(No Model.) 2 Sheets—Sheet 1.

W. H. RAMSEY, F. M. BOOTH & J. O. DOBSON.

CURTAIN STICK FASTENING AND MACHINE.

No. 549,747. Patented Nov. 12, 1895.

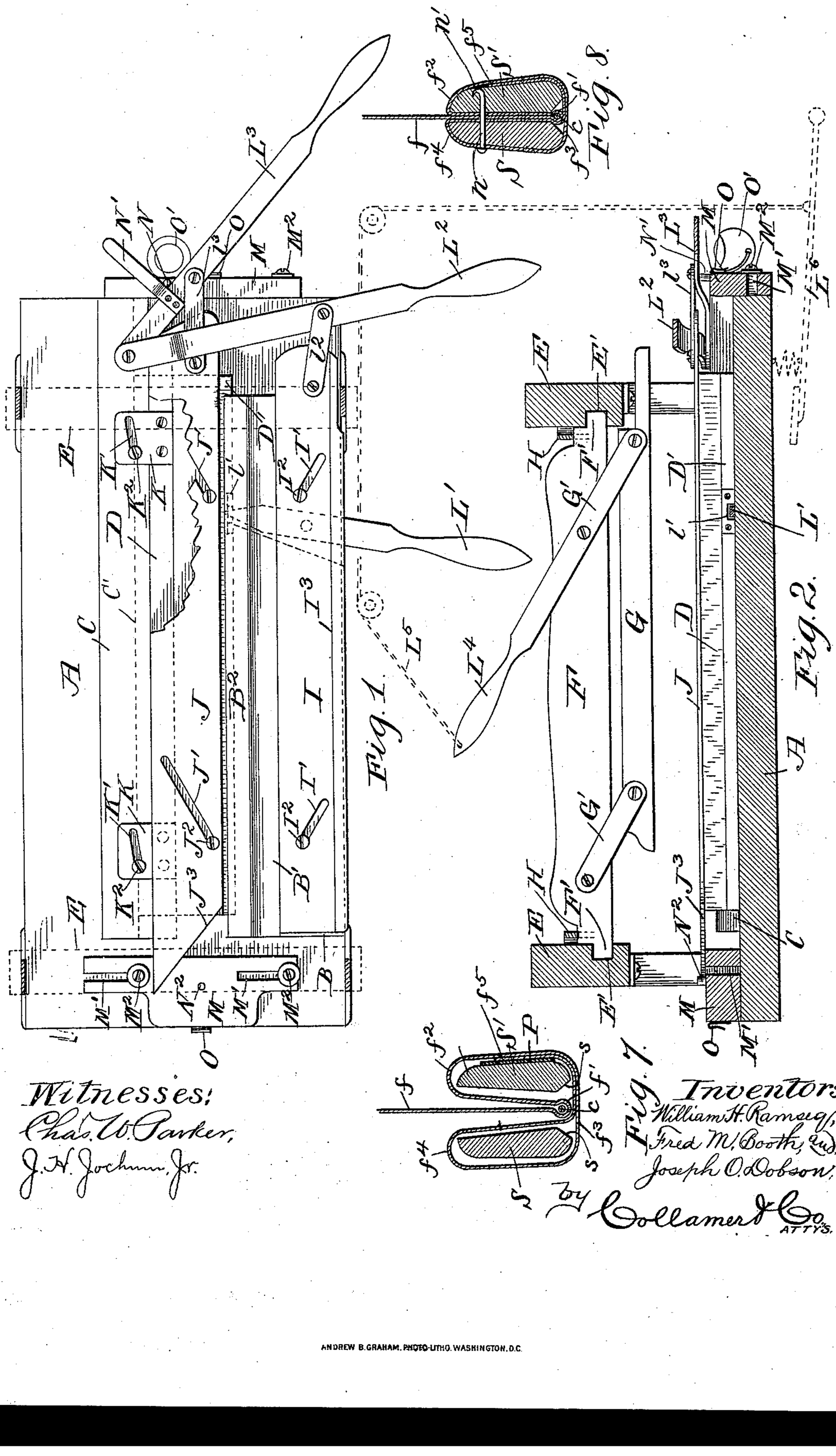

Fig. 1.

Fig. 2.

Fig. 7.

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(No Model.) 2 Sheets—Sheet 2.

W. H. RAMSEY, F. M. BOOTH & J. O. DOBSON.

CURTAIN STICK FASTENING AND MACHINE.

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Fig. 5.

