April 8, 1958 B. HOPPE 2,829,939

CONVERTIBLE DESK

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Fig. 1.

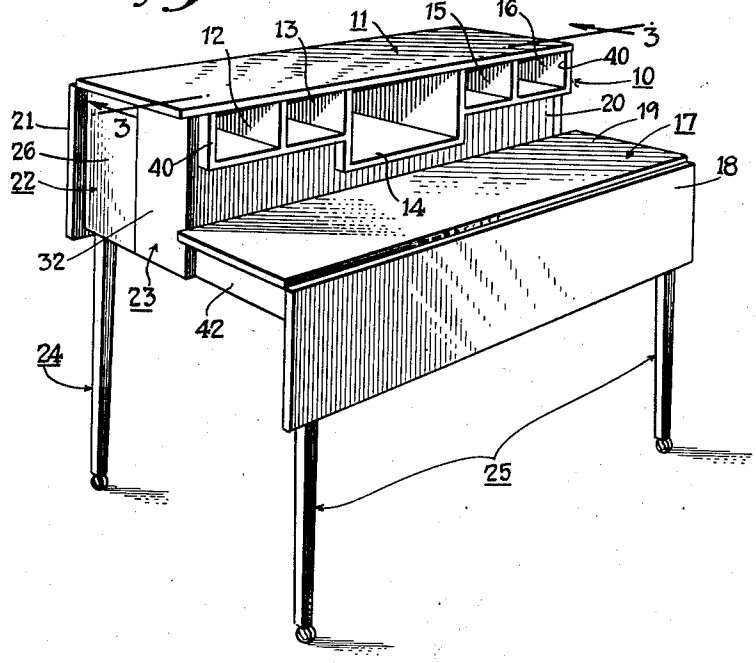
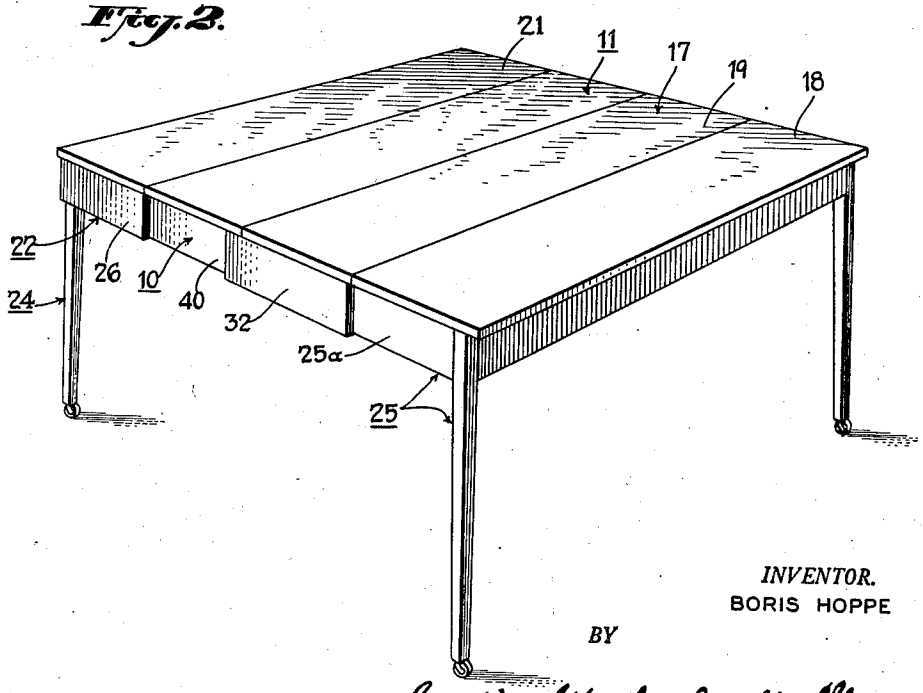


Fig. 2.



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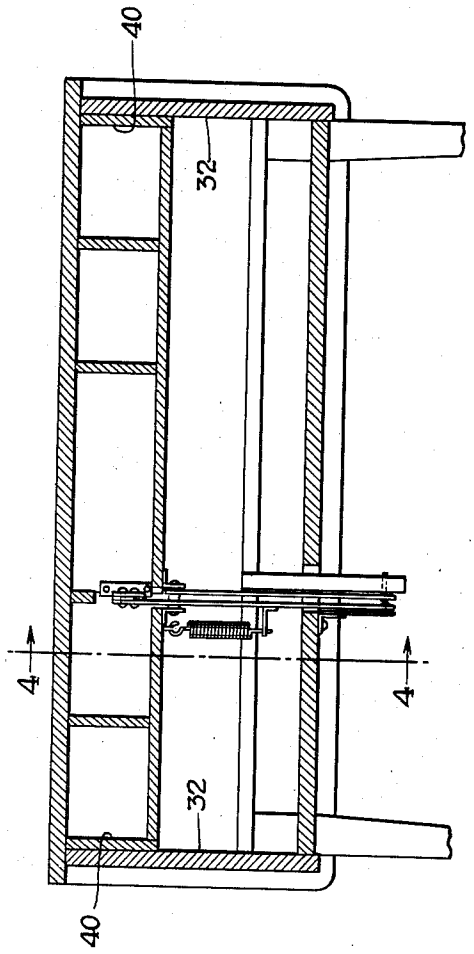


Fig. 3.

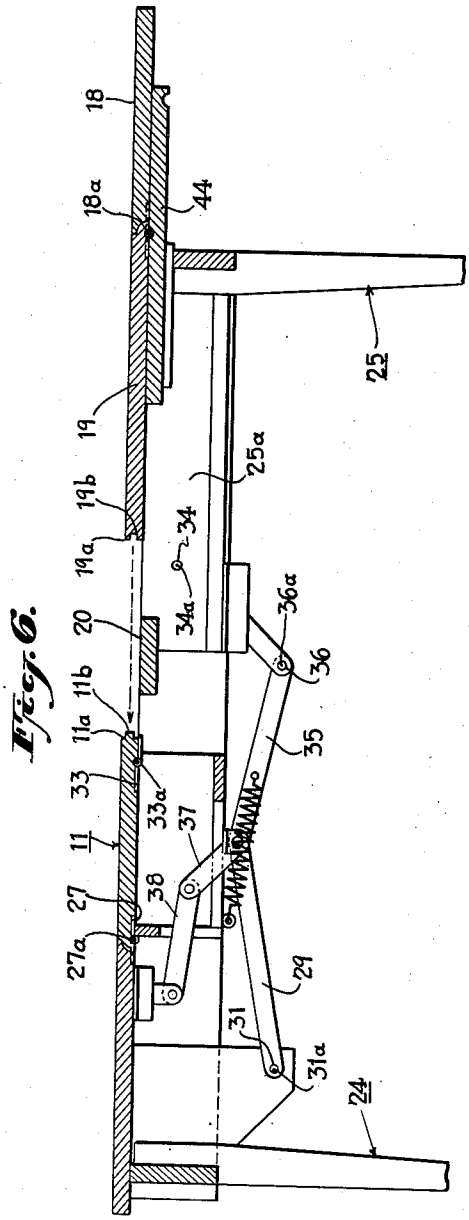


Fig. 6.

