

(No Model.)

C. E. BENTLEY.  
EMBROIDERY FRAME.

No. 414,184.

Patented Nov. 5, 1889.

Fig. 1.

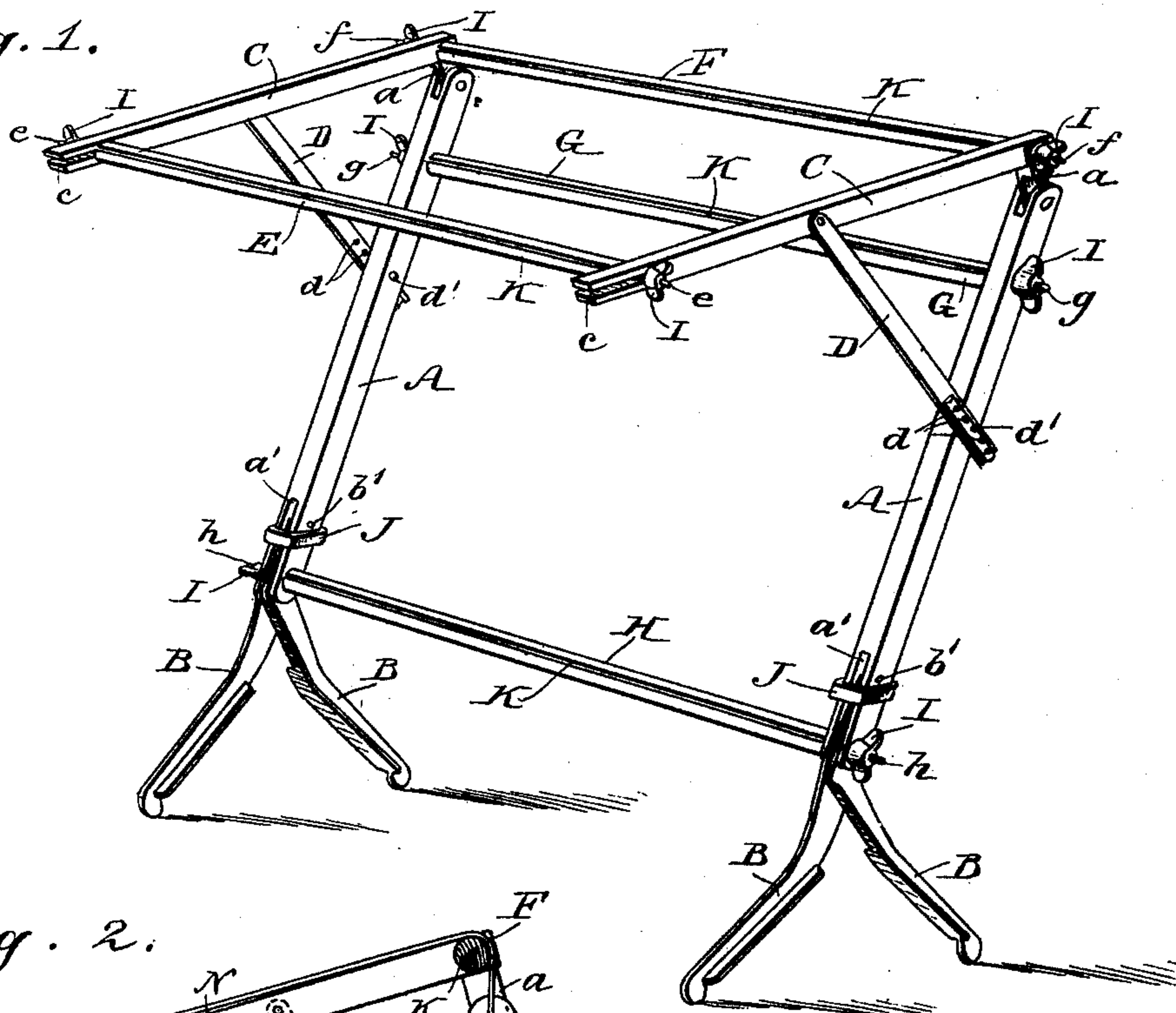


Fig. 2.