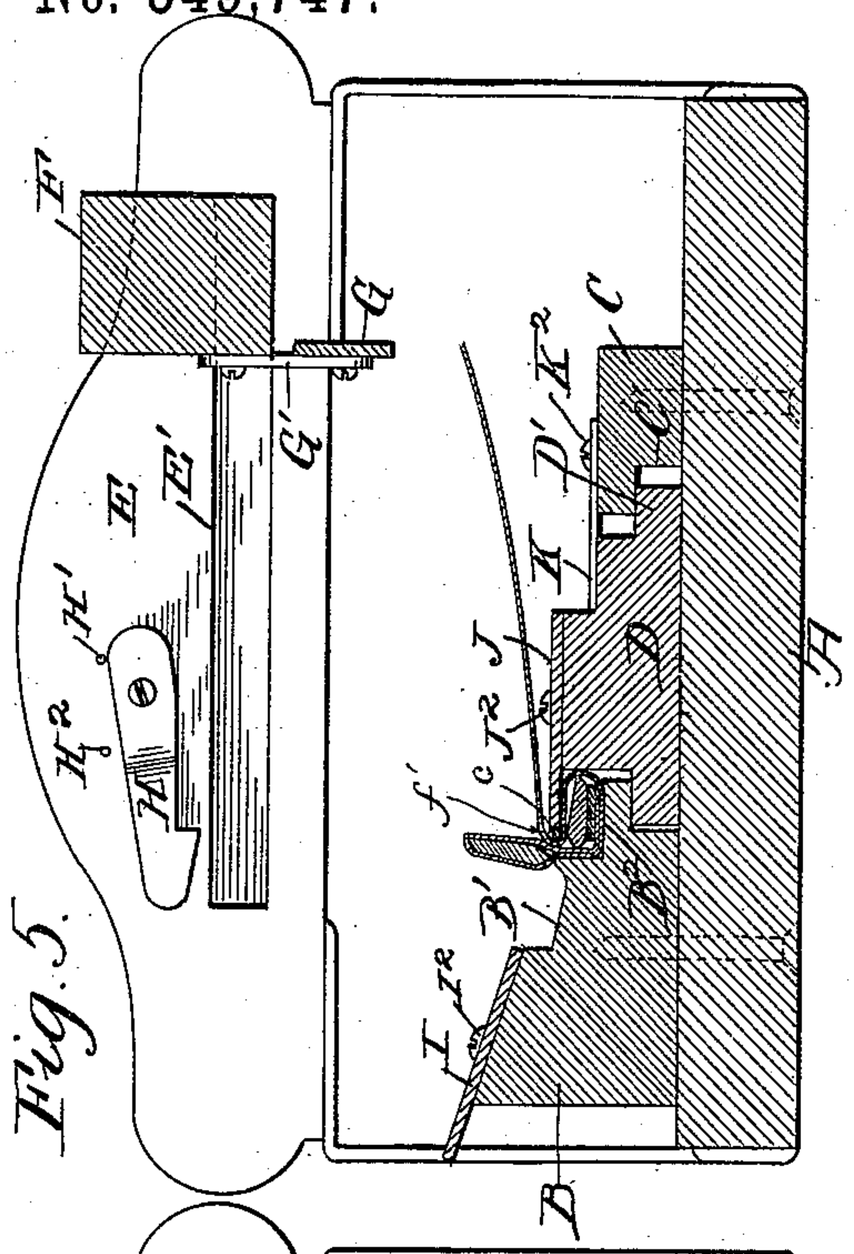


Fig. 6.

