Dec. 3, 1968 E. J. DOUCETTE 3,414,080

COLLAPSIBLE SAWHORSE

Filed May 16, 1967 2 Sheets-Sheet 1

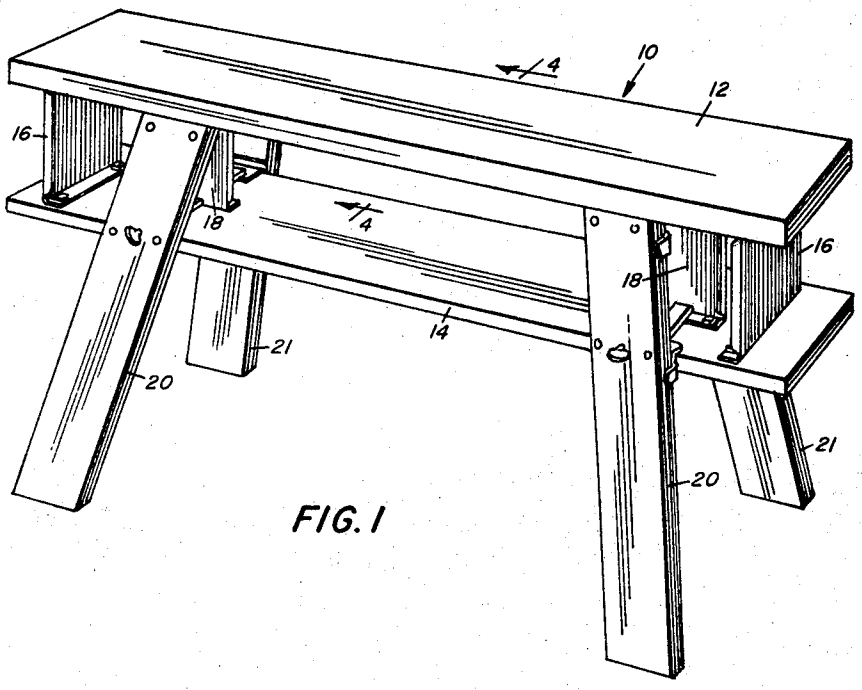


FIG. 1

FIG. 2

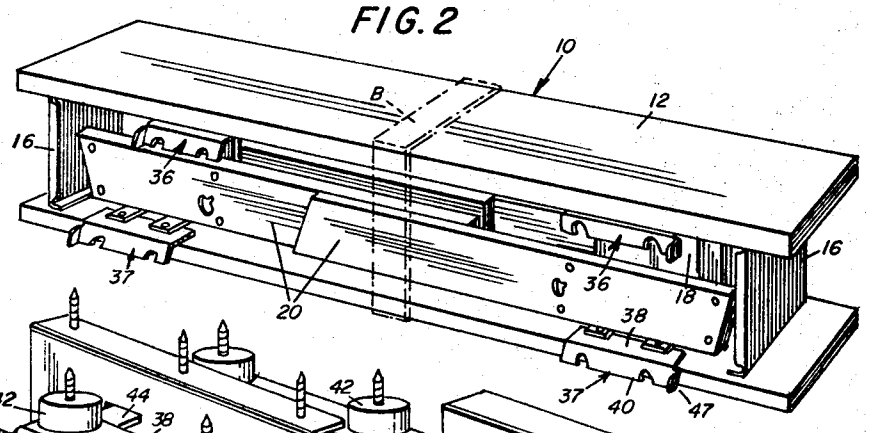
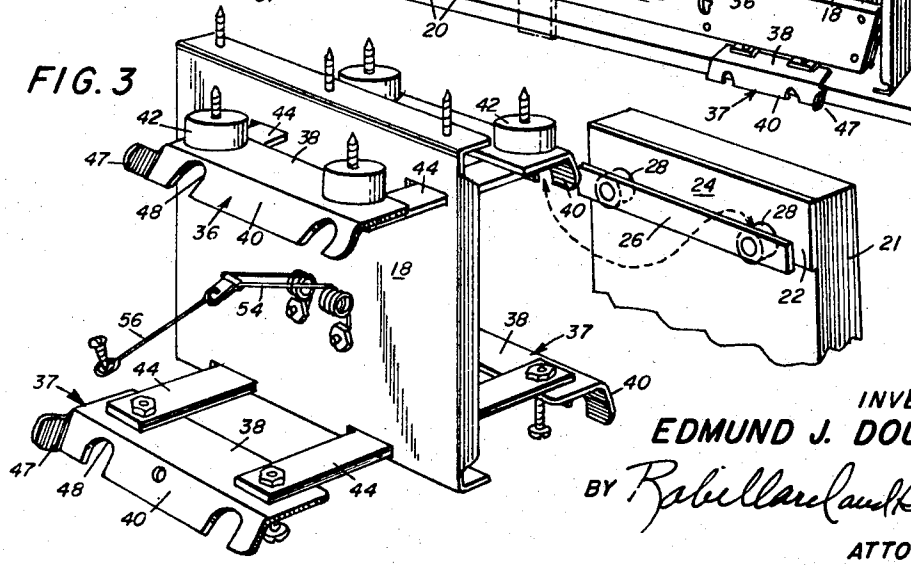


