

(No Model.)

3 Sheets—Sheet 1.

J. LATUS.

BACK STANDARD FOR GAUZE WEAVING LOOMS.

No. 249,470.

Patented Nov. 15, 1881.

Fig. 1.

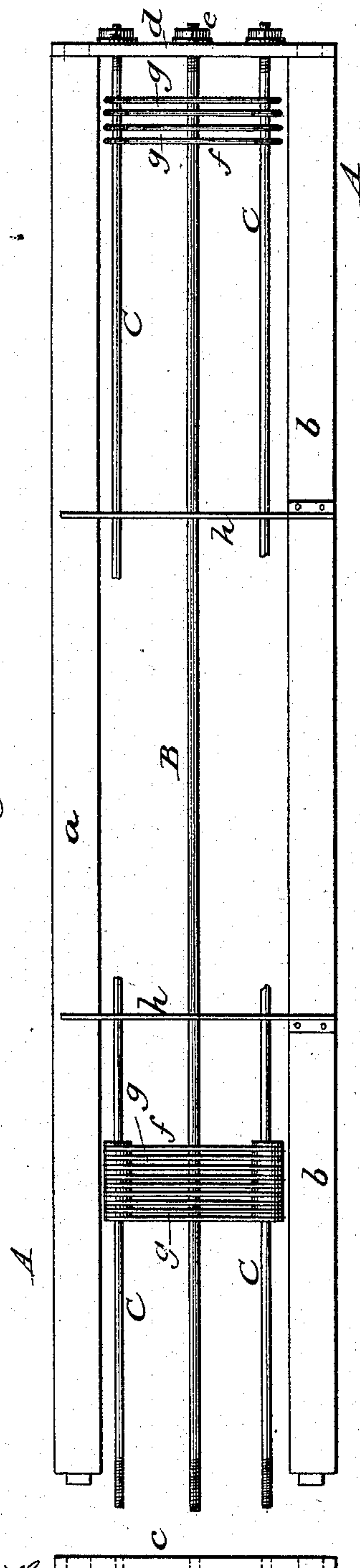
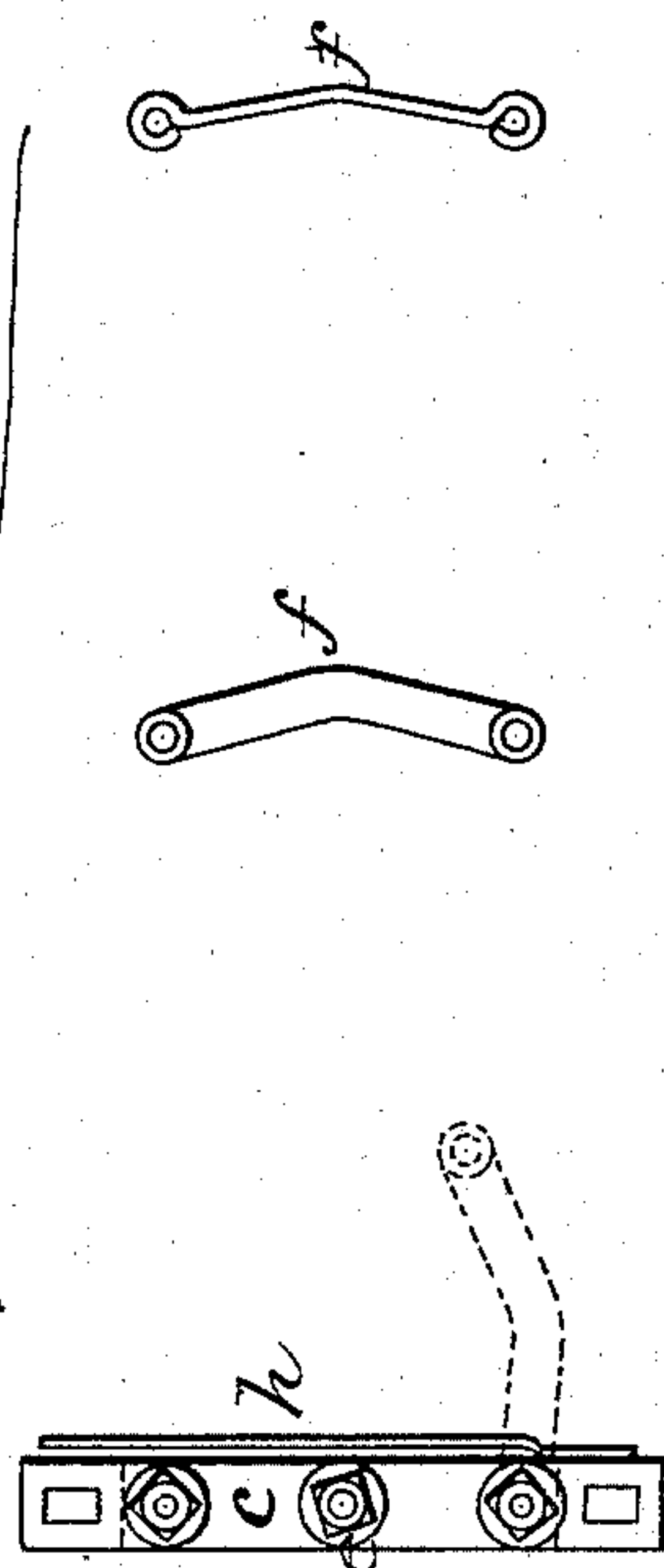


