

JOHN TONNER.

Stretching & Drying Frame.

109690

PATENTED NOV 29 1870

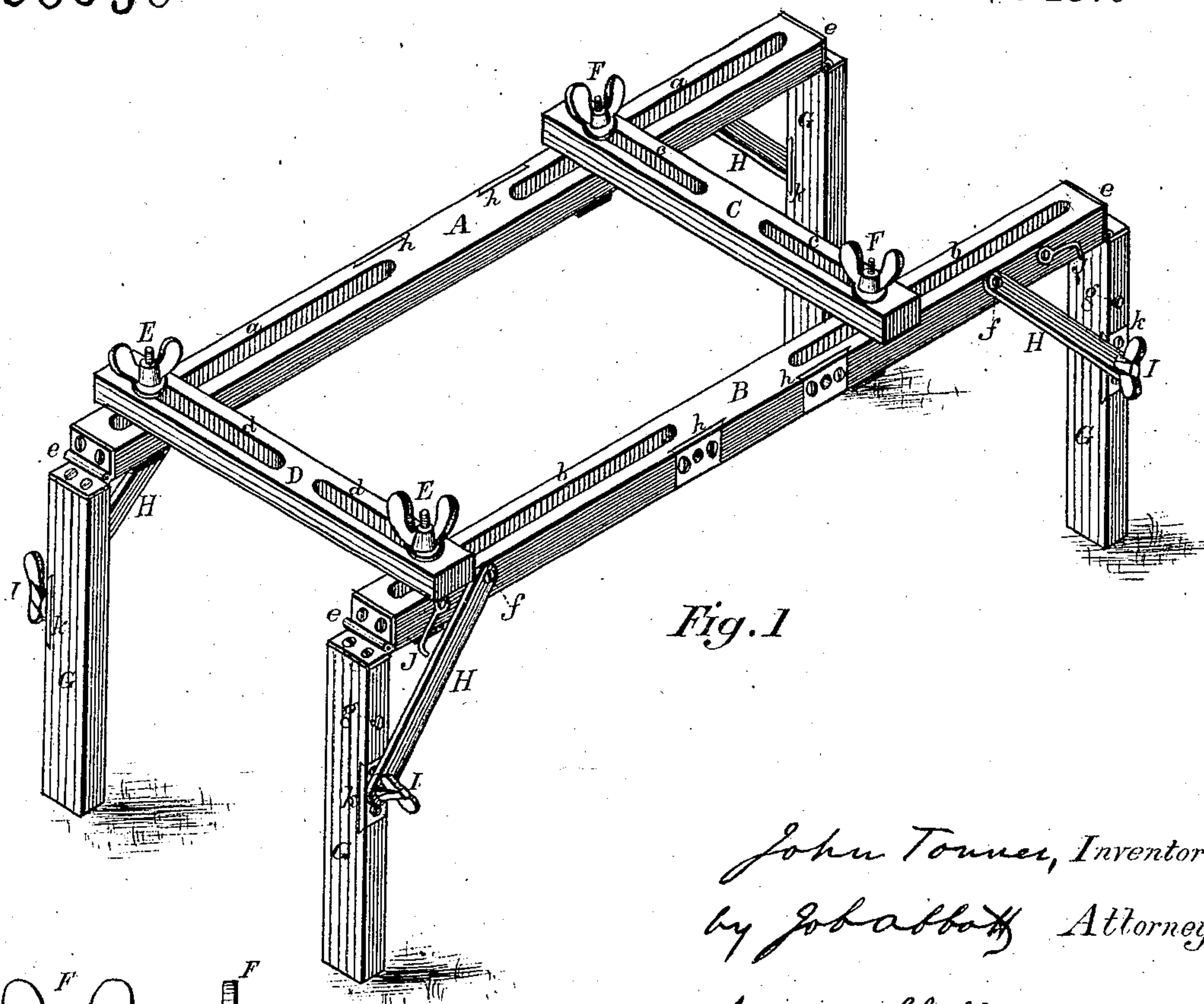
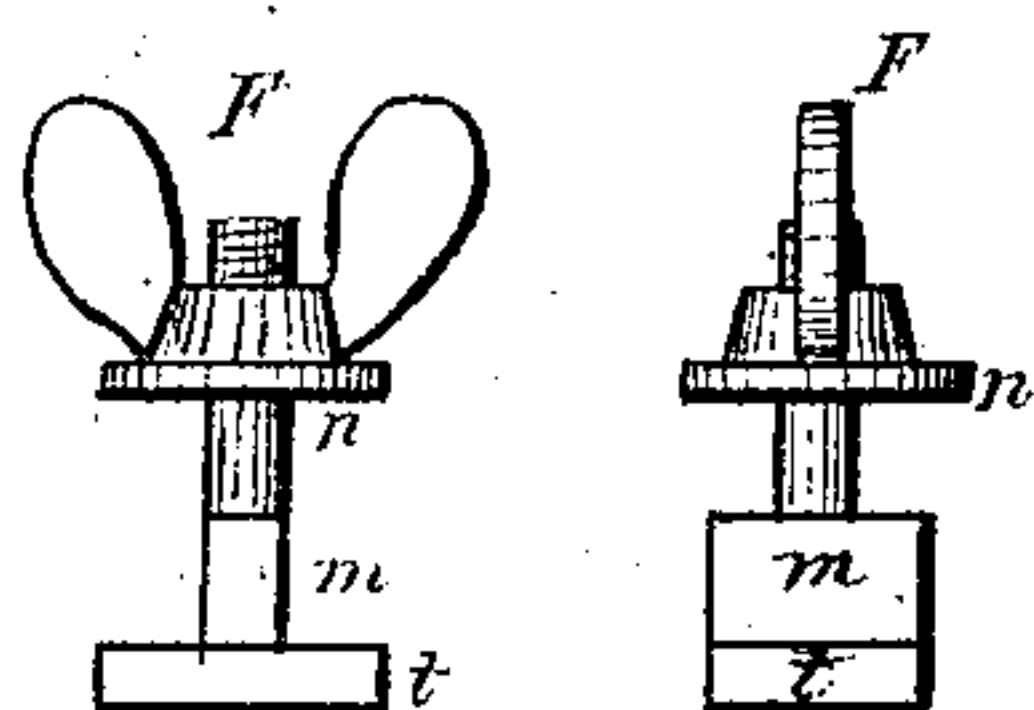


