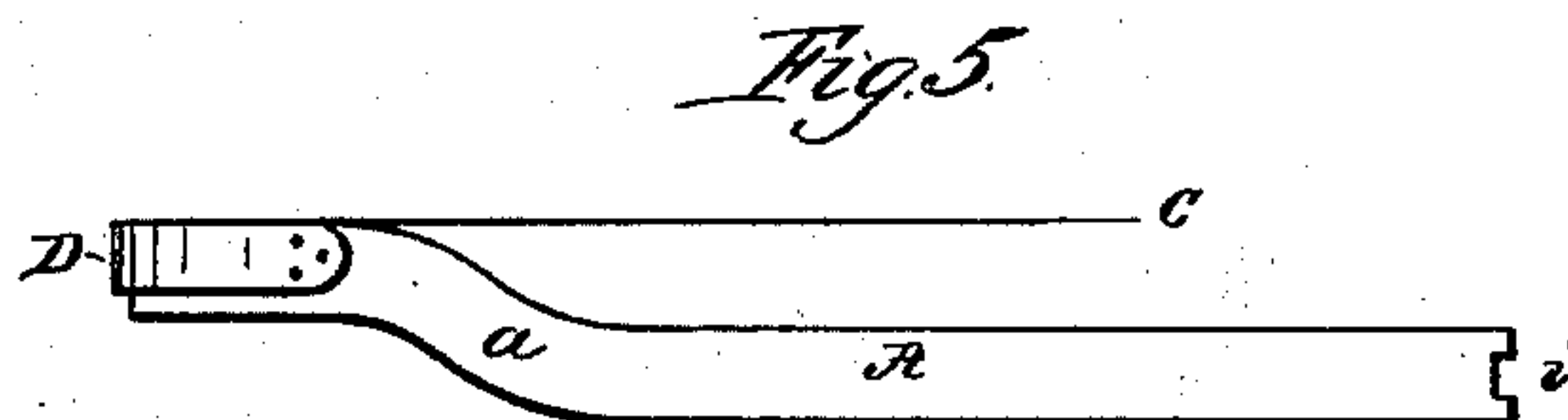
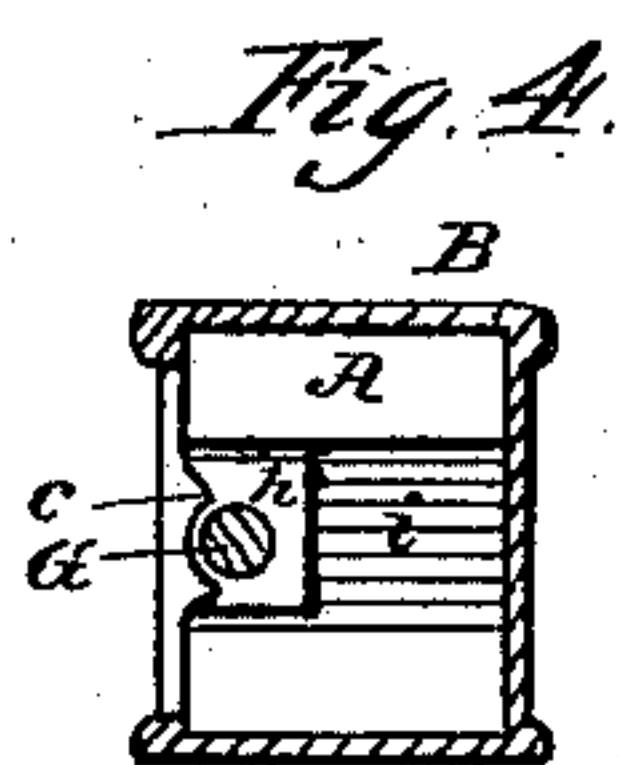
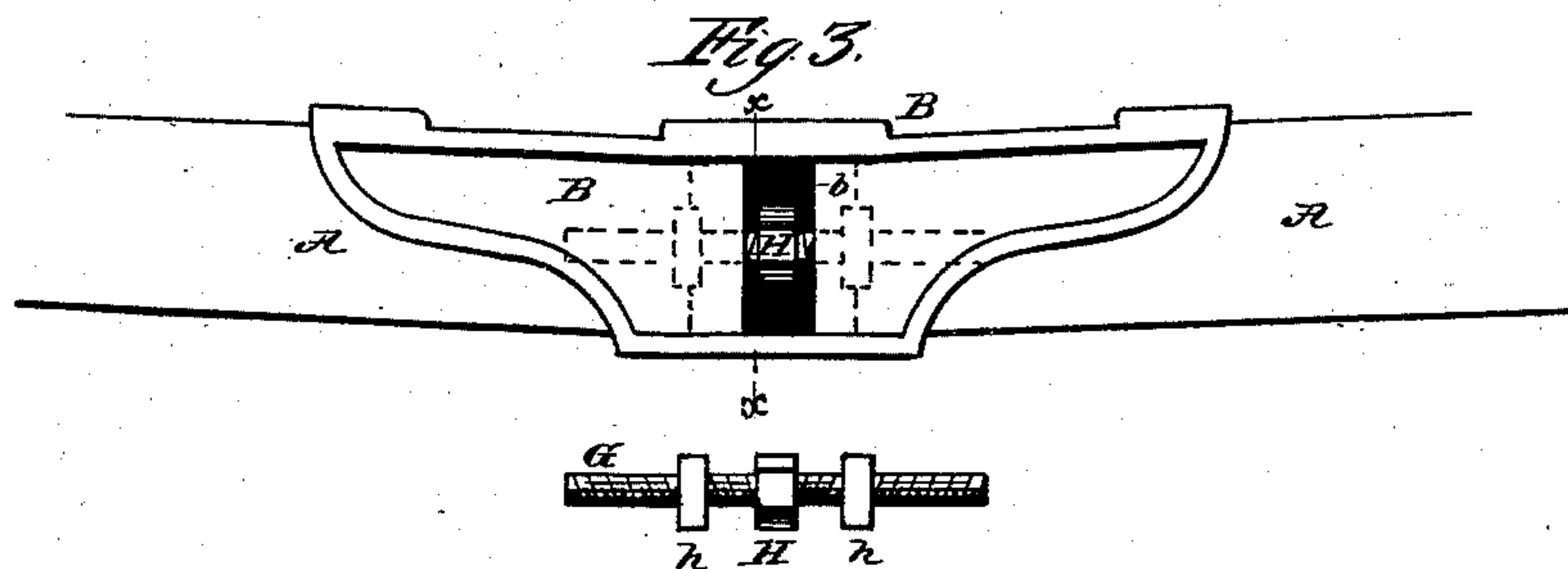