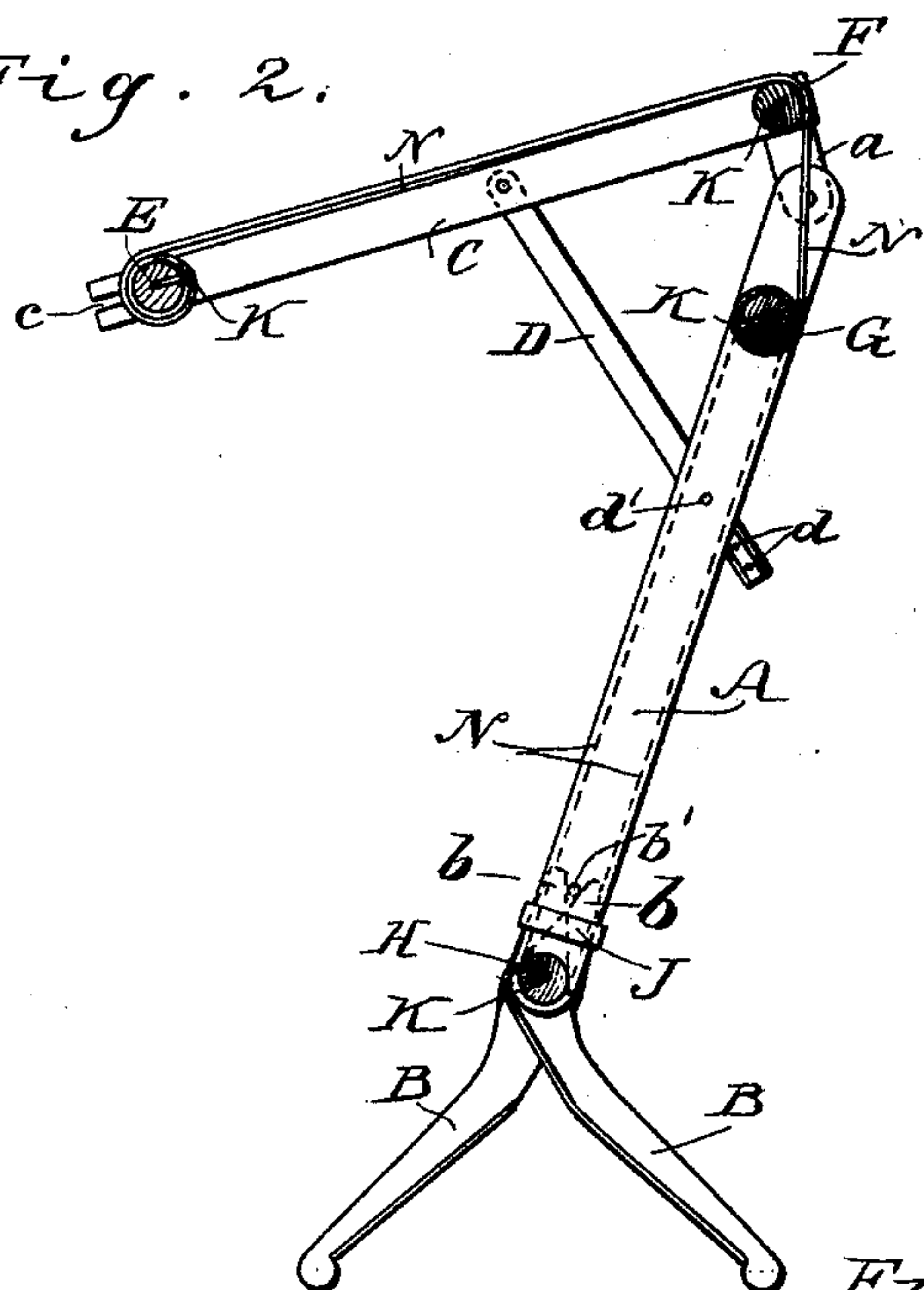


Fig. 3.

