

June 19, 1923.

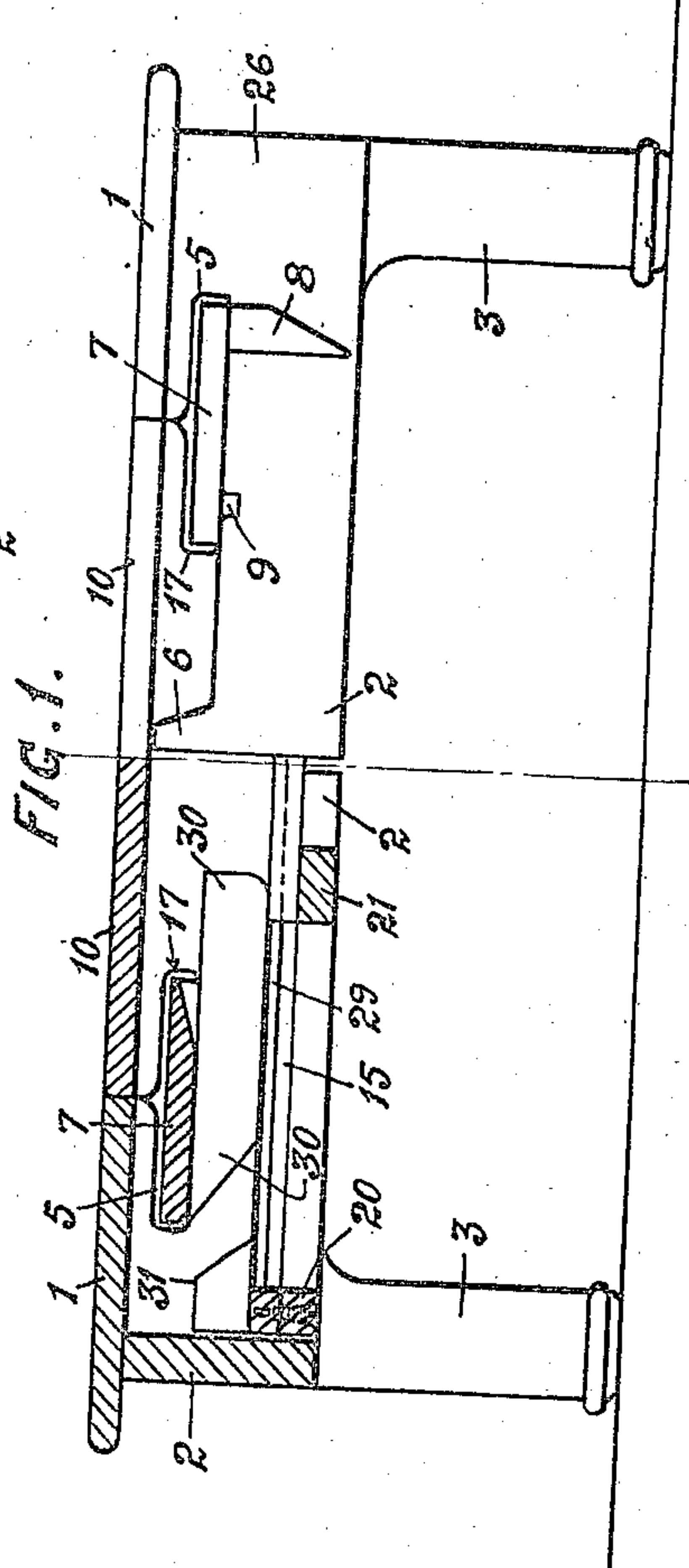