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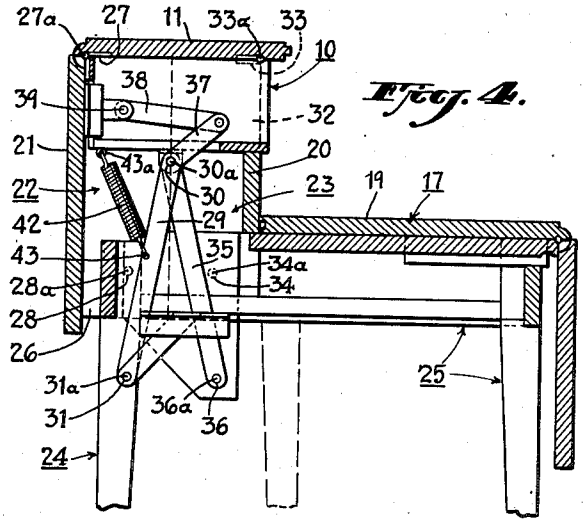


Fig. 4.

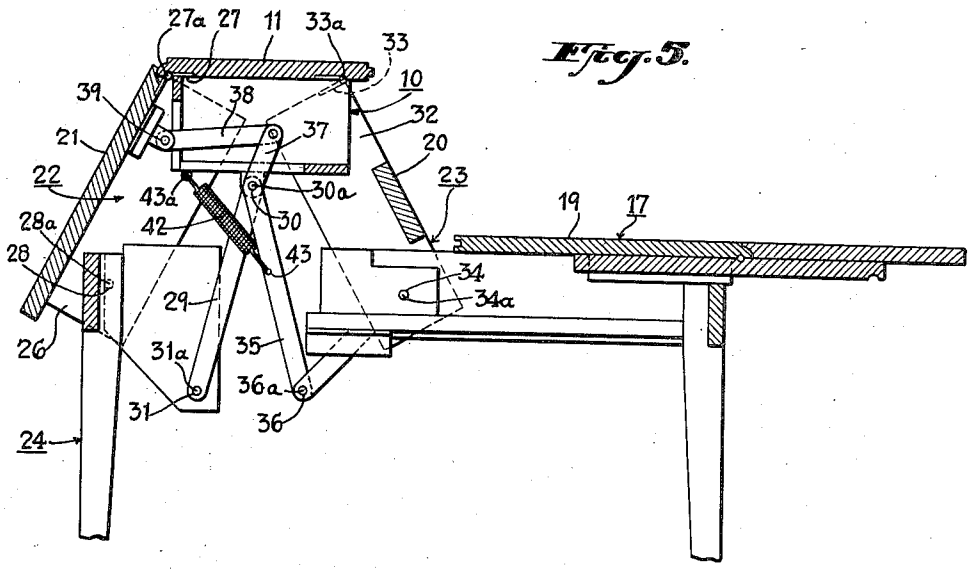


Fig. 5.

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Fig. 7.

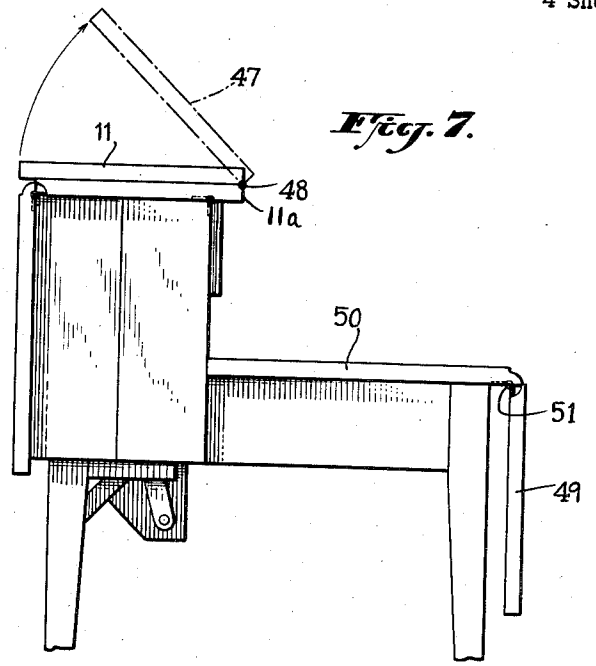
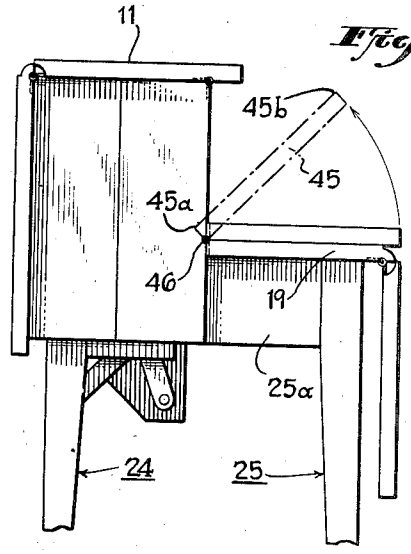


Fig. 8.



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United States Patent Office 2,829,939 Patented Apr. 8, 1958

2,829,939

CONVERTIBLE DESK

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Application March 19, 1956, Serial No. 572,280

16 Claims. (Cl. 312—241)

This invention relates to a multi-level cabinet-desk structure, and more particularly to such a structure which is convertible into a single level table.

One of the objects of the present invention is to provide a multi-level cabinet-desk construction which is of compact overall dimension, which occupies a relatively small amount of space, and which can be converted easily into a single level table.

A further object is to provide a multi-level cabinet-desk structure of this type having a plurality of desk compartments or pigeon holes which are readily accessible when the structure is in one operating position adapted for use as a cabinet-desk, such compartments or pigeon holes automatically disappearing as a result of the conversion of the structure into a single level table, this occurring without disturbing the contents of the compartments.

The invention in one aspect thereof comprises a convertible cabinet-desk and table construction which has one top portion adjustable for use at either a lower or an upper elevation while being maintained horizontal, and having another top portion which remains at such lower elevation. Two lower leg structures are provided which are spaced apart when the first-mentioned top portion is adjusted to such upper elevation and further spaced apart when such latter top portion is at the lower elevation. The first-mentioned top portion comprises the top of a cabinet part which may be subdivided into a plurality of desk compartments or pigeon holes, and the other top portion comprises a desk top part which, as aforementioned, remains horizontal at the lower elevation and is adapted for becoming a writing area when the cabinet top part is in the upper elevation. One of said leg structures mounts the desk top part. Articulated link-like connections are provided between the upper portions of each of such leg structures and the cabinet top part, such connection for one of such leg structures comprising part of a drop leaf structure which is hingedly connected to an edge of said cabinet top part and provides an upward continuation of its leg structure when such top part is at the upper elevation, the drop leaf structure being pivotally connected to the upper end of such lower leg structure for angular movement about an axis which is fixed with respect to such leg structure. Such connection for the other of said lower leg structures includes a drop arm structure which is hingedly connected to an opposite edge of said cabinet top part and which has a panel secured thereto which is adapted for moving beneath said cabinet part and extending from the lower surface thereof down to the desk top part when the cabinet part is in the upper elevation, it being understood that when such cabinet part is in the upper elevation, the compartments thereof are positioned above the desk top part and are easily accessible. Additional links are provided for operatively connecting the cabinet top part with the leg structures. All of such connections are so proportioned that the top of the cabinet part and the desk part are retained horizontal at all times and

downward and upward angular movement of such drop structures causes the leg structures to move through equal distances toward and away from each other.

