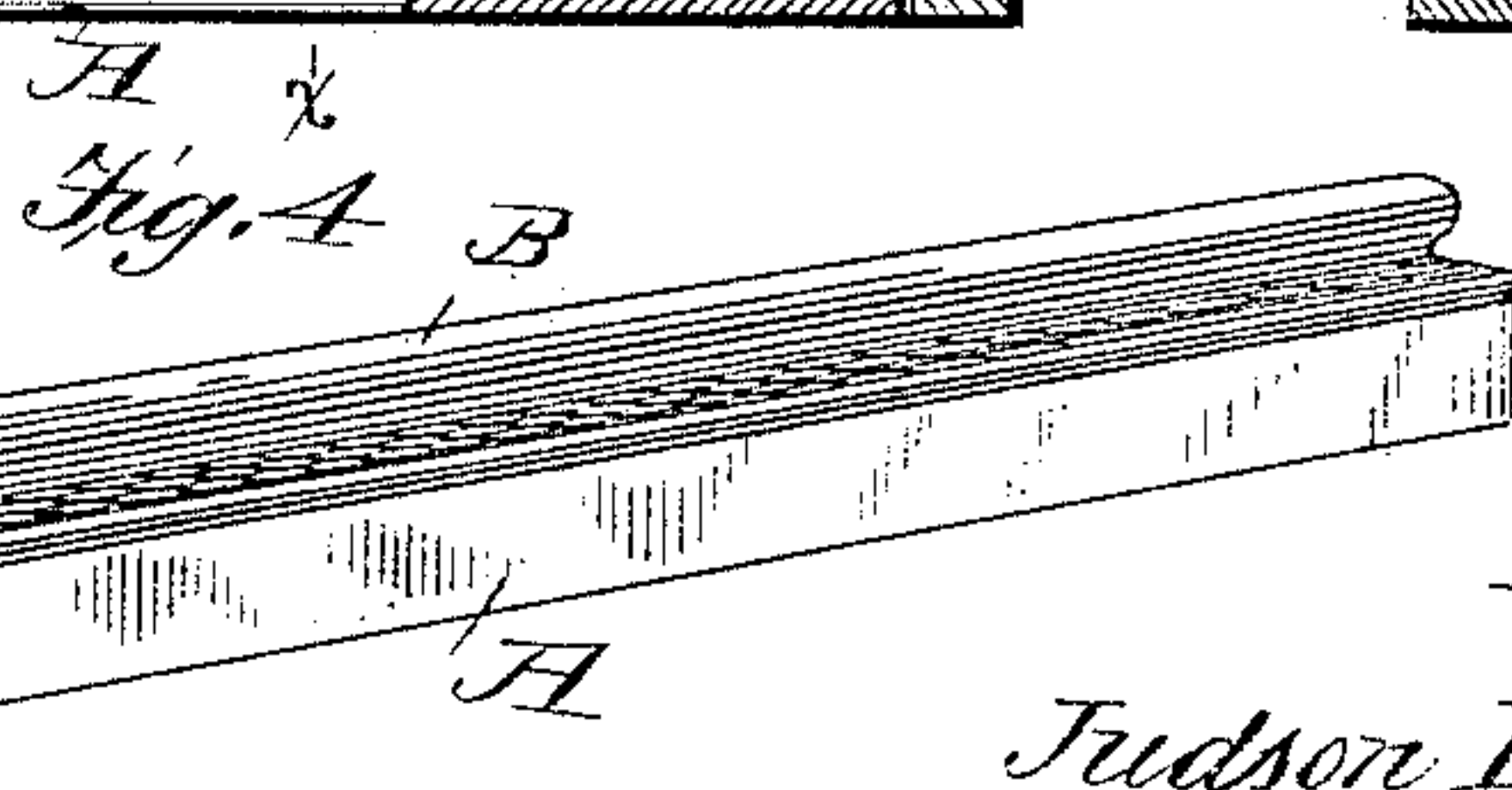