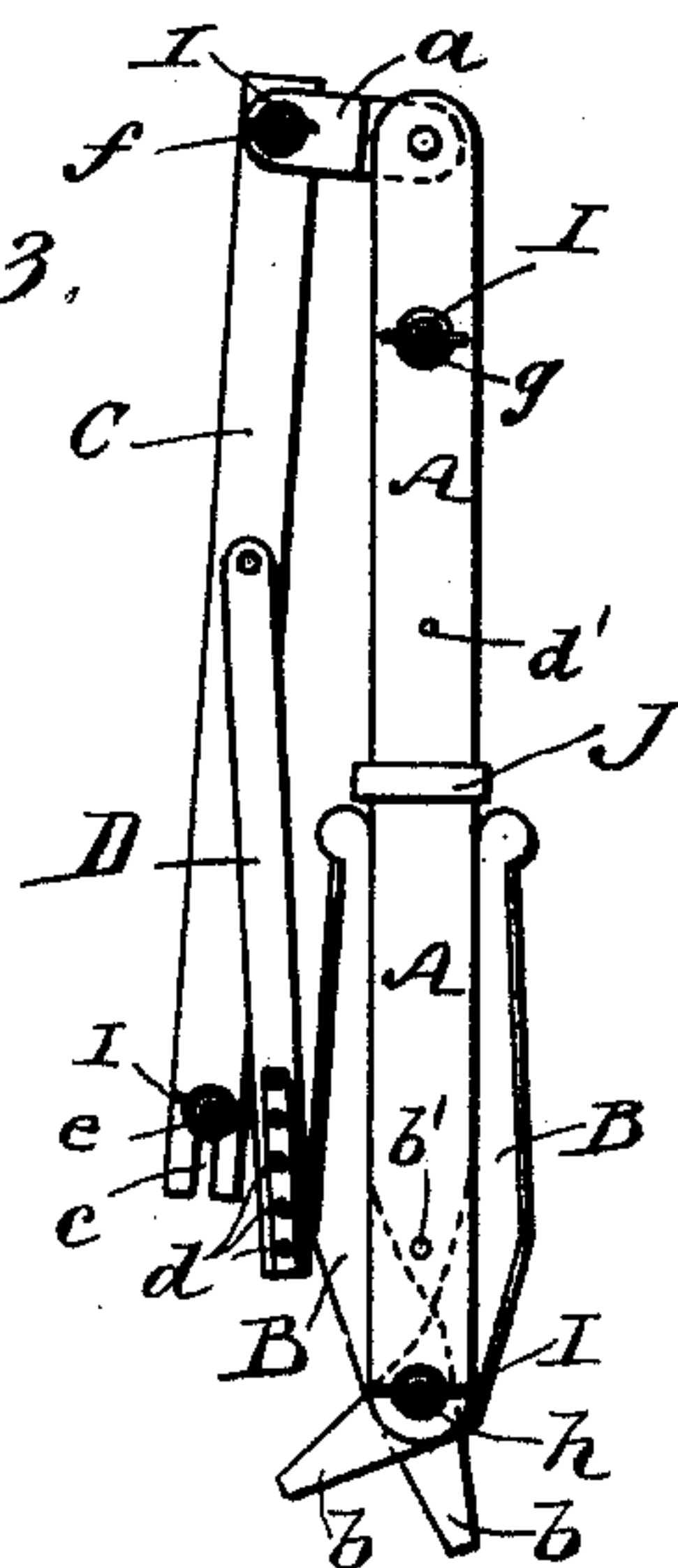
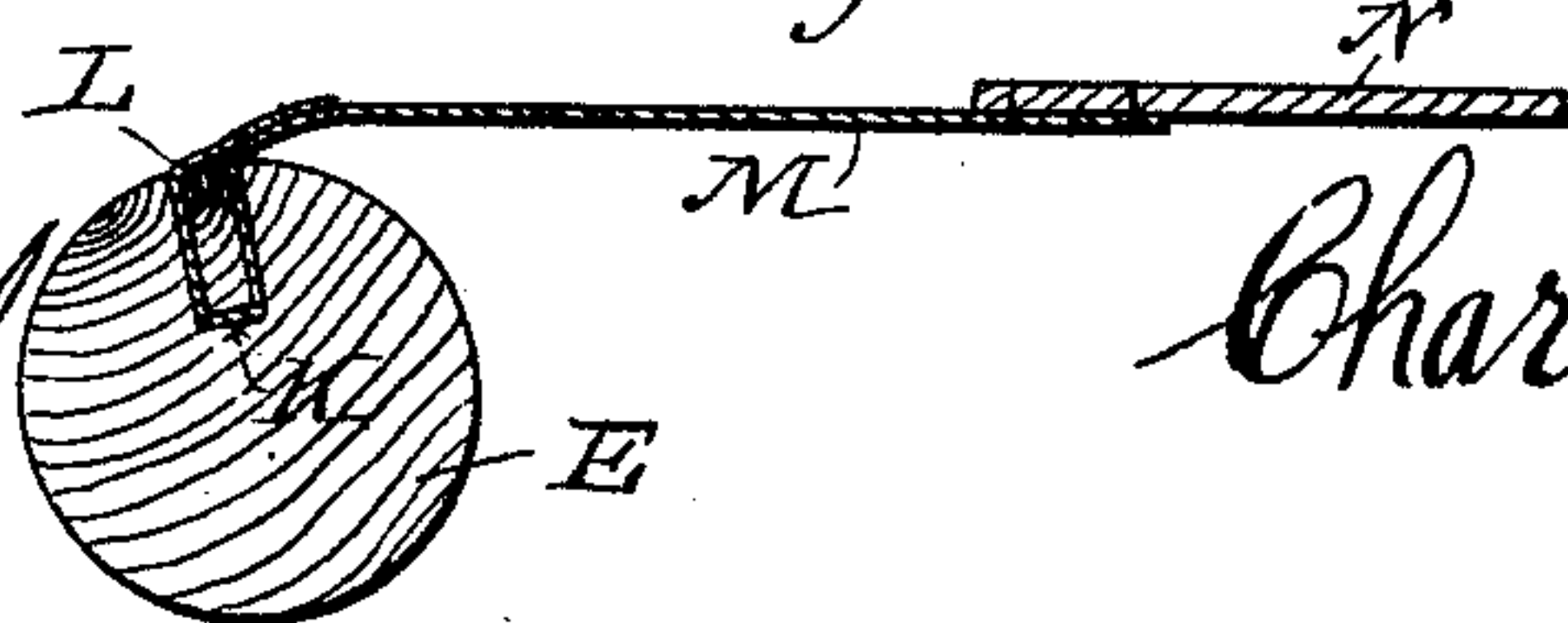