Fig. 2.



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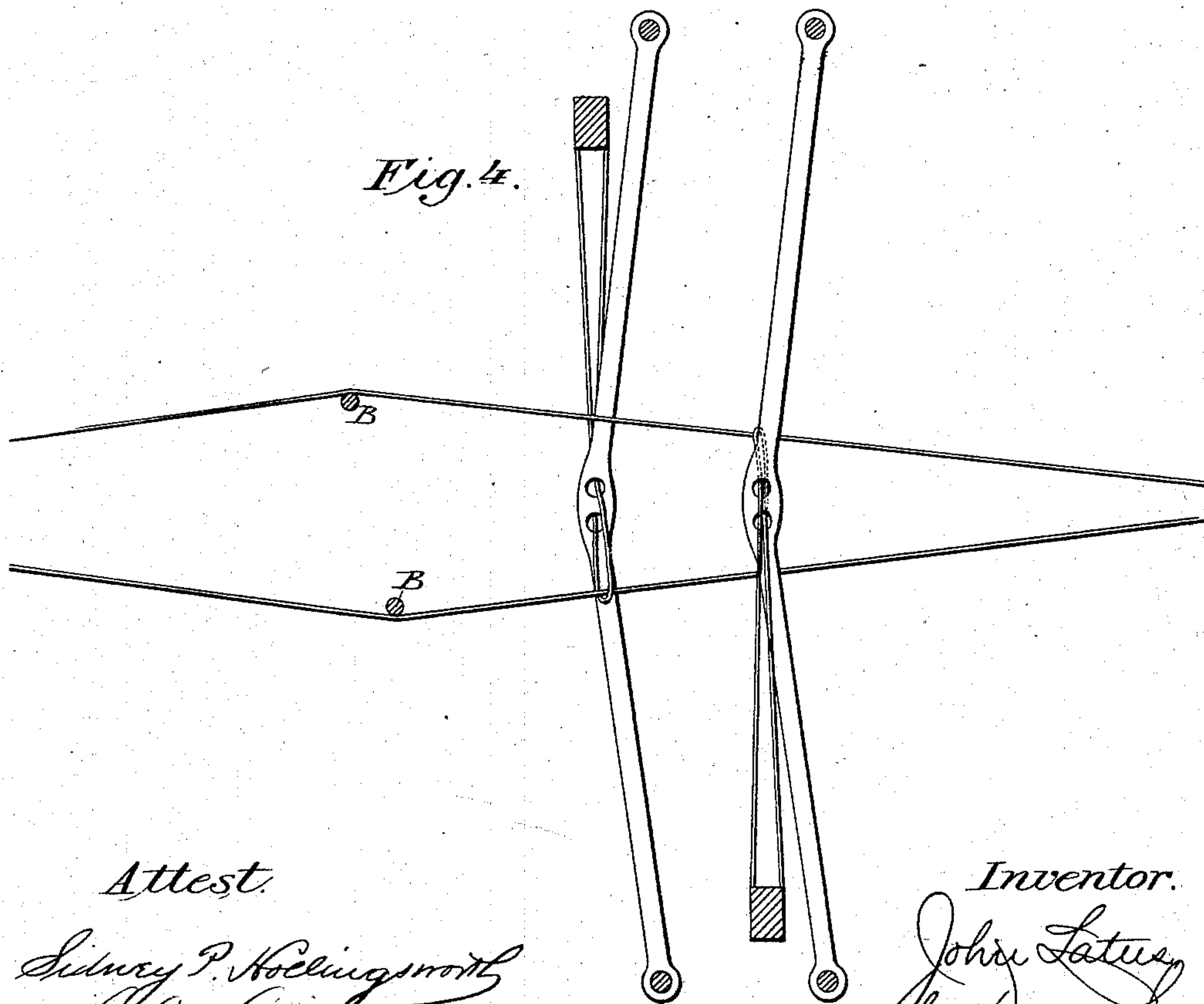
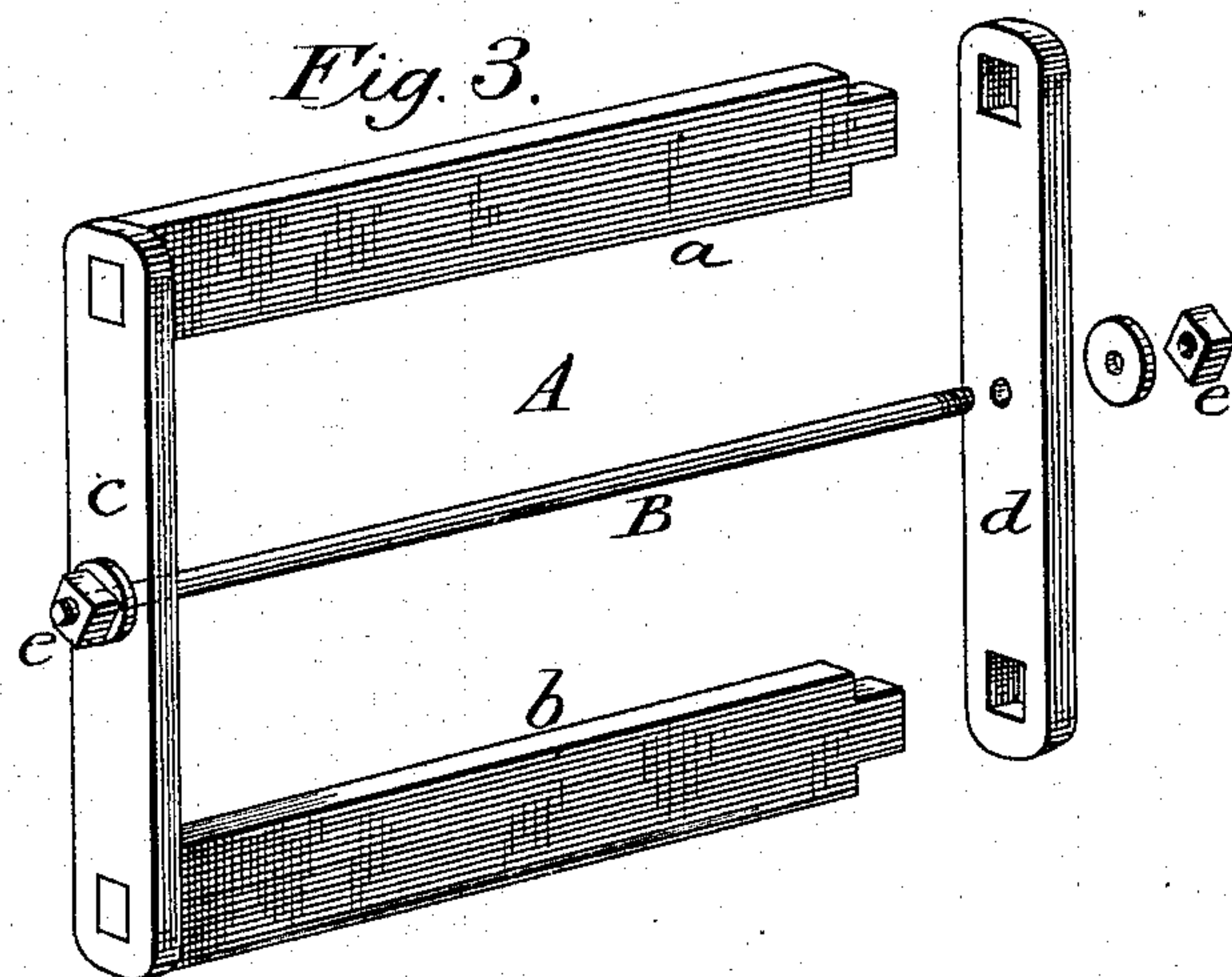
3 Sheets—Sheet 2