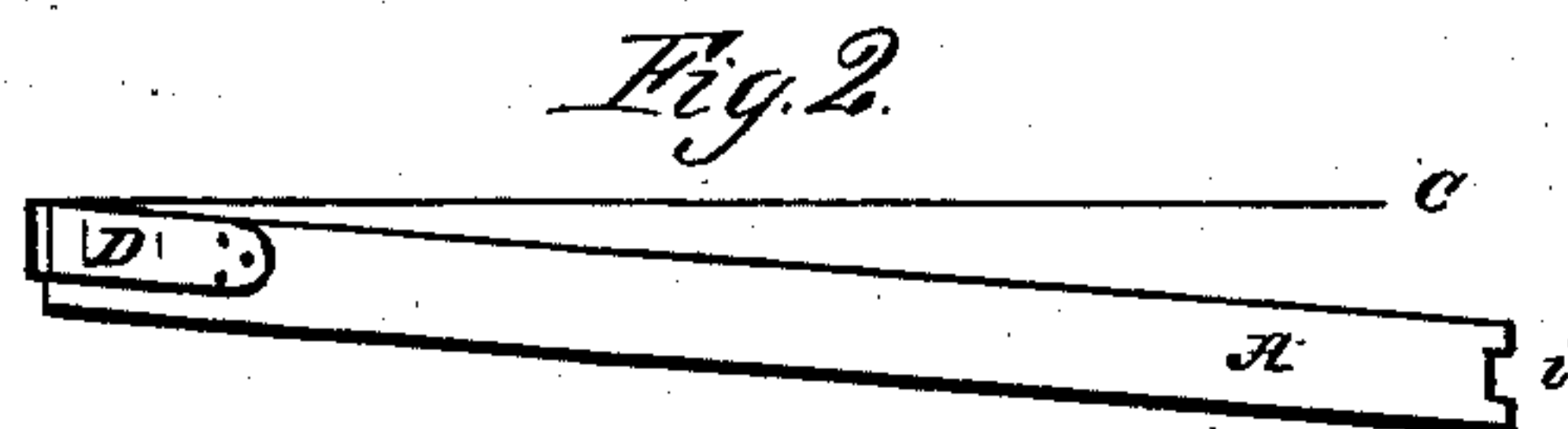
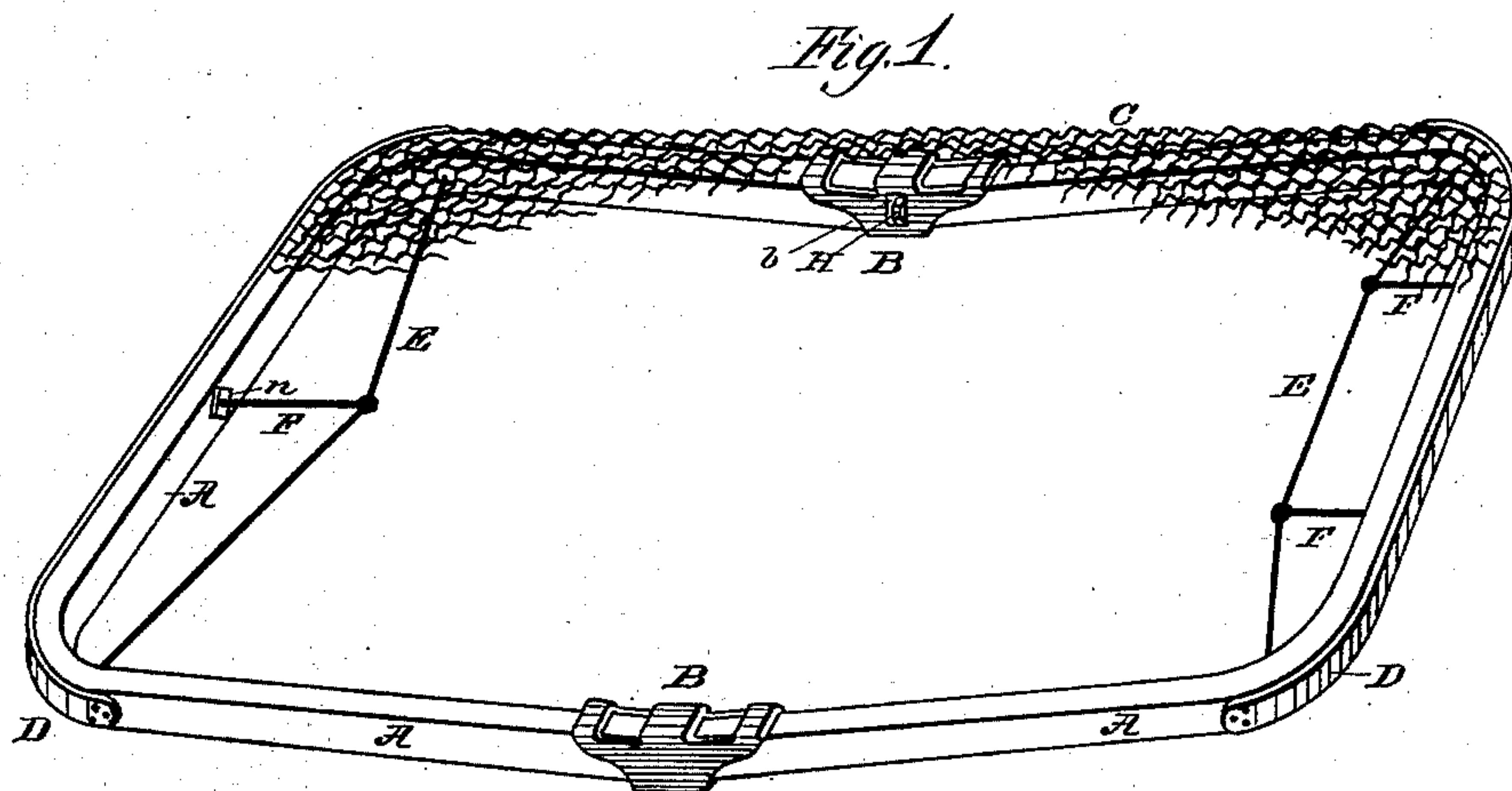