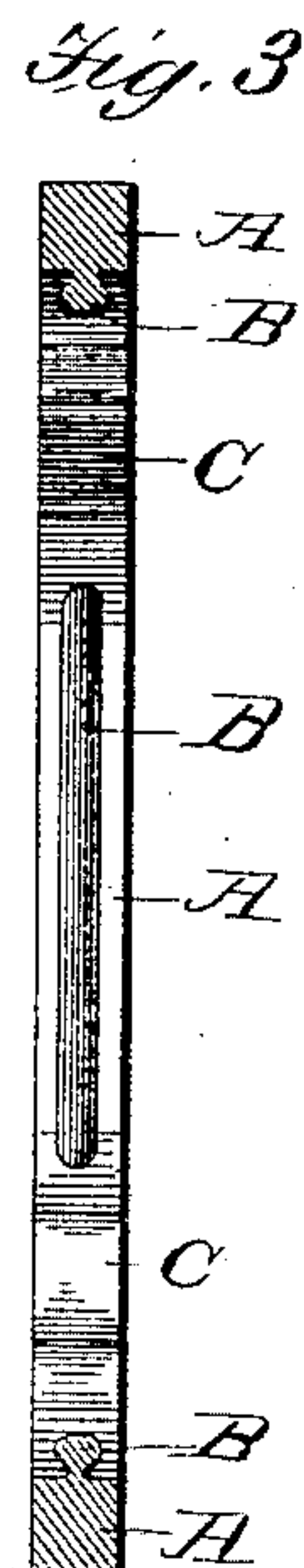
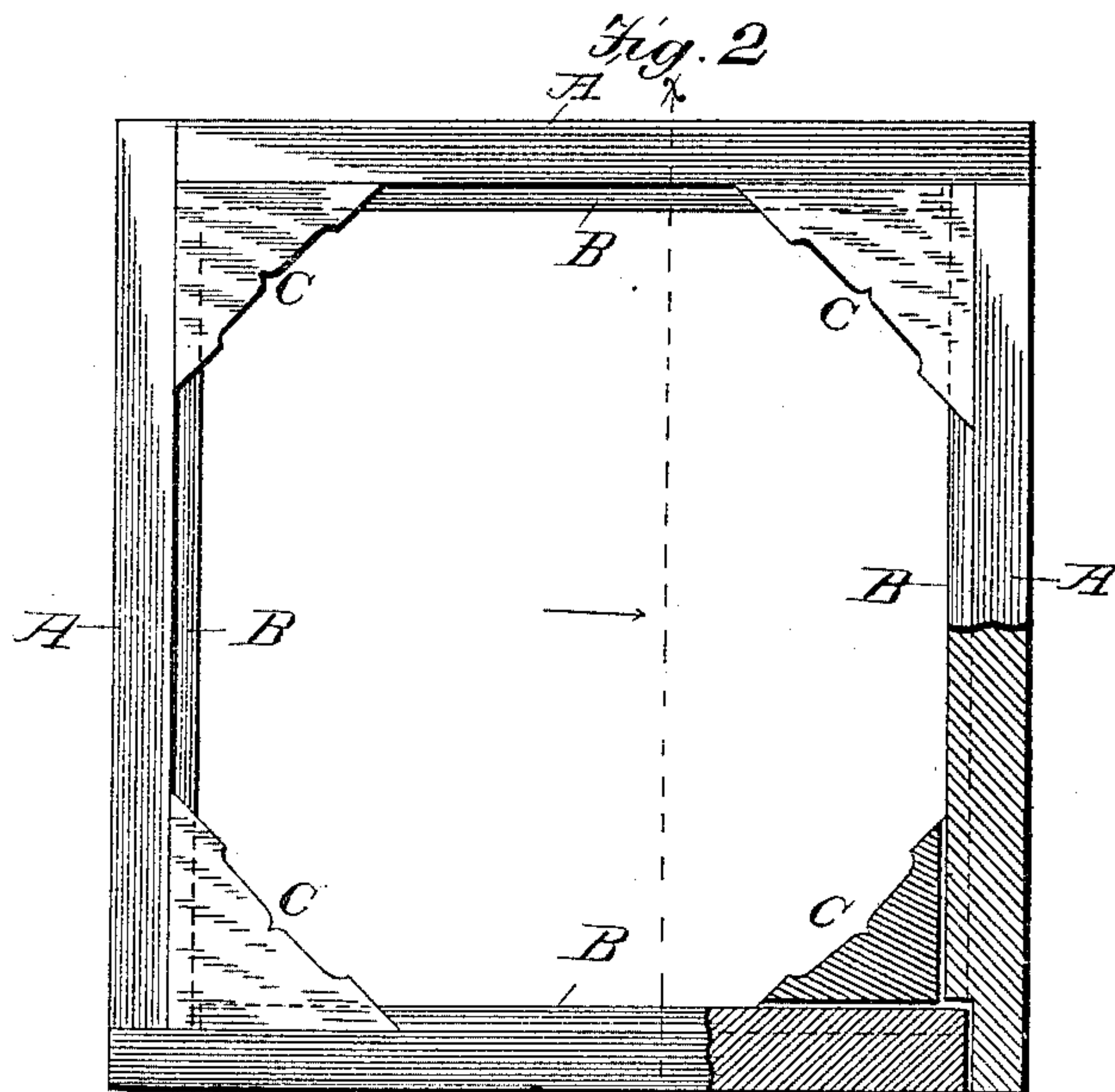