FIG. 3



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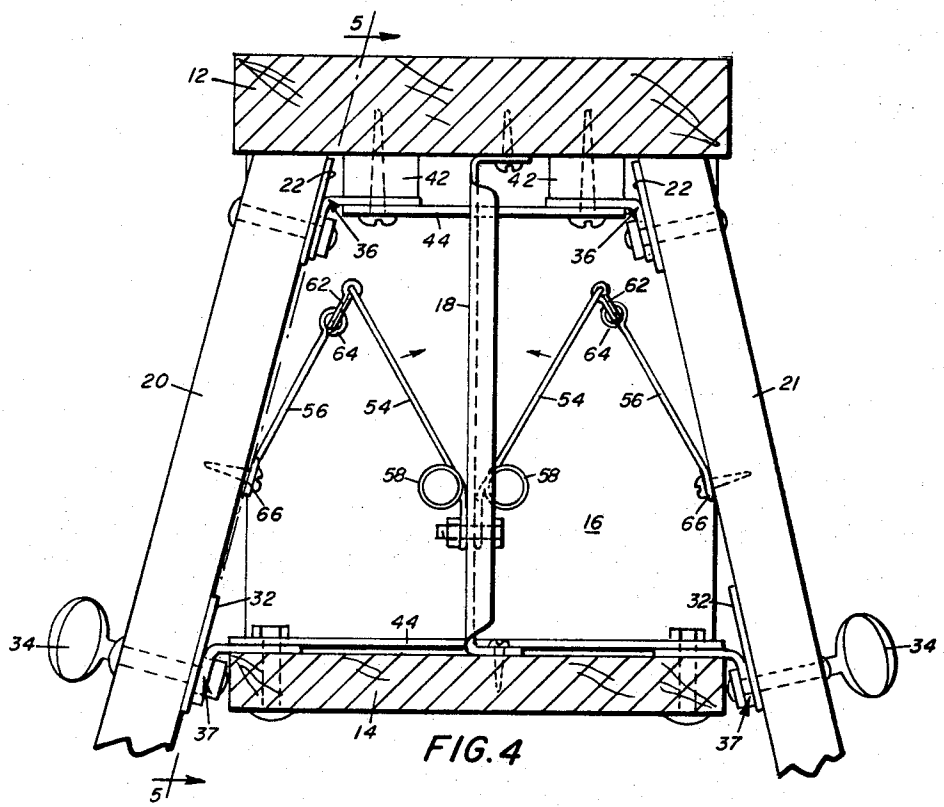


FIG. 4

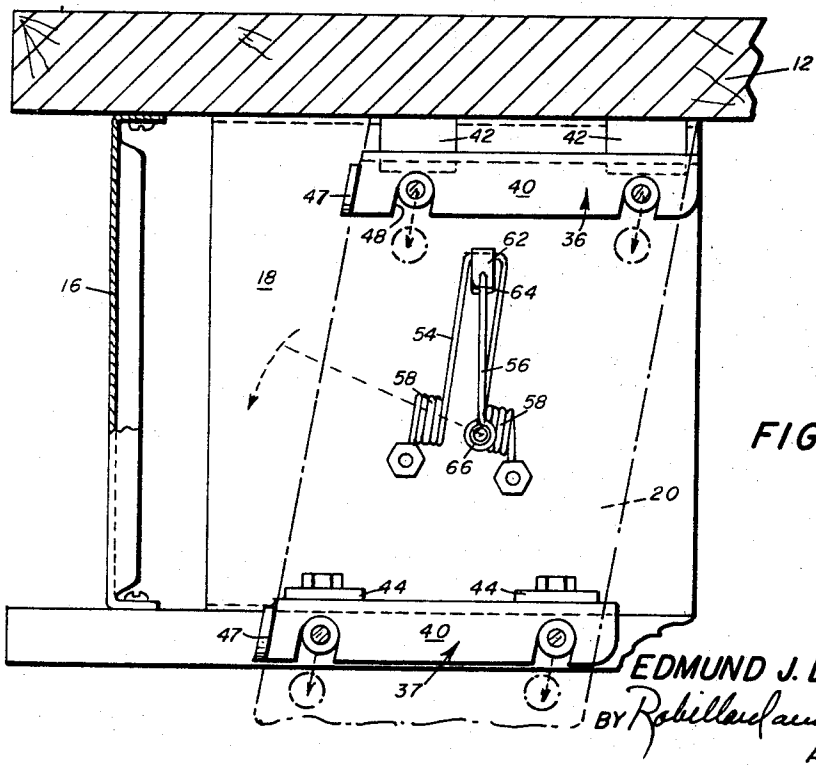


FIG. 5

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COLLAPSIBLE SAWHORSE

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ABSTRACT OF THE DISCLOSURE

A collapsible sawhorse having spring-biasing means connected between the sawhorse body and each sawhorse leg for automatically biasing each leg upon manual guidance thereof into its terminal mounted or travel position.