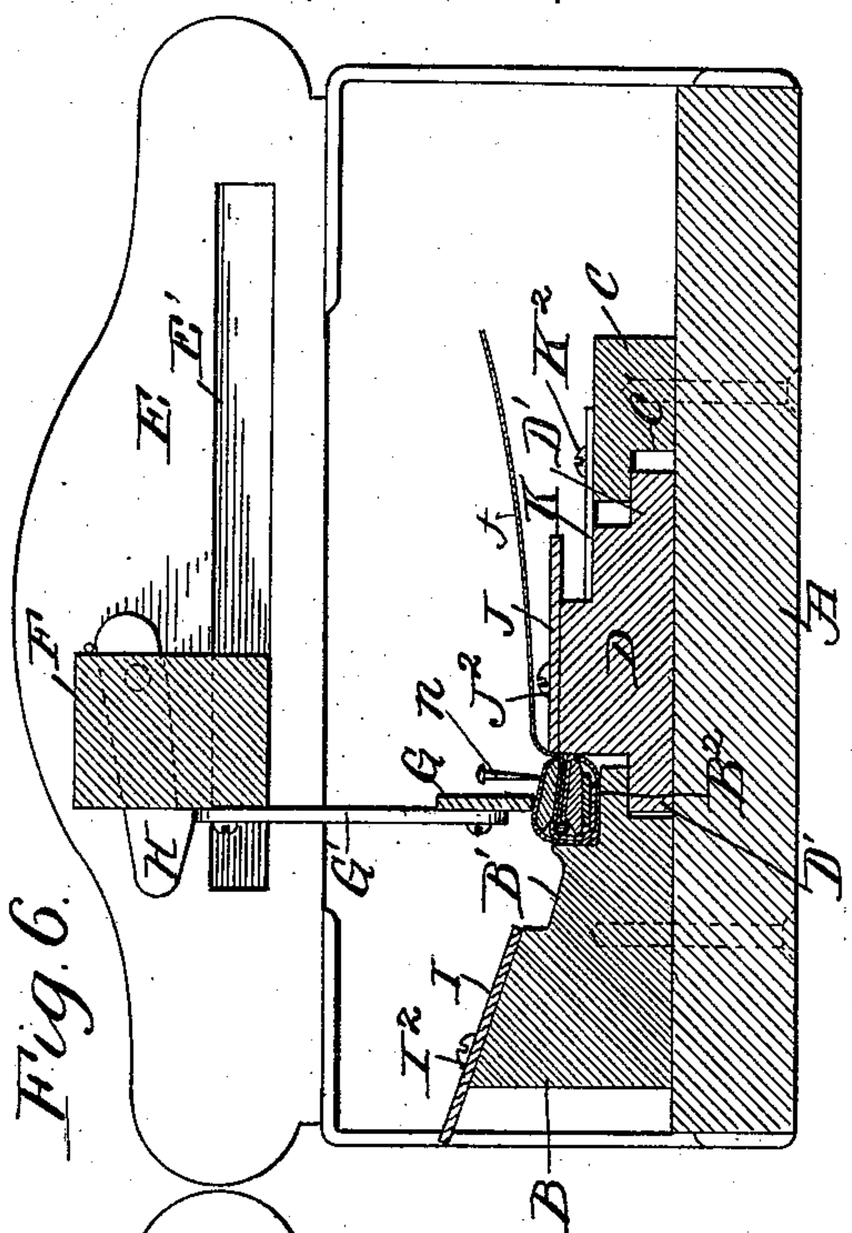


Fig. 3.

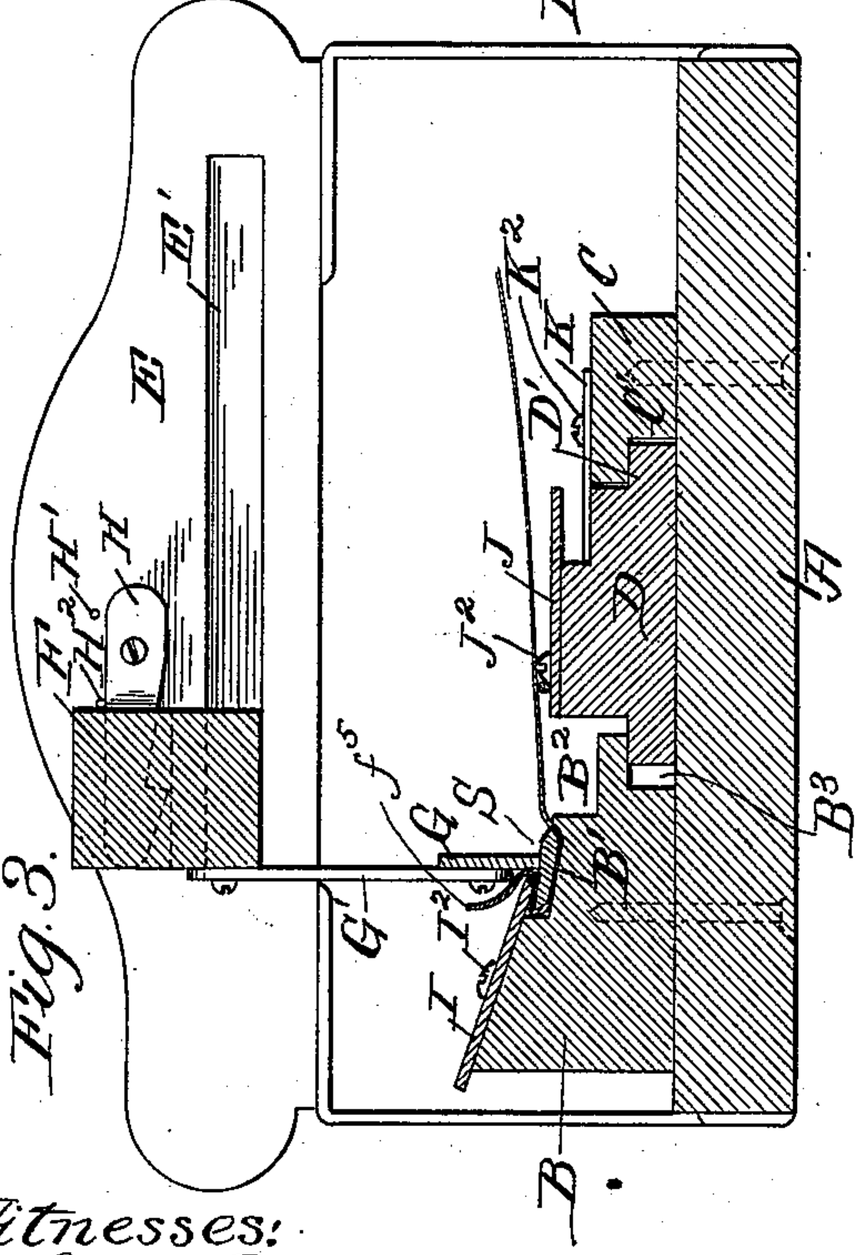
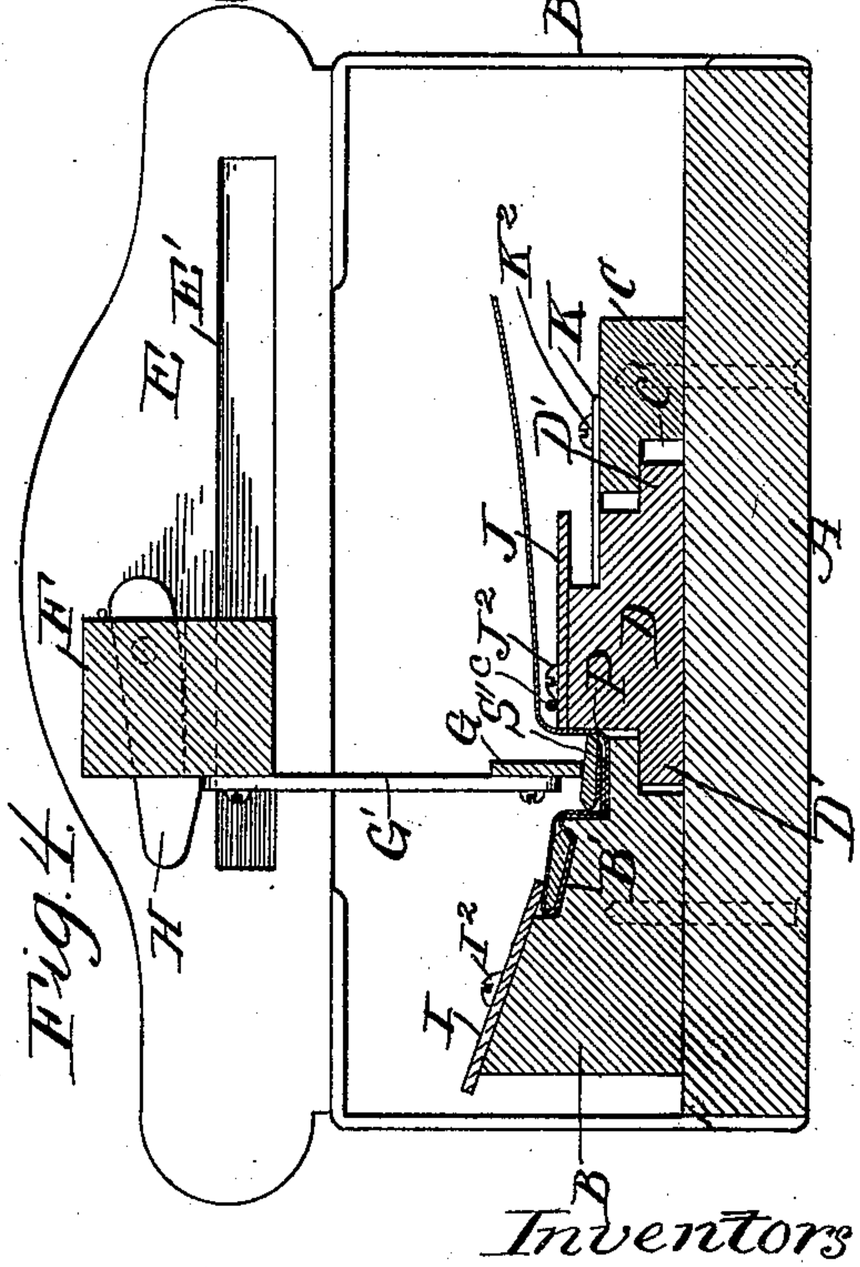


