July 8, 1952 H. M. MUTH 2,602,716

DROP-LEAF TABLE WITH MECHANICAL ACTUATOR MECHANISM

Filed June 14, 1949 2 SHEETS—SHEET 1

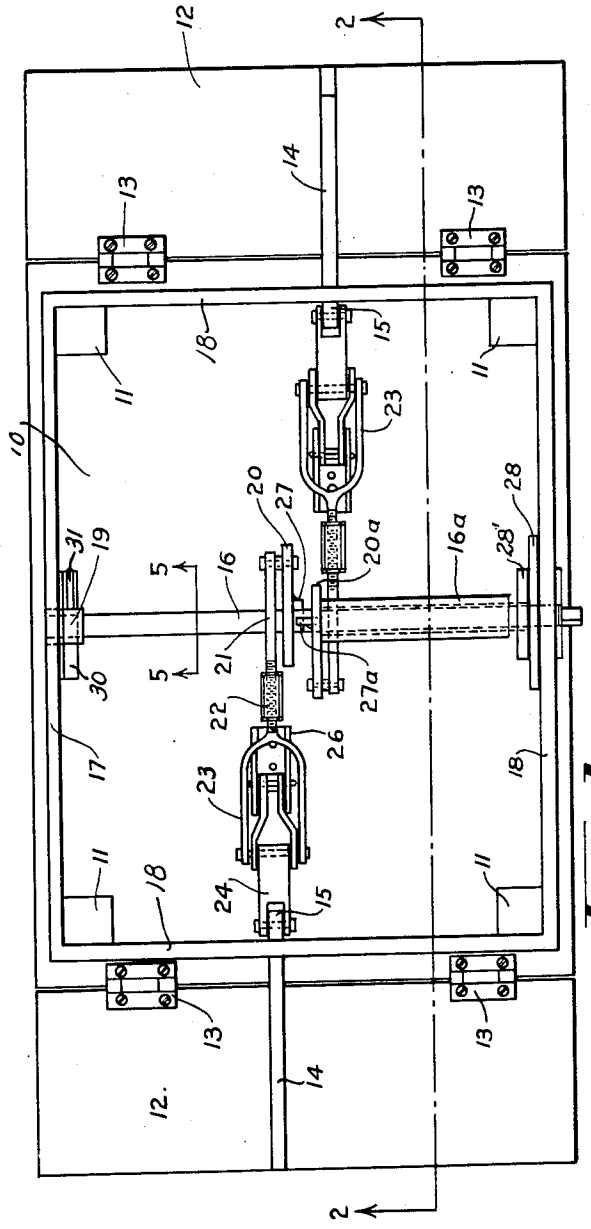


Fig. 1.

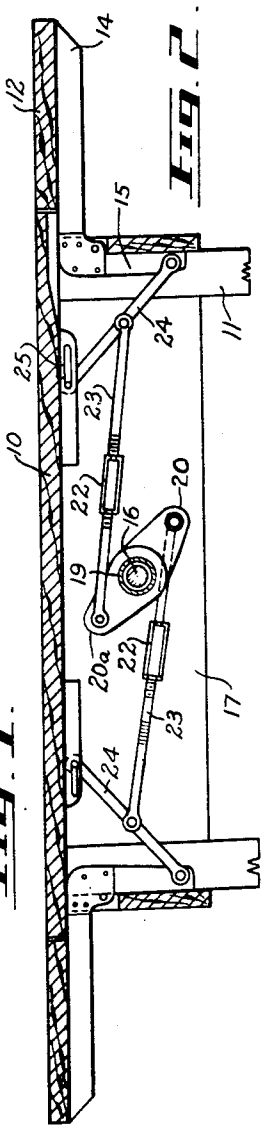


Fig. 2.

