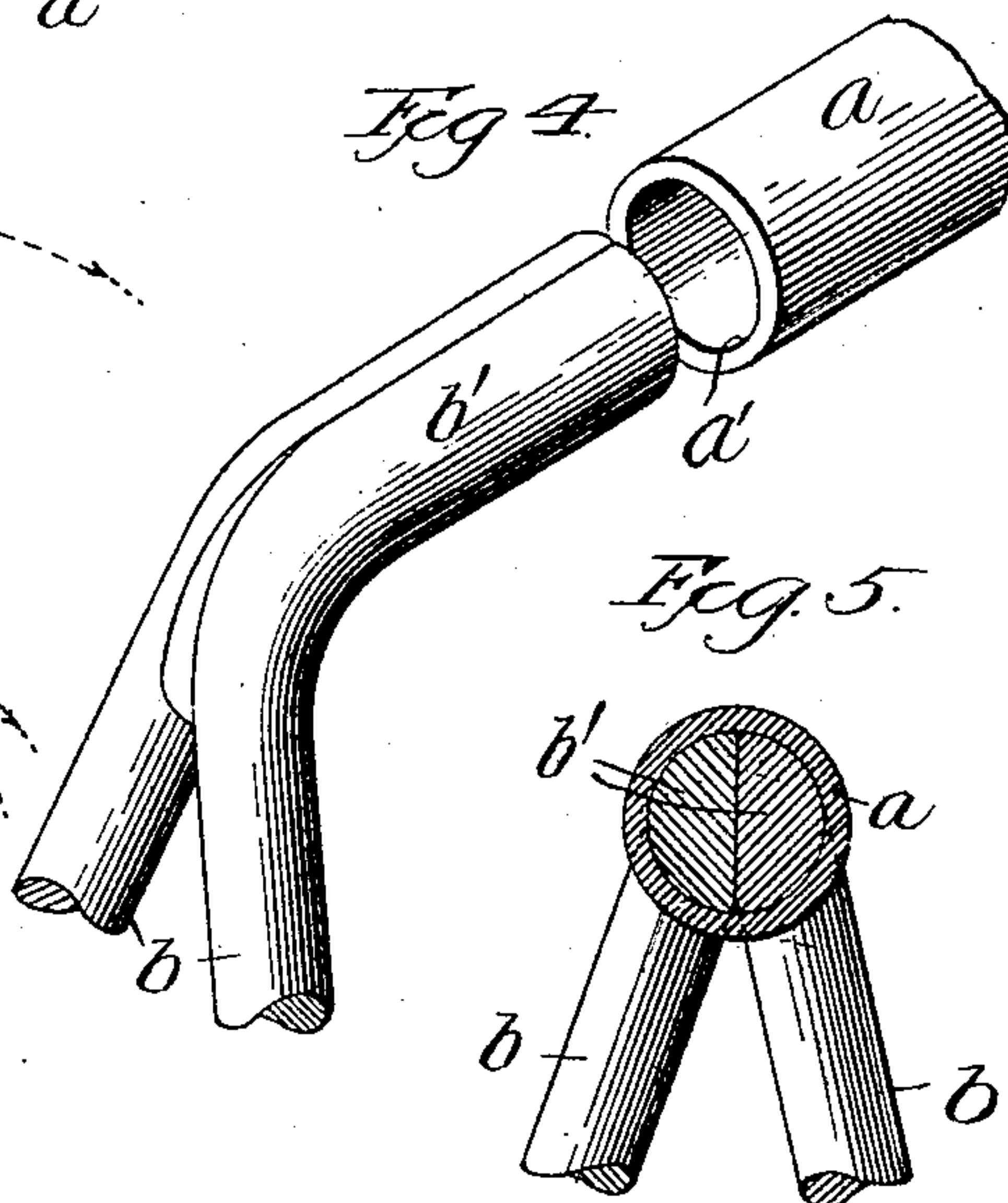