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CURTAIN-STICK FASTENING AND MACHINE.

SPECIFICATION forming part of Letters Patent No. 549,747, dated November 12, 1895.

Application filed April 19, 1895. Serial No. 546,341. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. RAMSEY, FRED M. BOOTH, and JOSEPH O. DOBSON, citizens of the United States, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented certain new and useful Improvements in Curtain-Stick Fastenings and Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to curtains, shades, and screens, and more especially to the sticks at the lower ends of shades, such as are usually mounted at their upper ends on and wind around spring-rollers; and the object of the same is to produce certain improvements in machines for fastening the stick to the shade and incidentally to produce improvements in the fastening device.

In an application, Serial No. 530,080, filed November 27, 1894, by Joseph O. Dobson, one of the inventors of the present machine, he described and claimed a shade-stick fastening and a machine or "break" for producing the fastening, and the present invention has for its object the production of improvements over that application.

To this end the invention consists in the details of construction hereinafter more fully described and claimed and as illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of this machine with its parts in their normal positions, the end standards being removed the better to show the parts beneath and a portion of the finishing-plate being broken away the better to show the clamp. Fig. 2 is a longitudinal section taken just in front of the clamp and finishing-plate and showing the presser-bar in front elevation with dotted connections which could be employed for operating this bar by a foot-lever. Fig. 3 is a central cross-section looking toward the left and showing the shade making the first fold around one part of the stick, the folding-plate as assisting in this operation and the presser-bar as holding the parts in place, this being the position of parts at the end of the first step. Fig. 4 is a similar section showing the shade as making the second fold in the groove beneath the fastening-plate and second part of the stick, both of which are held in place vertically by the presser-bar and horizontally by the clamp and the cord lying over the finishing-plate beneath the body of the shade, this being the position of parts at the end of the second step. Fig. 5 is a similar section showing the finishing-plate as having been moved forward over the second part of the stick and fastening-plate so as to carry the cord into the bend of the curtain, the folding-plate as having been retracted to release the first part of the stick, and the latter with the first fold of the curtain slightly raised from its bed. Fig. 6 is a similar section showing the finishing-plate as retracted, the first part of the stick with the first fold of the shade turned over upon the second part, and the presser-bar as holding them in position within the groove. Fig. 7 is an enlarged cross-section of the lower end of the finished shade, the two parts of the stick, and the fastening-plate, all parts being slightly separated for the sake of clearness and the nails having not yet been applied. Fig. 8 is a view similar to Fig. 7, with the parts closely assembled and held by the nails and the fastening-plate withdrawn, the curtain with its stick being now ready for use.

