(No Model.)

H. L. ADAMS.

TRESTLE.

No. 605,370. Patented June 7, 1898.

Fig. 1

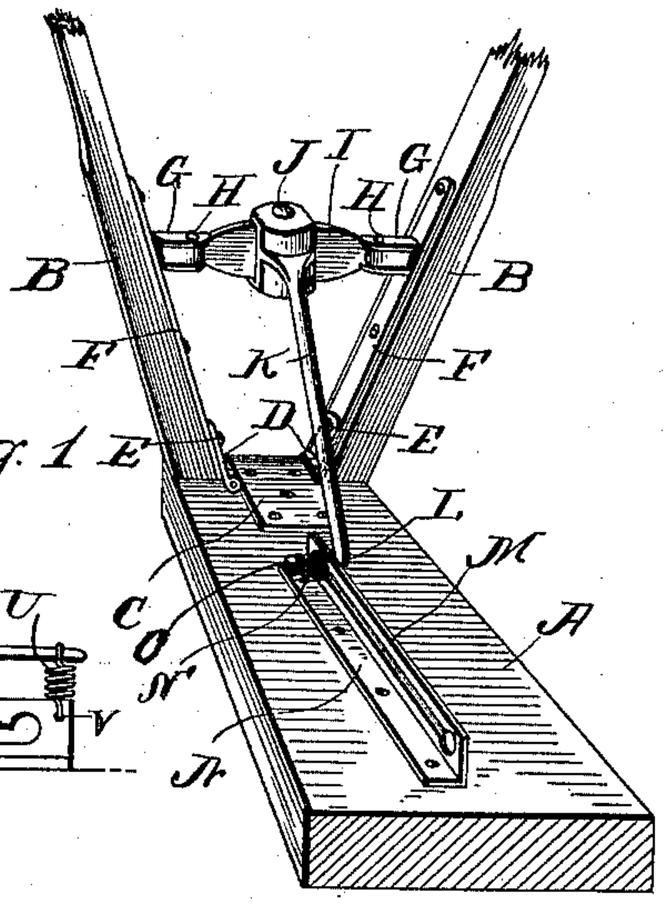


Fig. 5.

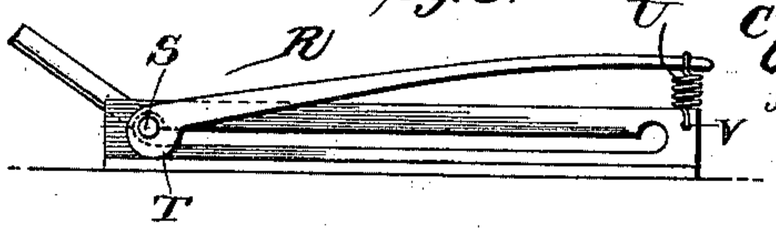


Fig. 2.

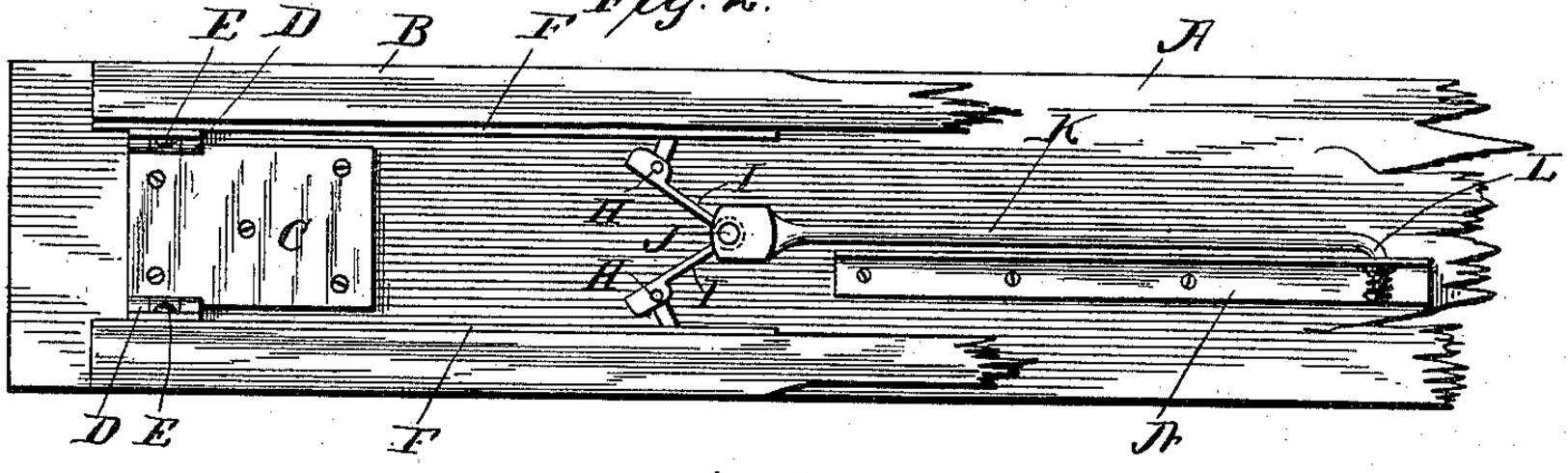


Fig. 3.