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## EMBROIDERY-FRAME.

SPECIFICATION forming part of Letters Patent No. 414,184, dated November 5, 1889.

Application filed April 19, 1889. Serial No. 307,647. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. BENTLEY, residing at the city of New York, county and State of New York, have invented certain useful Improvements in Embroidery-Frames, of which the following is a full, clear, and exact description.

My invention relates to frames of that class ordinarily used for holding fabrics while they are being embroidered by hand; and the invention has for its object to provide a simple, inexpensive, readily-adjustable, and convenient frame of this character.

Reference is to be had to the accompanying drawings, forming a part of this specification, and in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front perspective view of my improved embroidery-frame. Fig. 2 is a central vertical sectional side elevation thereof. Fig. 3 is a side view of the frame in folded condition, and Fig. 4 is an enlarged detail cross-sectional view of one of the fabric-holding rollers and the connected canvas apron to which the fabric to be embroidered will be sewed or otherwise attached.

The embroidery-frame is made with two main wooden standards A A, each of which is supported by a pair of legs B B, in a manner presently explained. The standards preferably lean back a little toward their tops, whereat are pivoted a couple of short metal links *a a*, the other ends of which are pivotally connected to top wooden side bars C C, which extend forward toward the operator for two feet, (more or less,) and are stayed to the standards A A by metal braces D D, which are pivoted at their upper ends to the side bars, and are provided at their lower rear ends with series of holes *d*, any one of which may be engaged with a pin *d'*, fixed in the standard A at the corresponding side of the frame, so as to support the top bars C C either level or at any desired angle of inclination, either up or down, as may be most convenient for the work in hand.