(Model.)

A. P. GRANGER & A. H. FROST.
Bed Bottom.

No. 238,107.

Patented Feb. 22, 1881.



WITNESSES.

L. B. Townsend
W. C. Adams

INVENTORS.

Alvan P. Granger
Abel H. Frost
per W. E. Davenport
Attorney

UNITED STATES PATENT OFFICE.

ALVAN P. GRANGER, OF WA KEENEY, KANSAS, AND ABEL H. FROST, OF CHICAGO, ILLINOIS.

BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 238,107, dated February 22, 1881.

Application filed April 16, 1880. (Model.)

To all whom it may concern:

Be it known that we, ALVAN P. GRANGER, of Wa Keeney, in the county of Trego and State of Kansas, and ABEL H. FROST, of Chicago, Illinois, have invented certain new and useful Improvements in Bed-Bottoms; and we 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.

Our invention relates to bed-bottom frames for the support of woven-wire or other fabric stretched from end to end, and more especially to such frames having bent-wood end rails. It is intended as an improvement, in some respects, on the construction shown in an application for patent filed of even date herewith by Abel H. Frost, one of the present applicants.

Our invention consists, first, in making the frame of two pieces of bent wood, each forming one end rail and part of both side rails; second, in combining with the bent-wood pieces mentioned metal sockets to receive the ends of said pieces and hold them in proper relation; third, in combining with the said bent-wood pieces and sockets, or metal connections, means for separating the ends of the bent pieces, and thus longitudinally expanding the frame; fourth, in so shaping or directing the parallel side portions of the bent pieces that the central side portions of the frame will be depressed below the plane of the transverse end portions; and, fifth, in the several specific features of construction hereinafter described, and pointed out in the claims.