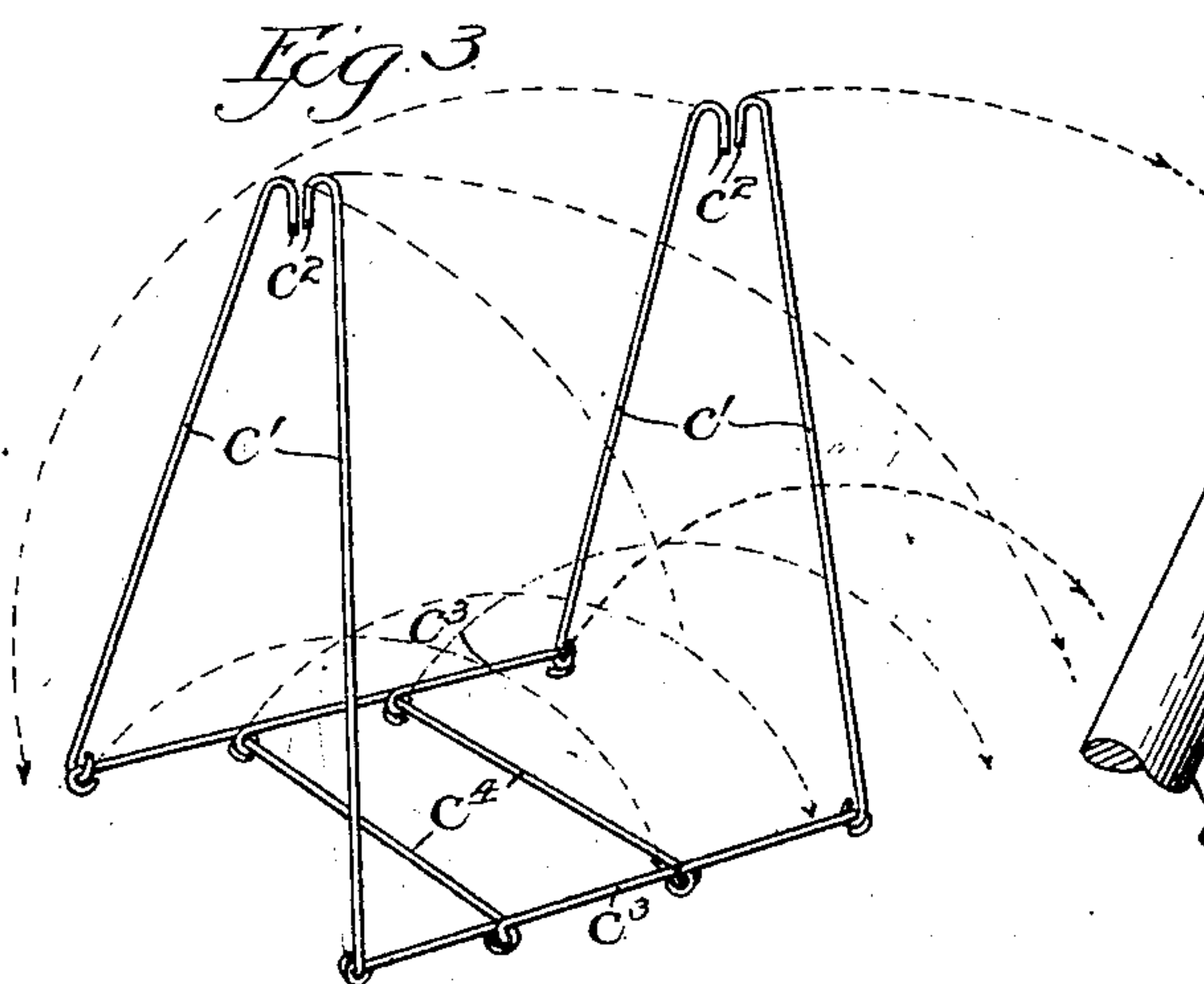
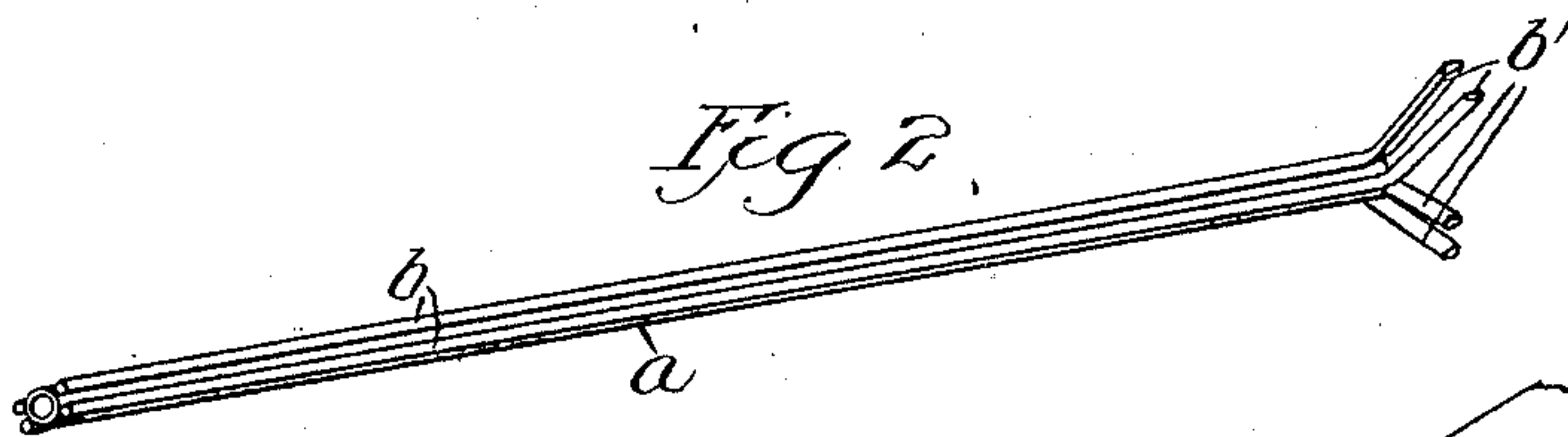
