June 18, 1963 W. R. SHANNON 3,094,080

COLLAPSIBLE DESK FOR BEDS

Filed March 13, 1961

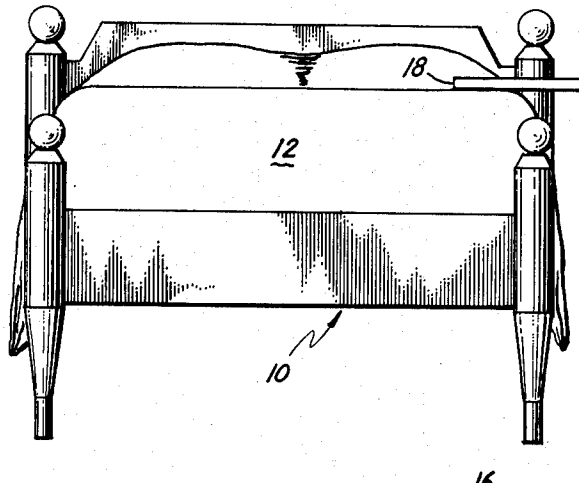

Fig. 1.

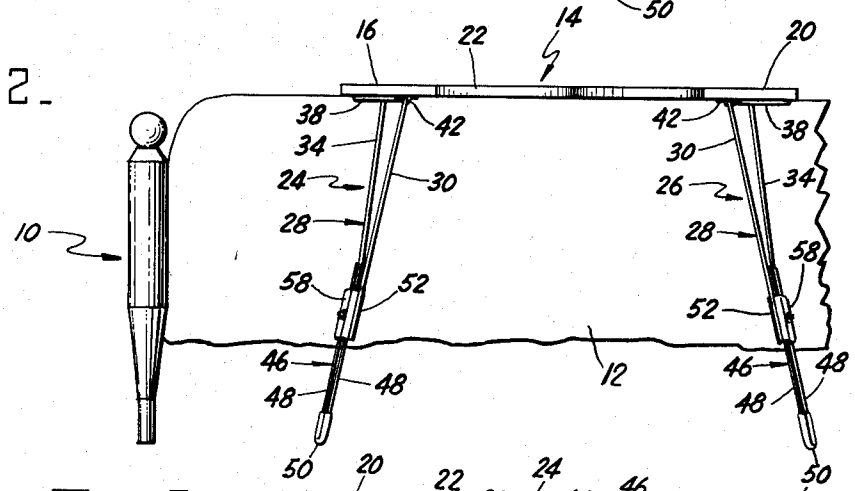

Fig. 2.

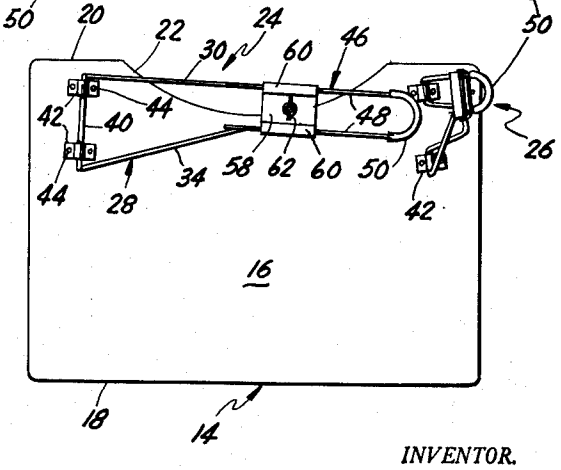

Fig. 3.

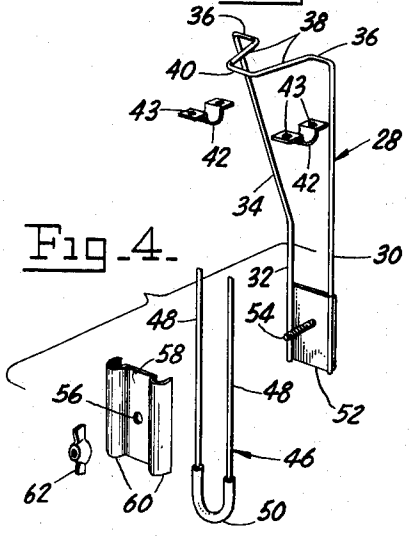

Fig. 4.

INVENTOR.
WILLIAM R. SHANNON
BY
Stuart R. Peterson
ATTORNEY

United States Patent Office 3,094,080 Patented June 18, 1963

3,094,080

COLLAPSIBLE DESK FOR BEDS

William R. Shannon, St. Paul, Minn.
(23 SE. 6th Ave., Faribault, Minn.)