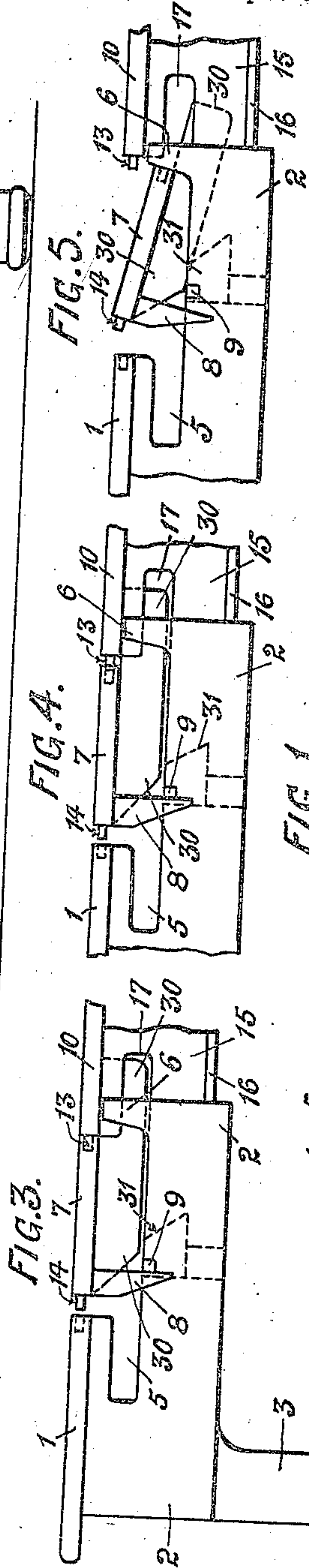
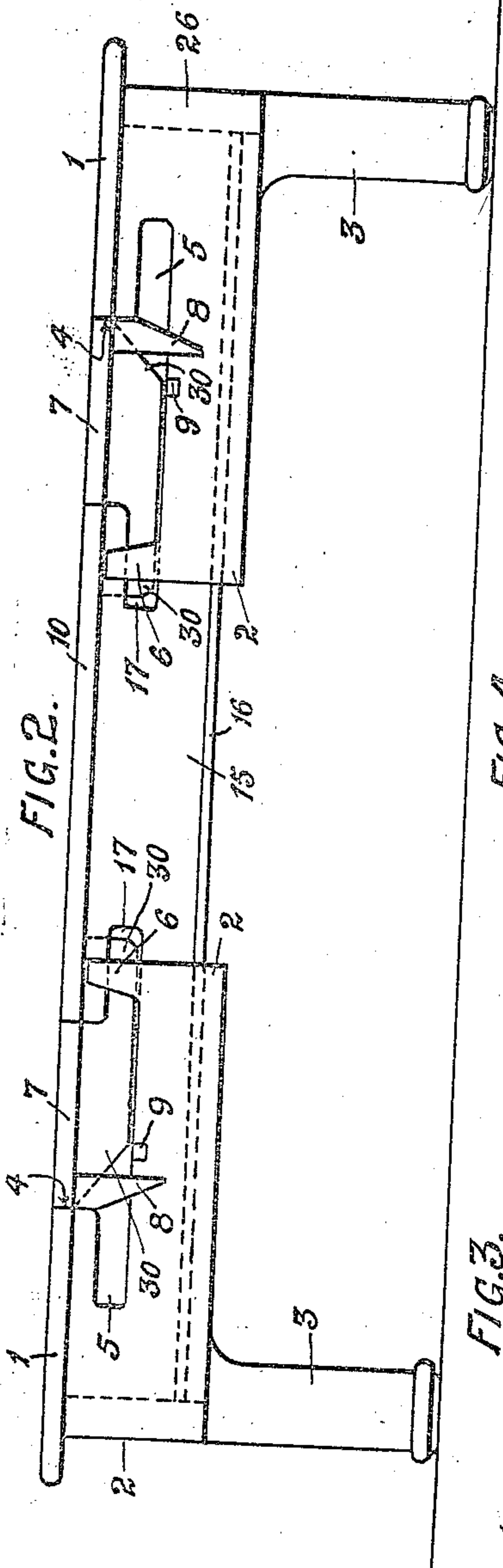
I. COOKLIN