Referring to the said drawings, the letter A designates a base which may be supported on legs or clamped or otherwise secured to a suitable table at which the operator is to stand and which base is of suitable material, length, and depth to accommodate it and its parts to the uses to which they are to be put. Parallel with the front edge of this base and upon its upper face is fastened a raised bed B, whose upper edge inclines from the front to the rear for a short distance, and is then provided with a recess B′, whose bottom lies in a plane parallel with the inclined upper face of the bed, and which recess is of a size and shape to receive one-half of the two-part curtain-stick hereinafter described, together with the first fold of the curtain around the same, and beyond this recess said upper face of the bed is provided with a deep groove B^2, having a horizontal bottom wall, a vertical inner wall next the recess B′, and no outer wall, since the bed terminates at that point.

Toward the rear of the base A and parallel with its length there is secured upon its upper face a cleat C, and the lower half of the front edge of this cleat is preferably cut away or rabbeted, as at C′, as is also preferably the lower half of the rear edge of the bed beneath the groove B^2, as seen at B^3. Between the bed and the cleat there slides upon the base a clamp D, the lower halves of whose front and rear edges may be provided with projectlng tongues D′ to engage the rabbets above mentioned, if such rabbets are employed. The bed, cleat, and clamp may be and preferably are of hard wood.

The letter I designates a folding-plate moving over the upper face of the bed B and having a number of oblique slots I′, which receive headed studs I^2, rising from the bed. The rear edge of this plate is adapted to pass over the recess B′ parallel with the bottom of the latter, and on the upper face of this plate near its front edge is a scratch or mark I^3 for a purpose to appear below. This plate is controlled by a lever L^2, pivoted upon the base or to one end of the cleat and connected to the plate by a link l^2.

The finishing-plate J slides upon the upper face of the clamp D and is also provided with oblique slots J′, moving over headed studs J^2. rising from said clamp, and this plate is controlled by another lever L^3, which is connected therewith by a link l^3, all as seen in Fig. 1. The front edge of this plate is adapted to move above the groove B^2 in the bed and its rear edge when the plate is retracted moves in a plane considerably above the cleat C, owing to the fact that the clamp D is of greater thickness than said cleat, as seen in the sectional views. Secured upon the upper face of the clamp D are a number of ears K, which project rearwardly over the upper face of the cleat, and the projecting ends of these ears are provided with oblique slots K′, moving over headed studs K^2, similar to the folding and fastening plates. The clamp is controlled by a lever L′, pivoted directly upon the base A and extending along a recess cut in the lower face of the bed B, which lever has a pointed connection l' with the clamp, all as indicated in Fig. 1. The plates, ears, levers, and links are preferably of metal.

The letters E designate suitable standards supported by uprights rising from the base, standing above the same and extending over it from front to rear at the ends thereof, and the inner faces of these standards are provided with grooves E′. F is a sliding bar, having feet F′ fitting in said grooves E′, and the standards and bar are preferably of hard wood.

The letter G designates a presser-bar pivotally connected by links G′ with the front face of the sliding bar, one of said links being continued into a handle or lever L^4, rising above the sliding bar F, and by means of which the presser-bar may be manipulated. As seen in dotted lines in Fig. 2, a chain or rod L^5 might lead from this lever to a suitable foot-lever L^6, located in position to be depressed by the operator when it is desired to manipulate the presser-bar by foot-power.

The letters H designate catches pivoted to the inner faces of the standards E and having hooked front ends, as shown, and for each catch are two pins, one of which H′ is in rear of the pivot and so located as to prevent the hook from dropping too far and the other of which H^2 is in front of the pivot for preventing the hooked end from rising too high. Said hooked end, when depressed, is adapted to stop the forward sliding of the bar F at a point to hold the presser-bar G over the groove B^2, but when the hooks are raised the bar F may slide to the front ends of the grooves E′ and the presser-bar will then descend in line with the recess B′. These grooves extend sufficiently far to the rear to permit the sliding bar F and presser-bar G to be moved completely out of the way when desired. The presser-bar, links, and lever are preferably of metal.

At opposite ends of the bed, clamp, and cleat and either upon the upper face of the base or against the end extremities thereof are arranged two cord-carriers M, each of which preferably has slots M′ in its body engaging over headed studs M^2, seated in the base, so that the carrier may slide from front to rear over said base, and each carrier has attached thereto a cord-clamp O, while the right-hand cord-carrier also, preferably, supports a cup O′ or other device for receiving a ball of cord. Rising from this right-hand cord-carrier is a stud N, which is engaged by the front face of an arm N′, projecting outward to the right from the lever L^3, and rising from the left cord-carrier is a similar stud N^2, adapted to be engaged by the beveled left end J^3 of the finishing-plate J. The cord-carriers are preferably of hard wood, with their parts and connections of metal.