Filed Mar. 13, 1961, Ser. No. 95,160
1 Claim. (Cl. 108—129)

This invention relates generally to desks, and pertains more particularly to a collapsible desk for use in conjunction with a bed or similar supporting article.

Students and others are frequently troubled with space problems, particularly where they must study in the same room in which they sleep. Resort to foldable tables having four legs, such as card tables, have only partially solved these problems, for in many instances insufficient space remains for a person to move about the room when such a table has been erected. Besides, the folding of four legs is relatively time consuming and a nuisance where regular use is to be made of a table so equipped. Consequently, a need exists for a table or desk that will occupy little more space than already exists in a room.

Accordingly, one object of the invention is to provide a desk that will occupy but little additional space in a room that is already rather crowded with furniture. More specifically, the invention has for an aim the provision of a desk that will overlie a bed throughout most of its usable area.

Another object is to provide a desk of the foregoing type that can be easily adjusted to the particular height of the bed, whereby a level writing surface can be provided.

A further object is to provide a desk that is readily collapsible for convenient and compact storage thereof when not needed.

A still further object is to provide a desk that can be carried about when circumstances so dictate. In this regard, it is planned that at times a desk will have to be taken with the user, such as when the student visits another student for joint study.

Yet another object is to provide a desk that is exceptionally sturdy when erected so as to furnish a firm writing surface.

Still another object is to provide a desk that will be inexpensive to manufacture, thereby encouraging its widespread use by those living in congested quarters.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application which will be indicated in the appended claim.

In the drawing:

FIGURE 1 is an end view taken from the foot of a conventional bed illustrating my collapsible desk in a supported relationship therewith;

FIGURE 2 is a side view of the desk in actual use;

FIGURE 3 is a bottom view of the desk constructed in accordance with the teachings of the instant invention, one of the collapsible leg units being shown in a folded condition, and

FIGURE 4 is a perspective view of one leg unit in an exploded condition so as to depict with greater clarity the construction thereof.

Referring now in detail to the drawing, it will be observed that a conventional bed **10** has been pictured in FIGURES 1 and 2, this bed having the usual foot and head boards with their associated posts and legs. Also appearing in these two views is a spread **12** that covers the bed.

The invention itself has been generally denoted by the

reference numeral **14**. In the exemplary situation, the desk **14** includes a panel **16** providing an upper surface for writing purposes. This panel has a free edge **18**, this edge being devoid of any legs so that it can be readily placed on top of the bed **10** as best viewed in FIGURE 1. The edge opposite the edge **18** has been given the reference numeral **20** and it will be discerned that a segmental portion has been removed so as to provide a curved or arcuate recess labeled **22**.

While the free edge **18** is supported by the bed **10**, the other edge **20** is supported by a pair of corresponding leg units denoted in their entirety by the reference numerals **24, 26**. Each of the leg units **24, 26** comprises a rod element **28** having a pair of generally parallel portions **30, 32**. Integral with the portion **32** is an angularly oriented portion **34**. The upper ends of the portions **30, 34** are inturned to provide transversely directed portions **36**. At an angle somewhat less than 90° is an offset auxiliary U-shaped section comprised of converging portions **38** and a bight or connecting portion **40**. It will be understood that the rod-like element **28** in each instance is formed of a single piece of material, such as steel, which is readily bent into the configuration that has been shown.

Inasmuch as the two leg units **24, 26** are to be collapsible or folded with respect to the panel **16**, these leg units are pivotally connected to the underside of the panel **16** by a plurality of U-shaped hinge clips **42**. As can be seen in FIGURE 4, each of the two clips **42** there shown have outwardly issuing ears with an aperture **43** in each ear. From FIGURE 3, it can be seen that the clips **42** for each of the leg units **24, 26** are attached to the underside of the panel **16** by means of a plurality of screws **44**.

The divergence of the leg units **24, 26** with respect to each other, as illustrated in FIGURE 2, is derived by having the portions **38** at somewhat less than 90° with respect to the general plane of the portions **30, 32** and **34**. It will be appreciated that the leg units, owing especially to their divergence, provide a firm support for the panel **16** adjacent its edge **20**.

Continuing with the description of the leg units **24, 26**, it is to be noted that these leg units further include a lower rod element **46** comprised of parallel portions **48** and a rubber covered bight or foot portion **50**. The spacing between the portions **48** of each element **46** is substantially the same as the spacing between the portions **30, 32** of the upper element **28**.