The above and other novel features of the invention will appear from the following detailed description when considered in conjunction with the accompanying drawings. It is to be understood, however, that the drawings are for purposes of illustration only and are not intended as a definition of the limits of the invention, reference being had to the appended claims for this latter purpose.

In the drawings:

Fig. 1 is a perspective view of a structure embodying one form of the present invention, such structure being in one operating position wherein it is adapted for use as a cabinet-desk;

Fig. 2 is a perspective view of the construction shown in Fig. 1 but with the parts converted to a single level table;

Fig. 3 is a sectional view taken substantially along line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken substantially along line 4—4 of Fig. 3 with the parts thereof in one operating position, namely, with the structure adapted for use as a cabinet desk;

Fig. 5 is a sectional view of the parts shown in Fig. 4 but in an intermediate operating position;

Fig. 6 is a sectional view in side elevation of the parts shown in Fig. 5 with the top surfaces of the several table parts at a single level;

Fig. 7 is a side elevation showing a modification of the form shown in Fig. 4; and

Fig. 8 is a side elevation showing a second modification of the parts shown in Fig. 4.

The term "cabinet" as employed herein refers to a piece of furniture consisting of a chest-like or box-like structure which, if desired, may have a plurality of compartments, such as "pigeon hole compartments," which in turn may be provided with drawers therein and/or doors covering same. And, of course, the term "cabinet-desk" refers to a piece of furniture which may be employed in the usual manner of a desk and which is also provided with a cabinet portion.

Referring to the drawings, with particular reference to Figs. 1 and 2, the present invention is constituted by a cabinet part **10** having a top part or top surface **11**. The cabinet part is subdivided into a plurality of small compartments, such as **12** and **13**, on one side of a larger and central compartment **14**, there being on the other side of the latter an additional two compartments **15** and **16** which preferably are similar to their counterparts **12** and **13** aforementioned.

The cabinet part **10** is adjustable for use either at a lower or an upper elevation, it being shown in its upper elevation in Fig. 1, and in its lower elevation in Fig. 2. When in its lower elevation, the cabinet part **10** in effect disappears and is concealed beneath the top surfaces of the convertible desk-table construction.

The cabinet part **10** is connected, in a manner to be set forth more fully hereinafter, with a desk top part **17** which remains horizontal at the aforementioned lower elevation at all times and is adapted for becoming a writing area when the cabinet part is in the upper elevation. The desk top part **17** may have hingedly secured thereto a desk drop leaf **18** which, as is well shown in Fig. 2, can be raised to a position coplanar with a leaf **19** comprising the horizontal portion of the desk top part **17**.

It will be noted with respect to the cabinet part **10** that the lowermost surfaces thereof, in the position shown in Fig. 1, are above the desk top part **11**, the cabinet part then being in the upper elevation. A panel **20** extends between such lowermost surface of the cabinet part **10** down to the level of leaf **19** of the desk top part **17**

thereby filling the gap therebetween when the parts are in the position shown in Fig. 1. The panel **20** is part of a drop panel structure which will be more fully described hereinafter.

Although the lowermost surfaces of the cabinet part **10** are above the desk top part **17** when in the upper elevation (Fig. 1), the invention is not limited thereto, it being possible for one or more of the compartments to extend down to the level of the desk top part when the cabinet is in the upper elevation.

On the rear side of the cabinet-desk (Fig. 1) there is secured a drop leaf **21** of a drop leaf structure **22**, which drop leaf forms the back surface of the cabinet-desk construction when the cabinet part **10** is raised to the upper elevation.

As is well shown in Fig. 2, the drop leaf **21** of the drop leaf structure **22** is adapted for moving into the same level with the cabinet top part or surface **11** when the cabinet part is in the lower elevation. At the same time, the desk top part **17**, including the leaves **18** and **19**, can be moved into such same level which is at the lower elevation.

The drop panel **20** comprises a part of a drop panel structure **23**. Thus there are employed both a drop leaf structure **22** and a drop panel structure **23**. These structures are both hingedly connected respectively to opposite margins of the top surface **11** of the cabinet part **10**.

Although the drop leaf **21** of the drop leaf structure **22**, as is well shown in Figs. 5 and 6, is adapted as aforementioned for forming the back surface of the cabinet-desk when the cabinet part is at the upper elevation, and for forming a top surface portion of the single level table when such cabinet part is at the lower elevation, the drop panel **20** does not perform, in the form shown, an exactly similar function. The drop panel **20** is conformed to fit the lowermost surface portion of the cabinet part, as is well shown in Fig. 1, and hence forms a part of the front of the cabinet-desk when the cabinet part is in the upper elevation. However, when the parts are reduced to a common level, as shown in Fig. 6, that is, when the cabinet part is at the lower elevation, the drop panel **20** does not form a part of the single level table surface but rather is positioned slightly below such surface to permit the hinged leaves **18** and **19** to be slid to the left, as viewed in Fig. 6, so that leaf **19** is juxtaposed to and in engagement with the righthand edge (Fig. 6) of the cabinet top surface **11**.

Two lower leg structures **24** and **25** are provided for the novel construction which are spaced apart a selected amount when such cabinet part is in the upper elevation (Fig. 1) and are further spaced apart when such cabinet part is in the lower elevation (Fig. 2). One of such leg structures, namely, **25**, in one form of the invention mounts the desk top part **17**, including the leaves therefor, for example, **18** and **19**.

There are provided articulated link-like connections between the upper portions of such leg structures and the top of said cabinet part **10**. Referring to Figs. 4 and 5, such connection for a first of said leg structures, for example, **24**, includes a part of the aforementioned drop leaf structure **22** by virtue of the fact that such drop leaf structure **22** includes a pair of parallel drop leaf side aprons **26**, only one of which is shown in the drawings, such drop leaf side aprons **26** being secured near opposite extremities of the drop leaf **21** and in effect providing arms or links for pivotally interconnecting the leg structure **24** with one of the edges of the cabinet top **11**. Thus the drop leaf structure **22** is hingedly or pivotally connected to the rear margin of the cabinet top **11**, preferably at the underside thereof by suitable hinge means **27** having an axis **27*a***. The drop leaf structure thus can provide an upward continuation of the leg structure **24** when the cabinet part is in the upper elevation. The drop leaf structure **22** is also hingedly or pivotally connected via its two parallel side apron members **26** by means of coaxial pivots **28** (one for each apron member) to the upper end of the lower leg structure **24** for angular or pivotal movement about axis **28*a*** which is fixed with respect to such leg structure **24** and parallel to the axis **27*a***. Furthermore, a link **29** is pivotally connected at its upper end at a pivot **30** having an axis **30*a*** which is fixed with respect to the underside of the mid-part of the cabinet top, the other end of the link **29** being pivotally connected to the last-named leg structure **24** at another pivot **31** having an axis **31*a*** which is fixed with respect thereto and which is spaced from the pivot axis **28*a***. The axes **30*a*** and **31*a*** are parallel to axes **27*a*** and **28*a***.