1,459,086

DINING TABLE

Filed Sept. 1, 1921

3 Sheets-Sheet 1



Inventor:
I. Cooklin

By *[Signature]*
Atty

June 19, 1923.

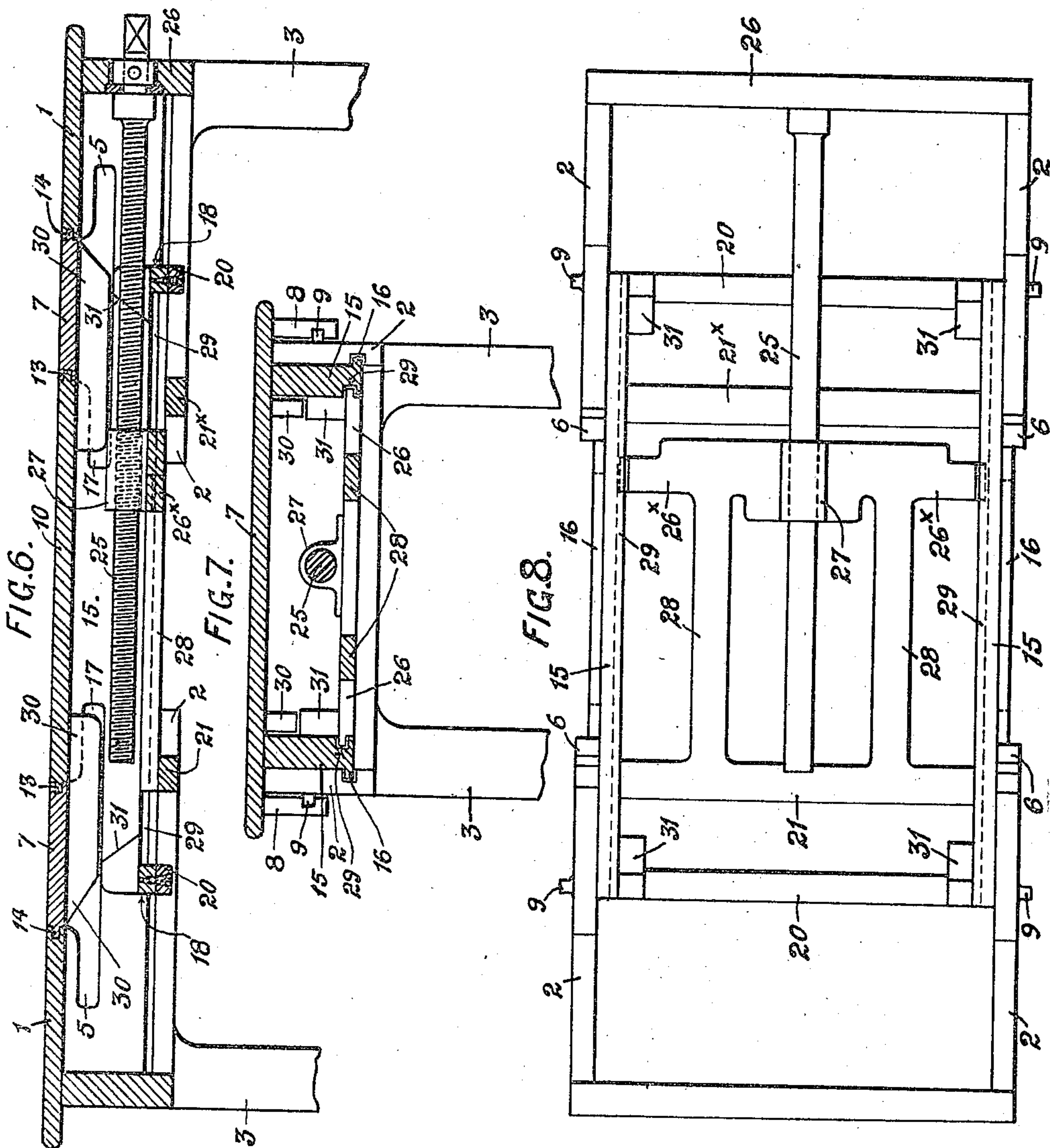