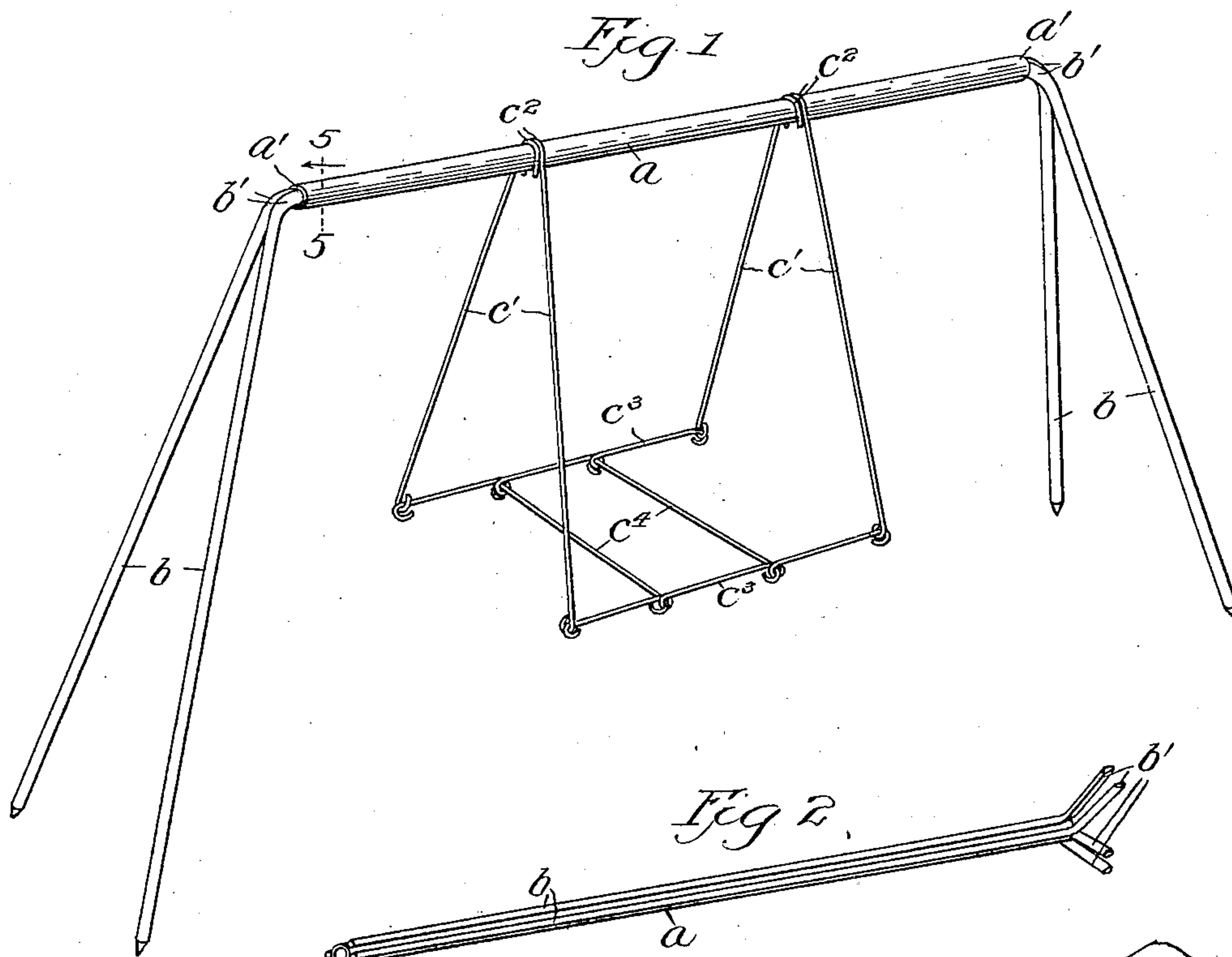


