Oct. 4, 1966 D. D'ANGELO 3,276,545

COLLAPSIBLE SAWHORSE

Filed April 26, 1965

FIG. 6

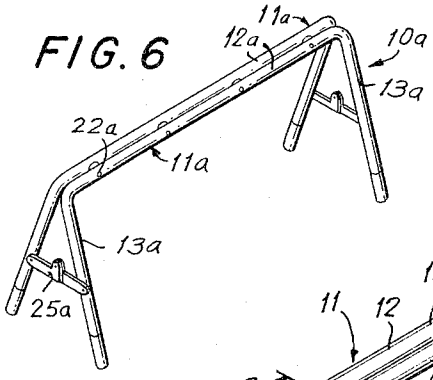


FIG. 1

FIG. 4

FIG. 3

FIG. 2

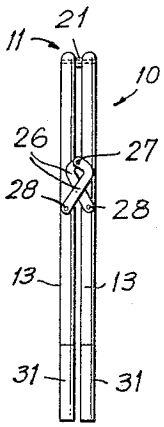


FIG. 5

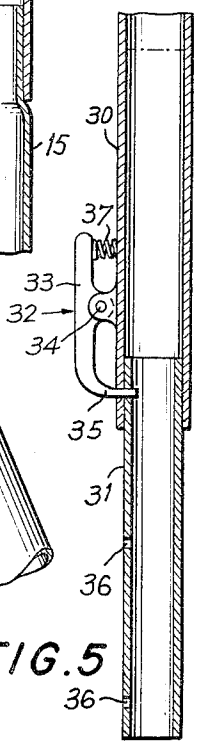


FIG. 8

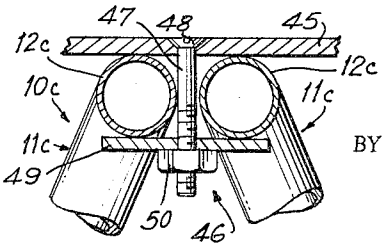
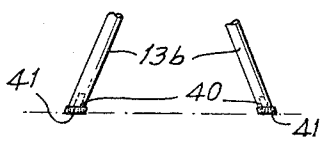


FIG. 7



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3,276,545

Patented Oct. 4, 1966

3,276,545

COLLAPSIBLE SAWHORSE

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Filed Apr. 26, 1965, Ser. No. 450,815

9 Claims. (Cl. 182—153)

This invention relates generally to support means of the type often referred to as trestles or sawhorses.

It is an important object of the present invention to provide a sawhorse-type support which is conveniently collapsible and erectable for immediate use when desired, and for storage in a minimum of space.

It is a further object of the present invention to provide a sawhorse structure of the type described which is of extremely lightweight and durable construction for ease in handling throughout a long useful life.

It is another object of the present invention to provide a sawhorse construction having the advantageous characteristics mentioned in the preceding paragraphs which is extremely simple in structure, entirely reliable in operation, and which can be economically manufactured for sale at a reasonable price.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

FIGURE 1 is a top perspective view showing a sawhorse-type support constructed in accordance with the teachings of the present invention, and illustrated in its operative condition of use.

FIGURE 2 is an end elevational view of the sawhorse of FIGURE 1 in a collapsed condition.

FIGURE 3 is a sectional view taken generally along the line 3—3 of FIGURE 1, and illustrating the collapsed condition in phantom.

FIGURE 4 is a partial sectional view taken generally along the line 4—4 of FIGURE 1.

FIGURE 5 is a sectional view taken generally along the line 5—5 of FIGURE 1.

FIGURE 6 is a top perspective view similar to FIGURE 1, showing a slightly modified embodiment.

FIGURE 7 is an end elevational view showing a sawhorse support of FIGURE 1 in erected condition standing upon a ground surface.

FIGURE 8 is a sectional elevational view showing the sawhorse of the present invention in operative association with a supported bed member or table plate.

Referring now more particularly to the drawings, and specifically to FIGURES 1–5 thereof, a sawhorse-type support of the present invention is generally designated **10**, and includes a pair of generally yoke-shaped members **11**, which may advantageously be fabricated of round tubular stock.