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3 Sheets—Sheet 3.

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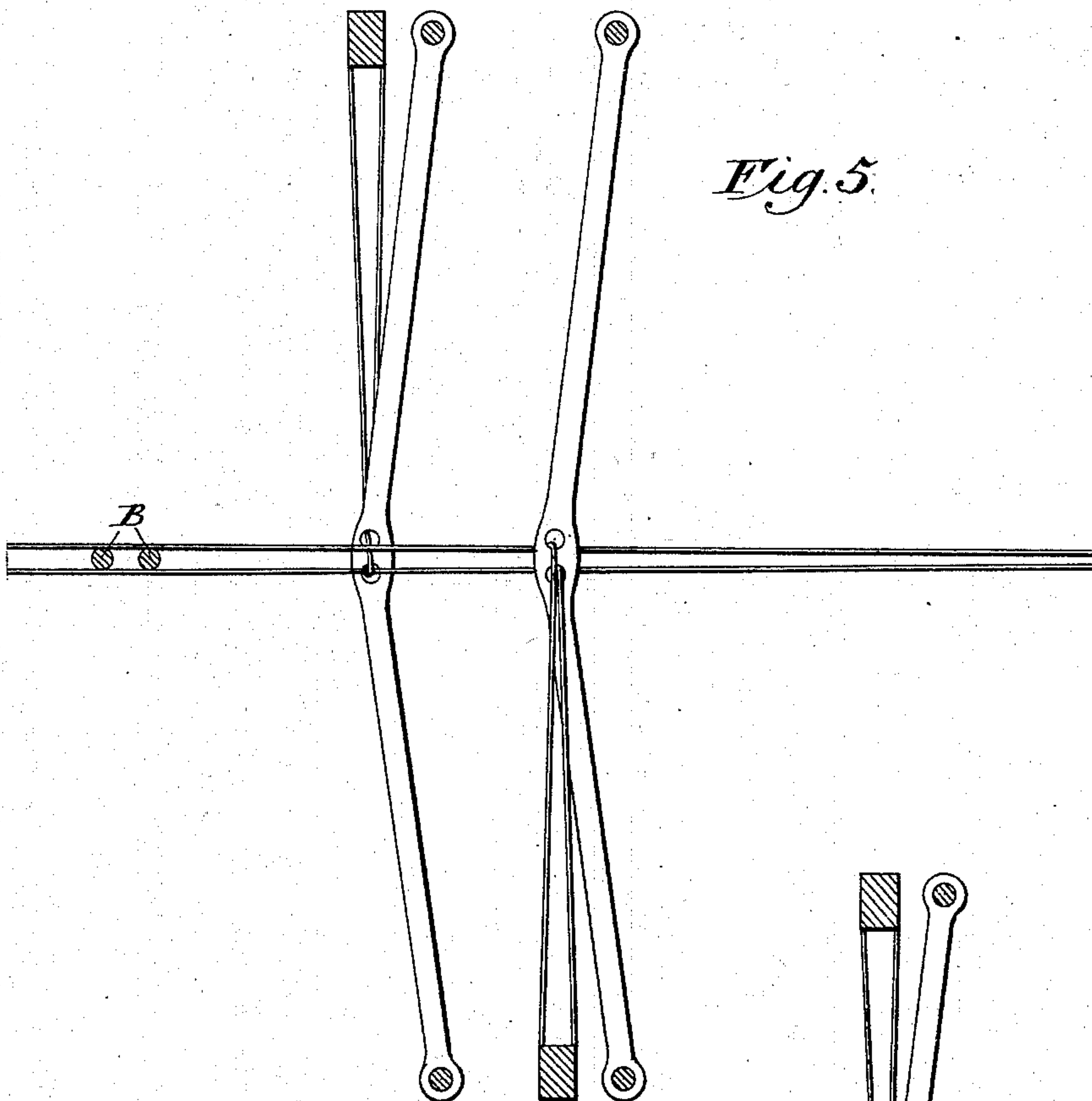