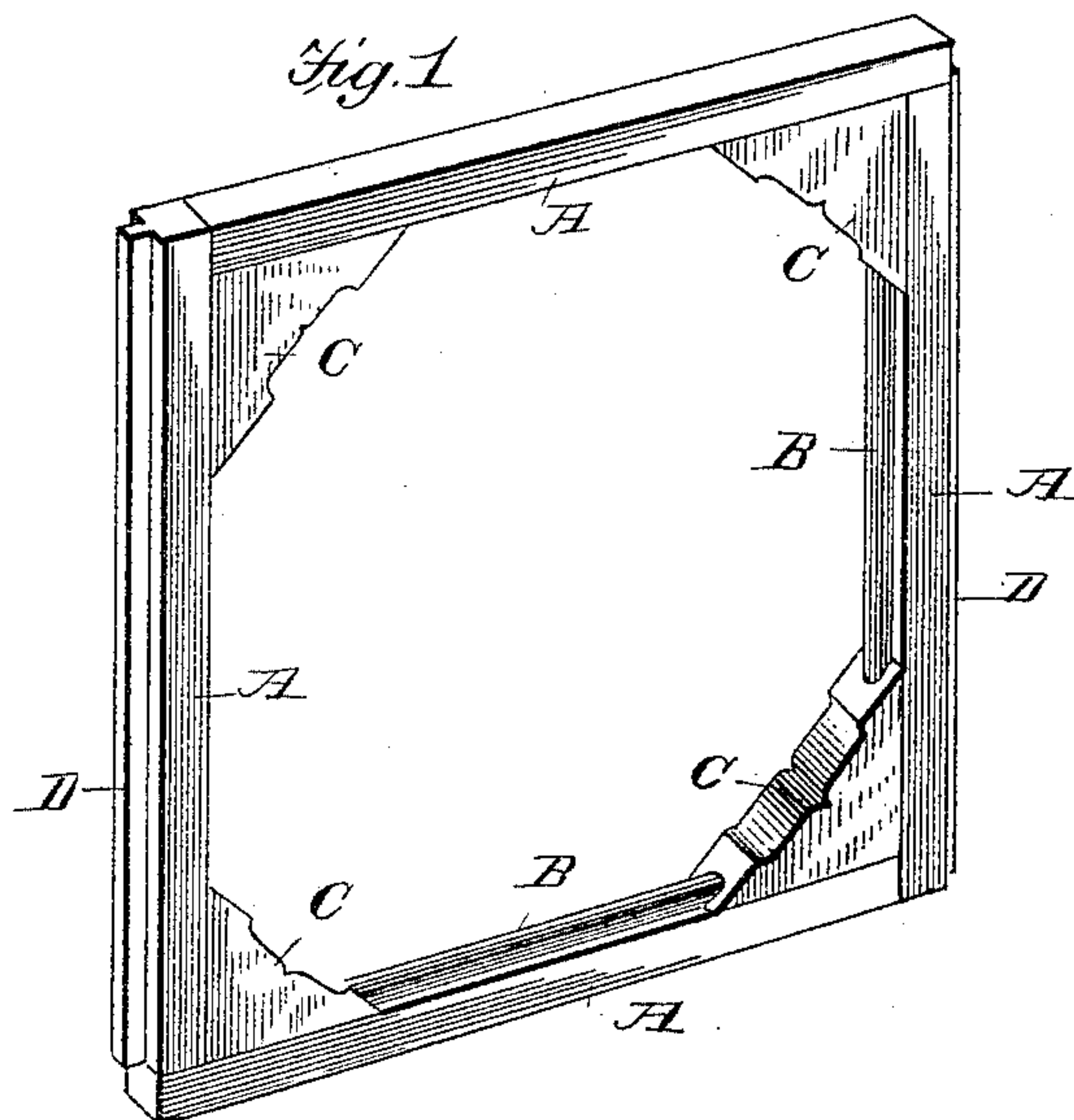