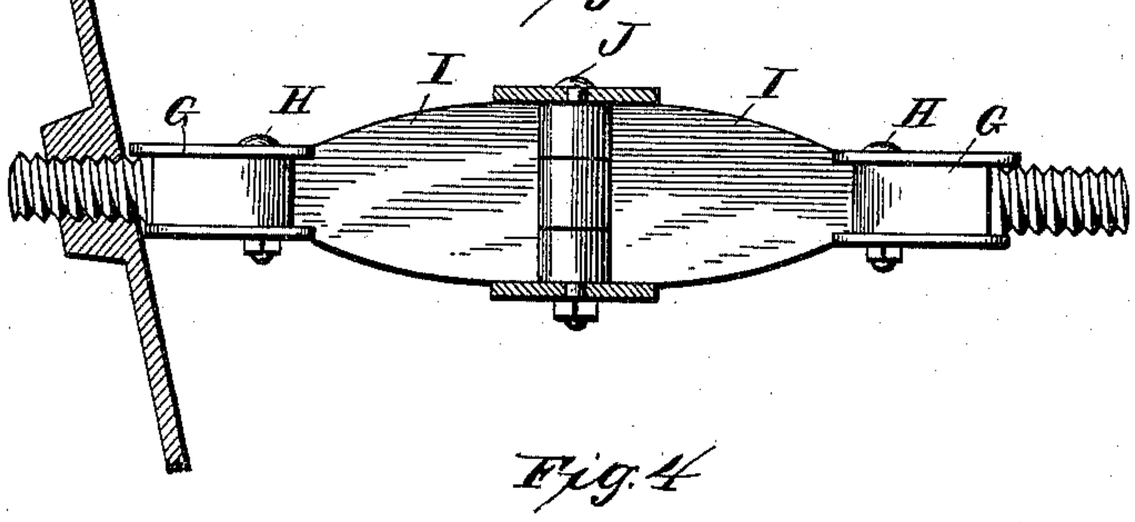
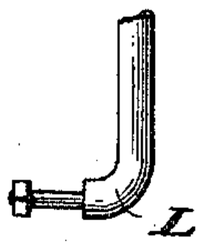


Fig. 4



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UNITED STATES PATENT OFFICE.

HARRY L. ADAMS, OF WILMINGTON, VERMONT.

TRESTLE.

SPECIFICATION forming part of Letters Patent No. 605,370, dated June 7, 1898.

Application filed September 28, 1897. Serial No. 653,339. (No model.)

To all whom it may concern:

Be it known that I, HARRY L. ADAMS, a citizen of the United States, residing at Wilmington, in the county of Windham and State of Vermont, have invented a certain new and useful Improvement in Trestles, of which the following is a specification.

My invention relates to a new and useful improvement in folding or collapsible hand-saw-benches, and has for its object to provide a simple, cheap, and effective device of this description by means of which all of the metal parts for securing the legs to the bench-top and together and adjusting them are so placed as to be out of the way of the saw when in operation, thereby avoiding the liability of injury to the saw, which has heretofore been a considerable drawback to benches of this description, since the nails necessary to secure the legs and other parts together have been so exposed as to greatly damage the saw-teeth when coming in contact therewith.

Another object of my invention is to so attach the legs of the bench to the top thereof as to permit them to fold inward against the top and within the outline thereof, thereby especially adapting the bench for storing in a small compass for transportation, and yet when the legs are adjusted to their active position to so secure them therein as to render the bench as rigid as though of ordinary construction.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of a portion of a bench, looking upon the under side thereof, and illustrating the manner of attaching the legs to the top and of securing the same in their adjustment; Fig. 2, a bottom plan view of one end of a bench made in accordance with my improvement, showing two of the legs folded in place and within the outline of the top for transportation or storage; Fig. 3, an enlarged detail view of the toggle-joint for securing the legs together and in their active adjustment; Fig. 4, a detail of the reduced end of the brace-rod, and Fig. 5 a detail of another manner in which the brace-rod may be held in engagement with the locking-notch of the angle-iron.

