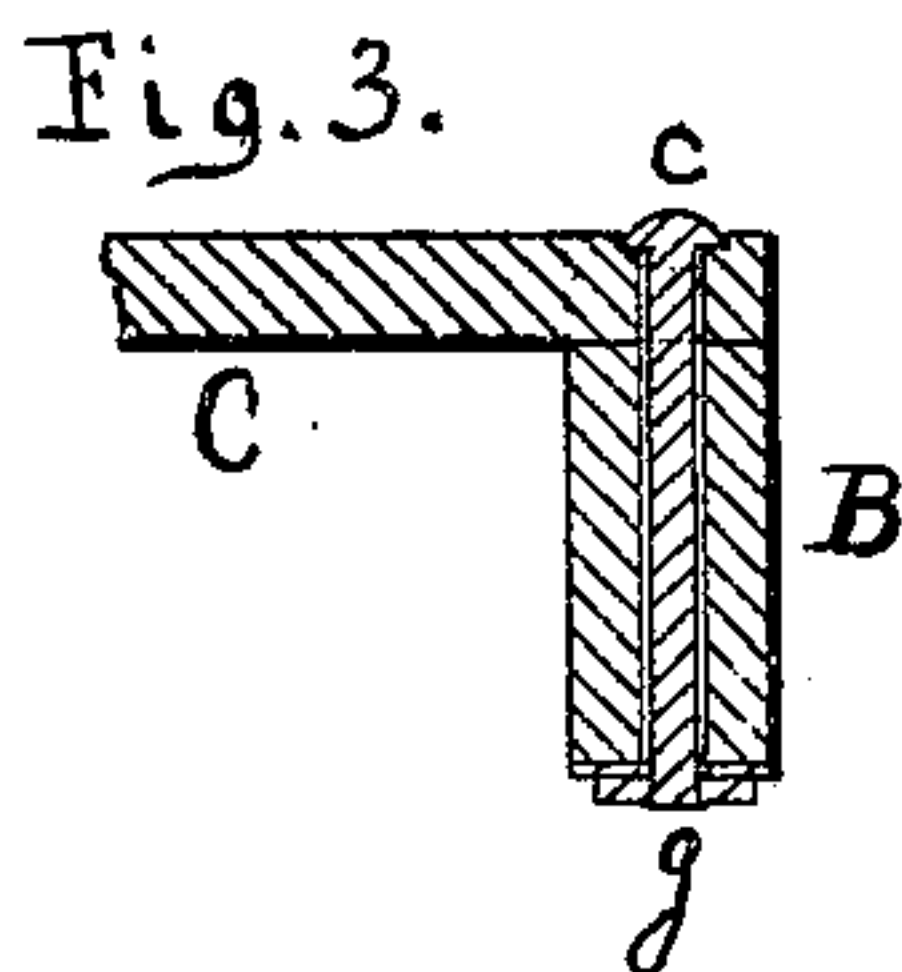
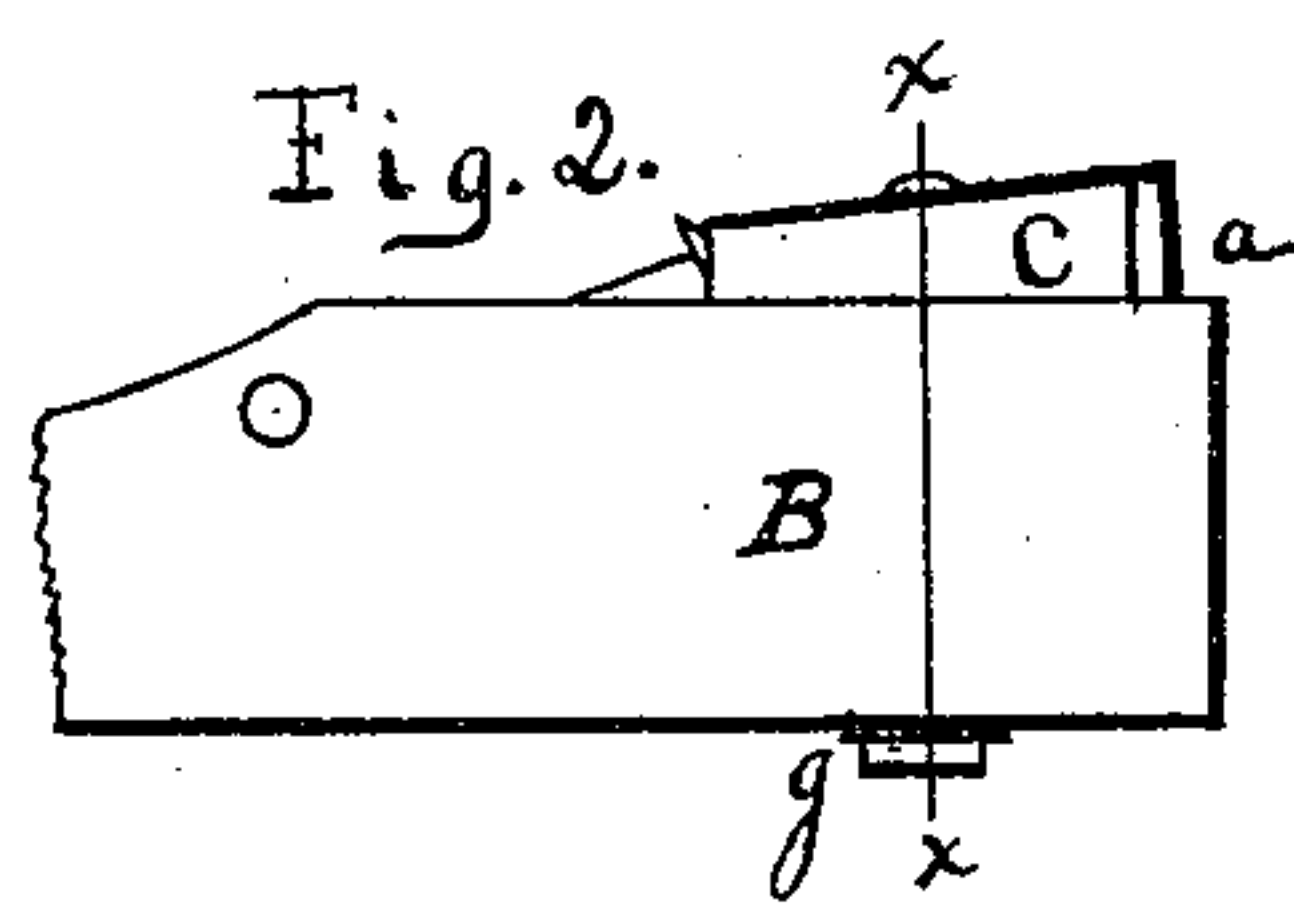