The aforementioned elements are so proportioned that points of such axes **27*a***, **28*a***, **31*a*** and **30*a***, all in a single plane as viewed in Figs. 4 and 5, form a parallelogram. The purpose of such linkage above described and of that to be set forth herebelow is to maintain the leg structures **24** and **25** in their intended vertical attitude at all times while the cabinet top surface **11** and the desk top **17** are retained horizontal at all times, for example, during the shifting of the cabinet part from its upper to its lower elevation or vice versa.

The aforementioned articulated link-like connection for the other of such leg structures **25** includes part of the aforementioned drop panel structure **23** because such structure also embraces a pair of parallel side apron members **32**, both of which are shown in Fig. 3 and one of which is well shown in Fig. 5 indicating its part in the link-like connection aforementioned. The parallel drop panel side aprons **32** thus form links for interconnecting the cabinet top **11** to the leg structure **25**. The two drop panel side aprons **32** accordingly are pivotally or hingedly connected at **33** to the opposite margin of the cabinet top **11** for angular movement about an axis **33*a*** parallel to the axis **27*a*** of hinge **27**. The two parallel apron members **32** are also respectively pivotally or hingedly connected to the aforementioned leg structure **25** by coaxial pivots **34** (one for each such apron member) for angular movement about an axis **34*a*** which is fixed with respect to said leg structure **25** and parallel to the axis **33*a*** of hinge **33**. Pivots **34** can be considered as being in the leg structure **25** or in the underside of the desk top part **17**. That is, such pivots **34** can be in parallel side aprons **25*a*** which can be considered as part of the leg structure **25**, to which they are secured, or as part of the desk top part **17**, which is supported thereby. A still further link **35** is pivotally connected at its upper end also to the pivot **30** or one preferably coaxial therewith which is fixed with respect to the underside of the cabinet top **11**. The other end of such link **35** is pivotally connected at **36** to leg structure **25** for angular movement about an axis **36*a*** of such pivot which is fixed with respect to the leg structure **25**. Axes **36*a*** and **30*a*** are also parallel to axis **34*a*** and axis **33*a***.

The parts are so constructed and arranged that, as viewed in Fig. 5, the points of such axes **33*a***, **34*a***, **36*a*** and **30*a***, all in a single plane (Fig. 5), also form a parallelogram.

For the purpose of insuring the parallel relationship of the desk top leaf **19** and the cabinet top **11** and also of insuring the parallelism of the leg structures **24** and **25**, additional link means are provided for coordinating the aforementioned links, that is, a link **37** is provided which at one end thereof is connected to, for example, the link **35**, thereby to undergo angular movement therewith, the two links **37** and **35** thus operating in the manner of a bell crank. The other end of such link **37** is pivotally connected to a fourth link **38** which in turn is pivotally connected to the drop leaf structure **22** at a pivot **39** having an axis **39*a*** which is fixed with respect to said drop leaf structure and which is parallel to axes **27*a*** and **33*a***. The invention, however, is not limited to the link **37** being connected to the link **35** or in turn the link **38**

being connected to the drop leaf structure **22**, a converse arrangement being workable. That is, the link **37**, in one form of the invention, may be connected to the link **29** for angular motion therewith and thus operate in the manner of a bell crank, in which event the link **38** would be pivotally connected to the drop panel structure **23** above set forth. It is understood that the link **38** is pivotally connected to that one of the structures **22** or **23** which, with reference to the fixed point **30**, is opposite to that leg structure (**24** or **25**) to which the other arm of the bell crank is connected.

There will now be discussed the coordination of the several apron members of the construction. The cabinet part **10**, as is well shown in Figs. 1 and 3, is provided with two parallel side panels **40**, **40** which in effect constitute cabinet side apron members and which are designed for coacting with respective of the apron members **26**, **26** and **32**, **32** to form on each side a continuous table apron when the cabinet part is in the lower elevation, as in Fig. 2. The leg structure **25** (or alternatively the desk top part **17**) is also provided with the aforementioned pair of parallel side apron members **25***a*, **25***a* only one of which is shown in the drawings, as in Figs. 1 and 2. The side apron members **25***a* are secured to opposite sides of the leg structure **25** (or alternatively to opposite undersides of the desk top part **17**). Each of such apron members **25***a* is also designed for coacting with respective of the other apron members **26**, **40** and **32** to provide an apron preferably of a common depth for each side of the table, as shown in Fig. 2.

Referring to said Figs. 1 and 2, it will be seen that the side apron members **26** and **32** coact to form the opposite and parallel side surfaces of the cabinet-desk when the cabinet part **10** is in the upper elevation. Those edges of the apron members **26** and **32** which are lowermost in Fig. 2 and are horizontal, are vertical in the position shown in Fig. 1 and are adjacent one another, thereby forming the parallel and opposite side surfaces of the cabinet portion of the cabinet desk as shown in Fig. 1.

If desired, a spring **42** (Figs. 4 and 5) can be employed for interconnecting the link **35** at **43** with the underside of the cabinet part **10** at **43***a*, thereby to assist in counterbalancing the weight of the shiftable parts and preventing the cabinet part from falling abruptly to its lower elevation when undergoing a transition from the upper to the lower elevation. And conversely the spring **42** can assist in moving the cabinet part from its lower to its upper elevation.

Referring now to Fig. 6, it will be seen that the parts of the novel construction are in the position wherein the cabinet part has just been moved from its upper to its lower elevation and a gap exists between edge **11***a* of the cabinet top **11** and edge **19***a* of the desk top leaf **19**. This gap, of course, must be filled in in order for the construction to be used as a table and such filling in can be accomplished by any suitable means, for example, by sliding the leaves **18** and **19** to the left, as viewed in Fig. 6, in such a manner that a tongue **11***b* of the top **11** engages a groove **19***b* of the leaf **19**. Alternatively, a separate and loose filler leaf can be employed for filling the aforementioned gap, it being understood that in such circumstances the sliding movement of the leaf **19** is only sufficient to permit the insertion of the separate and loose filler leaf.

The desk top leaf **19** is, as shown in Fig. 6, hingedly connected to the leaf **18** by any suitable means, preferably by a hinge **18***a* of well known construction. The drop leaf **18** of the desk top part can be held in its horizontal position by a conventional slidable arm **44** which operates in a well known manner.

Alternatively, the aforementioned gap between the edges **11***a* and **19***a* can be filled by means of a filler leaf **45** (Fig. 8) which is hinged at **46** along the edge **19***a* of the leaf **19**. In such form (Fig. 8) the leaf width between the points **45***a* and **45***b* of the leaf **45** obviously

must conform substantially to the width of the aforementioned gap between the points **11***a* and **19***a*. A desk top drop leaf **45***c* can be hingedly secured to leaf **45** if desired, thereby enabling a widening of the writing area of the desk top when cabinet part **10** is raised.