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Inventor:
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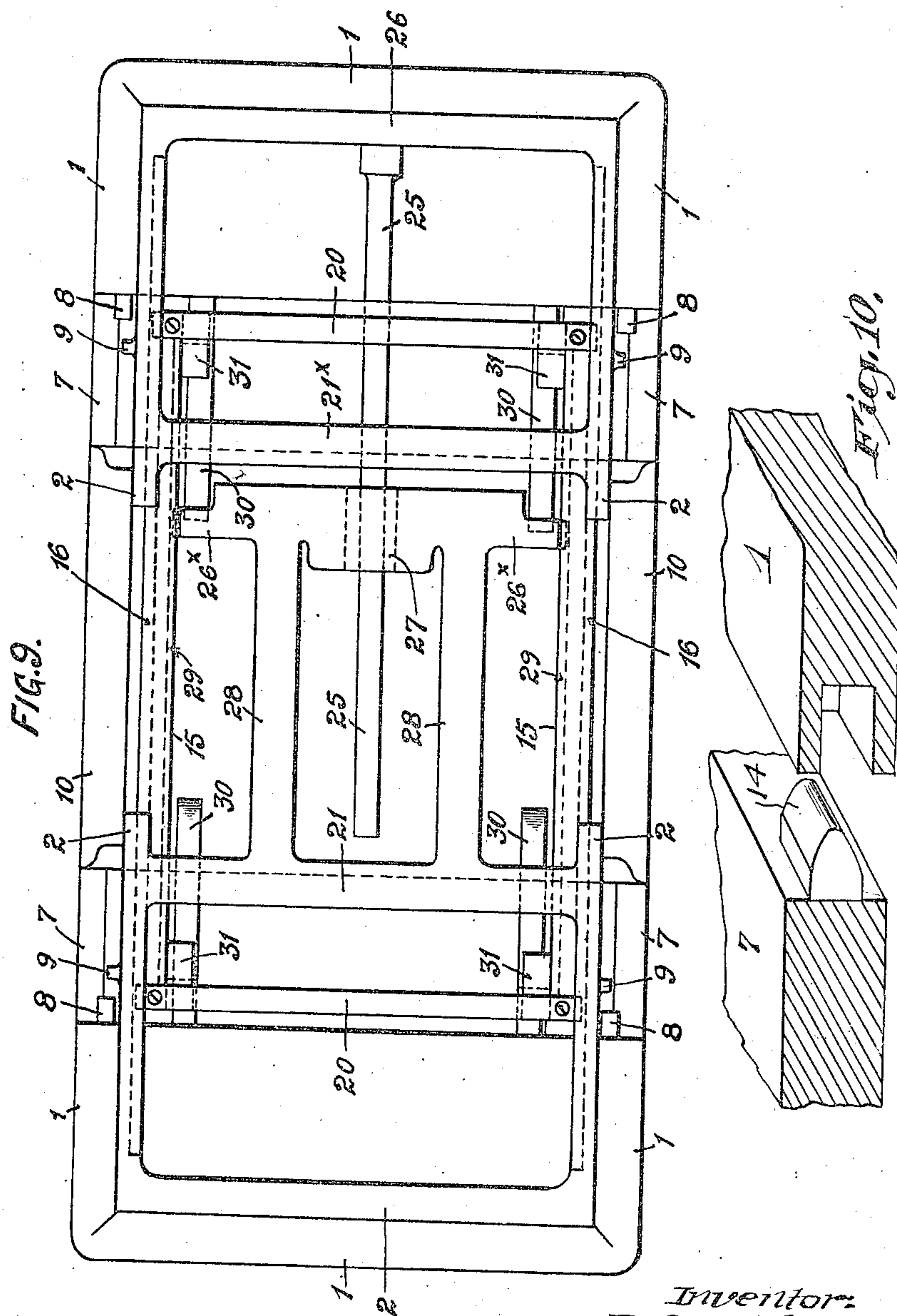
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DINING TABLE