The frame is preferably provided with four wooden work-holding rollers made alike. The front upper roller E is journaled by its metal end pins or gudgeons *e e* within lengthwise slots *c c* at the front ends of the side bars C C. The rear upper roller F is journaled by

its end pins *f f* in the bars C C, and also in the links *a a*, said pins *f* forming the connection between the links and side bars. The next lower rear roller G is journaled by its end pins *g g* in the upper end parts of the standards A A, and preferably about four to six inches below the roller F, and the lowermost roller H is journaled by its end pins *h h* at the lower ends of the standards, said pins *h* also passing through the pair of legs B B and forming their pivotal connection to the standards. At the outer faces of the standards and side bars the roller pins or journals are screw-threaded to receive wing-nuts I, by which the rollers may be clamped fast in the frame at any position to which they may be turned.

Each pair of legs B B has upward extensions or prolongations *b b*, which lie upon and cross each other in a slot *a'*, made in the foot of the corresponding standard A, and as the pair of legs are swung outward at the bottom on their pivots *h* said parts *b b* come to a stop against a pin *b'*, which is passed transversely through the standard a little above the leg-pivot. This stop-pin *b'* holds the legs spread in position to allow a metal ring or sleeve J, which is fitted loosely onto the standard A, to be slipped down outside the edges of the parts *b b*, and thereby prevent further spreading of the legs, however great pressure or strain may be brought upon them, and assuring substantial support by the two pairs of legs for the entire frame.

Each of the rollers E F G H is provided with a lengthwise slot K for attachment of the fabric to be embroidered, and in a manner best shown in Fig. 4 of the drawings. This slot is of proper width and depth to snugly receive a thin strip L, of wood or other suitable material, which is hemmed into one end of an apron M, made of canvas or other suitable fabric, and to the opposite plain or unhemmed edge of which the piece N, of silk plush or other fabric to be embroidered, will be connected by stitching or otherwise. One of these fabric aprons M, provided with a strip L, will be attached to each end of the fabric to be embroidered, which allows the strips L of the two aprons to be set into the slots K of any two of the frame-rollers for holding the work. The aprons M are of suffi-



cient length to allow them to be wound one or more times around the rollers, to which they are connected by the strips L, for stretching the work, as hereinafter more fully explained.

This embroidery-frame may be used in various ways as the length of the fabric to be embroidered may require. For instance, a short fabric, when attached to two aprons M, may be stretched between the two upper rollers E F by pressing the hemmed-in strips L of the two aprons into the slots K of these rollers and then turning the rollers to wind the aprons thereon to stretch the fabric tightly, whereupon the nuts I of the rollers will be tightened to clamp them and hold the work securely in place. Should the fabric afterward stretch or slacken, the nuts I of either one or both of the rollers may be loosened and the roller or rollers be turned up a little and again clamped by the nuts; or the front roller E may alone be loosened and may be forced or pulled forward in the frame-slots c c and the nuts again be tightened. Fabrics N, of ordinary length, are preferably held to the two rollers E G by aprons M and strips L, and the fabric will then be passed over the roller F and may be held taut by turning up the rollers and clamping them by their nuts I. The fabric may also be connected to these two rollers E G by aprons M and strips L after the braces D are slipped from their pins d', and while the frame-bars C C and rollers E F are pushed backward, as the links a a will permit, and which lessens the distance between the two rollers E G; and after the fabric is attached to these rollers and stretched somewhat and the nuts I are tightened to clamp the rollers the bars C C and rollers E F will be pulled forward again to further stretch the fabric over the roller F, and the braces D will again be engaged with the pins d' on the standards.

I have provided the lower roller H especially to permit holding by a light frame of comparatively small size a long piece of fabric to be embroidered and without rolling it up tightly upon itself, which, if done, would crush the nap or pile of the fabric and injure it. When the roller H is thus used, one end of the fabric to be embroidered will first be connected by an apron M and strip L to the roller G, and thence the fabric will be passed, face side out, down to and under the roller H, and thence face side out up to and over the rollers G F to the roller E, to which it will also be attached by an apron M and strip L. (See the full and dotted lines in Fig. 2 of the drawings.) In this case the work may be stretched by turning up either one or both of the rollers E G and then clamping them tightly by their nuts I.

When a piece of work has considerable length and is not liable to injury by rolling it tightly upon itself, it may be connected to the upper roller E and either roller F or G, and may be stretched at any time by turning

up either or both rollers to which it may be connected.

