I. & A. BISBEE.

HAY PRESS.

No. 34,872. Patented Apr. 8, 1862.

Fig 1.

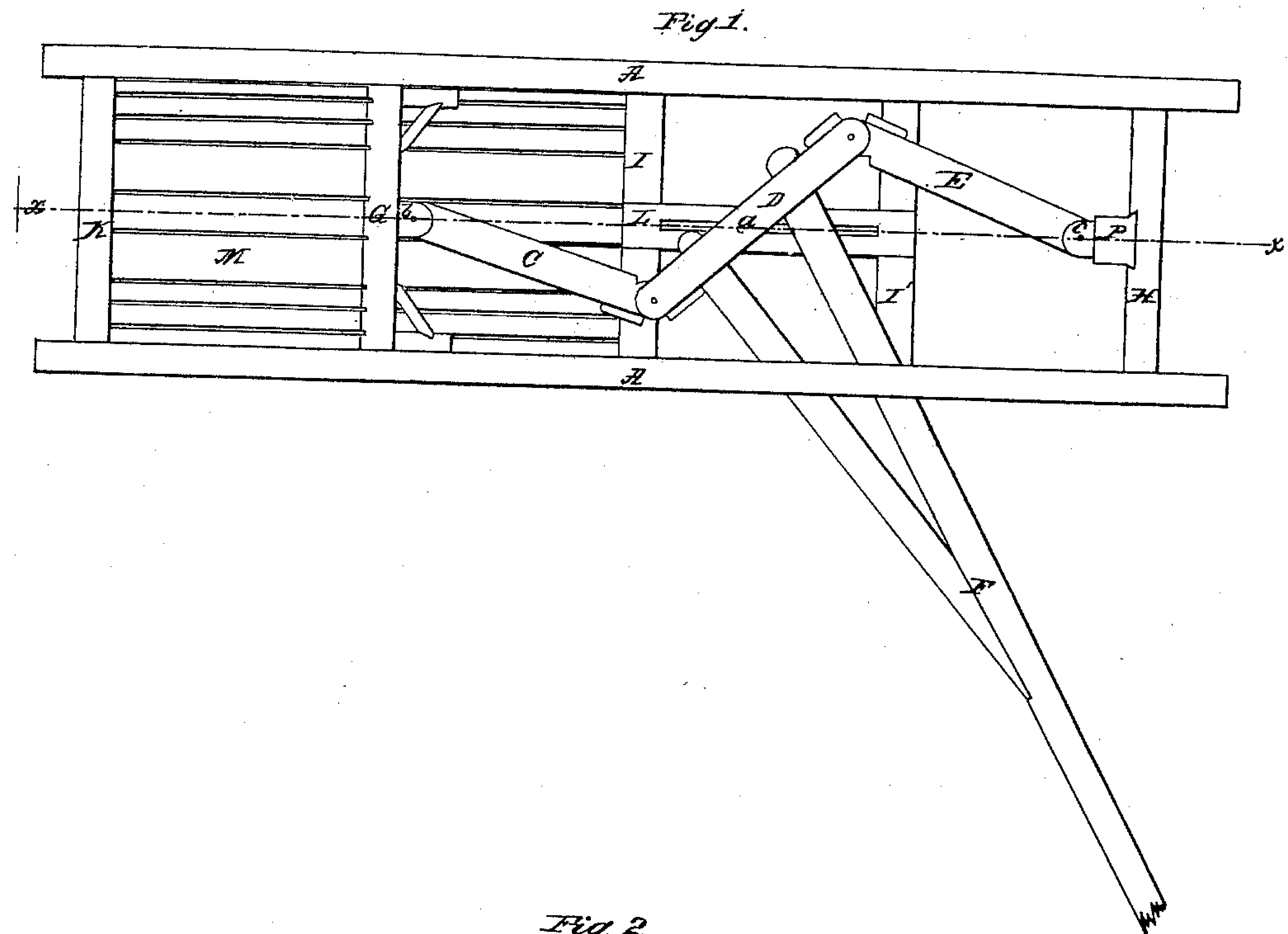


Fig. 2.