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3 Sheets-Sheet 3



Inventor:
I. Cooklin

by *[Signature]*

Atty

UNITED STATES PATENT OFFICE.

ISAAC COOKLIN, OF LIVERPOOL, ENGLAND.

DINING TABLE.

Application filed September 1, 1921. Serial No. 497,675.

(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT. L., 1313.)

To all whom it may concern:

Be it known that I, ISAAC COOKLIN, a subject of the King of England, and residing at Liverpool, in the county of Lancaster, England, have invented Improvements in Dining Tables (for which I have filed an application in England, January 28, 1915, Patent No. 1374), of which the following is a specification.

10 This invention has reference to tables having a removable leaf or leaves by which the table may be extended or shortened at will, as required, and it relates more particularly to such tables wherein, upon the operation of same by screw or equivalent gear, the leaf or leaves can be introduced in position in the table top, and removed from same, and the table shortened by the mere operation of the screw or like gear, i. e. without hand manipulations. In a table of the above kind according to this invention, the edges of the leaf or leaves and the edges of the permanent table top portions are provided with dowels or like registering and engaging devices; and when a leaf is to be removed, the table is actuated say by its screw or equivalent operating gear, one end of the table is disengaged from and moved away from the leaf, and then, by a further movement by the gear, a part of the table acts on a part on or of the leaf, and the other edge of the leaf will be disengaged and freed from the table, and one edge of the leaf will fall down into cut away parts of the table frames or slides below, the other edge being held up by pivot cam blocks or pieces on one of the slides or frames of the table, so that the leaf is tilted; and then by closing the table by the operating gear, the pivot cam parts— which are preferably on the inner frames or slides—are moved away from the leaf and so allows the then upper edge to fall and the whole leaf take the horizontal position, and its undersurface rests on the upper edge of the cut away parts of the slides. To insert a leaf from the stowed position, the opposite action takes place.

In the case where there are two leaves,

the two leaves can be moved out of position and stowed under the table top, similarly as that above described, or moved into position; and the table in some cases is so constructed and operated as hereinafter described, that both leaves are automatically operated with the same gear, as above described, and in the drawing hereto annexed, this double leaf table is illustrated, it being adapted to be operated by a single screw gear.

In the drawings, Figure 1 shows the table partly in longitudinal section with the two leaves stowed; Figure 2 shows it in outside elevation with the two leaves inserted; and Figures 3, 4, and 5 show one of the leaves in different positions when operating the table; whilst Figures 6 and 7, are, respectively, a longitudinal sectional elevation with the leaves inserted, and a cross section, and Figure 8 is a plan of the table showing the top removed. Fig. 9 is a bottom plan view of the table.

Figure 10 shows the dowels and level of leaf when disengaged from the table top.

In the table shown, the two end portions 1 are attached to two outside frames or slides 2 to which the legs 3 are fixed, and these side frames 2 project a considerable distance beyond the meeting edge parts 4 of the top 1, as shown; and they are cut away at their upper edges, a portion of which cut away parts extend back in the form of a slot 5, whilst the other cut away portion extends to nearly the end of the side frames, where an upstanding portion 6 is left, and acts upon one edge of the leaf when operating the table, as hereinafter described.

The leaves are designated 7, and they each have at their outer edge a downwardly projecting horn 8, which comes on the outside of the frames 2; while the frames 2 have on their outsides a projecting stud 9, which acts on the horns 8 when opening the table for stowing a leaf, and also in opening the table when bringing a leaf up into position.

When a leaf is being removed and stowed, the studs 9 pull the dowels 13 out of the

table top portion 10, as hereinafter described, after the dowels 14 have been pulled out of the top 1 by the first action of the screw gear.

Both ends of the table so far described are similar.

The central top portion 10 of the table is attached to two inner slides 15, which lie within the slides or frames 2, and have a continuous projecting tongue 16, which fits and slides in corresponding grooves on the inside faces of the outside frames or slides 2 of the table, and these inside frames or slides 15 are cut away at their upper edge, a part 17 of which (which is similar to the slot 5 in Figure 2) is in the form of a slot, beyond the end of which the slide extends, the line 18 representing the end of such slide, so that the leading ends of both the stationary slides or frames 2, and the inner intermediate slides or frames 15 overlap one another in all positions.

The two inner slides are connected together by cross bars 20, and the end outside frames 2 are also connected together by cross bars 21, and 21*, both of which project downwards below the underface of the central slides or frames 15; and these two sets of bars 20, 21 and 21* operate in connection with one another, in some cases, in operating the table, as hereafter explained.

