

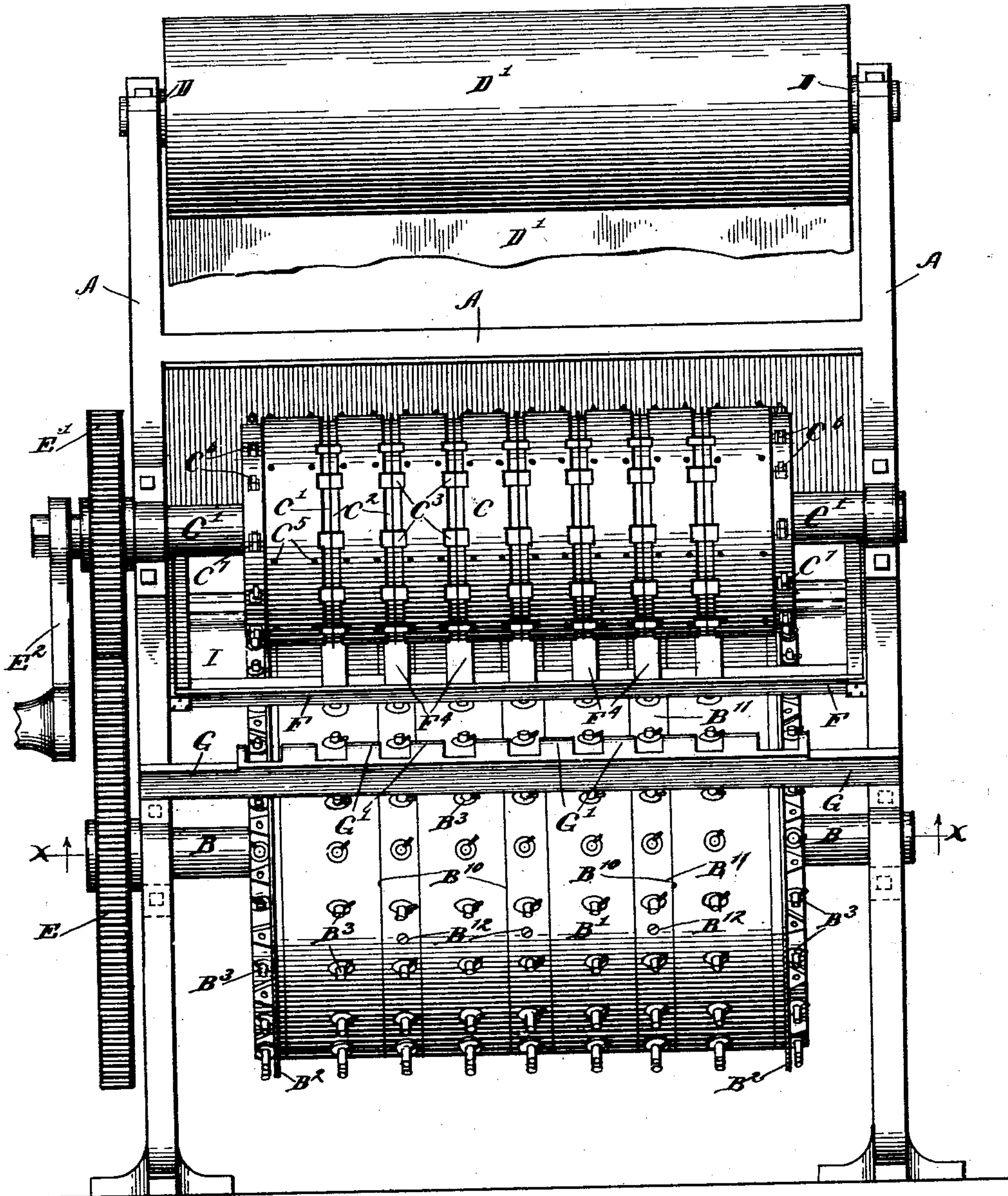
H. C. JONES.
UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses:

