legs are in their normal vertical positions, the springs 26 project upwardly at the outer faces of the frame ends 4 and press against the same and maintain their pins or studs 27 in holes or apertures 29 in the frame ends, and thereby firmly hold and lock the legs in position. The legs can be released and folded inwardly against cross-braces 8 by springing the spring-arms 26 outwardly to release the studs or pins thereof from the apertures in the frame ends. When the legs are swung back to their operative upright positions, the studs will automatically project into the said apertures and lock the legs. Each leg is preferably tubular or hollow and formed by longitudinally doubling or bending a sheet-metal blank and suitably uniting the longitudinal edges thereof. Each leg at its lower end is provided with a suitable rolling support, preferably consisting of a ball or spherical body 30 of hard material, such as glass or porcelain, located within the lower end of the hollow leg and projecting a slight distance below the otherwise open lower end thereof to engage and hold the leg from the floor. The ball is formed with a diametrical opening, through which a rigid shaft 31 extends and on which the ball is mounted to turn. The shaft is rigidly secured in the leg.

Tables manufactured from sheet metal are very light in weight, yet are rigid and durable in structure and can be economically manufactured and can be shipped knocked down and easily put together without requiring an expert mechanic. Such tables are not affected by climatic conditions and possess many other material advantages over the ordinary wooden tables.

I do not wish to limit myself to all the specific constructions shown, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

What I claim is—

1. In combination, in an extension-table, fixed top sections having depending flanges along their inner edges formed with notches, portions of one of said flanges turned out to form lips, side bars depending from said sections, extensible leaf-supporting members between and having sliding connection with said side bars, and a removable leaf formed with longitudinal depending flanges at its side edges having notches, portions of one of said flanges being turned outward to form lips, for the purpose described.

2. An extension-table having fixed top sections, side bars supporting the top sections, extensible leaf-supporting members between and having sliding connection with the side bars, and removable leaves adapted to rest on the extensible members, each of said leaves being formed with depending flanges along

its longitudinal edges, notches formed in said flanges to receive the edges of the extensible members, a part of the flanges on one edge of each leaf being turned outward to form lips adapted to enter the member-receiving notch in the contiguous edge of the adjoining leaf.

3. An extension-table having side bars formed with longitudinal slots and each provided with laterally-projecting flanges at top and bottom edges of the slot, extensible leaf-supporting members between the side bars, comprising a central plate and end plates overlapping said central plate, and clips secured to the end plates and projecting through the slots in the side bars, said clips being formed to engage and be guided by the flanges on the side bars.

4. An extension-table having side bars formed with longitudinal slots and each provided with laterally-projecting flanges at top and bottom edges of the slot, extensible leaf-supporting members between the side bars, comprising a central plate and end plates overlapping said central plate, and clips secured to the end plates and projecting through the slots in the side bars, said clips being formed with horizontally-projecting portions to bear against the surfaces of the side bar flanges and with turned ends to bear against the free edges of the flanges.

5. An extensible table having side bars formed with longitudinal slots and each provided with laterally-projecting flanges at top and bottom edges of the slot, a stop-piece secured to each side bar and formed with a vertically-arranged flange designed to form an end wall of the slot in said side bar, leaf-supporting members between the side bars comprising a central plate and end plates having sliding connection with the side bars and with the central plate, and clips secured to said end plates and adapted to slidably secure same to the side bars, said clips engaging the flanges to prevent disconnection of the parts.

6. In combination, in an extension-table,

end sections having side bars, and extensible leaf-supporting members between and having sliding connection with said side bars and each comprising a central plate having a longitudinal slot and horizontal flanges along the longitudinal edges of the slot, end plates overlapping the central plate, and clips secured to the end plates and projecting through the slot in the central plate and engaging and sliding on said flanges, substantially as described.

7. In combination, in an extension-table, end sections having side bars longitudinally slotted and formed with horizontal longitudinal flanges, extensible leaf-supporting members between and having sliding connection with said side bars, and clips arranged beside said bars and sliding on and guided by the outer edges of said flanges, said clips being dished inwardly through said slots and secured to said leaf-supporting members, substantially as described.

8. In an extension-table, in combination, the end sections, each comprising a depending frame formed of an end piece and two sides, extensible side-leaf-supporting members between said sides and arranged at the inner faces thereof, horizontal cross-shafts below the lower edges of said members and between said sides of the end sections, vertically-swinging legs below said members, whereby the said members can move above the legs without interference therewith, said legs at their inner sides confined on the cross-shafts and arranged to swing to the vertical position with their upper ends fitting between said shafts and the side and end pieces, and means to detachably lock the legs in their vertical positions.

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

GEORGE E. RUSSELL.

Witnesses:

E. A. BOORMAN,
J. W. GROVES.