With regard to the actuating gear, this consists of a screw 25 such as is commonly used in tables, mounted and adapted to be turned in the cross frame member 26 meshing and working in a nut 27 on one end of the table; but this screw 25 is not geared directly to the other end of the table, but is connected with and acts on same indirectly through a frame consisting of an end cross member 26*, on which the nut 27 is fixed, and longitudinal members 28, the ends of which are connected to the cross bar 21, which connects together the two outside frames or slides at the outer end of the table. Thus it is to be observed that when the screw 25 is revolved, this screw acts on the outer or opposite end of the table through the nut 27, the frame members 26*, 28 and the cross bar 21; and furthermore the frame can move in relation to the intermediate slides or frames 15 when the table is operated at certain times, as the ends of the cross member 26* fit and slide in grooves 29 in the inside of the side slides or frames 15.

On the inside of the ends of the slides or frames 15, pivot cam blocks 31 with inclined faces are fixed in connection with which bars 30 fixed on the under side of the leaves work, one end of the bars extending beyond the leaf edge for purposes hereinafter described, whilst the other ends are inclined and operate in connection with the inclined ends of the pivot cam blocks 31, and the upper edges of the inclined faces of the cam

blocks act as fulera to the bars 30 and leaf, and as for the purposes hereinafter described.

When a leaf is in position in the table top the bottom edges of the bars 30 are clear of and stand some distance above the upper or pivot face of the pivot cam blocks 31, it being lifted off same in the closing action, after the leaf has been brought in between the parts 1 and 10, by the dowels being wedge shaped or inclined, whereby when they enter the dowel recesses, they act on the upper surface of same and so lift the leaf; but when the leaf is free of the parts 1 and 10 it is free to and does drop.

In removing a leaf, the screw 25 is turned in the backward direction so as to unscrew the screw, the effect of which is that, through the nut 27 and frame 26*, 28, the outer slides 2 and end 1 will be moved away from the outer edge of the further leaf 7, so as to pull the dowels 14 out of the sockets, and these dowels are removed, and not the others 13, owing to the frictional contact of the upper surfaces of the projecting ends of the bars 30 on the under surface of the table portions 10. In this position the bars 30 and leaf will be held horizontal, the lower edges of the bars being above the level of the upper surface of the pivot cam blocks 31. Then upon the further backward turning and extending movement, the studs 9 come against and engage the inside of the horns 8 of the leaf 7, and thereby pull out the dowels 13 from the sockets in the central table portion 10. When this stage is reached, the leaf and dowels clear of both top portions 1 and 10, the leaf can then drop down, and the ends of the parts of the bars 30 beneath the leaf 7 will fall on to the top of the pivot cam blocks 31 on the ends of the inside of the intermediate slides 15, and such blocks then serve as pivots or fulera to the bars 30 and leaf, and the other end of same drops down to the inclined position shown in Figure 5, so that it comes on to and rests on the upper face of the cutaway parts or slots in the outside frames 2 and the inside frame 17. In this position the inner and lower edge of the leaf 7 will be below the top part 10, and will lie near or on the inner faces of the upwardly projecting parts 6 of the side frames 2. Then the screw 25 is screwed up, with the result that the side frames 2 are moved inwards, and the bars 30 slide over the fulera of the cam blocks 31 (which the upper edge of the inclines of these blocks form) so that the edge of the further or inner edge of the leaf 7 keeps against the projections 6, the leaf moving with the frames 2; and then the back ends of the bars 30, which are inclined as shown, leave this fulera of the cam blocks 31, and slide down the inclined faces of the latter, and the leaf as-

sumes the horizontal position below the table top, as seen in Figure 1, and then by a further screwing in of the table, the edges of the parts 1 and 10 come together.

5 To remove the other leaf, if desired, the screw 25 is again reversed, whereupon the dowels 13 at the edges of the end portion 1 and the inner leaf 7, leave one another, and the slides 9 strike the horns 8 of the leaf 7, similarly as above described, and the other
10 dowels between the centre portion 10 and the leaf, are thereby withdrawn, whereupon the leaf falls down into the inclined position as described with reference to the other leaf,
15 and the operations are completed upon the screwing up of the screw 25, so that the parts take the position shown in Figure 1.

