July 3, 1956 C. J. ANDERSON 2,753,223

LOCKING DEVICE FOR SAW HORSES

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Fig. 1.

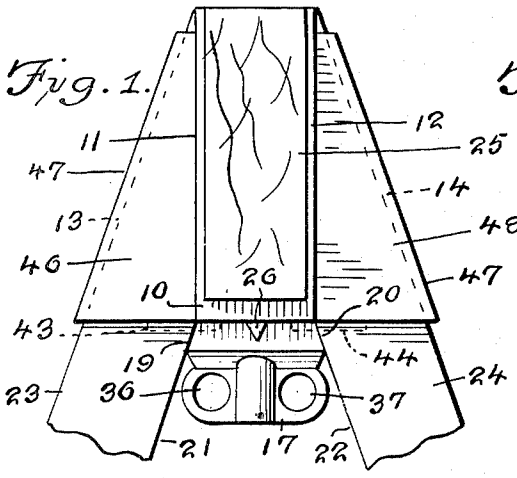


Fig. 2.

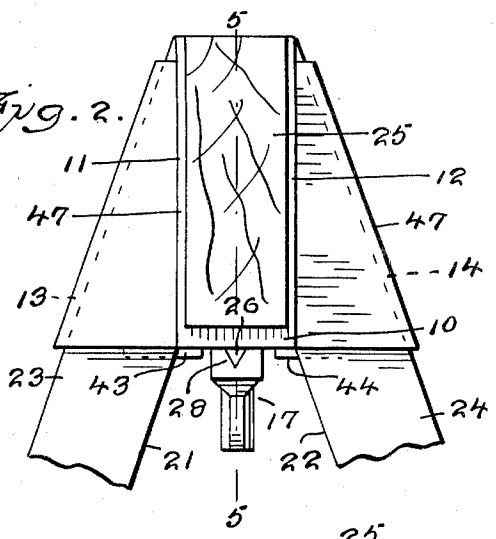


Fig. 3.

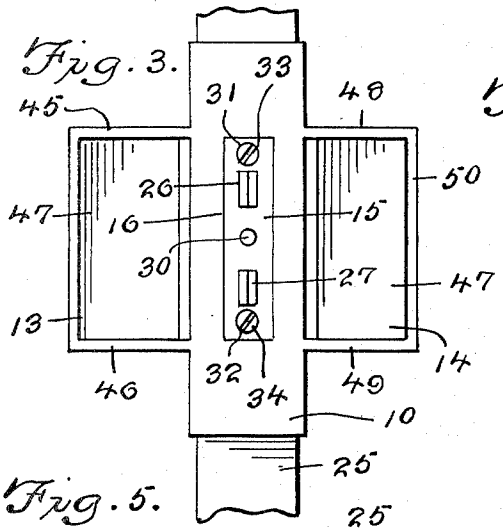


Fig. 4.

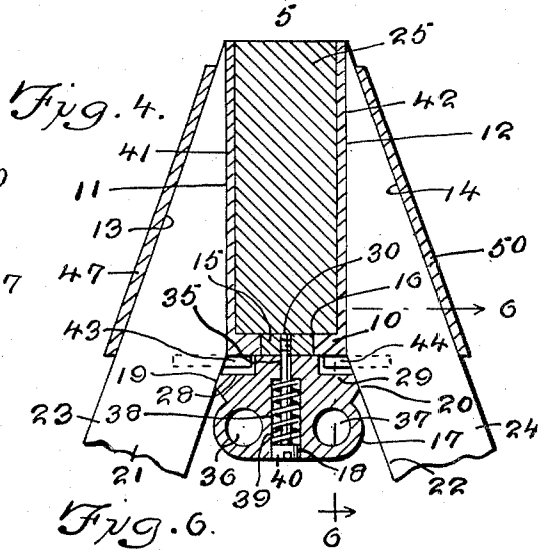


Fig. 5.