No. 832,163.

PATENTED OCT. 2, 1906.

W. RUGER, JR.
COLLAPSIBLE SUPPORTING FRAME.
APPLICATION FILED OCT. 16, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM RUGER, JR., OF JANESVILLE, WISCONSIN.

COLLAPSIBLE SUPPORTING-FRAME.

No. 832,163.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed October 16, 1905. Serial No. 282,874.

To all whom it may concern:

Be it known that I, WILLIAM RUGER, Jr., a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented a certain new and useful Improvement in Collapsible Supporting-Frames, of which the following is a full, clear, concise, and exact description.

My invention relates to a portable "knock-down" supporting-frame to be used more particularly for suspending cooking utensils over a camp-fire, and has for its object to provide a simple, cheap, and efficient support which may be readily taken apart and made to occupy very little space in order to be in convenient form for "packing" or shipment.

Generally speaking, the frame of my invention comprises a cross-bar having hollow ends and detachable legs having their upper ends formed to fit into the ends of said cross-bar to support the same.

A further feature of my invention consists in the provision of a collapsible supporting device for cooking utensils adapted to be suspended from the cross-bar over a camp-fire.

I will describe my invention more particularly by reference to the accompanying drawings, which illustrate the preferred form thereof, reserving for the appended claims a statement of the particular features and apparatus which I consider to be novel.

Figure 1 is a perspective view of the supporting-frame and the collapsible supporting device suspended therefrom, illustrating the preferred form of my invention. Fig. 2 is a view showing the frame "knocked down" with the parts in compact form for shipment. Fig. 3 is a perspective detail view of the collapsible supporting device, showing in dotted lines the manner in which the device is folded. Fig. 4 is a fragmentary perspective view showing the upper ends of a pair of legs in position to enter the end of the cross-bar; and Fig. 5 is an enlarged cross-sectional view on line 5 5 of Fig. 1.