Referring now to Figs. 7 and 8, the letters S and S′ designate the two parts of the stick, each part being slightly thicker near its lower than at its upper edge and having a flat inner face with a beveled corner *s* at its lower end and a gently-rounded outer face and upper edge. The letter *c* designates the cord, and *f* designates the fabric from which the shade or curtain is made, and this fabric in the finished article passes first down between the two parts of the stick, then around the cord, as at *f′*, at which point it is bent upward and rises between the sticks to the point f^2. Here it passes over the upper edge of the stick S′ and turns outward, thence it extends down over the fastening-plate P and around and under both sticks and the cord, as at f^3, thence up the outer side of the opposite stick S, over the upper edge of the latter, as at f^4, again down between the sticks, and, finally, the end or extremity f^5 passes a second time below the cord and under the first bend *f′* and rises again for some distance behind the part S′ of the

stick just outside the fastening-plate. The letters *n* designate nails, which are then driven in the direction indicated, completely through both parts of the stick, through the outer fold over the first part S, through the three folds between the sticks, and have their points *n'* turned back by the plate P and clinched into the outer face of the stick S' beneath its outer covering fold and the extremity of f^5.

We lay no claim in this application to a two-part stick, with a shade passing completely and independently around each part of the stick with its end turned in between the parts, and nails passing transversely through both sticks and all folds of the shade except the one upon the outer face of one stick with their points clinched into said outer face beneath the fold of the shade which covers it, such being the construction covered by claims in the patent to Dobson, hitherto referred to herein. By our present construction the end of the shade, instead of being simply turned in between the sticks and possibly caught by one of the two fastening-nails, if two are used, is continued down, passes a second time beneath the cord and a second time under the second part of the stick, and is then led up against the outer face of this part of the stick outside the fastening-plate (if used) and inside of the first fold of the shade, and the nail or other fastening device passes with certainty through this end of the shade and has its point clinched into the stick without passing through the outer extremity thereof; or, if the fastening-plate should be withdrawn before the clinching takes place, it will be obvious that the nail will pass still once again through the shade—viz., through the extremity, if it rises high enough, and certainly through the outer fold. The advantage of this continuation of the shade further than in the Dobson patent is the additional weight given to the finished article, and hence the stability of the shade as a whole, the additional strength furnished by the binding of the end of the shade under the cord below the second part of the stick and beneath the outer fold thereover, and the further additional strength furnished by such additional times as the nail may be caused to pass through the material. It might be added, however, that we have found it necessary to make the shade of this construction and with this continuation of its end, when it is made by the machine herein described, because, as shown in Fig. 5 and set forth under the third and fourth steps below, the first part of the stick as it is turned over the cord would be loose and very liable to become displaced, unless at that time it were completely surrounded by the shade material, and it would not be so surrounded unless the extremity f^5 had been as long as shown in Fig. 3 and had also been clamped under the second part of the stick, as shown in Fig. 4, before the turning over of the first part occurred.

The operation of this machine is as follows:

First step: The cord *c* is first led from the ball, passed under the levers L^3 and L^2, carried to the left over the fastening-plate J and over the left cord-carrier M, and engaged under the clamp O on this carrier. It is then drawn tightly to the right and engaged under the clamp on the right carrier, so that its body rests on the fastening-plate just in front of the studs J^2. The fabric *f* composing the shade is then led from a roll or suitable source (or may have been previously cut to the desired lengths) and its free end is passed into the rear of the machine under the presser-bar and over everything else and is drawn up on the folding-plate I to the mark I^3. Here it is held by one hand while the part S of the stick is put in place with its rounding-face bearing the shade downward into the recess B' and its beveled edge *s* uppermost and remote from the operator. The hooks of the catches H are raised, the sliding bar moved forward until stopped by the front ends of the grooves E', and the presser-bar G borne down upon the stick S to hold it in position. The lever L^2 is then moved to the left, whereby the folding-plate I, through its oblique slots I', is caused to slide downward and rearward over the bed B until stopped by the presser-bar G, when the parts stand as seen in Fig. 3. The presser-bar is now raised and moved to the rear, as in Fig. 5, and the plate I moved forward slightly farther until its rear edge tightly clamps the shade upon the stick by reason of the fact that the latter is slightly wedge-shaped, as above described.

Second step: The clamping bar having been raised and the sliding bar pushed to the rear the hooked ends of the catches H are now depressed. The operator now passes his fingers along the beveled edge of the first stick S and presses the fabric and stick toward himself under the folding-plate I, so that it shall lie close in the recess B'. The thin sheet of steel or other metal which constitutes the fastening-plate P above described is then laid upon the extreme end f^5 of the fabric and over it the second part S' of the stick with its bevel *s* uppermost and toward the operator, and these two pieces are then pressed downward, which bears them and the fabric beneath them down into the groove B^2. The operator next brings forward the sliding bar F until its movement is checked by the hooks and then throws the presser-bar G down onto the stick S' and plate P by means of the lever L^4. Next the clamp D is brought up against the rear edge of the stick S' by moving the forward end of the lever L' to the right for a short distance, after which the presser-bar G can be raised and moved to the rear out of the way. The parts in this position, before the presser-bar is moved to the rear, are shown in Fig. 4.