Referring now to Fig. 6, the aforementioned gap between the edges **11***a* and **19***a* can be filled by means of a hinged filler leaf **47** (Fig. 7) which is hinged at **48** to the edge **11***a* of the cabinet top **11**, the remainder of the structure remaining the same.

If desired, in the form shown in Fig. 7, a further desk top drop leaf **49** can be hinged to a desk top leaf **50** at **51** and can be raised and held in a horizontal position by well known means.

It will be noted that the extent to which the cabinet top can be elevated controls the width of the filler leaf and hence the width of the gap between the opposite edges of the cabinet top part and the desk top part.

Both the drop leaf and drop panel structures **22** and **23** respectively, in effect, constitute drop arm or link structures, and at least portions thereof are parts of the aforedescribed articulated link-like connections between the top **11** of the cabinet part and the leg structures. It is within the purview of the invention to consider not only the drop panel or arm structure **23** but also the link **35** (Fig. 5) as pivotally connected (at **34** and **36** respectively) either to the leg structure **25** or to the desk top part **17**.

The points of the axes **27***a*, **28***a*, **31***a* and **30***a* all in a single plane and the points of the axes **33***a*, **34***a*, **36***a* and **30***a* also in a single plane preferably form a parallelogram as aforementioned. However, the invention is not limited to such points forming a parallelogram, it being adequate if such points form a quadrilateral proportioned to permit suitable movement of the lower leg structures in proper relation to the desk top part and the cabinet top part. Furthermore, on one side of the structure one group of such points, for example, **27***a*, **28***a*, **31***a* and **30***a* may form a parallelogram whereas the other group of such points may form merely a quadrilateral. Also it is possible to employ such construction which forms either parallelograms or quadrilaterals of different sizes to effect differing amounts of movement of the two sets of legs in response to the movement of the cabinet part between the two elevations.

What is claimed is:

1. In a multi-level cabinet-desk construction which is convertible to a single level table; a cabinet top part adjustable for use at either a lower or an upper elevation while being retained horizontal; a desk top part which remains horizontal at such lower elevation and is adapted for becoming a writing area when said cabinet top part is in the upper elevation; a drop arm structure; a drop leaf structure; such structures being hingedly connected respectively to opposite margins of said cabinet top part, such drop leaf structure having a drop leaf adapted for forming a back surface of the cabinet-desk when said cabinet top part is at the upper elevation, and for forming a top surface portion of the single level table when such cabinet top part is at the lower elevation, such drop arm structure mounting an element adapted to be positioned between said cabinet top part and desk top part when said cabinet top part is at the upper elevation; two lower leg structures which are spaced apart when such cabinet top part is in the upper elevation and further spaced apart when such cabinet top part is in the lower elevation, one of said leg structures mounting said desk top part and being pivotally connected to said drop arm structure for angular movement relative thereto about an axis fixed with respect to the latter leg structure, the other of said leg structures being pivotally connected to said drop leaf structure for angular movement relative thereto about an axis fixed with respect to its leg structure; and articulated link-like connections for operatively associating said structures and cabinet top part so pro-

portioned that angular motion of a given extent of said drop leaf and drop arm structures with respect to said cabinet top part causes said leg structures to move through preselected distances, said top parts being retained horizontal.

2. In a multi-level cabinet-desk construction which is convertible to a single level table; a cabinet top part adjustable for use at either a lower or an upper elevation while being retained horizontal; a desk top part which remains horizontal at such lower elevation and is adapted for becoming a writing area when said cabinet top part is in the upper elevation; said cabinet top part having secured therebeneath a cabinet part, the lowermost surface of which is spaced below such cabinet top part in preselected dimensions, such lowermost surface being above said table top part when said cabinet top part is in the upper elevation; a drop panel structure; a drop leaf structure, such structures being hingedly connected respectively to opposite margins of said cabinet top part, such drop leaf structure having a drop leaf adapted for forming a back surface of the cabinet-desk when said cabinet top part is at the upper elevation, and for forming a top surface portion of the single level table when such cabinet top part is at the lower elevation, such drop panel structure having a panel positioned to fit such lower surface of said cabinet part when said cabinet top part is at the upper elevation, such panel being then substantially normal thereto and extending between such lower surface and said desk top part; two lower leg structures which are spaced apart when such cabinet top part is in the upper elevation and further spaced apart when such cabinet top part is in the lower elevation, one of said leg structures mounting said desk top part and being pivotally connected to said drop panel structure for angular movement relative thereto about an axis fixed with respect to the latter leg structure, the other of said leg structures being pivotally connected to said drop leaf structure for angular movement relative thereto about an axis fixed with respect to its leg structure; and articulated link-like connections for said structures and cabinet top part so proportioned that angular motion of a given extent of said drop leaf and panel structures with respect to said cabinet top part causes said leg structures to move through equal distances, and holds said top parts horizontal.

3. In a convertible desk and table construction, the combination comprising: a cabinet top part adjustable for use at either a lower or upper elevation while being retained horizontal and having secured therebeneath one or more compartments; a drop leaf portion hingedly connected to one edge of said cabinet top part; a panel portion hingedly connected to the other edge of said cabinet top part and proportioned to assume a substantially horizontal position when said cabinet top part is at the upper elevation and to move beneath the aforementioned compartments to a substantially vertical position when said cabinet top part is at its upper elevation; a horizontal desk top part hingedly connected to the lower part of said panel portion; two lower leg structures which are spaced apart when said cabinet top part is adjusted to the upper elevation and further spaced apart when said cabinet top part is at the lower elevation, a first of said lower leg structures being hingedly connected to the lower part of said drop leaf portion, the second of said lower leg structures being fixedly secured to said horizontal desk top part; a link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to said first lower leg structure; and a second link pivotally connected at one end to a point also fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to said horizontal desk top part.

4. In a cabinet-desk construction which is convertible to a single level table, the combination including: a cabinet top part adjustable for use either at a lower or upper elevation while being retained horizontal; a desk top part adapted for being retained horizontal and at a common level which is the same as such lower level of said cabinet top part, two lower leg structures which are spaced apart when such cabinet top part is adjusted to the upper elevation and further spaced apart when said cabinet top part is at the lower elevation, one of said leg structures mounting said desk top part, articulated link-like connections between the upper portions of each of said leg structures and said cabinet top part, such connection for at least one of said leg structures comprising part of a drop leaf structure hingedly connected to an edge of said cabinet top part and providing an upward continuation of its leg structure when said cabinet top part is at the upper elevation and pivotally connected to a point fixed with respect to the upper end of said leg structure; a link pivotally connected at a point fixed with respect to the underside of the mid-part of said cabinet top part, the other end of said link being pivotally connected at a point fixed with respect to said last-named leg structure; such connection for the other leg structure including a drop arm structure hingedly connected to an opposite edge of said cabinet top part and pivotally connected to a point fixed with respect to its lower leg structure; another link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to such other lower leg structures; a third link connected at one end thereof to one of the two links last mentioned for angular motion therewith about the pivot thereof fixed with respect to the underside of said cabinet top part thereby causing the links so connected to operate in the manner of a bell crank, the other end of such third link being pivotally connected to a fourth link which in turn is pivotally connected to that one of the aforementioned drop structures which is opposite to the other drop structure to which such bell crank is connected; the parts being so proportioned that angular motion of a given amount of said structures with respect to said cabinet top part causes said leg structures to move through preselected distances.