(No Model.)

J. B. PHILLIPS.  
WINDOW SCREEN FRAME.

No. 445,026.

Patented Jan. 20, 1891.



Witnesses

*A. F. Cornwall*

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*Att'y*



# UNITED STATES PATENT OFFICE.

JUDSON B. PHILLIPS, OF FENTON, MICHIGAN.

## WINDOW-SCREEN FRAME.

SPECIFICATION forming part of Letters Patent No. 445,026, dated January 20, 1891.

Application filed October 6, 1890. Serial No. 367,259. (No model.)

*To all whom it may concern:*

Be it known that I, JUDSON B. PHILLIPS, a citizen of the United States, residing at Fenton, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Window-Screen Frames, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in frames especially adapted for window-screens; and the object of my invention is, to construct the frame so that it can be readily manufactured and shipped  
15 in a knockdown condition, which dispenses with the use of any tool for putting it together, and which at the same time may be readily altered to any desired size within the length of the bars composing it and without  
20 requiring any skill or any other tool than a common saw.

To this end my invention consists, principally, in the construction of the bars composing the frame, all as more fully hereinafter  
25 described.

In the drawings which accompany this specification, Figure 1 is a perspective view of my improved frame as preferably constructed for use as a window-screen frame. Fig. 2 is an  
30 elevation of my improved frame with one corner thereof shown in vertical central section in the plane of the frame. Fig. 3 is a cross-section on the line  $x x$  of Fig. 2. Fig. 4 is a perspective view of one of the bars forming the frame.

35 A are the bars composing the frame, each bar being provided with square ends and with a tenon B, preferably formed integral with the bar, on one side thereof. This tenon extends the whole length of the bar, except at  
40 one end of the bar, where the bar extends beyond the tenon a distance preferably equal to the width of the whole bar. In manufacturing the bar this is preferably accomplished  
45 by forming the tenon the whole length of the bar and then cutting away the specified portion of the tenon. In cross-section this tenon is preferably made of dovetail or T-head shape, as shown.

50 C are corner-pieces adapted to engage with the tenons of the bars by means of suitable

mortises formed in the right-angled sides of the corner-pieces. Preferably I construct these corner-pieces of triangular-shaped pieces of wood having a thickness equal to the thickness of the bars, and, if desired, of more or less ornamental form.