When the embroidery-frame is not in use, it may be easily and quickly folded up for storage or transportation by simply slipping the braces D from the standard-pins d' and folding the bars C C down to the standards A and then raising the rings or sleeves J on the standards and folding the pairs of legs B upward thereto, as will be understood from Fig. 3 of the drawings.

I am aware that it is not broadly new to use a strip or lath for fastening a fabric into the slot of a roller, as this has before been done in curtain-roller fixtures and in warp-beams for looms; but I have never seen an embroidery-frame as a complete useful structure having two opposing rollers each provided with a continuous slot or groove adapted to receive a fabric-holding strip or lath about as long as the width of the work the frame is designed to accommodate, and each roller provided with a flexible work-holding apron connected with the roller by said strip or lath entering the slot of the roller in such manner as to allow a piece of work to be connected at opposite ends to the aprons of the opposing rollers, as I have herein shown and described. This construction is at once simple and inexpensive and most convenient as a means for attaching both ends of a piece of work to the frame, and the frame as a whole with the work in it can be easily and conveniently moved about as the operator may require.

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

1. The combination, in an embroidery-frame, of two opposing rollers each provided with a continuous lengthwise slot or groove, and aprons each provided with a fabric-holding strip or lath adapted to enter and lock the apron into the groove of one of the rollers, substantially as described, whereby both ends of a piece of work may be secured by the aprons to the opposing rollers, as set forth.

2. The combination, in an embroidery-frame, of standards, top bars pivoted thereto, braces held to the top bars and adapted for adjustable connection to the standards, two opposing rollers held to the top bars, each roller provided with a continuous slot or groove, and aprons each provided with a fabric-holding strip or lath adapted to enter and lock the apron in the groove of one of the rollers, substantially as described, whereby both ends of a piece of work may be secured by the aprons to the opposing rollers and the frame may be folded up with the work in it, as set forth.

3. The combination, in an embroidery-frame, of two side standards, two top bars pivoted thereto, braces held to the top bars and adapted for adjustable connection with the standards, a roller held to and between the upper parts of the standards, and rollers held



to the front and rear ends of the top bars, said rollers provided with continuous lengthwise slots or grooves, and two opposite aprons each provided with a fabric-holding strip or lath adapted to enter and lock the aprons into the grooves of two opposing rollers of the frame, substantially as described, for the purposes set forth.

4. The combination, in an embroidery-frame, of standards A A, top bars C C, links *a a*, connecting the standards and top bars, braces D, pivoted to the bars C and having holes *d*, adapted to pin on the standards, rollers G F E, journaled to the standards and top bars and provided with continuous lengthwise slots K, adapted to receive fabric-holding strips or laths, substantially as herein set forth.

5. The combination, in an embroidery-frame, of standards A A, top bars C C connected thereto, braces D, pivoted to the bars C and adapted for adjustable connection with the standards, upper rollers E F G, and a lower roller H, journaled to the standards and top bars, and clamping-nuts I on the rollers, said rollers provided with continuous lengthwise slots K, adapted to receive fabric-holding strips or laths, substantially as herein set forth.

6. In an embroidery-frame, the supporting-standard provided with two legs fulcrumed on the same pin and having top extensions which cross or lap on each other above the

fulcrum-pin and mutually brace each other laterally, combined with a ring or sleeve on the standard adapted to overlock the crossed leg-extensions to hold the legs normally spread when the frame is lifted, substantially as herein set forth.

7. In an embroidery-frame, the combination, with its standard having a stop *b'*, of a pair of legs pivoted to the standard below said stop and having top extensions which cross or lap on and mutually brace each other and strike the stop to limit the spreading of the legs, and a ring or sleeve fitted on the standard and adapted to overlock the leg-extensions to prevent closing or folding of the legs, substantially as herein set forth.

8. In an embroidery-frame, the combination, with two standards slotted at *a'* at the lower ends, of a roller journaled to said standards by bolt ends crossing the slots *a'*, pairs of legs B B, pivoted on the roller-journals and having top extensions *b b*, which cross or lap on each other within the standard-slots *a'*, nuts on the roller-journals outside the standards, and rings or sleeves on the standards adapted to overlock the leg-extensions when the frame is adjusted for use, substantially as herein set forth.

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Witnesses:

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