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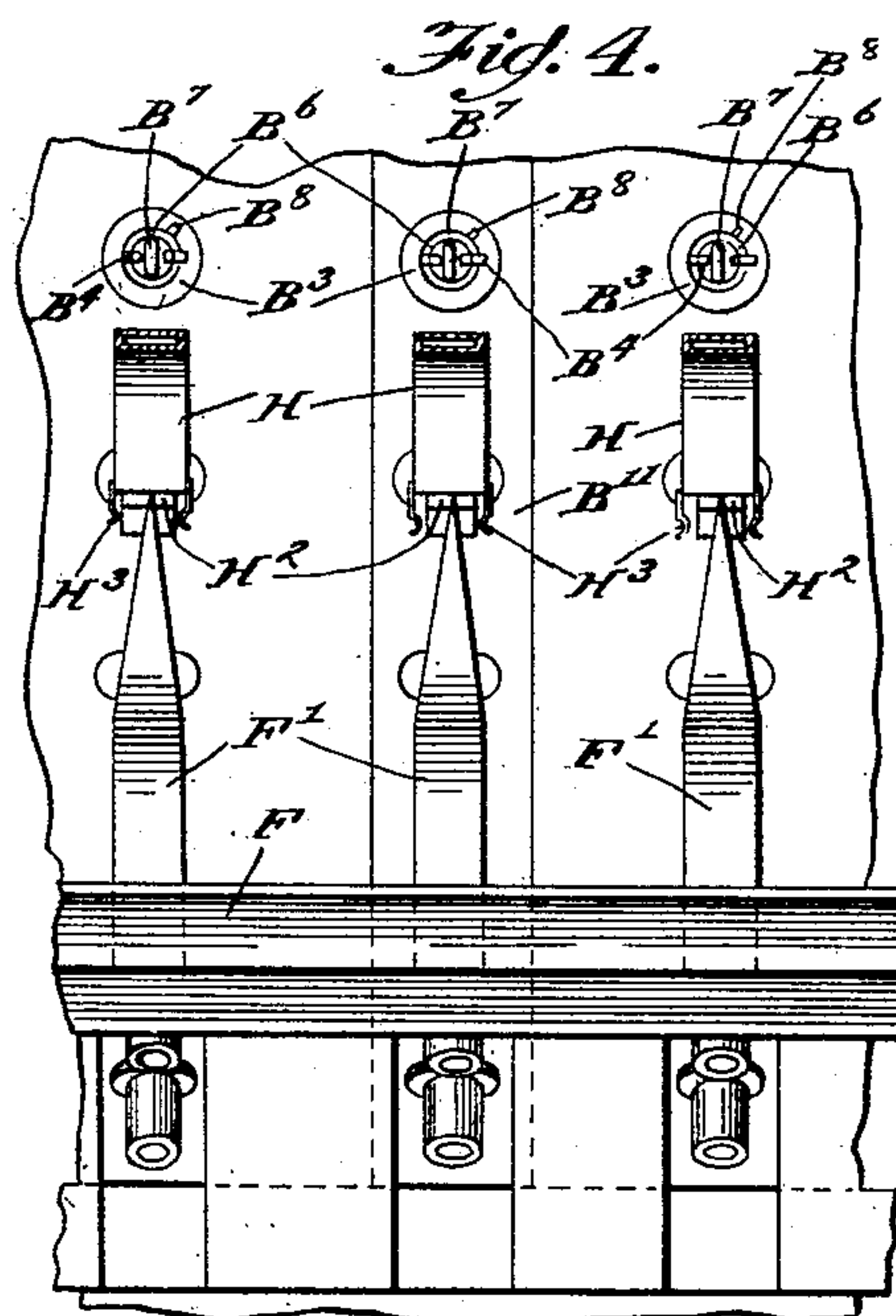
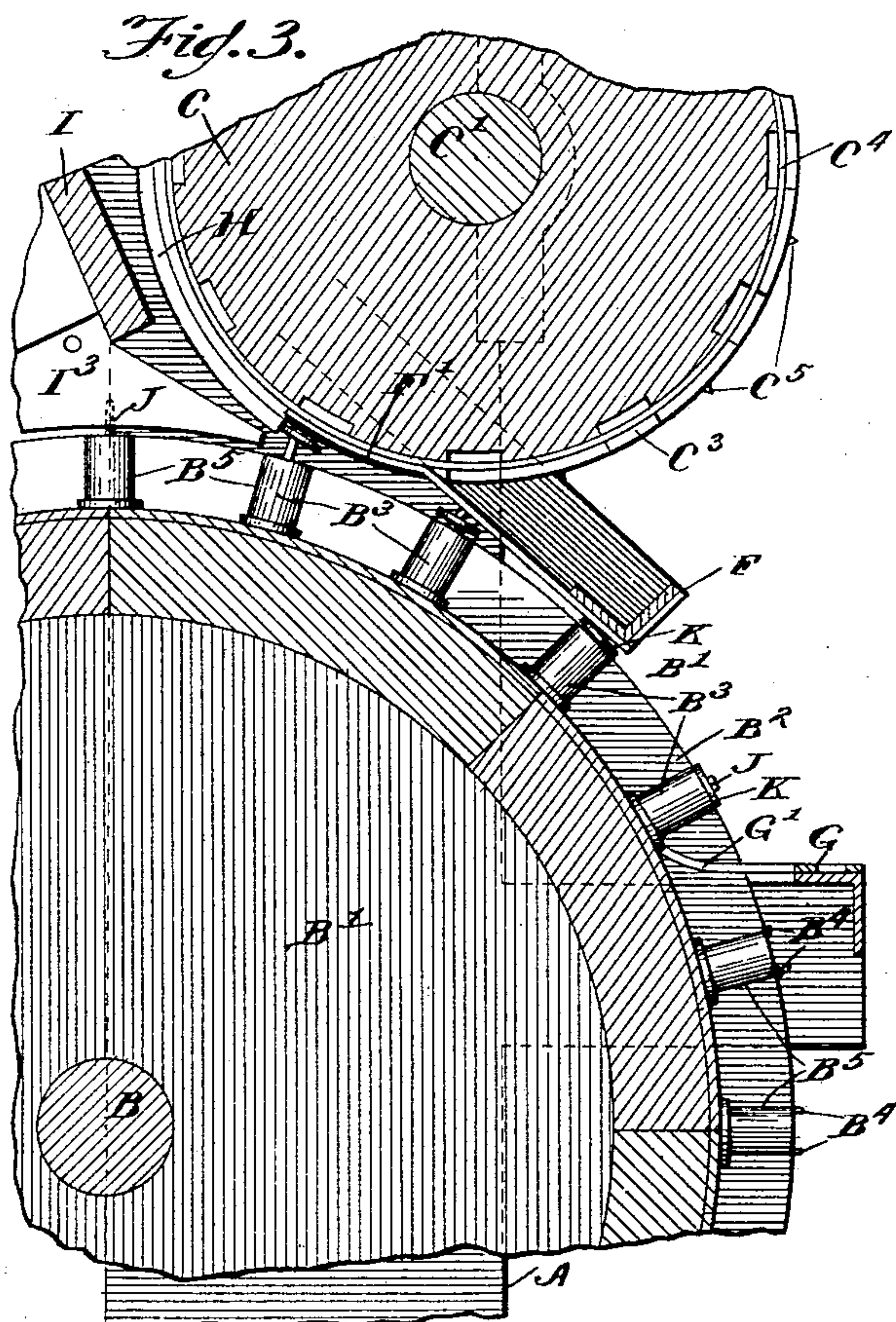
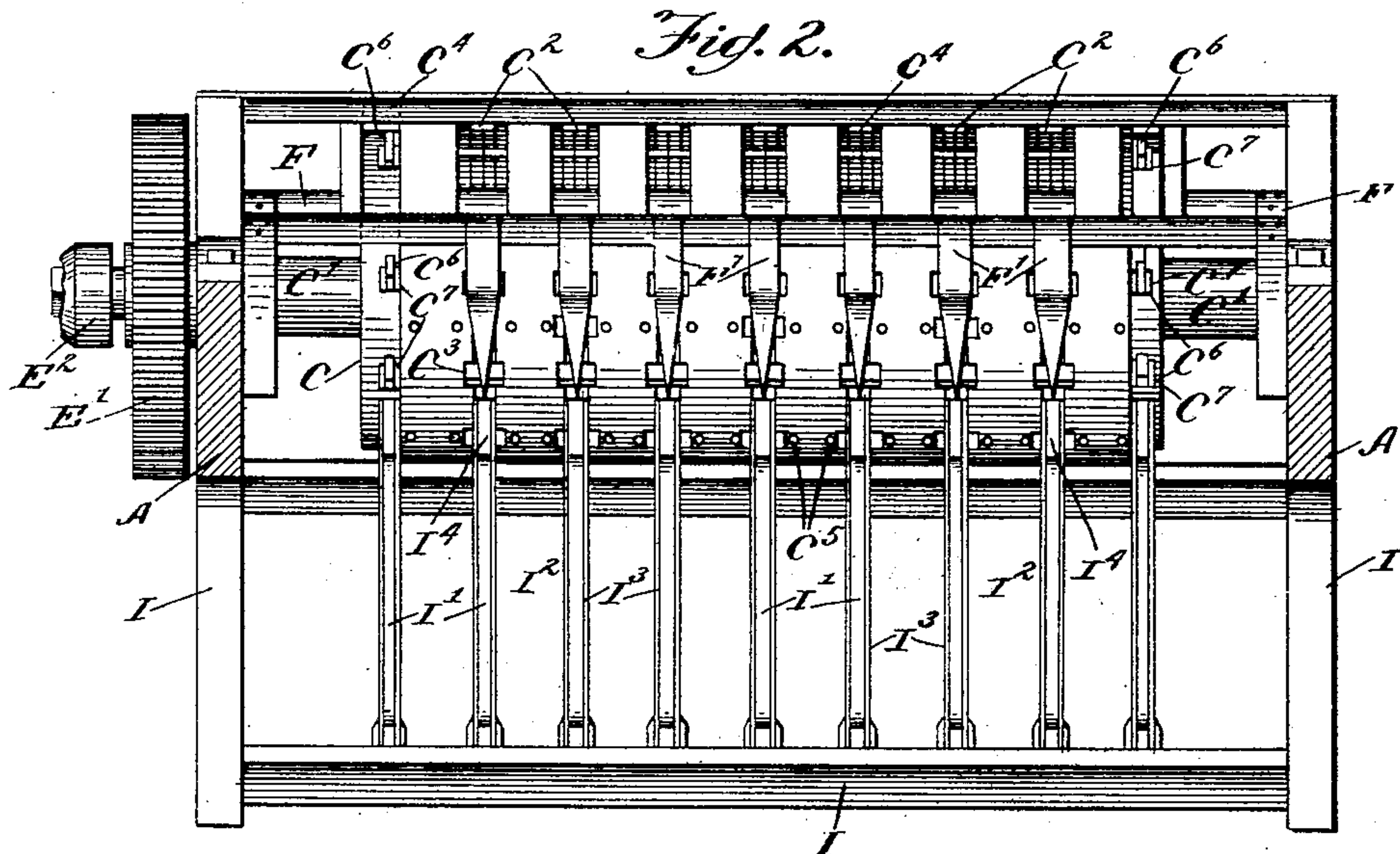
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By Luther L. Miller
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3 Sheets—Sheet 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