Each yoke-shaped member **11** includes a generally straight bight portion **12** and a pair of legs **13** extending transversely from opposite ends of the bight portion. In practice, the leg portions **13** may be integral with and connected by bends **14** to the bight portions **12**, the legs of each yoke-shaped member **11** extending in substantially parallel relation with each other.

If desired, the bight portions **12** may each be of a sectional construction, say including a pair of sections **15** and **16**. Each section **15** may include a male extension **17** insertible into the adjacent end of a section **16** for detachable end-to-end securement of bight-portion sections in end-to-end aligned relation.

In the assembled relation of yoke-shaped members **11**, their bight portions **21** extend in adjacent, spaced parallelism with each other, and are formed on their adjacent sides with pairs of facing openings, as at **20**, best seen in FIGURE 3. Interposed between the adjacent spaced bight portions **12**, and specifically between the openings **20** of each facing pair, is a spacer member or washer **21**, which may be fabricated of rubber or other suitable material. A tie member or pin **22** extends in spaced relation through each facing pair of openings **20**, and closely through the intermediate spacer or washer **21**, see FIGURE 3. Opposite ends of each transverse pin **22** may be secured to the outer sides of respective bight portions **12**, advantageously by a swingable connection, such as the rounded heads **23**.

In this manner, the bight portions **11** are connected together in their spaced parallel relation and relatively rotatable about longitudinal axes. That is, the swingable end connections of the pins **22** with the outer sides of bight portions **12**, as by the headed pin ends **23**, enables the bight portions to rotate about longitudinal axes relative to each other with each pin **22** moving relatively downward in the facing pairs of openings **20** from the position shown in FIGURE 3.

Upon this relative rotation of bight portions **12**, the leg portions **13** of each adjacent pair are swingable toward and away from each other to effect collapse and erection of the sawhorse **10**. The swinging movement of legs **13** away from each other is limited by interconnected linkages **25** between each pair of adjacent leg portions. Each linkage **25** includes a pair of links **26** pivotally connected together at their adjacent ends by a pin **27**, and having their distal ends respectively pivoted to adjacent leg portions **13** by pins **28**. Upon swingly movement of the legs **13** of each adjacent pair toward each other to the collapsed position of FIGURE 2, the links **26** are relatively swingable to the position shown.

Each leg **13** may also be of sectional construction, as best seen in FIGURE 5. Each leg portion may include an upper tubular section **30** integral with the adjacent region of the associated bight portion **12**, and a lower section **31** telescopically received in the lower end of the upper section **30**. A catch **32** of any suitable construction may be employed to releasably retain the lower section **31** in a selected position of its extensile and retractile movement relative to the upper section **30**. The catch **32** may include an arm **33** pivoted intermediate its ends, as by pin **34** to the section **30** and having a transverse end extension **35** removably engageable through the leg section **30** and a selected aperture **36** of the leg section **31** to lock the leg sections in any desired relationship. Resilient means **37** may be employed to releasably retain the catch **32** with its extension **35** engaged through a selected hole **36**. Of course, the arm **33** may be manually swung to remove the extension **35** for longitudinal shifting of the lower leg section **31**. In this manner, the height and inclination of the sawhorse **10** may be selectively adjusted as required by the intended purpose or supporting ground surface, and the leg section **31** may be stored entirely within the leg section **30**.

In the embodiment of FIGURE 6, there is shown a sawhorse type support generally designated **10***a*, wherein each yoke-shaped member **11***a* is integrally fabricated of a single length of tube stock. Thus, the parallel bight portions **12***a* of each yoke member **11***a* are of integral construction and integral with the transverse leg portions **13***a*. The parallel bight portions **12***a* are connected together by suitable pins **22***a*, which may be of the same construction as shown in FIGURE 3, and the leg portions **13***a* are connected together by limiting linkages **25***a*, which may be the same as shown in FIGURE 1.

Thus, the sawhorse construction **10***a* of FIGURE 6 is in many respects identical to that of FIGURES 1–5, but may may be more economical in cost at the sacrifice of some adjustabilty and space savings in storage.