5. In a convertible desk and table construction having one top portion adjustable for use at either a lower or upper elevation while being maintained horizontal, and having another top portion which remains at such lower elevation, the combination comprising: two lower leg structures which are spaced apart when said first-mentioned top portion is adjusted to such upper elevation and further spaced apart when such first-mentioned top portion is at such lower elevation, articulated link-like connections between the upper portions of each of said leg structures and said first-mentioned top portion, such connection for at least one of said leg structures comprising part of a drop leaf structure hingedly connected to an edge of said first-mentioned top portion and providing an upward continuation of its leg structure when such top portion is at the upper elevation and being pivotally connected to a point fixed with respect to the upper end of such leg structure, a link pivotally connected to a point fixed with respect to the underside of such first-mentioned top portion, the other end of said link being pivotally connected to a point fixed with respect to said last-mentioned leg structure, and a bell crank having its intermediate pivot located at a point also fixed with respect to the underside of said first-mentioned top portion, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected with respect to said drop leaf structure, and the other bell crank arm being pivotally connected at a point fixed with respect to the other of said lower leg structures, the parts being so proportioned that downward and upward angular movement respectively of such drop leaf structure with respect to such first-mentioned top portion causes the leg structures to

move through preselected distances toward and away from each other, such other top portion being mounted in horizontal position upon such other leg structure.

6. In a convertible cabinet-desk and table construction having a top portion adjustable for use at either a lower or an upper elevation while being maintained horizontal, and having another top portion which remains at such lower elevation, the combination comprising two lower leg structures which are spaced apart when said first-mentioned top portion is adjusted to such upper elevation and further spaced apart when such first-mentioned top portion is at such lower elevation, one of said leg structures mounting said other top portion, articulated link-like connections between the upper portions of each of said leg structures and said first-mentioned top portion, such connection for one of said leg structures comprising part of a drop leaf structure hingedly connected to an edge of said first-mentioned top portion and providing an upward continuation of its leg structure when such top portion is at the upper elevation and being pivotally connected to a point fixed with respect to such upper end of such leg structure, a link pivotally connected to a point fixed with respect to the underside of such first-mentioned top portion, the other end of said link being pivotally connected to a point fixed with respect to said last-mentioned leg structure, and a bell crank having its intermediate pivot located at a point also fixed with respect to the underside of said first-mentioned top portion, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected with respect to said drop leaf structure, and the other bell crank arm being pivotally connected at a point fixed with respect to the other of said lower leg structures, the parts being so proportioned that downward and upward angular movement of a given extent of such drop leaf structure with respect to such first-mentioned top portion causes the leg structures to move through preselected distances.

7. In a convertible cabinet-desk and table construction having a cabinet top part adjustable for use at either a lower or upper elevation while being retained horizontal, and having a desk top part which remains at such lower elevation and which is adapted for use as a writing desk when the other top part is raised, the combination comprising two lower leg structures which are spaced apart when such cabinet top part is adjusted to the upper elevation and further spaced apart when such top parts both are at the lower elevation, articulated link-like connections between said cabinet top part and the upper portion of one of said leg structures and between said cabinet top part and said desk top part, such connection for such leg structure comprising a part of a drop leaf structure hingedly connected to an edge of said cabinet top part and providing an upward continuation of its leg structure when such cabinet top part is at such upper elevation and also providing a table top surface when on the same level with such cabinet top part and said desk top part at such lower elevation, said drop leaf structure being pivotally connected to the upper end of its leg structure aforementioned along an axis fixed with respect to such leg structure, a link pivotally connected at a point fixed with respect to the underside of said cabinet top part, the other end of said link being pivotally connected to a point fixed with respect to said last-mentioned leg structure, such connection for said desk top part and cabinet top part comprising a drop arm structure hingedly connected to an opposite edge of said cabinet top part and pivotally connected to said desk top part along an axis fixed with respect thereto, the other of said leg structures being secured to said desk top part, a bell crank having its intermediate pivot located at a point also fixed with respect to the underside of said cabinet top part, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected to said drop leaf structure, and the other bell crank arm being pivotally connected to said desk top part along an axis fixed with respect to the latter, such articulated link-like connections being so proportioned that upward and downward movement of such cabinet top part causes the leg structures to move through preselected distances toward and away from each other while retaining said top parts horizontal.

8. In a convertible desk and table construction, the combination comprising: a cabinet top part adjustable for use at either a lower or upper elevation while being retained horizontal and having secured thereto beneath same a cabinet part; a drop leaf portion hingedly connected to one edge of said cabinet top part; a panel portion hingedly connected to the other edge of said cabinet top part and proportioned to assume a substantially horizontal position when said top part is at the upper elevation and to move beneath the aforementioned cabinet part to a substantially vertical position when said cabinet top part is at its upper elevation; a horizontal desk top part hingedly connected to the lower part of said panel portion; two lower leg structures which are spaced apart when said cabinet top part is adjusted to the upper elevation and further spaced apart when said cabinet top part is at the lower elevation, a first of said lower leg structures being hingedly connected to the lower part of said drop leaf portion, the second of said lower leg structures being fixedly secured to said horizontal desk top part; a link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to said first lower leg structure; a second link pivotally connected at one end to a point also fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to said horizontal desk top part; and a third link connected at one end thereof to the upper end of one of the aforementioned two links for angular motion therewith about its respective fixed pivot thereby causing such links so connected to operate in the manner of a bell crank, the other end of such third link being pivotally connected to a fourth link which in turn is pivotally connected to one of the aforementioned portions, the parts being so proportioned that upward and downward angular motion with respect to said cabinet top part of one of said portions causes said leg structures to move through preselected distances toward and away from each other, said top parts remaining parallel during such movement.

9. In a convertible cabinet-desk and table construction having a cabinet top portion adjustable for use at either a lower or upper elevation while being maintained horizontal, and also having a desk top portion which remains horizontal at such lower elevation, the combination comprising two lower leg structures which are spaced apart when said cabinet top portion is adjusted to such upper elevation and further spaced apart when said cabinet portion is at the lower elevation, one of said leg structures mounting said desk top portion, articulated link-like connections between the upper portions of each of said leg structures and said cabinet top portion, such connection for the first of said leg structures including a drop leaf structure hingedly connected to one edge of said cabinet top portion and providing an upward continuation of its leg structure when said cabinet top portion is at the upper elevation and being pivotally connected to a point fixed with respect to the upper end of its said leg structure, such connection for the other of said leg structures including a drop arm structure, said arm structure being pivotally connected to said cabinet top portion near the other edge thereof, and also being pivotally connected to a point fixed with respect to the other leg structure, a link pivotally connected at one end at a point fixed beneath said cabinet top portion, the other end of said link being pivotally connected at a point fixed with respect to said first leg structure, a bell crank having its intermediate pivot located at a point fixed with respect to said

cabinet top portion, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected with respect to said drop leaf structure, the other bell crank arm being pivotally connected at a point fixed with respect to the other of said lower leg structures, the parts being so proportioned that upward and downward angular movements respectively of said drop leaf and arm structures with respect to said cabinet top portion cause said leg structures to move through preselected distances toward and away from one another.

