

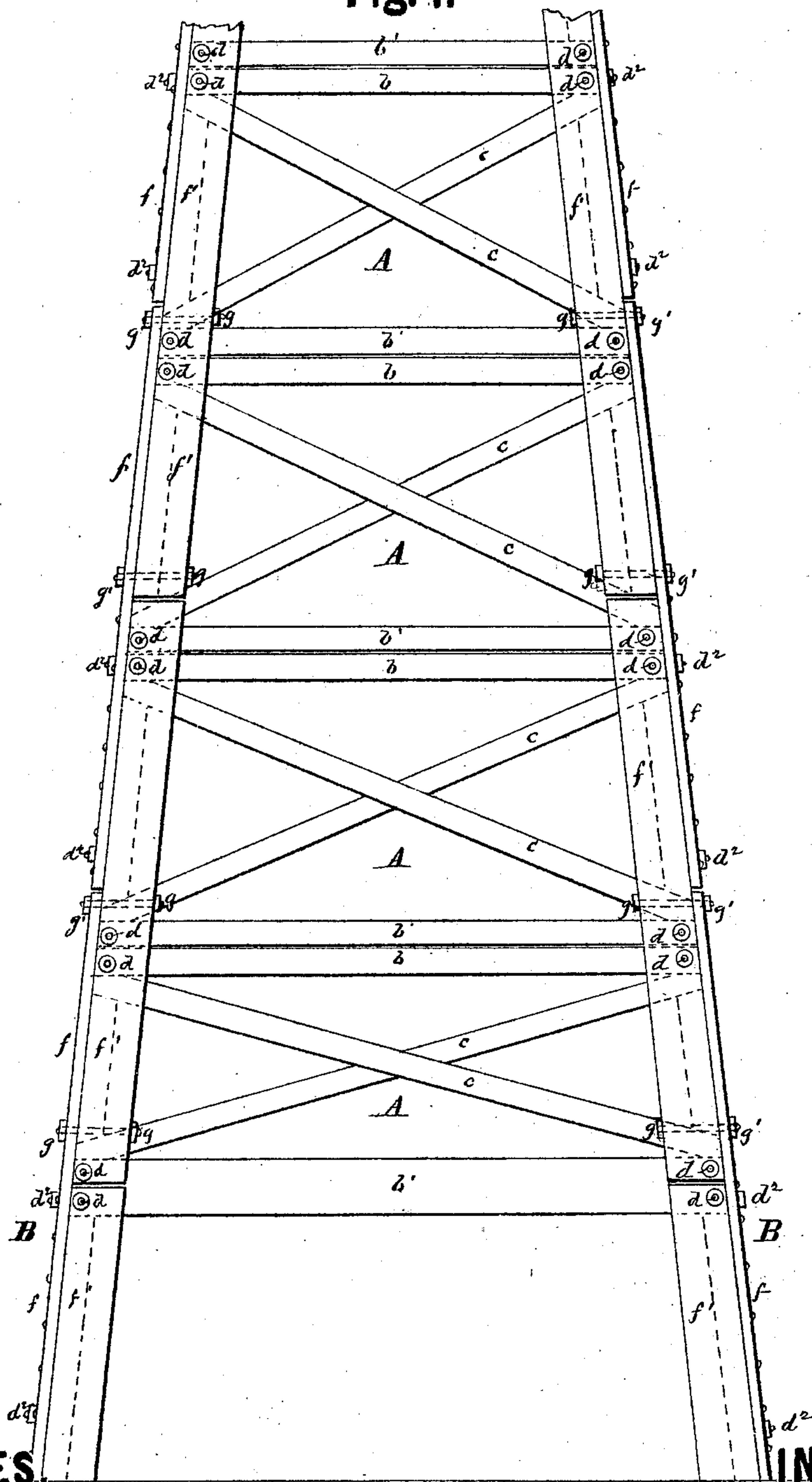
S. S. FERTIG.

Improvement in Derricks.

No. 130,706.

Patented Aug. 20, 1872.

Fig. 1.



WITNESSES.

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Fig. 2.