This invention relates to a collapsible sawhorse and more particularly relates to a sawhorse having collapsible legs which are connected to the sawhorse body by an articulated biasing connection.

In the past there have been provided a great number of models and types of collapsible sawhorses or trestles. For the most part such a "collapsible" feature meant that the sawhorse could be dismantled piece-by-piece with the artisan wasting much time and requiring much dexterity in order to carry the multiple pieces of his finally "portable" sawhorse. There have been other sawhorses which have been proposed which indeed are collapsible but only after much loosening, bending and folding under the skillful manipulations of the artisan. It is a primary object of this invention to provide a collapsible sawhorse having means on the sawhorse itself which will actually assist the artisan in collapsing the sawhorse into a single portable unit by providing a biasing force assist means for guiding and moving the sawhorse legs to a terminal position.

Another object of the invention is to provide a sawhorse having legs which are permanently connected to the sawhorse body by a substantially universal connection.

These and other objects of the invention will become more apparent to those skilled in the art by reference to the following detailed description when viewed in light of the accompanying drawings wherein:

FIGURE 1 is a perspective view of the sawhorse in its working position;

FIGURE 2 is a perspective view of the sawhorse in its travel condition;

FIGURE 3 is an enlarged perspective view of the biasing members and their associated elements;

FIGURE 4 is an enlarged section view taken along the line 4–4 of FIGURE 1; and

FIGURE 5 is a sectional view taken along the line 5–5 of FIGURE 4.

Referring now to the drawings, wherein like numerals indicate like parts, the numeral **10** indicates the sawhorse of the invention. The body portion of the sawhorse includes a rail **12** and a brace bar **14** supported below and parallel to the rail by pairs of spacing members **16** and **18**. The spacing members **16** and **18** are mutually perpendicular and are rigidly secured to the inner faces of the rail **12** and the brace bar **14** near their longitudinal extremities. The said spacing members **16** and **18** are preferably formed of metal in order to provide the sawhorse body with a maximum weight-bearing and stress withstanding capability.

As is conventional, the sawhorse **10** has a pair of legs **20** and **21** at either end thereof. The sawhorse when in the working position has its legs mounted so that they extend downwardly and outwardly from the inner face of the rail **12** past the longitudinal edge of the brace bar **14**. The legs **20** and **21** are also angled outwardly toward

their respective ends of the body portion. Since the legs are identical, only one of the legs **20** along with its cooperating elements on the sawhorse body will be discussed. The leg **20** is provided with upper and lower mounting brackets **22** and **23** respectively disposed parallel to each other. Each mounting bracket is comprised of a base plate **24** and a double-T bar **26** which is spaced therefrom by lugs **28**. The brackets **22, 23** are rigidly mounted to the leg and an aperture **32** (FIGURE 4) is provided in the plate **24** in order to allow egress of a locking screw **34** which is in threaded engagement through the leg.

For receiving the leg brackets **22, 23** there are provided upper and lower body brackets **36** and **37** respectively. The bracket **36** is L-shaped and comprised of legs **38** and **40**. The bracket leg **38** is secured to the inner face of the rail **12** and as shown in FIGURE 4, is spaced from the rail **12** by spacers **42**. It is also connected to its adjacent sister body bracket on the rail via bars **44** which extend through apertures **46** in the spacing member **18**. As best seen in FIGURE 2, each bracket is provided with a flange **47** projecting from the outer end of the leg **40** in order to assist in guiding the leg to its mounted position. The bars **44** provide an additional measure of reinforcement to prevent against twisting or loosening during use while the spacers **42** corresponding location of the upper leg brackets **22** at a greater distance from the leg end for increased strength. Each bracket leg **40** is provided with arcuate identations **48** which serve to receive the lugs **28** of the leg brackets.

The body bracket **37** is rigidly secured to the brace bar **14** with its leg **40** in spaced relation opposite the longitudinal edge of the brace bar. Bars **44** are again provided between sister body brackets on the brace bar and are secured in identical fashion as the brackets **36**.

When the brackets **22, 23, 36** and **37** are properly engaged, they will restrict the leg **20** from movement in any direction transverse to the longitudinal axis of the leg **20**. Movement by the leg in a direction away from the brackets **36, 37** along its own longitudinal axis is prevented by tightening the locking screw **34** which directly bears against the bracket leg **40** through the double-T bar **26** to clamp it against the said bar **26**.