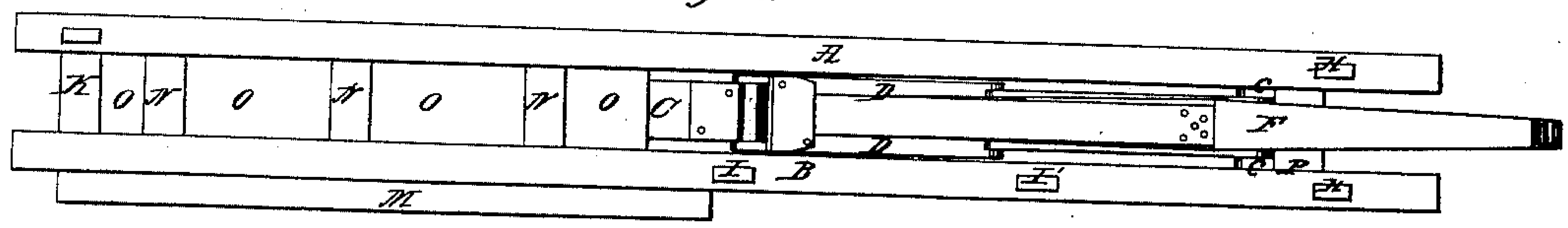
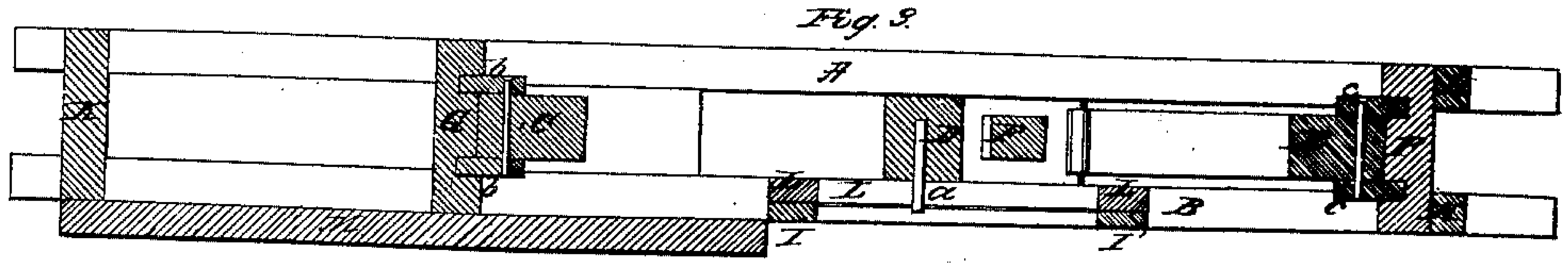


Fig. 3.



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UNITED STATES PATENT OFFICE.

IRA BISBEE OF EAST PHARSALIA, NEW YORK, AND ARZA BISBEE, OF POLK TOWNSHIP, RAY COUNTY, MISSOURI.

IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. **34,872**, dated April 8, 1862.

To all whom it may concern:

Be it known that we, IRA BISBEE, of East Pharsalia, in the county of Chenango and State of New York, and ARZA BISBEE, of Polk township, in the county of Ray and State of Missouri, have invented a new and Improved Apparatus for Pressing Hay, Tobacco, and other Substances; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a top view of our improved press; Fig. 2, a side view of the same, and Fig. 3 a section in the line *x x* of Fig. 1.

The frame of our improved press is composed of the corner timbers, A A and B B, the short perpendicular timbers K, N N N, and P, and the transverse timbers H I I′, in the manner represented in the drawings, or any other that will answer a similar purpose. The compressing-box at the left-hand end of the frame of our pressing apparatus is composed of the plank bottom M, the plank sides O O, the flat end timber K, and the follower G, as shown in the drawings. Motion is communicated to the follower G from the actuating-lever F by means of the toggle-jointed tripple levers C, D, and E, which are combined with the said actuating-lever in the manner represented in the accompanying drawings. The outer end of the lever C is jointed to the central portion of the follower G by means of embracing-ears and a pivot-pin, and the outer end of the lever E is jointed in a similar manner to the block P, which is secured to the transverse timbers H H at the right-hand end of the frame of our apparatus. A timber, L, which has a slot or groove formed in it for nearly its entire length, is firmly secured in a longitudinal position to the transverse timbers I I′, as shown in Fig. 1, and a pin, *a*, descending from its proper position on the under side of the central lever, D, as shown in Fig. 1, works in the said slot or groove in the timber L, and serves the purpose of harmoniously guiding the movements of all the levers and of equally distributing the power exerted upon the lever F to the respective levers C, D, and E. By using a series of three levers united to each other by toggle-joints, instead of the usual arrangement of two toggle-jointed levers in other presses, we are enabled to obtain in our press a greater extent of movement of the follower, and we are also enabled to combine our actuating-lever directly with the central lever, D, of our series of jointed tripple levers, and by so doing we make the said actuating-lever a portion of the leverage system of our improved compressing apparatus. The said improved leverage system of our press also enables the same to be operated within much narrower limits than it would be possible to do if the said leverage system was composed of only two toggle-joint levers.

The actuating power may be applied directly to the lever F, but a preferable mode is to communicate it through the medium of a rope and windlass.

Our improved press combines with enormous multiplication of power and great compactness the additional advantages of durability and simplicity of construction.

When used for pressing hay or cotton, our improved press will generally be placed in a horizontal position, and when used for pressing tobacco the said press will be placed in a vertical position.

Having thus fully described our improved apparatus for pressing hay, tobacco, &c., what we claim therein as our invention, and desire to secure by Letters Patent, is—

Operating the follower G of said apparatus by means of the system of three jointed levers, C D E, and a suitable actuating-lever, when the said levers are made to act harmoniously with each other by means of the fulcrum-pin *a*, which projects from the central lever, D, into a guiding slot or groove in a portion of the frame of said apparatus, substantially as herein set forth.

The above specification of our improved hay-press signed and witnessed at the dates specified herein.

IRA BISBEE,
ARZA BISBEE.

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