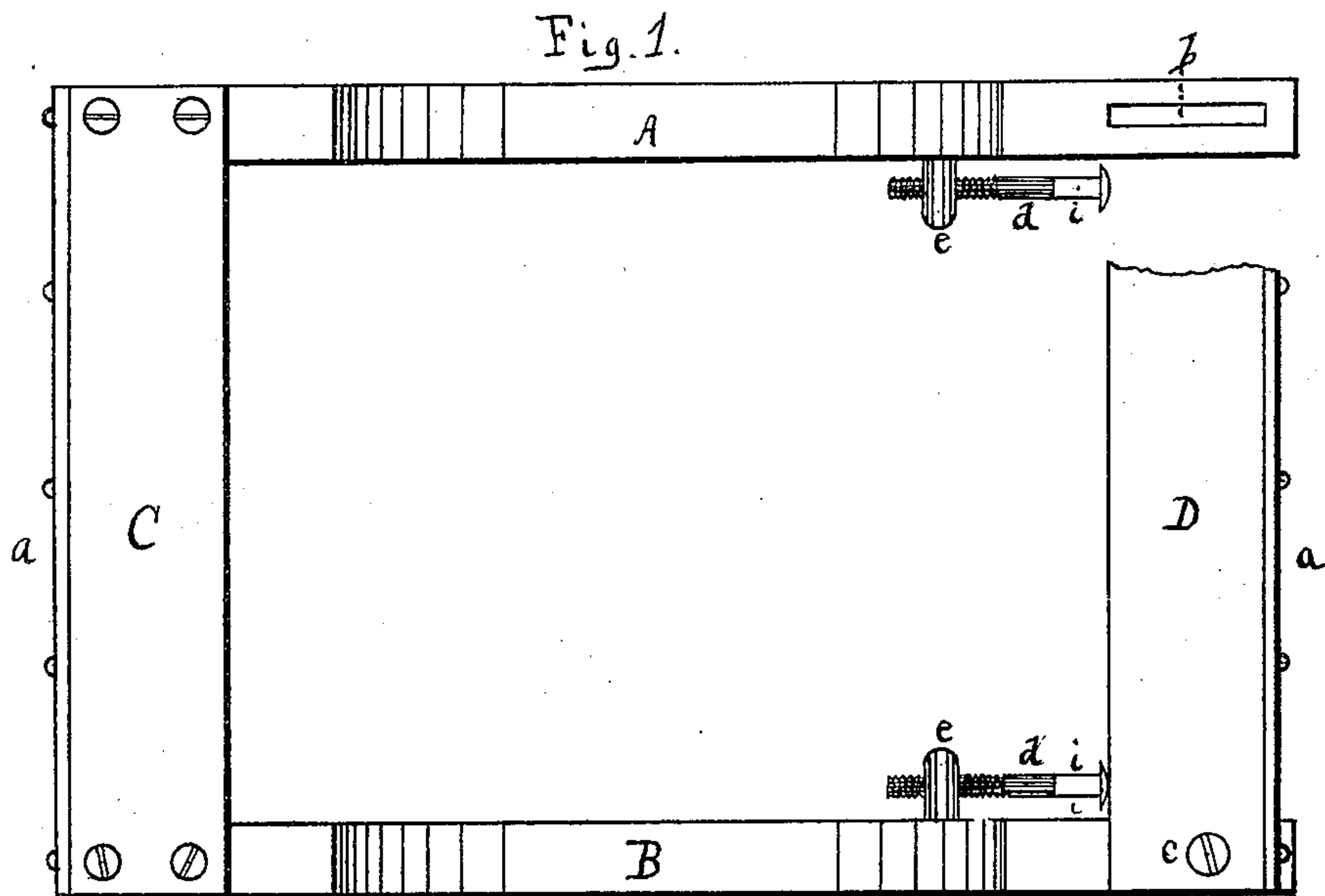