10. In a convertible cabinet-desk and table construction having a cabinet top portion adjustable for use at either a lower or upper elevation while being maintained horizontal, and also having a desk top portion which remains horizontal at such lower elevation, the combination comprising two lower leg structures which are spaced apart when said cabinet top portion is adjusted to such upper elevation and further spaced apart when said cabinet top portion is at the lower elevation, said desk top portion being mounted upon the upper portions of one of said leg structures, articulated connections between the upper portions of each of said leg structures and said cabinet top portion, such connection for the first of said leg structures including a drop leaf structure hingedly connected to one edge of said cabinet top portion and providing an upward continuation of its leg structure when said cabinet top portion is at the upper elevation and being pivotally connected to the upper end of its said leg structure for angular motion about an axis fixed with respect to such leg structure, such connection for the other of said leg structures including a cabinet panel having a pair of arm members, one secured to each extremity thereof, said arm members each being pivotally connected to said cabinet top portion near the other edge thereof, and also being pivotally connected to the other leg structure for angular movement about an axis also fixed with respect to the latter leg structure, said cabinet top portion having secured to the under surface thereof a cabinet part, the lower surface of which is positioned for moving into a position adjacent to the upper edge of the aforementioned panel in response to the movement of said cabinet top portion to the upper elevation thereby forming a panel extending from such lower surface of said cabinet part down to said desk top portion, a link pivotally connected at one end at a point fixed beneath said cabinet top portion, the other end of said link being pivotally connected to said first leg structure at a point fixed with respect to the latter leg structure, a bell crank having its intermediate pivot located at a point also fixed with respect to and beneath said cabinet top portion, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected with respect to said drop leaf structure, the other bell crank arm being pivotally connected to such other lower leg structure at a point fixed with respect to the latter leg structure, the parts being so proportioned that upward and downward angular movements respectively of said drop leaf structure and said panel with respect to said cabinet top portion cause said leg structures to move through preselected distances toward and away from one another.

11. In a convertible cabinet-desk and table construction having a cabinet top part adjustable for use at either a lower or upper elevation while being retained horizontal, and having a desk top structure which remains at such lower elevation, the combination comprising two lower leg structures which are spaced apart when such cabinet top part is adjusted to the upper elevation and further spaced apart when such top part is at the lower elevation, articulated link-like connections between the upper portions of each of said leg structures and said cabinet top part, such connection for at least one of said leg structures comprising a part of a drop leaf structure hingedly connected to an edge of said cabinet top part and providing an upward continuation of its leg structure when such cabinet top part is at such upper elevation and also providing a table top surface when on the same level with such cabinet top part, said drop leaf structure being pivotally connected to a point fixed with respect to the upper end of its leg structure aforementioned, a link pivotally connected at a point fixed with respect to the underside of said cabinet top part, the other end of said link being pivotally connected to a point fixed with respect to said last-mentioned leg structure, a bell crank having its intermediate pivot located at a point also fixed with respect to the underside of said cabinet top part, one arm of said bell crank being pivotally connected to a link which in turn is pivotally connected to said drop leaf structure, the other bell crank arm being pivotally connected to the other of said lower leg structures along an axis fixed with respect to the latter, said desk top part resting on said other lower leg structure, such link-like connections being so proportioned that upward and downward movement of such cabinet top portion causes the leg structures to move through preselected distances toward and away from each other.

12. In a convertible desk and table construction, the combination comprising: a desk top part adapted for remaining horizontal at all times at a common level, a cabinet top part adjustable for use either at a lower or upper elevation while being retained parallel to said desk top part, said cabinet top part being on the same level with said desk top part when in the lower elevation and being raised thereabove when in the upper elevation, said cabinet top part having a cabinet member secured therebeneath; two lower leg structures which are spaced apart when said cabinet top part is adjusted to the upper elevation and further spaced apart when said cabinet top part is at the lower elevation; a drop leaf portion hingedly connected to one edge of said cabinet top part; a panel portion hingedly connected to the other edge of said cabinet top part and conformed at all times to be spaced apart from said cabinet top part and for assuming a substantially horizontal attitude beneath such top parts in response to said cabinet top part being adjusted to the lower elevation and for assuming a position beneath said compartment member and substantially normal to one edge thereof in response to said cabinet top part being adjusted to the upper elevation; a first of said lower leg structures being hingedly connected to the lower part of said drop leaf portion, said horizontal desk top part being hingedly connected to the lower part of said panel portion; a second of said lower leg structures being secured to said desk top part; articulated link-like connections between the upper portions of each of said leg structures and said cabinet top part, one of such connections being via such desk top part, such connection for the other of said leg structures comprising part of such drop leaf portion which provides an upward continuation of its leg structure when the cabinet top part is at the upper elevation and being pivotally connected to a point fixed with respect to the upper end of such leg structure; a link pivotally connected at a point fixed with respect to the underside of said cabinet top part, said link also being pivotally connected at a point fixed with respect to said last-named leg structure, a second link pivotally connected to a point also fixed with respect to the underside of said cabinet top part and also pivotally connected at another location thereof to a point fixed with respect to the other of said lower leg structures; a third link connected at one end thereof to that portion of one of the two links previously mentioned which moves about a point fixed with respect to the underside of the cabinet top part and adapted for angular movement with such link thereby causing the two links so connected to operate in the manner of a bell crank, another part of such third link being pivotally connected to a fourth link which in turn is pivotally connected to one of the aforementioned portions; the parts being so proportioned that angular motion of one of said portions with respect to said cabinet top part

causes said leg structures to move through preselected distances with respect to such cabinet top part, said top parts being retained horizontal.

13. In a multi-level cabinet-desk construction which is convertible to a single level table, the combination including: a cabinet part having a top adjustable either at a lower or an upper level while being retained horizontal; a drop leaf portion in hinged connection with a top edge of said cabinet part and positionable at the same level with the top surface of said cabinet part in response to movement of the latter to the lower elevation; a panel portion hingedly connected to an opposite top edge of said cabinet part and conformed to assume a position beneath and adjacent to the underside of said cabinet part in response to movement of said cabinet part to the upper elevation; a horizontal desk top part in hinged connection with the lower part of said panel portion; two lower leg structures being spaced apart when said cabinet part is adjusted to the upper elevation and further spaced apart when said cabinet part is at the lower elevation, a first of said lower leg structures being pivotally connected to the lower part of said drop leaf portion, a second of such lower leg structures being secured to said horizontal desk top part at a location horizontally spaced from the hinged connection thereof to such panel portion; a link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to a point fixed with respect to said first lower leg structure, said last-mentioned two points, together with two other points coplanar therewith, upon the axes of the two spaced hinged connections of said drop leaf portion defining a quadrilateral; another link pivotally connected at one end thereof to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to another point fixed with respect to said desk top part, said last-mentioned two points, together with two other points also coplanar therewith at the axes of the two spaced hinged connections of said panel portion also defining a quadrilateral; a third link connected at one end thereof to one of the two links previously mentioned for angular motion therewith about the pivot thereof which is fixed with respect to the underside of said cabinet top part, causing the links so connected to operate in the manner of a bell crank, the other end of such third link being pivotally connected to a fourth link which in turn is pivotally connected to that one of the aforementioned portions which is opposite to that portion to which said third link is connected as a portion of such bell crank, said cabinet part, desk top part and drop leaf portion being adjustable to a common level in response to the movement of said cabinet top part to the lower elevation.