If in the act of stowing a leaf from the extended position, the parts at the outer end
20 of the table stick somewhat, then the front end of the table top 1 will leave the inner or front leaf 7, separating the dowels 14 of these parts; and upon a further movement outwards, the studs 9 by striking the horns
25 8, will move the inner dowels 13 from the central portion 10; and they will also bring this leaf 7 to such a position that the bars 30 will be resting on the cam blocks 31 so that the leaf 7 will remain in the horizontal
30 position; and on a still further screwing back of the screw, the bar 21* fixed to the end frames, will strike the bar 20 fixed to the inner central slides or frames 15, as shown in Figure 11 and so will prevent fur-
35 ther movement of the front end of the table in relation to the central part, so that these two parts stay together during the further unscrewing of the screw, whereupon the operation as described, namely, the opening of
40 the table at the far end takes place, and after such leaf has dropped into the lower horizontal position, upon screwing up the table again, this end is closed as before described.

45 In the case of the table being of the single loose type, one end will be similar to the end portions 1, 2, of the table shown and described, whilst the other end will have attached to it, the inside frames or slides.
50 That is to say, the slide 15 in the case shown in the drawings, would in the case of a single loose leaf table, be attached to the legs of one end of the table.

What I claim is:—

55 1. A loose leaf extension table, comprising end frames having the end portions of the table top secured thereto, a slide member carrying the center portion of the table top slidably mounted in the end frames, cam
60 blocks mounted on each end of the slide member, leaves carried by the end frames and slide member adapted to be inserted between the end portions and the center portions of the table top for extending the table,
65 bars having beveled faces carried by the

leaves and adapted for cooperation with the cam blocks, and means for moving the end frames and slide member toward or away from each other, whereby to stow a
70 leaf from between the top sections, the end frames and slide member are moved apart by said means, the leaves dropping so that the bars thereon engage the cam blocks and when said means is operated to bring the
75 end frames together, the bars ride down the cam blocks and the leaves are stowed below the table top.

2. A loose leaf extension table, comprising end frames having the end portions of the table top secured thereto, a slide member
80 carrying the center portion of the table top slidably mounted in the end frames, leaves carried by the end frames and slide member adapted to fit between the end portions and center portion of the table top for extend-
85 ing the top and to fit below the table top in contracted position of the table, cam blocks carried by the slide at each end, bars mounted on the leaves adapted to engage and co-
90 operate with the cam blocks so that the leaves may be guided for stowing below the table top or positioned between parts thereof, horns mounted on the leaves adapted to be engaged by projections on the end frames
95 for moving the leaves so that the bars may be moved relative to the cam blocks for producing the desired movement of the leaves, and means for moving the end frames and
100 slide to cause the leaves to be moved into the desired position thru the operation of the horns, projections, bars, and cam blocks.

3. In a loose leaf extension table, the combination of a plurality of loose leaves, two
105 end frames and top portions fixed thereto, a central top portion, intermediate frames fixed thereto and working in connection with the said end frames and supported one from the other, cut away parts or gaps in the end
110 and intermediate frames adapted to receive and hold the leaves, means connected with a sliding part of the table adapted to act upon parts on the leaves, and to tilt same, and
115 move same to the horizontal position, and means for moving the end portions of the table towards and away from one another.

4. A loose leaf extension table, including end frames, an intermediate frame slidably
120 mounted in said end frames, each of said frames carrying portions of the table top, the intermediate frame having its end portions overlapping the inner ends of the end frames in all positions, a loose leaf carried
125 between each end frame and the intermediate frame, projections formed on the leaves, projections on the inner ends of the end frames and other projections formed on the ends of the intermediate frame, the projections on the leaves extending between the
130 projections on the end and intermediate frames, and operating means for the table

frames adapted to move said frames outwardly and inwardly for bringing the projections on the frames together for engagement with the projections on the leaves to
5 position a leaf in top forming position in one operation and subsequently remove them therefrom in the next operation.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC COOKLIN.

Witnesses:

A. M. HANNAN,

A. M. WATKINS.