Figure 1 of the drawings is a perspective view of our improved frames supporting a woven-wire fabric. Fig. 2 is a fragmentary side elevation thereof. Fig. 3 is a side view of the metal socket or connecting-piece seen from the inside of the frame, and showing the expanding device. Fig. 4 is a transverse section of the connecting-piece through the line *xx* of Fig. 3, and Fig. 5 is a modified form of the bent-wood parts viewed in side elevation and with fabric applied.

A A are two bent pieces of wood, each forming an end rail and half of both side rails of the frame. The corners are turned over a form

having a curve of, say, four to six inch radius. Midway of the frame the bent parts A A meet or proximate, and are held by the metal sockets B B. When the side portions of the parts A A are straight said sockets are preferably shaped to hold them in the relatively-inclined positions shown, whereby the transverse end portions are elevated to properly support the fabric C above the side rails. Said bent parts may, however, be bent out of a horizontal plane, as seen at *a*, Fig. 5, in which case the sockets may hold their ends in a line, the desired elevation of the end rails being obtained by such offset or bend at *a*.

The fabric C is fastened over the top of the end rails, and its raw edges are concealed by the thin bent strips D D. After securing the fabric to the bent parts A tension is applied to the fabric, and the ends of said parts are then set into the opposite ends of the socket-connections B. To facilitate this operation the lower wall of the connection B is made relatively short, as indicated in the drawings, the greater length of the upper wall being given to the connection for the obvious purpose of better resisting the strain of the fabric in the higher plane, as shown.

For the purpose of extending the frame longitudinally the right-and-left-threaded screw G, having a central solid nut, H, and running-nuts *h h*, is inserted within each of the connecting-pieces B, and arranged to bear by the nuts *h* against the proximating ends of the opposite parts A. The nut H is made accessible through the vertical slot *b* of the connection B on the inside of the frame, and to facilitate working the screw it is located near the inner wall of said connection.

In order to retain the nut H in the central position, opposite the slot *b*, said nut may be of such size and the screw so located that the nut will project outward between the walls of the slot; or the lugs or flanges *c* may protrude inward from the edges of the slot to form shoulders to retain the nut in its place. The ends of the parts A are recessed at *i*, to admit the nuts *h* and prevent their turning, as seen in Figs. 2, 4, and 5.

The transverse portions of the parts A A being light in comparison with the end rails

heretofore commonly employed, to facilitate bending, the interior truss-rod, E, and strut or struts F are applied, as shown.

By means of the nuts *n n* upon the struts the fabric C may be centrally extended to give increased tension, while the general tension of the fabric will be varied by the screws G. Said truss devices are fully set forth and claimed in the aforesaid application of A. H. Frost.

Having thus described our invention, we claim—

1. The frame described, consisting, essentially, of two pieces of bent wood, each forming an end rail and part of both side rails, and joined at the sides, and having the transverse end portions elevated above the side portions, combined with the fabric suspended from the end portions and clear of the side portions, substantially as set forth.

2. The frame described, consisting, essentially, of two pieces of bent wood, each forming an end rail and part of each side rail, and joined at the sides, in combination with mechanism for separably connecting the bent parts at the sides of the frame, whereby the tension of the fabric may be varied at will, substantially as described.

3. The frame described, consisting, essentially, of two pieces of bent wood, each forming an end rail and part of each side rail, in combination with the contractile fabric C, secured to the ends of the frames, and the metal socket-connections B, adapted to receive the ends of the parts A and permit their adjustment longitudinally, substantially as described.

4. The frame described, consisting, essentially, of two pieces of bent wood, each forming an end rail and part of each side rail, combined with the socket-piece B, formed to receive and support in position the ends of the parts A, relatively inclined to elevate the transverse end portions and the fabric suspended therefrom above the side portions of the frame, substantially as described.

5. The frame described, consisting, essentially, of two pieces of bent wood, each forming an end rail and part of each side rail, in combination with the parts A, and provided with the connecting-piece B and an expanding-screw, G, operating between their ends to separate the parts A within the connection B, substantially as described.

6. The combination, with the parts A and connecting-piece B, having the slot *b*, of the right-and-left-threaded screw G, provided with the central nut, H, arranged to remain centrally in place while separating the parts A, substantially as described.

7. Combined with the parts A and the elastic fabric C, secured thereto, as described, the connecting socket-pieces B, having their lower walls shorter than their upper walls, as and for the purposes set forth.

In testimony that we claim the foregoing as our invention we affix our signatures in presence of two witnesses.

ALVAN P. GRANGER.
ABEL H. FROST.

Witnesses:

M. E. DAYTON,
JESSE COX, Jr.