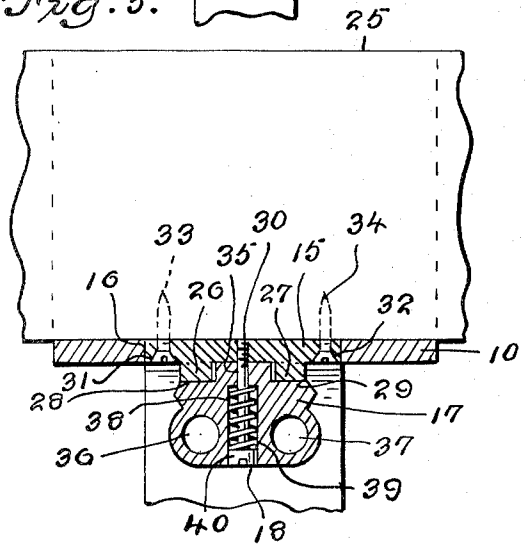
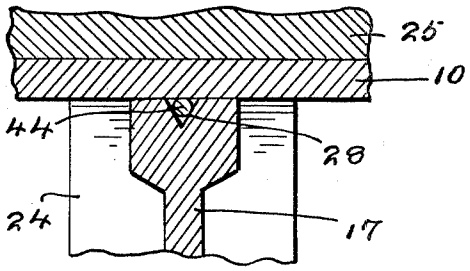


Fig. 6.



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Fig. 7.

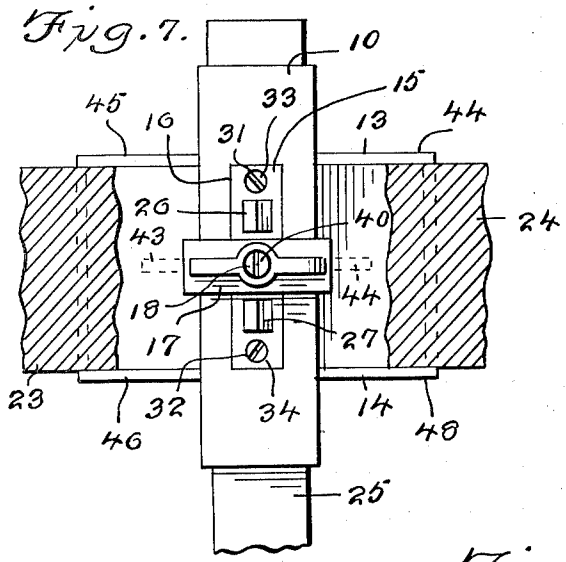


Fig. 8.

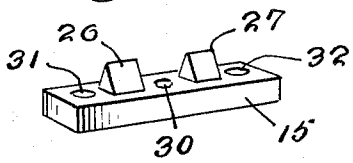


Fig. 9.

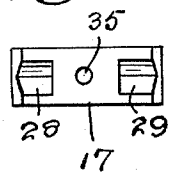


Fig. 10.

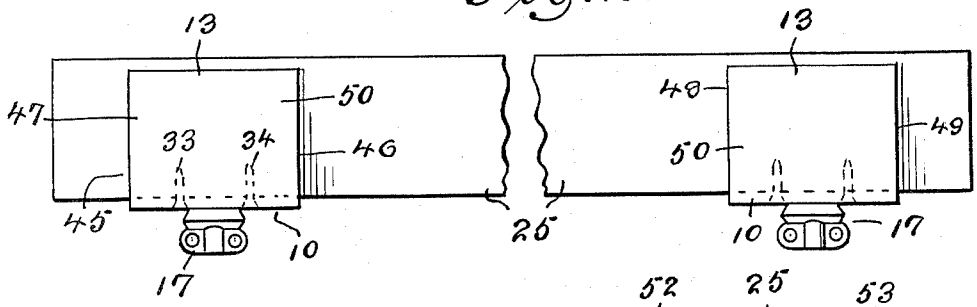


Fig. 11.

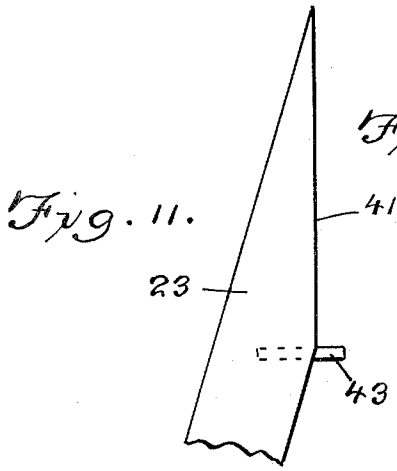
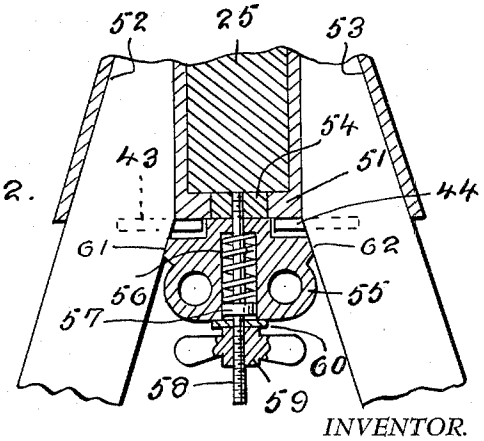


Fig. 12.