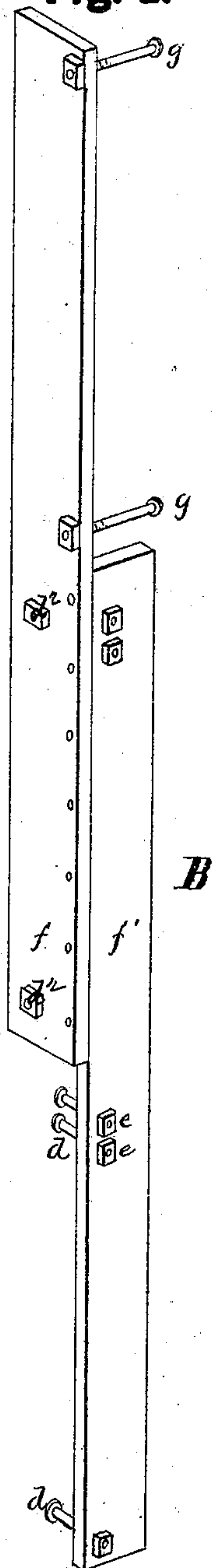


Fig. 3.

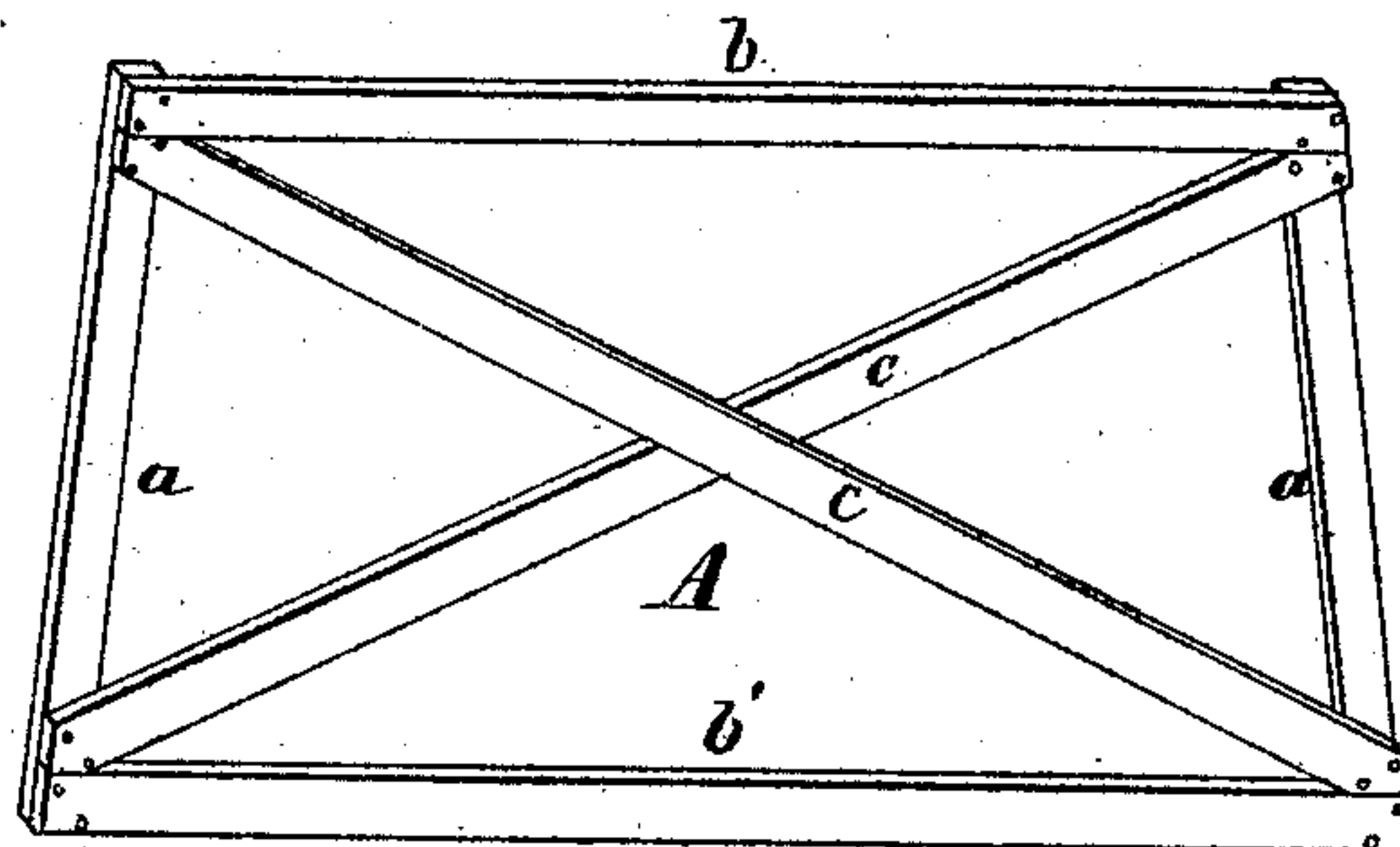
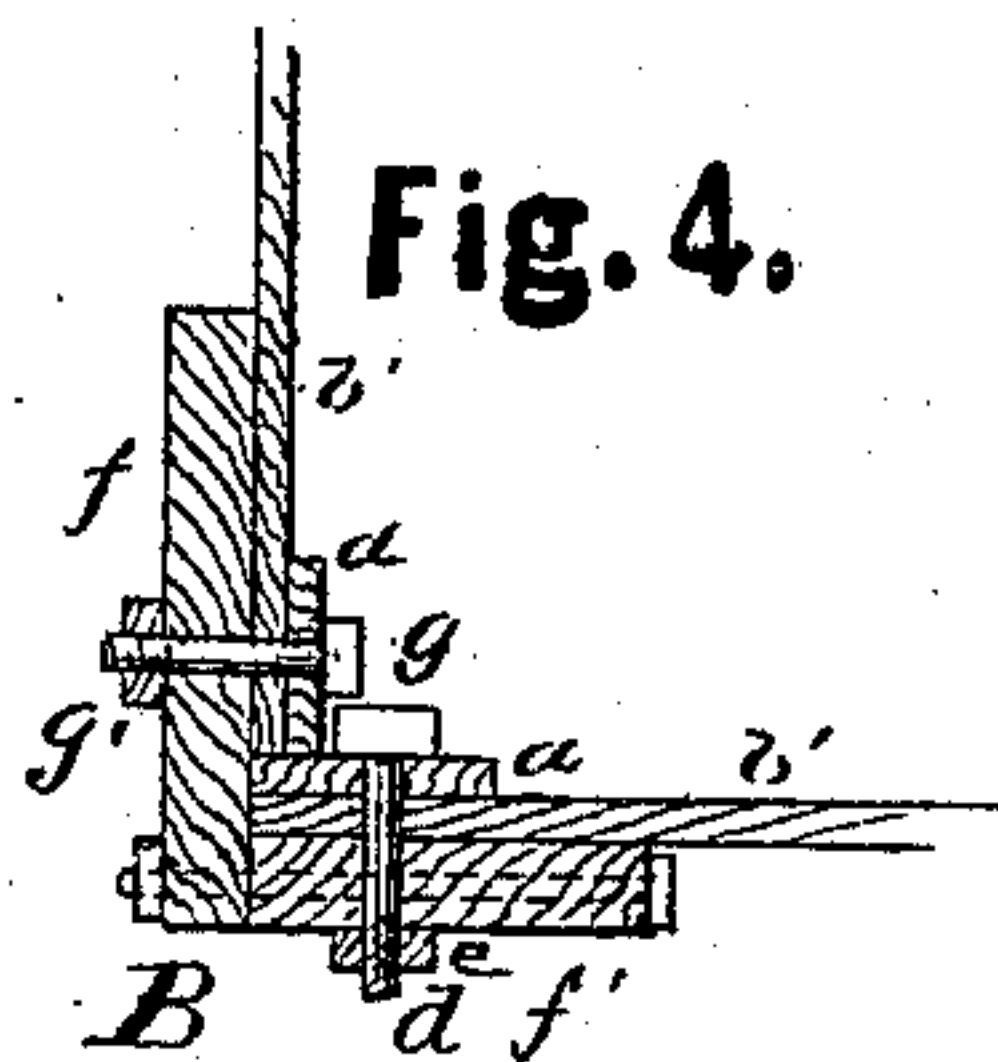


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL S. FERTIG, OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN DERRICKS.