14. In a multi-level cabinet-desk construction which is convertible to a single level table; a cabinet top part adjustable for use at either a lower or an upper elevation while being retained horizontal; a desk top part which remains horizontal at such lower elevation and is adapted for becoming a writing area when said cabinet top part is in the upper elevation; said cabinet top part having secured therebeneath a cabinet section, the lowermost surfaces of which are spaced below such cabinet top part in preselected dimensions, such lowermost surfaces being above said desk top part when said cabinet top part is in the upper elevation; a pair of drop arm structures both hingedly connected respectively to opposite margins of said cabinet top part, one of such drop arm structures having a drop leaf adapted for forming a back surface of the cabinet-desk when said cabinet top part is at the upper elevation, and for forming a stop surface portion of the single level table when such cabinet top part is at the lower elevation, the other of such drop arm structures having a drop panel proportioned to fit a lower surface portion of said cabinet section when said cabinet top part is at the upper elevation, such panel then extending between such lower surface portion and said desk top part; two lower leg structures which are spaced apart when such cabinet top part is in the upper elevation and further spaced apart when such cabinet top part is in the lower elevation, one of said leg structures being secured to said desk top part, the other of said leg structures being pivotally connected to said drop arm structure having said drop leaf; and articulated link-like connections between the upper portion of one of said leg structures and said cabinet top part, and between said desk top part and said cabinet top part, such connection for one of said leg structures including a part of the aforementioned drop arm structure having the drop leaf, such drop arm structure providing an upward continuation of its leg structure when said cabinet top part is at the upper elevation, such part of such drop arm structure being pivotally connected to a point fixed with respect to the upper end of such leg structure; a link pivotally connected at one end at a point fixed with respect to the underside of the midpart of said cabinet top part, the other end of said link being pivotally connected at a point fixed with respect to said last-named leg structure; such connection for said cabinet top part and said desk top part including part of the aforementioned drop arm structure having the drop panel, such structure being pivotally connected at a point fixed with respect to such desk top part, another link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top part, the other end of such link being pivotally connected to another point fixed with respect to said desk top part, a third link connected at one end thereof to one of the two links last mentioned for angular motion therewith about the pivot thereof which is fixed with respect to the underside of said cabinet top part thereby causing the links so connected to operate in the manner of a bell crank, the other end of such third link being pivotally connected to a fourth link which in turn is pivotally connected to that one of the aforementioned drop arm structures which, with reference to said point fixed with respect to the underside of said cabinet top part, is opposite to that element to which the other arm of said bell crank is connected, such articulated link-like connections being so proportioned that angular motion of a given amount of said drop arm structures with respect to said cabinet top part causes said leg structures to move through preselected distances, and said top parts to remain parallel to one another.

15. In a multi-level cabinet-desk construction which is convertible to a single level table; a cabinet part adjustable to either a lower or an upper elevation while its top surface is retained horizontal; a desk top part which remains horizontal at such lower elevation and is adapted for becoming a writing area when said cabinet part is in the upper elevation; at least part of the lowermost surfaces of said cabinet part being above said desk top part when said cabinet part is in the upper elevation; drop leaf and drop panel structures both hingedly connected respectively to opposite margins of said top surface of said cabinet part, such drop leaf structure having a drop leaf adapted for forming a back surface of the cabinet-desk when said cabinet part is at the upper elevation, and for forming a top surface portion of the single level table when such cabinet part is at the lower elevation, such drop panel structure having a drop panel conformed to fit beneath a lower surface portion of said cabinet part when the latter is at the upper elevation, such panel then extending between such lower surface portion and said desk top part; two lower leg structures which are spaced apart when such cabinet part is in the upper elevation and further spaced apart when such cabinet part is in the lower elevation, one of said leg structures mounting said desk top part, and articulated link-like connections between the upper portions of said

leg structures and said cabinet top, such connection for a first of said leg structures including part of the aforementioned drop leaf structure, the latter structure providing an upward continuation of its leg structure when said cabinet part is at the upper elevation, such part of such drop leaf structure being pivotally connected to the upper end of its leg structure for pivotal movement about an axis fixed with respect thereto; a link pivotally connected at one end at a point fixed with respect to the underside of said cabinet top, the other end of said link being pivotally connected to said last-named leg structure at a point fixed with respect thereto; such articulated connection for the other of said leg structures including part of the aforementioned drop panel structure, the latter being pivotally connected to such other leg structure for pivotal movement about an axis fixed with respect thereto, another link pivotally connected at one end to a point fixed with respect to the underside of said cabinet top, the other end of such link being pivotally connected to said other leg structure for pivotal movement about an axis fixed with respect thereto, a third link connected at one end thereof to one of the two links last mentioned for angular motion therewith about the pivot thereof which is fixed with respect to the underside of said cabinet top thereby causing the two links so connected to operate in the manner of a bell crank, the other end of such third link being pivotally connected to a fourth link which in turn is pivotally connected to that one of the aforementioned drop structures which, with reference to said point fixed with respect to the underside of said cabinet top is opposite to the leg structure to which the other arm of said bell crank is connected, such articulated link-like connections being so proportioned that angular motion of a given amount of said drop leaf structure with respect to said cabinet top causes said leg structures to move through preselected distances, said desk top part and cabinet top remaining parallel.

16. In a multi-lever cabinet-desk construction which is convertible to a single level table, a cabinet part adjustable to either a lower or an upper elevation while its top surface is retained horizontal; a desk top part which remains horizontal at such lower elevation and is adapted for becoming a writing area when said cabinet part is in the upper elevation; at least part of the lowermost surfaces of said cabinet part being above said desk top part when said cabinet part is in the upper elevation; a drop leaf structure; a drop panel structure; both of said structures being hingedly connected respectively to opposite margins of the top of said cabinet part, such drop leaf structure having a drop leaf adapted for forming a back surface of the cabinet-desk when said cabinet part is at the upper elevation, and for forming a top surface portion of the single level table when such cabinet part is at the lower elevation, such drop panel structure having a drop panel conformed to fit beneath a lower surface portion of said cabinet part when the latter is at the upper elevation, such panel then extending between such lower surface portion and said desk top part; two lower leg structures which are spaced apart when such cabinet part is in the upper elevation and further spaced apart when such cabinet part is in the lower elevation, one of said leg structures mounting said desk top part; and articulated link-like connections between the upper portions of said leg structures and said cabinet top surface part, such connections including at least parts of said drop leaf and drop panel structures and being so proportioned that angular motion of a given amount of said drop leaf structure with respect to said cabinet part causes said leg structures to move through preselected distances, said desk top part and cabinet top surface remaining parallel.

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