HERBERT C. JONES, OF CHICAGO, ILLINOIS.

UPHOLSTERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 702,961, dated June 24, 1902.

Application filed March 21, 1902. Serial No. 99,290. (No model.)

To all whom it may concern:

Be it known that I, HERBERT C. JONES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Upholstering-Machines, of which the following is a specification.

The object of this invention is the production of an improved upholstering-machine for forming, compressing, and joining together the materials to be upholstered.

In the embodiment herein shown of this invention I provide an upright framework, on which are journaled two shafts, and upon said shafts I rigidly mount two upholstering-rollers, one above the other, the upper roller being only one-half the diameter of the lower one. The outer ends of these shafts are connected by two intermeshing gear-wheels, the upper gear-wheel being one-half the diameter of the lower one in order that the surfaces of the two rollers may travel at the same rate of speed. The lower upholstering-roller is provided with several circumferential series of button-holders and the frame of the machine with spreading-wedges for opening and clenching the ends of the button-staples that fasten the upholstering fabrics together. These button-holders are also normally arranged in transverse series; but in order to permit of the formation of "biscuit" of diamond shape every alternating circumferential series of button-holders, except those at the ends of the roller, is mounted upon a ring, which lies in a groove formed in the surface of said lower upholstering-roller, and said rings having a slight rotative movement with relation to the said roller the button-holders so mounted may be moved into transverse rows half-way between the transverse lines of the stationary holders.

At the sides of the upholstered fabric it is desirable to have the ends of the button-staples bent lengthwise of the fabric instead of transversely, as clenching by the spreading-wedges; otherwise the sharp ends of the staples are likely to work through the covering material where the latter is turned downward, as at the edge of a couch-cover. This result I attain by providing pivoted clenching-wings for the button-holders of both of the end series of the lower upholstering-roller. These

clenching-wings are mounted on the upper upholstering-roller and register with the button-holders of the said outer end series as the rollers are rotated.