Fig. 5.

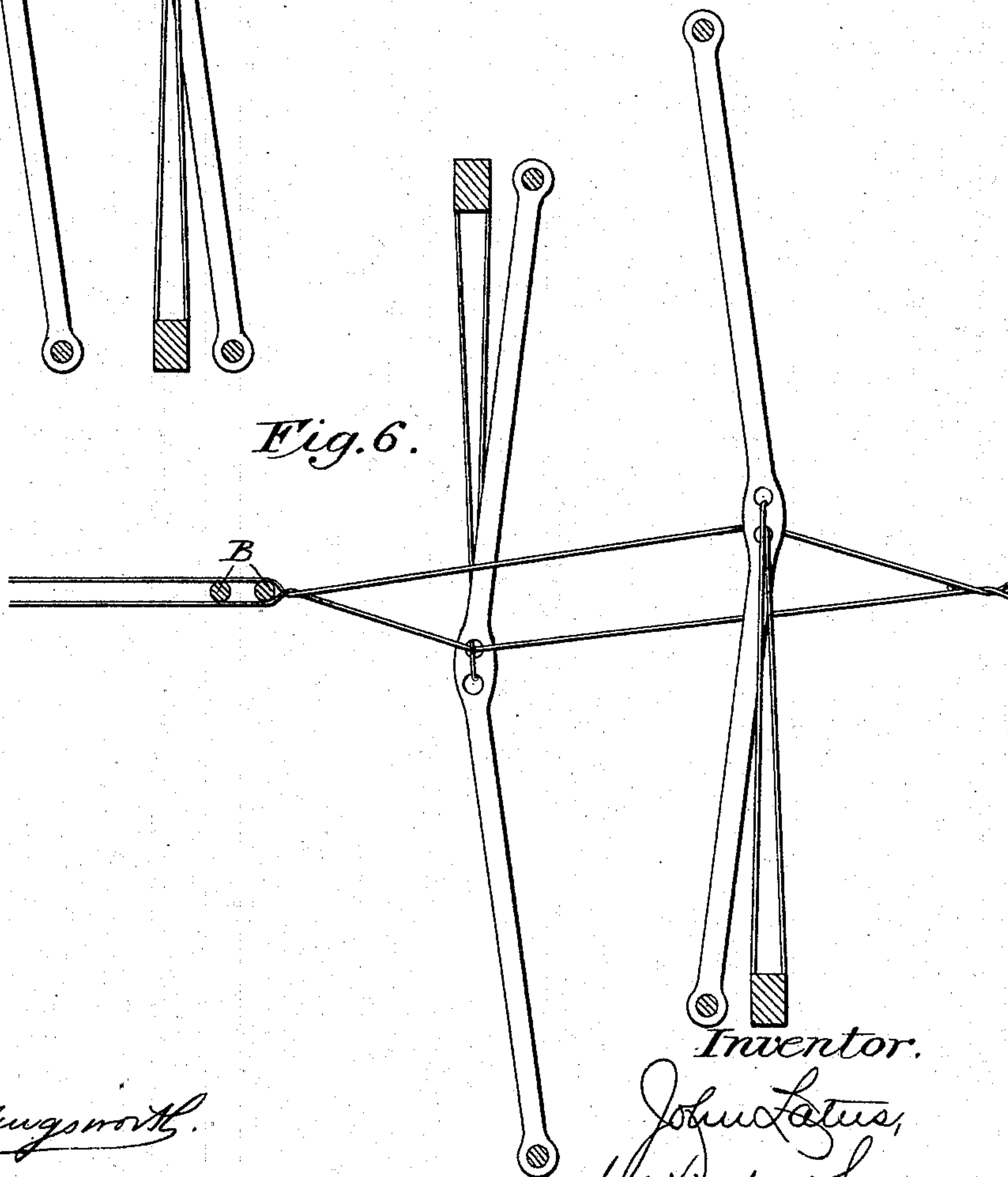


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN LATUS, OF BIRMINGHAM, CONNECTICUT, ASSIGNOR OF ONE-HALF TO
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BACK STANDARD FOR GAUZE-WEAVING LOOMS.

SPECIFICATION forming part of Letters Patent No. 249,470, dated November 15, 1881.

Application filed August 31, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN LATUS, of Birmingham, in the county of New Haven, State of Connecticut, have invented certain Improvements in Back Standards for Gauze-Weaving Looms, of which the following is a specification.

My invention relates to gauze-weaving looms, and particularly to the back standards thereof for stretching open the doup, and is designed to facilitate the removal and replacement of the standards, to simplify and cheapen the construction, and to render the operation of placing the warp-threads in position easy and expeditious.

The invention consists in a frame having one or more removable sides, and a horizontal tie-rod extending from side to side of the frame, and serving at once to hold the parts together and to receive and support the warp-threads.

The invention further consists in a series of separating-strips placed between the warp-threads, and so mounted and secured in the frame that they may be readily passed between the warp-threads or removed from such position, as hereinafter explained.

Hitherto it has been the custom, generally, to construct the back standards of this class of looms in the form of a rigid frame, and to arrange therein harness formed of wire, cord, or like materials, having closed eyes, through which the warp-threads were carried, and from which they could only be removed by cutting. It has been proposed to dispense with the harness and to employ in lieu thereof a horizontal rod, upon which the warp-threads