In FIGURE 7 is shown a further embodiment wherein leg portions **13***b*, corresponding to the leg portions **13** and **13***a* described hereinbefore, have their lower ends **40** each cut obliquely to the axis of the respective leg portion, so as to be substantially parallel to a generally horizontal ground or supporting surface in the erected condition. Advantageously, the lower ends **40** of the leg portions **13***b* may be provided with protective plugs **41** of rubber, or other suitable frictional material.

In the further embodiment of FIGURE 8, there is shown a sawhorse-type support **10***c* having yoke-shaped members **11***c* which may be substantially identical to the previously described yoke-shaped members **11**, or those designated **11***a*.

The yoke-shaped members **11***c* include parallel, spaced bight portions **12***c*, which may be connected together in spaced relation, as in FIGURE 3, for relative rotation about longitudinal axes.

Associated with and resting on the bight portions **12***c* of sawhorse **10***c* may be a table plate or bed member **45**. In order to securely anchor the bed member **45** in position on the sawhorse **10***c*, fastener means **46** may extend through the space between the bight portions **12***c* having its lower end enlarged and its upper end secured to the bed member. More particularly, a fastener or bolt **47** may extend through the space between bight portions **12***c* having its upper end enlarged, as by a head **48** for securement to the bed member **45**. The lower end of the fastener **47** may be provided with an enlargement or washer **49** below the bight portions **12***c* and a nut **50** threadedly engaged on the fastener to draw the washer **49** in firm abutting engagement with the undersides of the bight portions. In this manner, the bed member or table plate **45** may be securely fastened in position on one or more sawhorse supports **10***c*, and quickly removed therefrom by removal of the fastener **47** from between the bight portions **12***c*.

From the foregoing, it is seen that the present invention provides a sawhorse-type support which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A sawhorse-type support comprising a pair of generally yoke-shaped members each having a generally straight tubular bight portion and a pair of leg portions extending from opposite ends of the bight portion, said bight portions extending in adjacent parallel relation with each other, said bight portions being formed on their adjacent sides with facing pairs of openings, and a tie member extending in spaced relation through each of said pairs of openings and swingably secured to the outer sides of said bight portions to connect the latter for relative rotation about longitudinal axes, whereby said leg portions are swingable toward and away from each other for collapse and erection.

2. A sawhorse-type support according to claim **1**, in combination with linkage means connected between said legs for limiting swinging movement of the latter away from each other.

3. A sawhorse-type construction according to claim **1**, said bight portions being in spaced parallelism with each other, and a spacer circumposed about each tie member intermediate said bight portions to maintain the spaced parallelism therebetween.

4. A sawhorse-type construction according to claim **3**, said leg portions being engageable with a supporting surface, a bed member resting on said bight portions spaced over a supporting surface, and headed tie means extending through the space between said bight portions for anchoring said bed member to said bight portions.

5. A sawhorse-type support according to claim **1**, said bight portions each comprising a plurality of sections detachably secured in end-to-end relation.

6. A sawhorse-type support according to claim **1**, said leg portions each comprising a plurality of sections detachably secured in end-to-end relation.

7. A sawhorse-type support comprising a pair of generally yoke-shaped members each having a generally straight round tubular bight portion and a pair of transverse leg portions extending from opposite ends of said bight portion, said bight portions extending in adjacent parallel spaced relation with each other, said bight portions being formed on their adjacent sides with facing pairs of openings, spacer means interposed between said bight portions, and a tie member extending in spaced relation through each of said pairs of openings and said spacer means, the outer ends of said tie members being swingably secured to the outer sides of said bight portions to connect said bight portions for relative rotation about longitudinal axes, whereby said leg portions are swingable toward and away from each other for collapse and erection.

8. A sawhorse-type support according to claim **7**, said tie means extending closely through said spacer means to retain and locate the latter between said bight portions.

9. A sawhorse-type support according to claim **7**, said bight portions and leg portions each comprising a plurality of sections detachably secured in end-to-end relation.

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