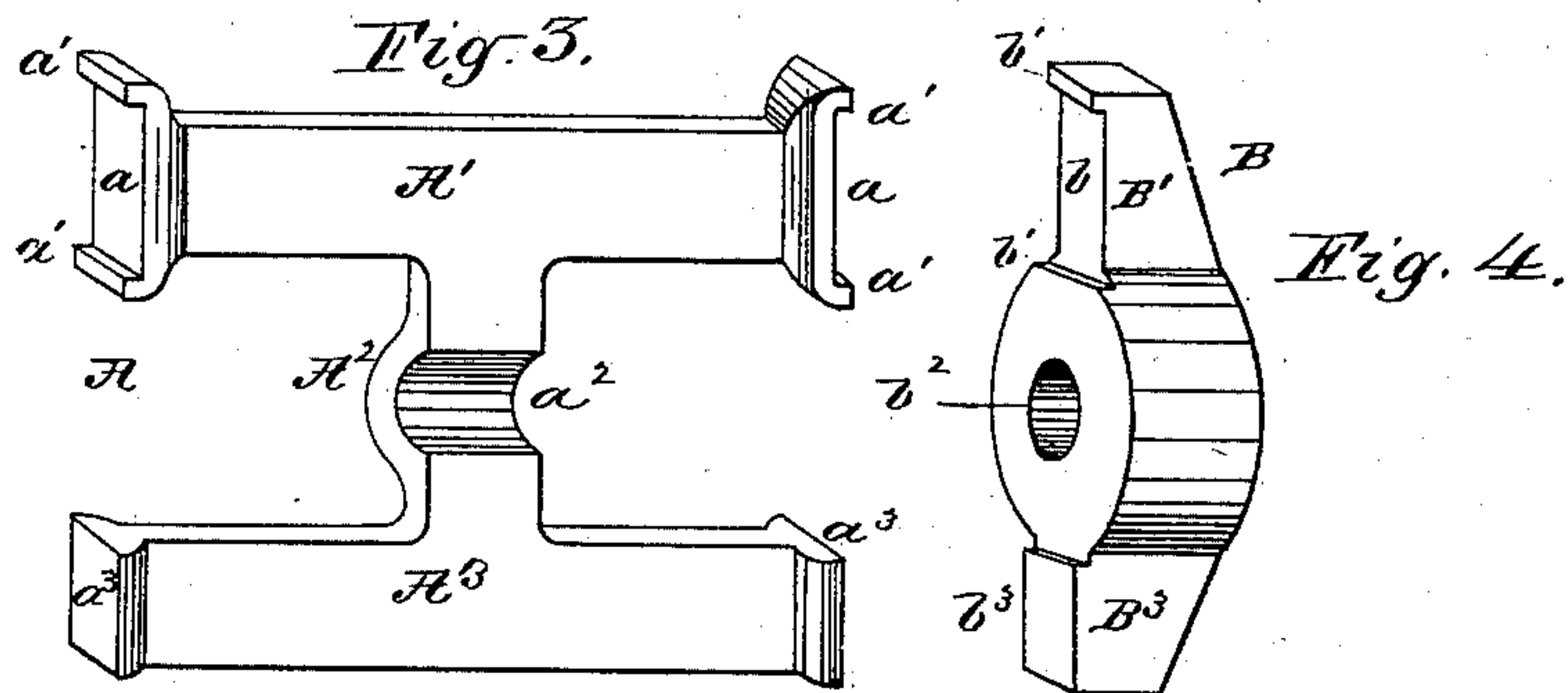
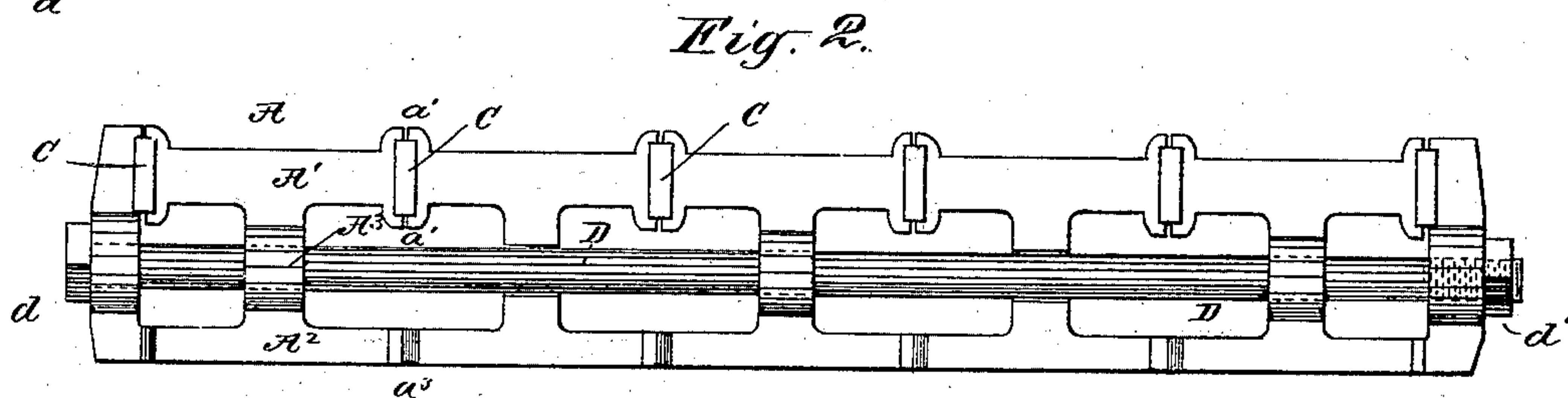