were to be carried; but the frame, being incapable of separation, could only be removed after cutting out the warp-threads. A weaving-heddle has also been framed together and provided with longitudinal tie-rods, which might be removed to permit the separation of the frame; but in the instance referred to there is nothing to indicate that such separation was contemplated, and being furnished with the usual harness having closed eyes to carry the warp-threads, the latter must have been cut before the frame could be withdrawn. Under my improved construction, however, I am enabled to dispense with

such harness, and by removing one or more sides of the back-standard frame to withdraw the latter from the warp-threads easily and quickly and without the necessity of cutting the threads, as heretofore. The separating-strips are so arranged that they may be readily swung out of the way, or that the threads may be readily withdrawn from between them to permit the removal of the frame. The doup-heads employed in connection with the herein-described back standard may be of ordinary construction, or they may embody the improvements constituting the subject-matter of an application for Letters Patent filed by Robert Adams and myself April 27, 1881.

In the accompanying drawings, Figure 1 represents a face view of my improved back standard with a portion of the separating-strips in position and one side of the frame separated. Fig. 2 shows an end view of said frame and detached views of the separating-strips. Fig. 3 is a perspective view of the back standard without the separating-strips and their supporting-rods; and Figs. 4, 5, and 6 are diagrams representing, respectively, the open shed, the closed shed, and the cross-shed as formed in a loom provided with my improved standards and employing the doup-heads shown in the joint application hereinbefore referred to.