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2,753,223

LOCKING DEVICE FOR SAW HORSES

Carl John Anderson, Eau Claire, Wis.

Application June 9, 1953, Serial No. 360,483

7 Claims. (Cl. 304—5)

This invention relates to a saw horse of the conventional type, having a beam, such as a two-by-four supported by outwardly diverging legs spaced from the ends, and in particular a bracket for attaching the legs to the beam whereby the legs may readily be removed and packed in a folded or collapsed position for storing and shipping.

The purpose of this invention is to provide a collapsible saw horse in which the legs are secured in the set-up position with a wedge action and in which the wedge element is held in position by resilient means.

In the conventional type of saw horse and also in brackets for retaining legs of saw horses in operative positions the legs work loose in the brackets or in relation to the beam of the saw horse and for this reason it is difficult to retain a saw horse in a rigid condition. With this thought in mind this invention contemplates a saw horse having a beam with tapering sockets formed in brackets spaced from the ends and a key or wedge element pivotally mounted on the under surfaces of the brackets and positioned to, selectively, rest in a free position upon the brackets, or when turned to an angle of 90 degrees grip the legs with a positive action whereby a rigid saw horse is provided.

The object of this invention is, therefore, to provide means for mounting legs on a beam of a saw horse whereby the legs are clamped in sockets on the beam with a wedge action.

Another object of the invention is to provide positive clamping means for legs of saw horses in which the legs and beam of the saw horse may be formed of conventional design.

A further object of the invention is to provide positive locking means for saw horses of the folding or collapsible type wherein a rigid saw horse may be provided and in which the saw horse is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a substantially U-shaped bracket having tapering or triangularly disposed sockets on the sides with a key pivotally mounted on the base of the bracket and wherein the key is provided with beveled ends that are inclined with the key extended transversely of the beam, to correspond with the inner surfaces of the legs of the saw horse whereby the legs are secured in the sockets with a positive clamping action.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is an end elevational view of the upper part of a saw horse with the lower ends of the legs broken away showing the locking key in the position of clamping the legs in sockets of a bracket of the saw horse.

Figure 2 is a view similar to that shown in Fig. 1 showing the key turned to an angle of 90 degrees wherein the legs of the saw horse are released.

Figure 3 is a view looking upwardly toward the under surface of an end of the beam of a saw horse showing the leg mounting bracket with the legs and locking key of this invention removed.

Figure 4 is a cross section through a saw horse also showing the key in the locking position, as illustrated in Fig. 1.

Figure 5 is a longitudinal section through a portion of one end of a saw horse taken on line 5—5 of Fig. 2 showing the locking means in the released position.

Figure 6 is a detail showing a section taken on line 6—6 of Fig. 4 with the parts shown on an enlarged scale illustrating a recess in the locking key for receiving the head of a stud extended inwardly from the inner surface of one of the legs of the saw horse.

Figure 7 is a view looking upwardly toward the under surface of one end of a saw horse showing the locking key in the position of clamping legs in sockets of the brackets positioned on the beam of the saw horse and showing parts of the legs broken away.

Figure 8 is a detail showing a perspective view of a positioning plate adapted to be mounted on the lower surface of a beam for locating legs on the beam of a saw horse.

Figure 9 is a detail showing a view looking upwardly toward the under surface of a key adapted to be pivotally mounted on the plate shown in Fig. 8 and showing sockets in the lower surface of the key for selectively, receiving positioning lugs of the plate or for receiving the ends of studs extended inwardly from the legs.

Figure 10 is a side elevational view of the upper part of a saw horse with part of the beam broken away and with the legs omitted showing the locking keys.

Figure 11 is a detail showing the upper end of one of the legs with the lower part broken away and with a stud extended therefrom.

Figure 12 is a detail also showing a section through the saw horse, similar to Figure 4, illustrating a modification wherein a lock nut is threaded on a stud extended from the locking key for securing the locking key in clamping relation with the legs of the horse, parts of the upper portion of the saw horse and lower end of the leg being broken away.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved saw horse bracket of this invention includes a base **10** having upwardly extended webs **11** and **12** at the sides with sockets **13** and **14** respectively on the outer surfaces of the webs, a plate **15** adapted to be positioned in an opening **16** in the base **10** and a key **17**, secured to the plate **15** with a bolt **18** and having beveled ends **19** and **20** that grip inner surfaces **21** and **22** of legs **23** and **24**, respectively of a saw horse, having a beam **25**.