My frame is constructed of four of the bars and of four of the corner-pieces described in the manner shown in the drawings, in which  
60 each bar is shown with one end abutting against the side of one of the adjoining bars, while the other end, on which the tenon is partly cut away, is shown to overlap the end of the other adjoining bar, all the bars being  
65 arranged in like manner and united together by means of the corner-pieces, which engage with the tenons of two adjoining bars. The manner of accomplishing this is obviously simple and need not be described. When the  
70 bars are so joined, it will be seen that while each bar at one end overlaps the end of one of the adjoining bars its tenon overlaps the end of the tenon of the other adjoining bar. The result of this arrangement is that each  
75 bar is thereby held against longitudinal displacement in either direction, and also against displacement at either end in the direction of the adjoining bars. Thus if a fabric cut to fit the opening of the frame between the bars  
80 and corner-pieces is secured therein by securing the edges of the fabric to the tenons the whole frame becomes rigid, and if a fabric or material of greater rigidity than the ordinary wire screen is desired to be secured in  
85 the frame the corner-pieces may be even omitted, if desired.

For window-screen frames I preferably provide two of the bars with tenons D upon their outer faces, whereby the frame may be secured in vertical guides on the window-frame in the well-known manner for permitting the screens to be adjusted up or down in the window.

With proper workmanship a frame of my construction is so rigidly held together by the corner-pieces that even without the help of the fabric secured within the frame it will maintain its form against any accidental displacement, so that the use of nails or screws  
90 is entirely superfluous, thus permitting the parts of the frame to be readily taken apart



again, and, if desired, to be altered in size. In order to do a minimum of work in altering the size of the frame, the cutting off or shortening of the bars is accomplished by sawing  
5 off the required portion on that end of the bar on which the tenon extends to the end of the bar, thus saving the work of readjusting the other end of the bar, which is maintained the same for any desired size of frame.

10 To determine the proper length of the bars to obtain a frame of given size is obviously not a difficult matter and need not be explained.

The great advantage of my frame is that it  
15 may be manufactured and shipped in a knock-down condition, and when accompanied with simple instructions may be put together by any one endowed with common intelligence and without requiring any other tools than a  
20 handsaw for sawing the bars the proper length.

I am aware that frames have been constructed heretofore of four bars overlapping each other at the corners in like manner as  
25 shown in my frame; but in all such constructions the bars were never united without the use of screws or nails and without the help of the fabric intended to be secured within the frame.

30 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A frame composed of four like bars provided with tenons upon their inner sides and  
35 corner-pieces engaging the tenons of two adjoining bars, each bar extending at one end beyond its tenon and overlapping with said end the end of one of its adjoining bars in like manner in all the bars composing the  
40 frame, substantially as described.

2. A frame composed of four like bars provided with tenons upon their inner sides and corner-pieces engaging the tenons of two adjoining bars, each bar extending at one end beyond its tenon to a distance equal to the  
45 width of the bar and overlapping with said end the end of one of its adjoining bars in like manner in all the bars composing the frame, substantially as described.

3. A knockdown frame comprising four  
50 like bars, each formed on one side with a tenon cut away near one end of the bar equal to the width of the bar, whereby said bars may be arranged to form a frame in which each bar overlaps the end of one adjoining bar and its  
55 tenon overlaps the tenon of the other adjoining bar in like manner in all the bars, substantially as described.

4. A knockdown frame composed of four  
60 like bars, each formed on its inner side with a T-head tenon cut away near one end of the bar and of four triangular corner-pieces having two rectangular sides provided with mortises adapted to engage the tenons of the bars, said bars being adapted to be arranged into a  
65 frame in which each bar overlaps the end of one adjoining bar and its tenon overlaps the end of the tenon of the other adjoining bar in like manner in all the bars, and the corner-pieces being adapted to engage with the tenons of two adjoining bars to unite the same  
70 into a frame, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 19th day of September, 1890.

JUDSON B. PHILLIPS.

Witnesses:

H. B. LATOURETTE,  
WINFIELD B. PHILLIPS.