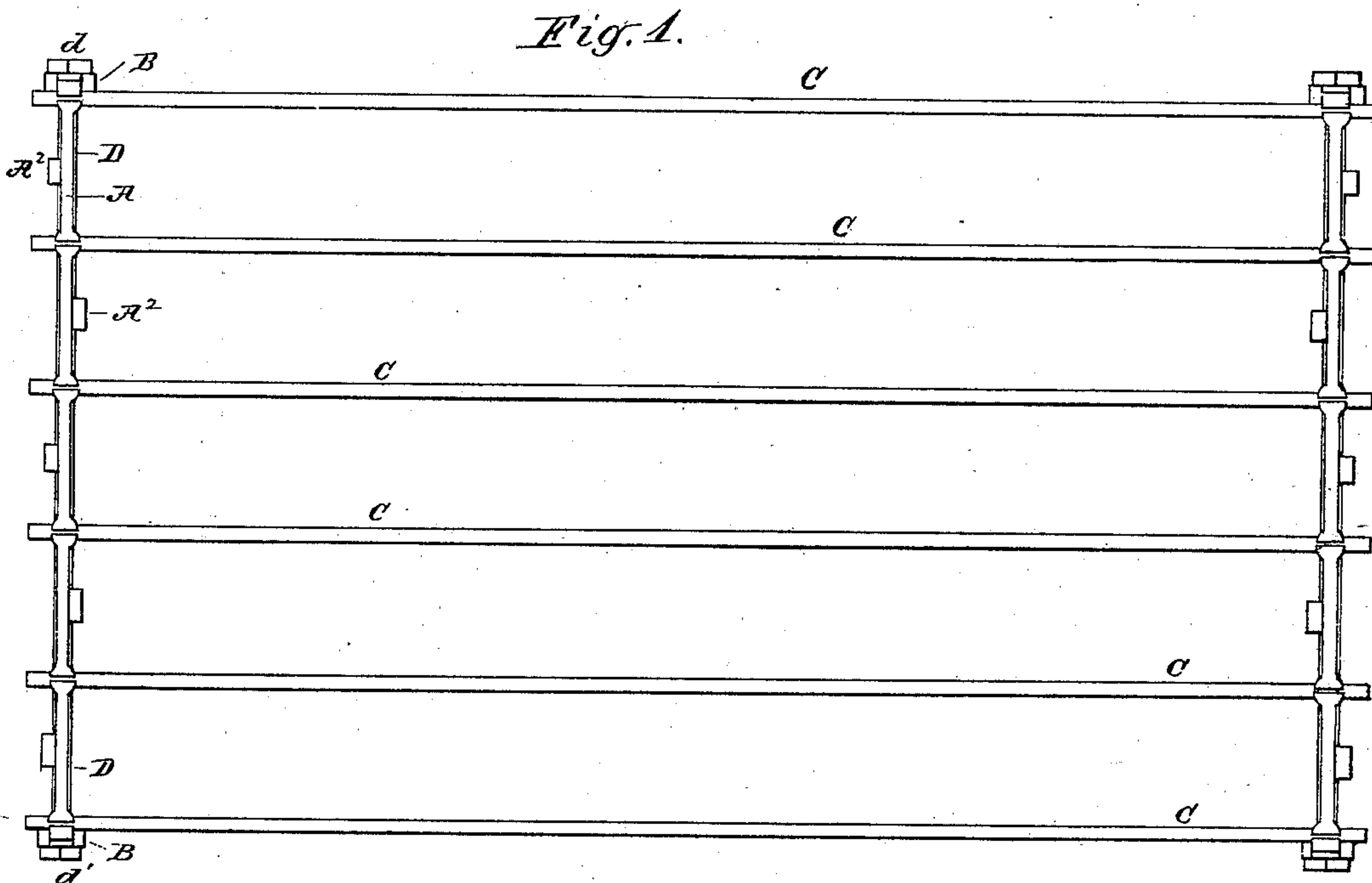