The plate **15** is provided with V-shaped lugs **26** and **27** that are positioned to extend into notches **28** and **29**, respectively of the key **17** with the key positioned longitudinally of the beam **25** whereby the key is secured with the notches and lugs in a position wherein the legs of the saw horse are free so that they may be removed for folding the legs to collapse the saw horse.

The plate **15** is provided with a threaded opening **30** into which the bolt **18** is threaded, as shown in Fig. 4 and also openings **31** and **32**, the outer ends of which are countersunk, for receiving the heads of screws **33** and **34**, as shown in Fig. 5.

The key **17** is provided with a centrally positioned opening **35** through which the bolt **18** extends and also finger receiving openings **36** and **37** to facilitate gripping the key for drawing the key outwardly against a spring **38** positioned in a counterbore **39** in the center of the key. The spring is positioned between the inner end of the counterbore and a head **40** of the bolt and although it is preferred to form the head of the bolt with a Philips head socket it will be understood that the head may be

provided with a screwdriver slot or other means for adjusting the position of the bolt to regulate the tension of the spring.

The legs **23** and **24** are formed with beveled surfaces **41** and **42**, at the upper ends which contact the outer surfaces of the webs **11** and **12** with the upper ends of the legs positioned in the sockets **13** and **14**. The legs are also provided with studs **43** and **44**, respectively, which are positioned to engage the under surface of the base **10** of the bracket and which are also positioned to register with the notches **28** and **29** in the under surface of the key.

The socket **13** is provided with triangular shaped side walls **45** and **46** and a sloping outer wall **47**, and the socket **14** is provided with similar side walls **48** and **49** and a sloping outer wall **50**.

In the design illustrated in Fig. 12 a bracket having a base **51** with sockets **52** and **53** at the sides, similar to the sockets **13** and **14**, is provided with a locating plate **54**, similar to the plate **15** and a key **55**, similar to the key **17** is secured to the plate with a bolt **56** having a head **57** and also having a threaded stud **58** extended from the outer surface of the head. A wing nut **59** is threaded on the stud **58** and a washer **60** is positioned between the nut and outer end of the key. By this means the thumb or wing nut **59** clamps the key with beveled surfaces **61** and **62** thereof against the inner surfaces of the legs whereby the legs are positively clamped in the bracket.

With the parts formed in this manner a saw horse is provided which, with the locking key turned transversely of the beam of the saw horse, as shown in Figs. 1, 4, and 7 the legs are rigidly clamped, with a wedge action in the sockets at the sides of the bracket in which the beam of the saw horse is positioned.

With the key turned to an angle of 90 degrees, or to the position shown in Fig. 2 the legs are released and may readily be removed from the sockets of the bracket whereby the legs may be nested in folded or collapsed positions against the surface of the beam.

The saw horse may readily be set up for use and the key may be actuated to positively clamp the legs in the sockets of the bracket.

It will be understood that modifications, within the scope of the appended claims, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. A saw horse bracket comprising a U-shaped body having triangular shaped sockets at the sides, with a beam positioned in said U-shaped body, legs for the saw horse, a locking key having beveled ends positioned to engage the inner surfaces of the legs with the upper ends of the legs positioned in said triangular-shaped sockets, means for pivotally mounting the locking key on the body, a pair of opposed V-shaped lugs on the body, a pair of opposed studs on the legs at a 90 degree angle to the lugs and notches in said key alternately engaging the studs to retain the legs in rigid relation to the beam or alternately engaging the lugs to permit removal of the legs.

2. A saw horse attachment comprising a bracket, U-shaped in cross section and having open triangular-shaped sockets at the sides, said bracket having positioning lugs on the under surface, legs for the saw horse, a locking key having beveled ends positioned against the under surface of the bracket with said beveled ends in engagement with the inner surfaces of the legs when the legs are positioned in the triangular-shaped sockets, means for pivotally mounting the locking key on the bracket, means for resiliently urging the locking key toward the bracket with the beveled ends in engagement with the inner surfaces of legs positioned in the sockets of the bracket, a pair of opposed V-shaped lugs on the body, a pair of opposed studs on the legs at a 90 degree angle to the lugs and notches in said key alternately engaging the studs to retain the legs in rigid relation to the beam or alternately engaging the lugs to permit removal of the legs.