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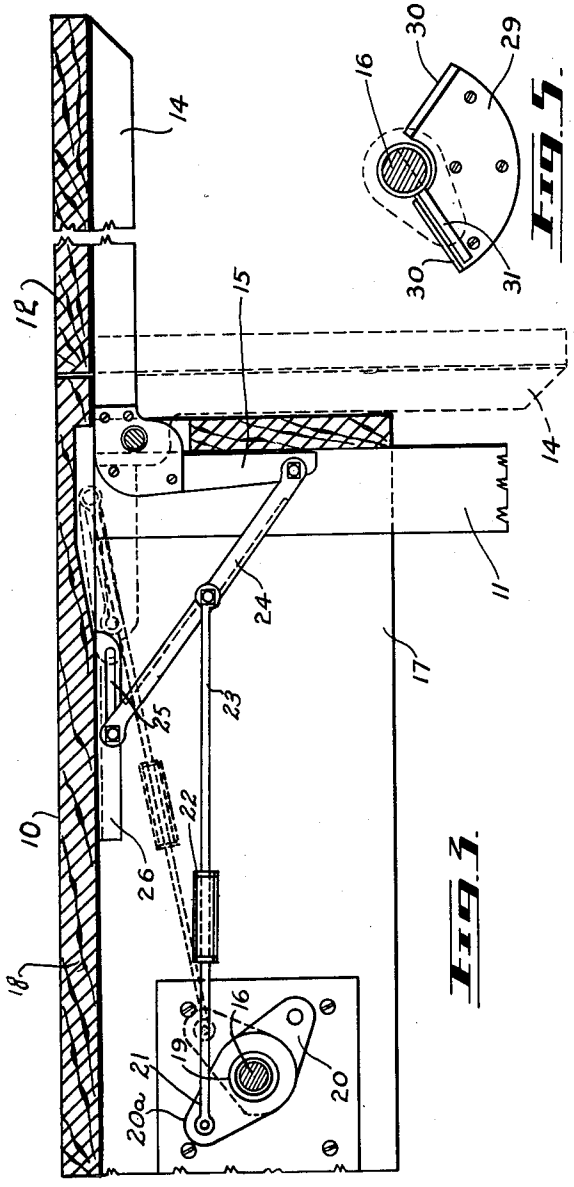


Fig. 1.

Fig. 5.

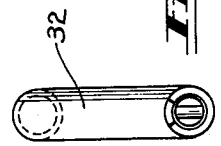


Fig. 7.

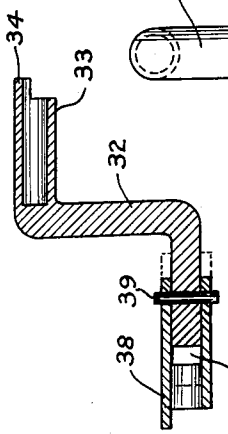


Fig. 6.

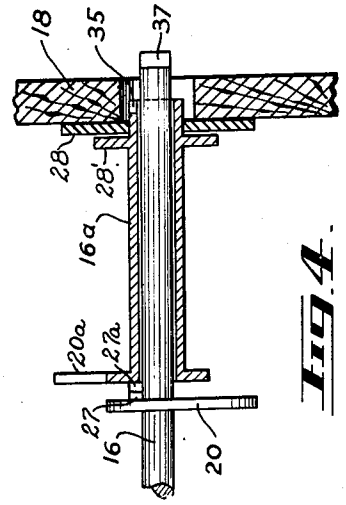


Fig. 4.

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DROP-LEAF TABLE WITH MECHANICAL ACTUATOR MECHANISM

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2 Claims. (Cl. 311—62)

1

This invention relates to articles of furniture and more particularly to a mechanically operated drop leaf table.

Drop leaf tables are not new in the art, but they generally consist of hinged leaves which are held in a horizontal position by means of a sliding support which may inadvertently be pushed back and result in damages to expensive dishes or to stain expensive clothing.

My invention provides mechanical means of raising the leaves of a table and securing same in a raised position in such a manner that they cannot be inadvertently released.

Further I provide mechanical means of raising one or the other leaf or both leaves simultaneously.

The mechanical arrangement is relatively simple in construction, inexpensive to produce, durable and efficient.

Broadly it comprises a tubular shaft having a folding bracket to raise one leaf, a further shaft disposed within the tubular shaft to raise the other leaf, and a crank to operate anyone of the shafts or both shafts simultaneously.

The primary object of the invention is therefore to provide a mechanically operated drop leaf table which is efficient, durable, inexpensive to produce and easy to operate.

A further object is to provide a mechanism which is so constructed as to permit the raising of either one of the leaves or both leaves simultaneously.

With these and other objects in view that may appear while the description proceeds, the invention consists in the novel arrangement of parts as hereinafter more specifically set forth, claimed and shown in the accompanying drawings forming part of this application and in which:

Fig. 1 is an underneath plan view of the table showing the operating mechanism;

Fig. 2 is a sectional view taken along line 2—2 of Figure 1;

Fig. 3 is an enlarged view showing a leaf in a raised and lowered position;

Fig. 4 is a detail of the arrangement of the shafts to operate the raising arms;

Fig. 5 is a detail of the plate to limit the travel of the shafts;

Fig. 6 is a detail of the operating crank and

Fig. 7 is a front elevational view of the crank.