(No Model.)

J. S. ADAMS.
IRON GRATING.

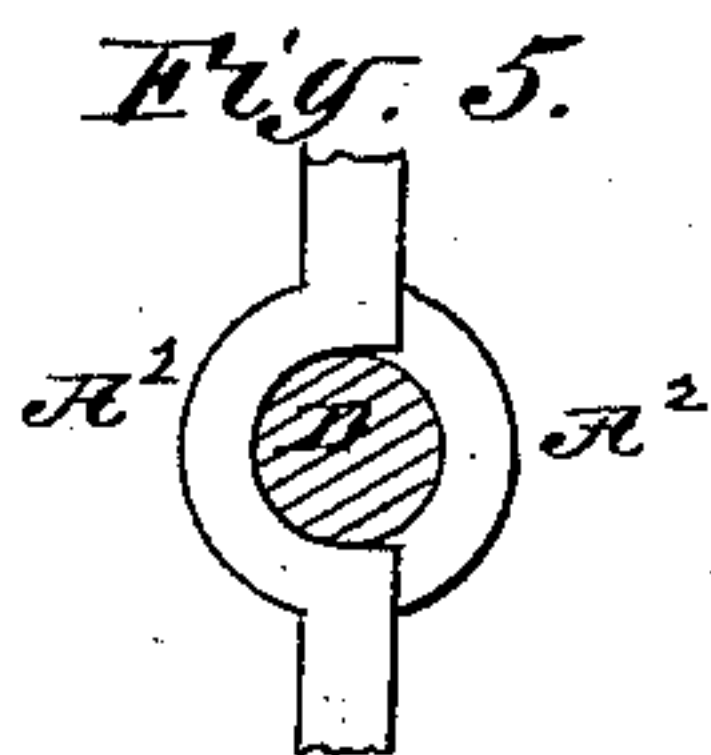
No. 311,167.

Patented Jan. 27, 1885.



WITNESSES—

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IRON GRATING.

SPECIFICATION forming part of Letters Patent No. 311,167, dated January 27, 1885.

Application filed July 25, 1882. Renewed July 30, 1883. Again renewed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ADAMS, of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Iron Gratings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to novel features of construction in iron gratings for areas, walks, and other situations where an open-work iron platform or floor is required.