D. J. POWERS.

Tightening Devices for Woven Wire Mattresses.

No. 142,940.

Patented September 16, 1873.



Witnesses.

E. A. West.
O. W. Bond

David J. Powers
Inventor.

UNITED STATES PATENT OFFICE.

DAVID J. POWERS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN TIGHTENING DEVICES FOR WOVEN-WIRE MATTRESSES.

Specification forming part of Letters Patent No. **142,940**, dated September 16, 1873; application filed December 27, 1872.

To all whom it may concern:

Be it known that I, DAVID J. POWERS, of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Tension Devices for Woven-Wire Mattresses, of which the following is a full description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan view of the frame, a portion of the same being cut away; and Figs. 2 and 3, details, Fig. 3 being a section on line *x* of Fig. 2.

My present invention is an improvement on that for which I now have an application for a patent pending; and its object is to provide a better mode of tightening the woven wire, the frame at the same time being so constructed that the frame can be readily taken apart, and the mattress packed for transportation.

In the drawings, A B represent the side pieces of the frame, in one end of which is a long slot, *b*. C D are the cross-pieces, one at each end of the frame, one of which, C, is secured to the frame by screws, while the other, D, is held in place by means of two suitable bolts, *c*, one at each end, passing through the slots *b*, and secured by a nut, *g*. *a a* are strips, between which and the end pieces C D the woven wire is to be secured by means of screws or otherwise. *d d* are tightening-bolts. Each bolt has a head fitting in a recess in the edge of the cross-piece D, a screw-thread upon one end, and a square portion, *i*, to which a wrench may be applied to turn it. *e e* are nuts, permanently secured to the side pieces A B, through which the bolts *d* pass. By loosening the nuts upon the ends of the bolts *c*, and turning the tightening-bolts *d*, any requisite amount of strain may be given to the woven wire, and

when properly tightened the end piece D can be secured in position by means of the nut *g*.

This construction furnishes a very ready and efficient mode of tightening the woven wire, the bolts *c* having a longitudinal movement in the slots *b*, and, even if the nuts *g* are not made very tight, the tightening-bolts *b* prevent the cross-piece D from being drawn toward the center by the strain upon the fabric.

The frame is so constructed that the upper sides of the cross-pieces C D slope inward, so that when the weight is placed upon the fabric the strain will be from the extreme ends, and the fabric will not rest upon the inner edges of these cross-pieces. This sloping may be obtained either by making the cross-pieces thinner on the inner than on the outer edges, or by notching them at their ends; or by notching the ends of the side pieces.

The mattress can be readily taken apart by removing the end pieces C D. The woven wire can be rolled up on one of these end pieces, and the whole packed for transportation.

A substantial frame might be made by securing both of the end pieces to the side pieces by means of bolts, dispensing with the slots *b* and the tightening-bolts *d*, in which case it would be necessary to tighten the fabric when it is secured to the frame.

What I claim as new is as follows:

The side pieces A B, provided with the slots *b*, and cross-piece D, in combination with the nuts *e e* and bolts *d d*, each provided with a head to fit in the recesses in the piece D, a screw-thread, and wrench-surface, all constructed and arranged as and for the purpose specified.

Witnesses: DAVID J. POWERS.

E. A. WEST,
O. W. BOND.