Specification forming part of Letters Patent No. 130,706, dated August 20, 1872.

To all whom it may concern:

Be it known that I, SAMUEL S. FERTIG, of Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and valuable Improvement in Derricks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my invention. Figs. 2, 3, and 4 are details of the same.

This invention has relation to derricks for oil-wells and for other purposes; and it consists in the construction and novel arrangement of the parts of a sectional derrick-frame, whereby said frame, after being built, may be readily taken apart, separated into sections, or one or more sections removed by the displacement of a few bolts without injury to the timbers, and in such a manner that the frame may be speedily rebuilt, substantially as hereinafter more fully described. The derrick-frame forming the subject of this invention is designed to be of a quadrangular-pyramidal form, as illustrated in the accompanying drawing.

The sides of said frame are composed principally of the sectional frames A, having each two oblique side-bars, *a a*, parallel top and bottom ties *b b'*, and diagonal braces *c c*, all secured together by nails or equivalent fastenings, and appearing as shown in Fig. 3. Four of the frames A constitute a horizontal section of the derrick-frame, exclusive of the corner clamps or caps hereinafter described. The derrick-frame may embrace any desirable number of these sections, but as they are designed to be about eight feet in height each, seven, together with the base section, will be sufficient for a derrick of ordinary size. The base section above referred to is produced by extending the side bars *a a* of the section A nearest the base to a distance of about seven feet below said section. B designates the corner clamps or caps, by means of which the sections of the derrick are held together. Each clamp or cap consists of two boards, *f f'*, of about sixteen feet in length each, nailed to-

gether at right angles, the end of one reaching to the middle part of the other, as shown clearly in Fig. 2 of the drawing, thus producing a twenty-four-foot clamp or cap. The clamps for the base of the derrick-frame are modified by having one board only eight feet long, so that when the clamp is applied the lower ends of both boards shall touch and rest on the ground.

In erecting the derrick-frame, the first lower section is arranged by fitting the frames A together at right angles to each other, as represented in Fig. 4. The clamps or caps are then applied to the corners, which they fit exactly, and are secured by means of bolts *d* passing from the upper parts of the short cap-boards through the adjacent ties *b'* and sides *a*, and by bolts *d²* entering the side pieces or base extensions *a a* from the lower part of the long cap-boards, as shown, or vice versa. These bolts are secured by nuts *e*. The ties *b'* of the lowest section of the derrick-frame are wider than those of the sections above, so that the short clamp or cap-boards will terminate midway between the upper and lower edges of said ties, and leave space above them for the fastening of the next set of clamps. The second section of the frame is next put in position, and the second set of clamps applied. The boards *f* of the lower set are then secured to the boards *f'* of the upper set by means of the bolts *g g* holding the nuts *g' g'*, these bolts passing through the boards *f'* in the direction of their width. The boards *f'* of the upper set of clamps are secured to the ties *b b'* and sides *a* of the two sections by means of bolts *d*, as shown, and the boards *f* secured to the side boards *a* of the second section by bolts *d²*, as shown. The third section is next arranged, and to the ties *b'* thereof the boards *f'* of the second clamps secured by bolts *d*. According to this method the entire derrick-frame is erected.

As will be observed, the upper ends of each board *f f'* passes a short distance beyond the lower tie *b'* of the adjacent section or frame A rising above it. The joints of the sections are thereby crossed and strengthened. Now, in order to take down the derrick or remove any of the clamps to enable a frame, A, to be taken out, it is only necessary to remove the

bolts which secure the clamps to said frames. This will allow the clamps to be removed without destroying them or injuring any part of the derrick-frame.

What I claim as new is—

1. The improved derrick composed of the removable sectional frames A, supported by the corner-clamps or caps B, breaking joints with said frames, as described, and secured together and to said frames by means of bolts or spikes, substantially as specified.

2. The corner-clamp B, composed of the

boards *ff'* fastened together at right angles, in combination with the removable sectional frames A, constructed and arranged as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL S. FERTIG.

Witnesses:

D. D. KANE,
GEO. E. UPHAM.