Fig. 1



Figs. 3.

John Tonner, Inventor.
by Job Abbott Attorney.
Andrew Choffin } Witnesses.
D. Hammond }

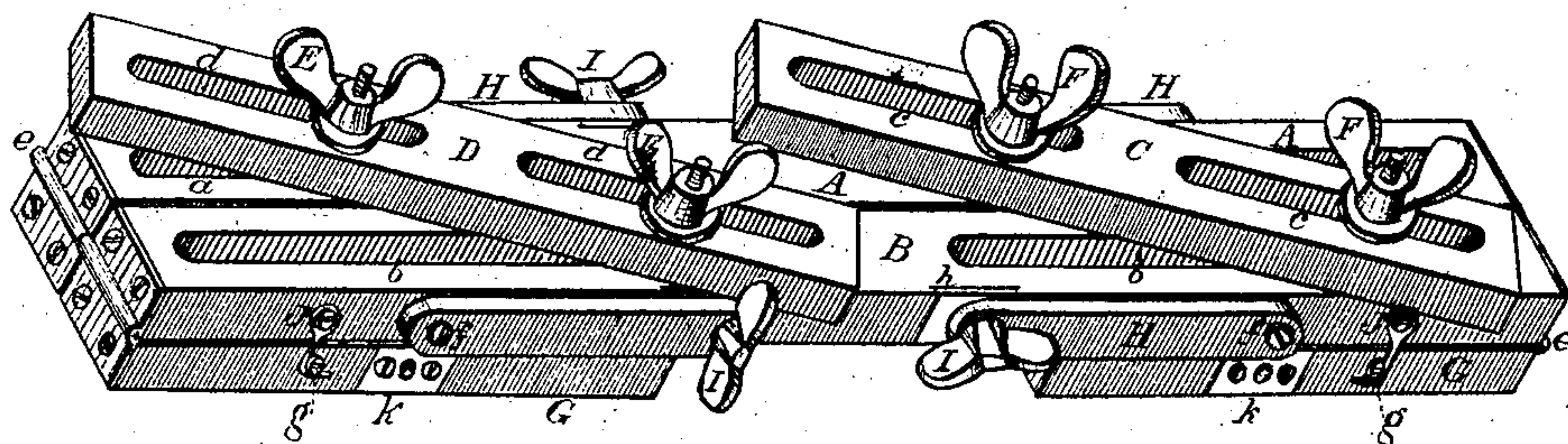


Fig. 2.

United States Patent Office.

JOHN TONNER, OF CANTON, OHIO.

Letters Patent No. 109,690, dated November 29, 1870.

IMPROVEMENT IN STRETCHING-FRAMES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN TONNER, of Canton, Stark county, Ohio, have invented certain new and useful Improvements in Stretching and Drying-Frames; and that the following is a full, clear, and exact specification thereof.

Nature and Objects of my Invention.