In order to permanently attach the leg to the sawhorse body, a biasing member **50** is secured on one side of the spacing member **18** by bolts **52** and to the leg **20** by a screw **54** located intermediate the brackets **22** and **23**. The biasing member **50** is comprised of two parts, namely, a spring clip **54** and a connecting rod **56**. As best seen in FIGURE 5 the spring clip **54** is composed of identical coil spring segments **58** which form a projecting arm **60**. The spring clip is secured at an angle on the spacing member **18** so that the longitudinal axis of the projecting arm **60** lies substantially within a plane formed by the longitudinal axes of the legs **20** and **21**. The projecting arm **60** is biased by the coil segments **58** to lie flat against the face of the spacing member **18**. A connecting link **62** is pivotally secured to the extreme end of the projecting arm **60** and is pivotal about an axis transverse to the axis of the projecting arm.

The connecting rod **56** is formed with circular loops **64, 66** at each end. Each loop forms a plane which is perpendicular to the plane of the other loop and it can be seen that when the leg mounting brackets are disengaged from the body brackets, the leg **20** is free to move along its longitudinal axis by overcoming the bias of spring clip **54** and also to pivot about the bottom loop **66**.

In operation, with the sawhorse fully assembled and ready for collapse, the locking screw **34** is loosened until the leg is unlocked. The leg can then be pulled downwardly along its olngitudinal axis against the bias of spring clip **54** until the brackets **36** and **37** are disengaged.

Once the brackets are disengaged, the leg **20** is pivoted about the bottom loop **66** until it is substantially parallel with the rail **12** and brace bar **14**. The leg is then released or preferably hand guided between the rail and brace bar. During this operation the bias of the spring clip **54** provides a motive force for finally locating the leg **20** in its terminal travel position as seen in FIGURE 2. Of course, to insure that the movement of the leg ends be restricted, a belt B shown in phantom could be usde.

In order to erect the sawhorse, the reverse operation is performed. The leg is manually pulled outwardly to overcome the bias of spring clip **54** until the leg is clear of the rail and brace bar. The leg is then pivoted until the leg brackets **22** and **23** are positioned just beneath the respective body brackets **36** and **37**. Once again simple guidance by the artisan will suffice since the spring clip **54** will provide the final motive force to locate the legs in their terminal mounted position. It is to be noted that the said motive force provided by the spring clip **54** acts through its projecting arm **60** by pulling upwardly and inwardly on the connecting rod **56** and hence the leg **20**. The leg is then locked into position by tightening the locking screw **34**.

It is seen from the above description that not only does the biasing member **50** provide a permanent connection between the leg **20** and the sawhorse body, but it also provides a motive force for moving each leg to its terminal mounted or travel position.

What has been set forth above is intended primarily as exemplary to enable those skilled in the art in the practice of the invention and it should, therefore, be understood that, within the scope of the appended claims, the invention may be practiced in other ways than as specifically described.

What is new and therefore desired to be protected by Letters Patent of the United States is:

1. A collapsible sawhorse having a trestle member and a plurality of supporting legs at the longitudinal end of said trestle wherein the improvement comprises a bracing assembly below said trestle, means connected between said bracing assembly and an outer surface portion of at least one of said legs for pivotally securing said leg to said bracing assembly between an erected position wherein said leg extends downwardly and outwardly from said trestle and a travel position wherein that leg is nested parallel to and beneath said trestle and said means biasing said leg to said erected position or to said travel position depending upon which of said positions said leg is in closest proximity.

2. The invention as described in claim **1** wherein said bracing assembly includes receiving brackets which receive inserting brackets carried by said legs to detachably secure said legs in said first position.

3. The invention as described in claim **2** wherein said legs carry locking means for locking said inserting brackets to said receiving brackets when said brackets are engaged with each other.

4. The invention as described in claim **2** wherein said receiving brackets include a downwardly depending leg having arcuate indentations therein and said inserting brackets include lugs for engagement in said indentations.

5. A collapsible sawhorse having a trestle member and a plurality of supporting legs at the longitudinal end of said trestle wherein the improvement comprises a bracing assembly below said trestle, a spring clip mounted on said bracing assembly, a connecting rod pivotally connected between said spring and each said leg, said spring clip and said connecting rod pivotally securing said leg to said bracing assembly between an erected position wherein said leg extends downwardly and outwardly from said trestle and a travel position wherein that leg is nested parallel to and beneath said trestle, said spring clip and said connecting rod biasing said leg to said erected position or to said travel position depending upon which of said positions said leg is in closest proximity.

6. The invention as described in claim **5** wherein said spring clip is biased inwardly substantially within a plane formed by the longitudinal axes of the erected legs at one end of said sawhorse.

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