A represents the standard as a whole, consisting of upper and lower cross-bars, *a* and *b*, each having its ends tenoned, and side bars or pieces, *c* and *d*, each mortised at its upper and lower ends to receive the tenons of the cross-bars. The several parts, being thus formed, are put together as indicated in Figs. 1 and 3, and the whole is then secured and tied together by a tie-rod, B, passing horizontally across the middle of the frame and through the side bars. The rod B is represented as threaded at both ends and provided with nuts *e*, the removal of either of which permits the separation of the parts of the frame or standard. If preferred, however, one end of the tie-rod may be headed, and it is likewise obvious that the form and arrangement of the joints and fastening devices may be modified, provided the longitudinal tie-rod be retained.

C C, Fig. 1, represent two rods or wires extending from side to side of the frame A, near the top and bottom thereof, and parallel with the rod B. Upon these rods C C are strung a series of separating-strips, *f*, formed of thin metal or of wire, and with an eye or perforation at each end, as shown in Fig. 2, to permit them to be placed upon the rods or wires C C. The strips are separated by washers or equivalent means, and are either bent, as shown, to pass the tie-rod B, or are set in front or in rear thereof for that purpose. Thus arranged, the strips, *f*, together with the tie-rod and the longitudinal wires C, form a series of elongated eyes, *g*, through which the warp-threads are carried.

By withdrawing one of the rods or wires C the separating-strips may be swung outward, turning upon the other wire C as a pivot, thus permitting the strips *f* to be quickly removed from between the threads; and by loosening the tie-rod B and the second wire or rod C sufficiently to release the tenons of the top and bottom pieces *a* and *b* the frame may be separated or opened and withdrawn from the loom, as already explained. The wires or rods C C, like the tie-rod B, are furnished at their ends with nuts and washers or equivalent fastening devices.

The standard may be used without the separating-strips, if preferred, in which case the rods C C may also be omitted, as in Fig. 3.

If desired, strips *h* may be applied to the standard, as shown in Figs. 1 and 2, to divide the warp-threads; but if used they should be left free at one end, or otherwise arranged to permit the removal of the warp-threads between them and the back-standard frame. The back standards, being thus constructed, are introduced into the loom and mounted in the usual manner, one set of warp-threads passing over the tie-rods B and the other set below the same, as indicated in Figs. 4, 5, 6. The usual motions are then imparted to the various parts of the loom, and the back standards perform their functions in the same manner, essentially, as in other looms of this class. This action is illustrated in the diagrams, in which Fig. 4 represents the doup in action and the back standards separated to open the shed. On the reverse action of the loom the standards remain stationary, as in Fig. 5, in order to permit the formation of the cross-

shed, Fig. 6, as they also do when weaving in the plain bar to permit the two doup-harnesses to weave without stretching the doup, such stretching of the doup-eyes producing a twist, which of course is not wanted in weaving the plain-bar.

It being old, as above stated, to dispense with the looped or eyed harness in a non-separable back standard, and also old to employ a weaving-heddle frame capable of separation, but provided with harness having closed eyes, I do not claim such construction or arrangement.

Having thus described my invention, what I claim is—

1. A back standard consisting of a frame having one or more removable sides and a continuous horizontal support for the warp-threads, substantially as described and shown.

2. A back standard for gauze-weaving looms, consisting of a frame having a removable side and a tie-rod extending from side to side of said frame, and serving both to hold its parts in place and to support the warp-threads, substantially as explained.

3. The herein-described back standard for gauze-weaving looms, consisting of the parts *a b c d*, tie-rod B, and nut or fastening device *e*, all combined and arranged to operate as set forth.

4. The combination of a frame having a removable side or sides, a longitudinal tie-rod, a series of separating-strips, substantially such as described, having eyes at their ends, and removable wires or sustaining-rods passed through the eyes and secured in the frame, substantially in the manner set forth.

5. A back standard for gauze-weaving looms, having a separable frame and a series of elongated eyes capable of being readily opened to permit the withdrawal of the warp-threads, substantially as set forth.

6. A back standard consisting of a separable frame provided with a series of separating-strips, detachable at one or both ends, as explained, whereby they are adapted to be withdrawn from between the warp-threads substantially in the manner explained.

JOHN LATUS.

Witnesses:

WM. S. BROWNE,
CHAS. E. CLARK.