The same letters of reference designate the same parts throughout the several figures of the drawings.

The supporting-frame illustrated in the drawings is provided with a horizontal cross-bar *a*, having hollow ends *a' a'*, said cross-bar preferably being a hollow metal tube, such as a piece of gas-pipe. This cross-bar *a* is supported by legs *b b*, whose upper ends *b'* are inserted in the hollow ends of the cross-bar *a*.

A pair of legs is preferably provided at each end of the cross-bar, the upper ends of the legs of each pair being bent at an angle and formed so that the two ends together fit snugly in the bore of the tube and give mutual support to each other and to the tube. This may be accomplished, as shown in Figs. 4 and 5, each pair of legs being flattened at their sides, so that such flattened portions will be in engagement with each other to maintain the legs of each pair in a fixed angular relation to each other. The legs of each pair thus form a rigid inverted-V-shaped support for the cross-bar to prevent "wabbling" of the frame. The legs *b b* may be simply stout metal rods or bars. I also provide a collapsible supporting device *c*, adapted to be suspended from the bar *a* over a camp-fire, the supporting device being suspended by arms *c'*, having hooks *c''* passing over the bar *a*. The base of the supporting device preferably comprises two end rods or bars *c'' c''*, united by cross-bars *c''' c'''*, having link connections with said rods. The arms *c'* are preferably four in number and united by link connections with the ends of the end rods. A very simple and efficient suspending support is thus provided for cooking utensils which when not in use may be collapsed and made to occupy very little space, with the end rods and cross-bars all lying parallel to each other in a compact bundle.

With my construction above described it will be seen that the parts of the frame may be easily and quickly assembled and taken apart, and when disassembled the parts of the frame and the collapsible suspending device may be tied together in very compact form for shipping or packing. The feature just referred to makes the device of especial value to campers moving with pack outfits from place to place, since large and cumbersome packs cannot be employed and all parts of a pack must be of minimum size and compactly and firmly put together to occupy the least possible space. The device is also very light, simple, and cheap to manufacture.

I am aware that my supporting-frame is capable of use for various other purposes than that herein mentioned. For example, it may be used as a tent-frame. The form of the structure may also be varied without departing from the invention. I do not, therefore, desire to be understood as limiting myself to the precise arrangement shown; but,

Having thus described my invention, I claim—

1. In a supporting-frame the combination with a cross-bar having openings in the ends thereof, of supports therefor, each support comprising a pair of legs having bent upper ends inserted in one of said openings, said ends being flattened and in engagement to maintain the legs in fixed relation to each other.

2. In a supporting-frame for cooking utensils, the combination with a hollow cross-bar, of supports therefor, each support comprising a pair of legs having horizontally-bent upper ends inserted in one end of the cross-bar, said upper ends having flattened sides in engagement to maintain said legs in a fixed angular relation to each other.

3. In a collapsible frame, a bar having a tubular end, in combination with a pair of detachable legs therefor, the upper ends of said legs being formed angularly to fit together side by side in the tubular end of said bar.

4. A collapsible support for camp-cooking utensils comprising a pair of end bars c^3 c^3 , cross-bars c^4 linked to and uniting said end bars, and hanger-arms linked to said end bars and having hooks at their upper ends adapted to be hooked over a horizontal supporting cross-bar.

5. The combination with a hollow cross-bar, of a pair of legs at each end of said bar, the upper ends of the legs of each pair being bent and formed angularly to lie side by side in a hollow end of said bar.

6. In a supporting-frame, the combination with a hollow cross-bar, of a pair of legs at each end of said bar, the upper ends of each pair being bent to lie in engagement side by side within an end of said bar.

In witness whereof I hereunto subscribe my name this 13th day of October, A. D. 1905.

WILLIAM RUGER, JR.

Witnesses:

WILLIAM RUGER,
N. J. EMERY.