Referring more in detail to the drawings it will be seen the invention comprises a table 10 supported on legs 11, and having dropping leaves 12 at opposite ends secured to the table top by

2

means of hinges 13. The leaves 12 are raised and lowered by means of a mechanical structure. The said structure comprises a pivoted support 14 for the leaf having a portion 15 depending therefrom at right angle thereto and mechanical means to operate the depending portion 15 to swing the support to raise and lower the said leaf 12.

The mechanical means consists of a shaft 16 extending through the frame boards 17 and 18 disposed under the table top 10 and rotatable in a bearing 19 mounted on board 17. To the said shaft is secured a crank 20 to which is pivotally secured an arm 21. The length of the said arm is adjustable by means of a turnbuckle 22. At the other extremity of the arm is a yoke 23 pivotally connected to a folding bracket 24. The said bracket 24 is secured at one extremity to the depending portion 15 of the support 14 and at its other extremity is slidably mounted in a groove 25 on a further bracket 26 secured to the underface of the table top 10.

The above description applies to the mechanical means for operating one of the table leaves. The mechanism for operating the other table leaf is substantially the same except that in lieu of the shaft 16 I provide a tubular shaft 16*a* rotatably mounted on one end of the shaft 16 with one end mounted in a bearing plate 28 attached to the frame member 18 and having a flange 28' adjacent the bearing plate to limit its longitudinal movement. The inner end of the tubular shaft 16*a* has a crank 20*a* formed integral therewith which normally extends in a direction diametrically opposite to that of the crank 20. The crank 20*a* is connected to the table leaf by a mechanism identical to the mechanism employed to connect the crank 20 to the other table leaf. The cranks 20 and 20*a* are disposed in close spaced relation and projecting from the confronting faces of the cranks are lugs 27 and 27*a* adapted upon rotation of the tubular shaft 16*a* to engage each other so that both the shafts 16*a* and 16 will be rotated simultaneously, thus raising both leaves of the table together. Rotation of shaft 16 is limited by a plate 29 secured to the frame board 17 having outwardly extending end walls 30 which are contacted by a pin 31 secured to the shaft.

To operate the shafts 16 and 16*a* I provide a crank 32 formed at one end with a hollow shank 33 and a lip 34 to engage a recess 35 formed in tubular shaft 16*a*.

The other extremity of the crank is formed with a recess 36 to engage the lip 37 on the extremity

of shaft 16 while a sleeve 38 is slidably mounted over said extremity of the crank and held thereon by means of a pin 39. When the sleeve is extended as shown in Fig. 6, both shafts will be operated simultaneously while if the sleeve is pushed in as indicated by the dotted lines of Fig. 6 only shaft 16 will be operated. To operate shaft 16*a* the extremity 33 of the crank is used and since there is no inner recess to engage lip 37 only shaft 16*a* will be operated.

It is believed that the construction and advantages of the structure shown may be apparent from the foregoing paragraphs taken in conjunction with the accompanying drawings without further detailed description.

While the preferred embodiment of the invention has been disclosed it is understood that minor changes in the details of construction, combination and arrangement of co-operating parts may be resorted to within the scope of what is claimed without departing from the spirit of the invention.

I claim:

1. A drop leaf table comprising a table top, leaves hingedly secured to the ends of said table top for downward swinging movement, angular supports pivotally mounted beneath the table top having one end secured to said leaves, foldable brackets having one end connected to the free end of said supports and their opposite ends to said table top, a rotatable shaft transversely mounted beneath said table top, a tubular shaft rotatably mounted on said first-mentioned shaft, cranks attached to said shafts extending in opposite directions therefrom, rods having one end

pivotally connected to said cranks and their opposite ends to said foldable brackets, and means interconnecting said shafts for rotation together upon rotation of said shafts.

2. A drop leaf table comprising a table top, leaves hingedly secured to the ends of said table top for downward swinging movement, foldable brackets connected to said table top and said leaves operable to swing said leaves to a raised or lowered position, a rotatable shaft mounted transversely beneath said table top, a tubular shaft rotatably mounted on said first-mentioned shaft, cranks carried by said shafts, rods connecting said cranks with said foldable brackets, and means interconnecting said shafts for movement in unison upon rotation of said shafts.

HENRY M. MUTH.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,580,289	Cummings	Apr. 13, 1926
1,781,602	Rygl	Nov. 11, 1930
1,902,175	Lurie	Mar. 21, 1933
1,980,450	Symmonds	Nov. 13, 1934
2,028,724	Ritchie	Jan. 21, 1936
2,190,498	Williams	Feb. 13, 1940
2,329,293	Predit	Sept. 14, 1943

FOREIGN PATENTS

Number	Country	Date
427,991	Great Britain	May 3, 1935