The element **46** of each leg unit **24, 26** is to be clamped to the corresponding element **28** in a preferred telescopic relation. To accomplish this, a plate **52** is welded to the portions **30, 32** as easily seen in FIGURE 4. This plate **52** in each situation carries a bolt or threaded stud **54** that is spot welded to the plate **52**. The stud **54** for each plate **52** is designed to project through an aperture **56** in a cooperable plate **58**, the plate **58** having grooves or channels **60** for partially encircling the rod portions **48** of the lower element **46**. By reason of a wing nut **62** threadable on the stud **54** of each unit **24, 26** the plates **52** and **58** may be drawn toward each other so as to clamp therebetween the rod portions **30, 32** with the rod portions **48**. It will be readily understood that the clamping action may be effected after the element **46** for each leg unit has been properly extended with respect to the portions **30, 32** for the height of the particular bed **10** for which the desk **14** is to be associated.

Having presented the above information, the use of my collapsible desk **14** should be easily understood. Briefly, however, the student or other user of the desk **14** will adjust the leg units **24, 26** for the particular height of the bed **10** or other article, as alluded to in the preceding paragraph. This can be readily accomplished with the edge **18** resting on the top of the bed **10** substantially as

depicted in FIGURES 1 and 2. With the edge **18** so supported, then the wing nuts **62** for each leg unit can be loosened so as to permit the rod element **46** of each leg unit to be telescopically moved with respect to the grooves **60** of the plate **58**. When the proper degree of projection or extension exists, then the wing nuts **62** are tightened and left in a tightened conditions for all subsequent uses with the same bed **10**.

When the desk is to be stored, one only has to fold each leg unit **24**, **26** into the confronting relationship shown of the leg unit **24** in FIGURE 3. Both leg units **24**, **26** are not shown in a folded condition in this view for the simple reason that the difference in positions reveals in a better manner the construction of these leg units. To complete the folding operation that has been inaugurated in FIGURE 3, one only has to pivot the other leg unit **26** into an overlying relationship with the already folded leg unit **24**. It will be noted that when so folded, owing to the recess **22**, the desk **14** can be readily carried from place to place. However, when the desk is erected, the recess **22** permits the student or user to position himself closer to the center of the desk than would otherwise be possible. Thus, it will be recognized that the recess **22** fulfills a dual purpose.

Accordingly, it will be appreciated that the desk **14** will find especial utility where very little room exists for employing a conventional table. It is to be particularly observed that the panel **16** is maintained in a relatively firm condition by reason of the support **18** on the bed **10** itself. This support is augmented by virtue of the leg units **24**, **26** so that the entire panel **16** is kept at the proper elevation and also in a condition that will resist movement during actual use, the resistance to movement being supplemented by the divergence of the leg units **24**, **26** as they appear in FIGURE 2.

In practice, suitable swivel clamps or the like would be fastened to the underside of the of the panel **16** and would engage the portions **40** in order to maintain the leg units **24**, **26** in a fixed, downwardly projecting position during use. Likewise, similar clamps would be used for engaging one portion **48** (or other portion) of each leg unit to hold the leg units in a folded condition when not is use. However, for the sake of drawing simplicity these clamps have been omitted.

As many changes could be made in the above construction and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claim is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed:

A collapsible desk of the character described comprising a panel member providing a generally flat writing surface, said member having one free edge for resting on a bed, a pair of telescoping leg units each including a first element hingedly connected to the underside of said panel member adjacent the opposite edge thereof and pivotal into one downwardly projecting position, each first element having a pair of generally parallel spaced portions, each leg unit further including a second element having a pair of generally parallel portions spaced substantially the same distance apart as the parallel portions of said first element, said legs being adapted to have substantially point contact with the floor subjacent said opposite edge of said panel member for pivotal movement, and respective means for clamping the adjacent parallel portions of the first and second elements of each leg unit together to adjust the height of said opposite edge to substantially that of said one edge, said respective clamping means including a first plate extending between the parallel portions of each first element, a second plate overlying the parallel portions of each second element, and a threaded element and nut for urging each of said first and second plates toward each other to clamp the corresponding parallel portions of said leg units together and thereby adjust the height of said opposite edge.

References Cited in the file of this patent

UNITED STATES PATENTS

623,143	Doty	Apr. 18, 1889
561,779	Feely	June 9, 1896
590,872	Allen	Sept. 28, 1897
1,208,885	Alderman et al.	Dec. 19, 1916
1,599,247	Ridabock	Sept. 7, 1926
1,709,928	Whitney	Apr. 23, 1929
1,924,945	Klotz	Aug. 29, 1933
2,323,423	Schmidt et al.	July 6, 1943
2,426,573	Alderfer	Aug. 26, 1947
2,493,170	Stiff et al.	Jan. 3, 1950
2,630,360	McGinley	Mar. 3, 1953
2,845,316	Bailey	July 29, 1958
2,977,169	Geller	Mar. 28, 1961

FOREIGN PATENTS

911,066	France	June 27, 1946
527,853	Belgium	Apr. 30, 1954