My invention relates to a stretching-frame, upon which to stretch and dry lace, Nottingham window-curtains, and any other fibrous material which requires spreading and stretching out for drying and other purposes; and

The first part of my invention consists in the construction of the frame proper, the same consisting of four bars, each having two long slots formed at their ends, and the four being united by four bolts, each being provided with suitable thumb-nuts, and with a flattened stem which fits in the slots of the frame-bars, whereby I obtain a frame which can be easily adjusted to suit any size and shape of material to be stretched and dried, and which, when not in use, can be folded up into a very neat and compact form, so as to require but a small space for storing or transportation.

The second part of my invention relates to the combination of legs and braces with the side bars of the frame described in the preceding clause, said legs and braces being so combined with the frame as to form very firm and solid supports for the frame when in use, and, at the same time, being so arranged as to fold up in a compact form with the frame when not in use.

Description of Accompanying Drawing.

Figure 1 is a perspective view of my frame spread out and ready for use.

Figure 2 is a perspective view of the same folded up for packing.

Figures 3 are front and side views of the bolt for uniting the frame-bars.

General Description.

A and B are the side frame-bars, in which are formed the longitudinal slots *a a* and *b b*, as shown.

C and D are the cross-frame bars, which, with the bars A B, form the stretching-frame proper, and in which are formed the slots *c c* and *d d*.

The clamping-bolts F consist of the broad flat head *t*; the flattened neck *m*, which is of a thickness equal to the width of the slots *a b*; and of the threaded portion *n*; and each of these bolts is provided with a thumb-nut of the form shown, or of any other suitable form, by which the bolt can be readily drawn up without the aid of a wrench.

These bolts are passed up through the slots *a b* in the bars A B, and the slots *c d* in the bars C D, one at the crossing of each side and cross-bar, and are drawn up, in order to hold the bars together, by the thumb-nuts, which press on washers placed on the top of the bars C D, the bolts being held from turning, in turning up the thumb-nuts, by the fitting of the flattened necks *m* in the slots *a b*.

From this description it is seen that the length and breadth of the space inclosed by the bars A B C D can be varied, as required, to suit any particular length and breadth of cloth by loosening the thumb-nuts on the bolts F, and sliding said bolts along the slots *a b* or *c d* until the bars are brought into the proper position, when they are readily secured by drawing up the thumb-nuts, as before described.

When the frame is not in use the bars A B can be brought up together, and the bars C D be arranged diagonally across them, as shown in fig. 2, when, by drawing up the bolts F, the frame is secured in a very compact and convenient form for setting away or for transportation.

Various modes of securing the material to be stretched to the bars A B C D may be used, but a very convenient one is to tack strips of woollen material along the adjacent faces of said bars, to which the material to be stretched may be pinned or otherwise secured.

In order to provide a convenient and simple means of supporting this frame, I hinge the legs G to the bars A B, as shown, and pivot the braces H on the sides of said bars by means of pins or screws *f*.

At the ends of the braces H are arranged the thumb-screws I, and in the sides of the legs G are set the screw-plates *k*, so that, by swinging the braces H into the position shown in fig. 1, and by screwing the screws I into the plates *k*, the legs are solidly braced against any end movement of the frame, and as the breadth of the hinges *e* is sufficient to prevent any side movement, it is seen that a very firm support is obtained for the frame.

The screw-plates *h* are set in the sides of the bars A B at such distances from the pins *f* as to allow of the turning of the braces H up to the sides of said bars, and of the screwing of the thumb-screws I into the plates *h* when the braces are thus turned up, as shown in fig. 2, when, by turning the legs G up against the bars A B and securing them in such position by means of the hooks J, which hook over the pins *g* in the legs G, the whole frame is brought into a very compact form.

This frame can be conveniently used as a quilting-frame by removing the bolts *f* from the slots *c d* in the bars C D, and placing said bars close up to the threaded portions *n*, so that the washers can have a

bearing on the bars C D, in order to allow the bolts F to act as clamps to unite the bars A B and C D, when it is readily seen that the frame will be held solidly together, and that, by loosening the thumb-nuts on the bolts F, the bars C D can be rolled over to roll up the quilt as the quilting progresses.

Claims.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The stretching-frame A B C D, herein described, the same consisting of the bars A B and C D, having the slots *a b c d* cut therein, and united by the clamp-

ing-bolts E F, constructed with thumb-nuts and flattened stems, substantially as is herein specified.

2. The combination, with the frame-bars A B, of the legs G G hinged to the said bars, and the braces H H pivoted to said bars and provided with the thumb-screws I, said braces being so arranged as to be secured either to the legs or the frame-bars by the thumb-screws I, and the several parts being arranged to fold together, substantially as specified.

As evidence of the foregoing, witness my hand this 1st day of November, A. D. 1870.

Witnesses:

JOHN TONNER.

HENRY C. FOGLE,

M. G. HUNTINGTON.