3. In a saw horse mounting, the combination which comprises a bracket, U-shaped in cross section, having a base with an elongated opening therein and upwardly extended side webs with triangular-shaped sockets on the outer surfaces thereof, a plate having V-shaped projections on the outer surface positioned in an opening in the base of the U-shaped bracket with the lugs extended downwardly, legs for the saw horses, a locking key having recesses therein pivotally mounted on said plate and positioned whereby the recesses therein register with the lugs of the plate to retain the key in the free position to permit removal of said legs and studs on the legs to register with the recesses in the key to retain the key in the locked position whereby the legs are retained in rigid relation to the plate and whereby beveled surfaces at the ends of the key engage inner surfaces of the legs positioned in the sockets when said key has been disengaged from contact with said projections.

4. In a saw horse attachment, the combination which comprises a bracket, U-shaped in cross section, having a base with upwardly extended side webs and having V-shaped sockets on the outer surfaces of said side webs, the base of said bracket having an elongated opening therein, a plate having lugs extended from the outer surface positioned in the opening in the base of the bracket, a locking key, a stud extended through the locking key and threaded into said plate for retaining the locking key in adjusted positions, legs for the saw horse, means urging said locking key against the bracket with the ends of the locking key in engagement with the legs extended into the sockets of the bracket, a pair of opposed V-shaped lugs on the body, a pair of opposed studs on the legs at a 90 degree angle to the lugs and notches in said key alternately engaging the studs to retain the legs in rigid relation to the beams or alternately engaging the lugs to permit removal of the legs.

5. In a saw horse assembly bracket, the combination which comprises a base having an elongated opening therein and having upwardly extended webs at the sides with triangular-shaped sockets on the outer surfaces of the webs, a plate having aligned V-shaped projections thereon mounted in the opening of the base, legs for the saw horse, a stud extended from said plate, a locking key pivotally mounted on said stud and having beveled surfaces on the ends positioned to engage the inner surfaces of the legs extended from the said sockets, beveled notches in said key adapted to engage said projections to retain said key out of engagement with the inner surfaces of said legs, resilient means urging the locking key toward the base of the bracket with the beveled surfaces at the ends of the locking key bearing against the inner surfaces of legs positioned in the sockets, alined studs on the legs and the beveled notches in said key alternately engaging said studs and said projections to clamp said legs in rigid relation to said plate or permit the removal of said legs from engagement with said plate.

6. In a saw horse assembly bracket, the combination which comprises a base having an elongated opening therein and having upwardly extended webs at the sides with triangular-shaped sockets on the outer surfaces of the webs, a plate having aligned V-shaped projections thereon mounted in the opening of the base, a stud extended from said plate, legs for the saw horse, a locking key pivotally mounted on said stud and having beveled surfaces on the ends positioned to engage the inner surfaces of the legs extended from the said sockets, beveled notches in said key adapted to engage said projections to retain said key out of engagement with the inner surfaces of said legs, resilient means urging the locking key toward the base of the bracket with the beveled surfaces at the ends of the locking key bearing against the inner surfaces of legs positioned in the

sockets, said locking key having finger receiving openings therein to permit the turning of said locking key to disengage said locking key from said projection, alined studs on the legs, and the beveled notches in said key alternately engaging said studs and said projections to clamp said legs in rigid relation to said plate or permit the removal of said legs from engagement with said plate.

7. In a saw horse assembly bracket, the combination which comprises a base having an elongated opening therein and having upwardly extended webs at the sides with triangular-shaped sockets on the outer surfaces of the webs, a plate having aligned V-shaped projections thereon mounted in the opening of the base, legs for a saw horse, a stud extended from said plate, a locking key pivotally mounted on said stud and having beveled surfaces on the ends positioned to engage the inner surfaces of legs extended from the said sockets, beveled notches in said key adapted to engage said projections to retain said key out of engagement with the inner surfaces of said legs, resilient means urging the locking key toward the base of the bracket with the beveled surfaces at the ends of the locking key bearing against the inner

surfaces of legs positioned in the sockets, said locking key having finger receiving openings therein to permit the turning of said locking key to disengage said locking key from said projections, means for forcing the locking key into engagement with legs positioned in said triangular-shaped sockets, alined studs on the legs and the beveled notches in said key alternately engaging said studs and said projections to clamp said legs in rigid relation to said plate or permit the removal of said legs from engagement with said plate.

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