In carrying out my invention as here embodied, A represents the top of the bench, and B the legs thereof, the latter being attached to the former by a hinge and pivot which permit a four-way movement, and this last element is constructed as follows:

C is a plate which is secured to the under side of the bench-top by means of screws or otherwise, and to this plate are pivoted the swinging hinge members D, which are preferably of some length, after the manner of a strap-hinge, and these hinge members are pivoted at E to the brace-strips F, the latter in turn being secured by suitable screws to the legs, as clearly shown, by which arrangement the legs may be swung inward toward each other, as well as upward toward the top. The brace-strips have swivelly secured thereto the clips G, and these have pivoted thereto at H the members of the toggle-joint I, said members being in turn pivoted together at J. From this it is obvious that by the breaking of this joint or the swinging of the inner ends of its members out of line the legs will be brought toward each other, and when parallel it is only necessary that they be swung toward the top to bring them parallel and in contact therewith and within the outline thereof, as clearly shown in Fig. 2.

The last-named result is accomplished by a brace-rod K, the outer end of which is bifurcated and pivoted to the center of the toggle-joint at J, while its inner end is bent at right angles thereto and reduced in diameter, as indicated at L, and this reduced end passes through and is adapted to slide within the slot M, formed within the guide-strip N, and a spring N′ may be used to prevent the displacement of the brace-rod. The strip N is preferably formed of a length of right-angle iron and is secured to the under side of the bench-top by suitable screws, as clearly shown, and the slot M in this strip terminates at each end in an enlargement, the one near-

est the legs being utilized as a locking-notch, as hereinafter set forth, while the one at the opposite end of the slot is of sufficient size to permit the withdrawal of the head O, formed upon the end of the brace-rod K.

When it is found that the spring N' is not sufficiently reliable for holding the brace-rod in its locked position, the construction shown in Fig. 5 may be utilized for this purpose and consists of a lever R being pivoted to the end of the brace-rod, as indicated at S, and having formed thereon a cam T, which when the reduced end of the brace-rod is in alinement with the locking-notch in the angle-iron may be so operated as to force this reduced end into said notch and there hold the same until the cam-lever has been swung in a reverse direction, and in order that the cam-lever may be securely held against accidentally swinging upon its axis a coil-spring U is attached to its outer end and adapted to be hooked to the angle-iron by means of a small hole V.

From this description it will be seen that to rigidly secure the legs in their active position the toggle-joint is straightened by bringing its members into alinement, which latter is accomplished by sliding the brace-rod toward said legs until the end thereof enters the enlargement of the slot, where it will be retained, thus serving as a lock to hold the toggle-joint in its adjusted position. This arrangement will cause the legs to assume their proper position for use, where they will be locked, as just described, so that any pressure brought to bear upon the bench will tend to more firmly engage the reduced end of the brace-rod K with its locking-notch.

When it is desired to again fold the bench into a small compass, the same may be quickly accomplished by disengaging the reduced end of the brace-rod from the locking-notch in the guide-strip and permitting said end to slide longitudinally in the groove M, which action will draw the members of the toggle-joint out of line, thereby bringing the legs into parallelism and at the same time swinging them toward the bench-top and finally bringing them in contact therewith and within the outline of said top.

A bench thus made has no metal parts exposed where they are likely to injure the saw by the latter coming in contact therewith, and thus a twofold advantage is gained by my improvement, while the cost of the same is but little in advance of benches made in the usual manner; yet much expense will be saved in transporting the benches from one point to another, as is often necessary.

Having thus fully described my invention, what I claim as new and useful is—

1. A saw-bench consisting of a top, legs hinged thereto having a four-way movement, a toggle-joint interposed between each pair of legs, a brace-rod connected at one end to the joint and means for engaging the rod in position for holding the joint in the open or folded position of the legs, substantially as described.

2. In combination, a top, two pairs of legs hinged thereto so as to have a four-way motion, a toggle-joint interposed between each pair of legs, a brace-rod pivoted to the center of each of the toggle-joints, and a guide-strip having a slot formed therein through which the inner end of said brace-rod passes and is adapted to slide, as specified.

3. The herein-described combination of the top A, the legs B hinged thereto so as to have a four-way motion, clips G swiveled to said legs, a toggle-joint, the members of which are pivoted to the clips and to each other, a brace-rod K having its outer end bifurcated and pivoted to the center of the toggle-joint, a guide-strip secured to the under side of the top and having a slot formed therein, said slot terminating at each end in an enlargement, and a reduced end L formed with the brace-rod adapted to run within said groove and be locked in one of said enlargements, substantially as and for the purpose set forth.

4. In combination with a saw-bench of the character described, hinged legs, toggle-levers for forcing said legs apart, a brace-rod connected to the levers, an angle-iron through which the outer end of said rod passes, said iron having a slot and locking-notches formed therein, a cam-lever pivoted upon the end of the brace-rod, and a cam formed with said lever adapted to force this end of the brace-rod into the locking-notches, and a spring adapted to hold the cam-lever in its locked position, as specified.

In testimony whereof I have hereunto affixed by signature in the presence of two subscribing witnesses.

HARRY L. ADAMS.

Witnesses:
FRANK A. CHILDS,
GILBERT P. MORRIS.