The invention has for its object to provide a construction that is at once cheap, strong, and durable; and it consists in the combination, with the grating-bars, of spacing truss-blocks for separating said bars, made in a peculiar form, so as to meet each other below the main bars, together with the clamping-heads and screw-threaded binding-rods by which all parts are joined to form a trussed structure, as will hereinafter be more fully set forth, and stated in the appended claims.

In the drawings, Figure 1 is a top or plan view of a grating embodying my invention. Fig. 2 is an end elevation of the same. Fig. 3 is a perspective view of one of the truss and spacing castings. Fig. 4 is a perspective view of one of the clamping-heads, through which the binding-rod passes near its ends, and which are located at the margins of the grating. Fig. 5 is a fragmentary view of the spacing truss-blocks, in vertical transverse section, of the binding-rod.

A A are castings, which are arranged in two or more series, end to end, between the grating-bars, and which meet below said bars to form elements of a truss. B B are castings, which terminate the truss. C C are the grating-bars, and D D are binding-rods which pass through the several series of spacing-castings and clamping-heads, and which, with these and the embraced grating-bars, complete the trussed structure.

The spacing-casting A (seen detached in Fig. 3) is preferably of skeleton structure, and consists of two horizontal bars, A' A'', centrally joined by the vertical bar A'', having a lateral recess, a''. The upper bar, A', has its end faces,

a a, accurately vertical, parallel, and transverse to the direction of said bar, and provided on their upper and lower margins with flanges a a', far enough apart to admit the side face of a grating-bar, C, between them, and projecting rather less than half the thickness of said grating-bars. The lower bar, A'', has its faces a'' similarly vertical, parallel, and accurately transverse, and is in length greater than the bar A' by half the thickness of the bars C.

In uniting a number of grate-bars, C, with a series of the castings, A, the latter are placed end to end, and the bars C are embraced between the faces a a of contiguous castings A, as shown in Figs. 1 and 2. Alternate castings or spacing truss-blocks A are set with the recess a'' oppositely directed, and through the direct passage afforded by said recesses when the blocks are thus arranged a binding-rod, D, passes from end to end of the series. Beneath the head d and nut d' of said binding-bolt the clamping-heads B are placed, being provided each with a central aperture, b'', for the passage of the rod D, and preferably having a recessed face, b, fitted to admit the contiguous bar C, and having a lower projecting face, b'', which meets the face a'' of the adjacent truss-block A.

The parts being constructed and arranged as described, the binding-rod is made to compress them together tightly, so as to give great rigidity to the truss thereby formed, and so as to firmly clasp and retain the grating-bars C from longitudinal or other movement.

It will be observed that in the grating made as above set forth the bars C are not apertured, as in the ordinary construction, and that their strength is therefore unimpaired. It will also be observed that said bars, being supported by trusses formed of the several series of blocks A bound together, as stated, need not be separately supported at their ends, as is usual in fitting gratings to place, but may, if desired, be wholly upheld from its marginal bars.

The parts A and B may be cast with sufficient accuracy to give a straight truss when clamped by the rod D, wherefore but little hand-labor is involved in preparing the parts or in putting the grating together.

I claim as my invention—

1. The combination, with the grating-bars C, of spacing-blocks A and terminal clamping-

heads B, constructed to bear against the bars C and against each other below the said bars, and a binding-rod, D, arranged between the bearing-points of the parts A and B, substantially as described.

5 2. In combination with the grating-bars C and suitable binding devices, the spacing truss-blocks A, having the flanges a' a' , forming an intermediate recess for the grating-bars, substantially as described.

10 3. In combination with the grating-bars, the

binding-rod and terminal supports for the nut and head of said rod, the spacing-blocks having a lateral recess, a'' , substantially as described, and for the purposes set forth.

15 In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

JOHN S. ADAMS.

Witnesses:

M. E. DAYTON,

JESSE COX, Jr.