Third step: The cord *c* is next placed in front of the finishing-plate J and the lever L^3 is moved to the left. This movement causes the plate J to move forward, and the arm N'

and bevel J^3, contacting with the studs of the cord-carriers, move the latter forward simultaneously until the cord is pressed close up against the front edge of the groove B^2 and into the bend f' of the finished shade. The lever L^2 is then moved to the right, which withdraws the folding-plate I from the first part of the stick, and the parts in this position with said first part of the stick slightly raised are shown in Fig. 5.

Fourth step: The first part of the stick which is loose is now turned over the cord as a pivot and away from the operator onto the the fabric *f;* but before being pressed down the lever L^3 is moved to the right, which withdraws the finishing-plate from the position shown in Fig. 5; yet the first part of the stick is prevented from displacement by the cord which extends along the bend of the shade. The first part S of the stick with the surrounding shade is then pressed down onto the second part S′ of the stick, which lies within the groove B^2, and is held there by the clamp. (The presser-bar can here be again drawn forward and operated, if desired, as shown in Fig. 6; but it is not usually desirable, provided the operation above described has been carefully gone through with.) The parts now stand as seen in Fig. 6, and the presser-bar having been pushed to the rear the operator with a hammer drives nails *n* of proper length down through the parts as they now lie exposed to his view and held in place by the clamp. The heads of these nails are to be driven down only upon and not embedded into the uppermost fold of the shade, and their length is such that their tips will strike upon and be clinched by the fastening-plate P. The lever L′ is then moved to the right to throw off the clamp, the cord disengaged from the clamps on its carriers, the fabric cut from the roll at the desired length, and the curtain drawn toward the operator and out of the machine, this act drawing more cord from the ball, which is cut off at the right edge of the curtain and falls across the machine, to be used on the next curtain. The fastening-plate P is then removed, if it is not to form a permanent part of the curtain, and the sticks and cord are neatly trimmed off, as will be clear.

What is claimed as new is—

1. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess, and finishing mechanism co-operating with said groove; of a curtain stick adapted to fit in said recess and of slightly wedge-shaped section, a folding plate sliding on the inclined upper face of the bed and over said recess, and means for moving this plate, as and for the purpose set forth.

2. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess, and finishing mechanism co-operating with said groove; of a curtain stick adapted to fit in said recess and of slightly wedge-shaped section, a folding plate resting on the inclined upper face of the bed with one edge adapted to stand over said recess, the body of the plate being provided with oblique slots, headed studs rising from the bed and engaging said slots, and a lever for imparting longitudinal motion to the plate, as and for the purpose set forth.

3. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess and having a horizontal bottom, a two-part stick each of which parts is slightly wedge-shaped in section and one of which is adapted to fit in said recess, and a folding plate sliding upon the inclined upper face of the bed; of a clamp for holding the other part of the stick in said groove, and a finishing plate sliding over said clamp, as and for the purpose set forth.

4. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess and having a horizontal bottom, a two-part stick each of which parts is slightly wedge-shaped in section and one of which is adapted to fit in said recess, and a folding plate sliding upon the inclined upper face of the bed; of a clamp for holding the other part of the stick in said groove, a finishing plate sliding upon the horizontal upper face of the clamp, the body of said plate being provided with oblique slots, headed studs in the clamp engaging said slots, and a lever for imparting longitudinal motion to this plate, as and for the purpose set forth.

5. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess and having a horizontal bottom, a two-part stick each of which parts is slightly wedge-shaped in section and one of which is adapted to fit in said recess, and a folding plate sliding upon the inclined upper face of the bed; of a clamp for holding the other part of the stick in said groove, ears projecting rearwardly from said clamp and provided with oblique slots, a cleat secured to the base and over which said ears pass, headed studs in the cleat engaging said oblique slots in the ears, and a lever for imparting longitudinal motion to the clamp, as and for the purpose set forth.

6. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick one of

which parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess; of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, a finishing plate supported by the clamp, and means for moving this plate over the clamp so as to pass its front edge over the groove, as and for the purpose set forth.

7. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick one of which parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess; of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, a finishing plate supported by the clamp, the body of the plate being provided with oblique slots, headed studs rising from the clamp and engaging said slots, and a lever for imparting longitudinal motion to this plate, as and for the purpose set forth.

8. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick one of which parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess; of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, ears on the clamp moving over the cleat and provided with oblique slots, studs rising from the cleat and engaging said slots, a lever for imparting longitudinal motion to the clamp, and a finishing plate sliding over the clamp, as and for the purpose set forth.

9. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick one of which parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess; of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, ears on the clamp moving over the cleat and provided with oblique slots, studs rising from the cleat and engaging said slots, a lever for imparting longitudinal motion to the clamp, a finishing plate sliding upon the clamp, the body of this plate having oblique slots, headed studs rising from the clamp and engaging said slots, and an independent lever for imparting longitudinal motion to this plate, as and for the purpose set forth.

10. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick one of which parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess; of a clamp for holding the second part of the stick in said groove, and a vertically movable presser bar supported above the base and adapted to depress the sticks when in the groove, as and for the purpose set forth.

11. In a machine for forming a curtain stick fastening, the combination with a bed having a recess in its upper face, a wedge-shaped stick adapted to fit said recess, a plate sliding upon the upper face of the bed and over the recess and adapted to clamp the stick therein; of a presser bar movable above the bed and adapted to bear vertically on the portion of the stick not engaged by the plate, as and for the purpose set forth.

12. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base; of standards supported above the base at right angles with the above members, a bar sliding in said standards transversely over the base, a presser bar, links pivotally connecting the presser bar with the sliding bar, and a lever connected with the presser bar for depressing it when desired, as and for the purpose set forth.

13. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base; of standards supported above the base at right angles with the above members, a bar sliding in said standards transversely over the base, a presser bar supported by the sliding bar, means for depressing the presser bar at will, and catches carried by the standards and adapted to check the forward movement of the presser bar at a point over said groove, as and for the purpose set forth.

14. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base; of standards supported above the base at right angles with the above members and having grooves on their inner faces, a bar having feet sliding in said grooves, a presser bar supported by the sliding bar, and means for depressing the presser bar at will, the presser bar standing above the recess when said feet rest in the front ends of said grooves, as and for the purpose set forth.

15. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base; of standards supported above the base at right angles with the above members and having grooves on their inner faces, a bar having feet sliding in said grooves, a presser bar supported by the sliding bar, means for depressing the presser bar at will, the presser bar standing above the recess when said feet rest in the front ends of said grooves, and catches

pivoted to the standards and having hooked front ends adapted when depressed to check the sliding bar at a point to hold the presser bar above said groove, as and for the purpose set forth.

16. In a machine for forming a curtain stick fastening, the combination with a base, a bed, a clamp, a finishing plate having oblique slots in its body, headed studs on the clamp engaging said slots, a lever connected with one end of the plate for moving the same longitudinally, the opposite end of the plate being beveled, and an arm projecting from said lever; of cord-carriers mounted on the base near its ends and movable transversely thereover, and studs rising from said cord-carriers, one of which studs contacts with the beveled end of the plate and the other of which is moved by said arm, as and for the purpose set forth.

17. In a machine for forming a curtain stick fastening, the combination with a base, a bed, a clamp, a finishing plate moving longitudinally over said clamp and having one end beveled, and a lever connected to the other end of said plate and having a projecting arm; of cord-carriers mounted on the base near the ends thereof for transverse movement thereover, each carrier having a slotted body, studs in the base over which the slots slide, and studs rising from the carriers, one of which engages said beveled end of the plate and the other of which is moved by said arm, as and for the purpose set forth.

18. In a machine for forming a curtain stick fastening, the combination with a base, and a bed and clamp supported longitudinally thereof; of cord-carriers mounted on the base at the ends thereof and moving transversely thereover in suitable guides, studs rising from the cord-carriers, mechanism for engaging these studs to impart simultaneous forward movement to the carriers, a cord clamp on each carrier, and a cord-ball-cup on one carrier, as and for the purpose set forth.

19. In a curtain stick fastening, the combination with a two-part stick; of a shade passing first down between the parts of the stick, then bent up and passing completely around both parts with its end carried upward around said bend and standing between one stick and its outer fold, a fastening plate extending along the outer face of said stick under the fold which covers it, and fastening devices passing through both sticks and one outer and three inner folds of the shade with their inner ends resting against said plate, substantially as described.

20. In a curtain stick fastening, the combination with a two-part stick; of a shade passing first down between the members of the stick, then bent up and passing completely around both parts with its end carried upward around said bend and standing between one stick and its outer fold, a fastening plate extending along one face of one stick under the adjacent fold of the shade, and a nail passing through the one outer and three inner folds of the shade and both parts of the stick with its end resting against the inner face of said plate and clinched into the adjacent face of the stick, substantially as described.

21. In a curtain stick fastening, the combination with a two-part stick, and a cord; of a shade passing first between the parts of the stick, then around the cord, then between the parts and over the upper edge of the second part, then down the outer face of this part and under both parts and the cord, then up the outer face of the first part and over its upper edge, then down between the parts, then again around the cord, and finally up between said second part and its outer fold; and nails for holding the parts together, substantially as described.

22. In a curtain stick fastening, the combination with a two-part stick which parts have flat adjacent inner faces, bevels at their lower corners and rounded lower edges and outer faces, and a cord standing within the angle formed by the bevels; of a shade passing first between the parts of the stick, then around the cord, then between the parts and over the upper edge of the second part, then down the outer face of this part and under both parts and the cord, then up the outer face of the first part and over its upper edge, then down between the parts, then again around the cord, and finally up between said second part and its outer fold; and means for holding the parts together, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. RAMSEY.
FRED M. BOOTH.
JOSEPH O. DOBSON.

Witnesses:
J. H. SHELDON,
G. W. BURNSIDE.