The machine at its forward side is provided with compartments for the reception of upholstering material—such as hair, moss, &c.—the covering fabric to be upholstered passing underneath said compartments. The roller for holding burlap or other suitable backing fabric for the upholstering is mounted at the top of the supporting-frame, and the two fabrics and the filling material pass between the two rollers, there to be compressed, formed, and fastened together by the machine.

In the accompanying drawings, Figure 1 is a rear elevation of this machine. Fig. 2 is a view on dotted line *xx* of Fig. 1 looking upward, the lower upholstering-roller being removed. Fig. 3 is a vertical section through a portion of the two upholstering-rollers, showing the means for feeding the washers and clenching the button-staples. This view also shows several button-staples in different stages of the process of clenching. Fig. 4 is a fragmental plan view showing the ends of the washer-feeding tubes and the wedges for clenching the button-staples. Fig. 5 is a fragmental view of the ends of the two upholstering-rollers, showing the means for clenching the outer circumferential series of button-staples. Figs. 6 and 7 are vertical central sections through the button-holder, showing the parts in different positions; and Figs. 8 and 9, a side elevation and a plan view, respectively, of one of said holders. Fig. 10 is a section through one of the clenching-wings and its supporting-bracket. Figs. 11 and 12 are respectively side and top views of said clenching-wing and its supporting-bracket. Fig. 13 is an under side view of the lower end of one of the washer-feeding tubes. Fig. 14 is a side view, and Fig. 15 an end view, of one of said tubes. Figs. 16 and 17 are respectively a side elevation and a plan view of one of the washers. Figs. 18 and 19 are side elevations of a button-staple. Fig. 20 is a fragmental transverse section through the lower upholstering-roller, illustrating the manner of connecting the ends of one of the supporting-rings for the movable button-holders. Fig. 21 is a fragmental longitudi-

nal section through the lower upholstering-roller, showing the groove in the surface of said roller for receiving the button-holder-supporting ring; and Fig. 22 is a fragmental view showing the arrangement of the button-holders when set to form upholstering-biscuit of diamond form.

In the construction of this machine I provide an upright supporting-frame A, upon which, near the lower part thereof, I journal the shaft B and upon said shaft fix the lower upholstering-roller B'. Near each end of said upholstering-roller are the annular flanges B² for retaining the filling material between them, fixed to the roller in any suitable manner, and arranged in regular series both circumferentially and transversely of said roller are placed the button-holding stems B³. Such, at least, is their normal arrangement, and the two circumferential rows nearest each end of the roller and the alternating circumferential series throughout are fixed rigidly in that position upon the periphery of the roller. The remaining circumferential series, however, are mounted upon rings capable of a slight rotatory movement with relation to the upholstering-roller to permit of the production of upholstered biscuit of diamond shape to be described more fully hereinafter. These button-holding stems are tubular in form, and in their upper ends are pivoted the two opposite L-shape button-holding jaws B⁴. These jaws are held open by the flat springs B⁵, secured to the sides of the stems B³ and engaging the rear ends of the button-holding jaws B⁴. The tubular stems B³ are each provided with a rotatable core B⁶, having at its upper end the cam B⁷ for holding the button-holding jaws closed when said cam is turned into a certain position. The stud B⁸, formed integral with said core B⁶, projects through an elongated opening B⁹ through the walls of the tubular button-holding stem and near the lower end thereof.

B¹⁰ represents shallow circumferential grooves formed in the face of the lower upholstering-roller B', adapted to receive the rings B¹¹, upon which latter are rigidly mounted at regular intervals outwardly-extending button-holders B³. These rings are formed from metallic strips of suitable length, the ends of which strips are joined in any proper manner. They and the button-holders which they carry are capable of a rotatory movement with relation to the roller B' sufficient to shift said button-holders into transverse rows midway of the regular transverse series of button-holders fixed upon the surface of said roller B'. This arrangement permits of the formation of upholstering-biscuit of diamond form. The screws B¹², extending through openings in said rings, hold the rings B¹¹ in the desired position either for square biscuit or those of diamond outline. It may be stated that the movable and the station-

ary button-holders are identical in construction.

When the head of a button-staple is pressed into the upper end of the button-holding stem B³, the pivoted jaws B⁴ are thereby turned upon their pivots and closed. The stud B⁸ is then turned to rotate the core B⁶ into the position indicated in Fig. 7. This position of the core causes the cam B⁷ to prevent the opening of the button-holding jaws B⁴, retaining the button-staple between said jaws until said core is rotated to turn the cam B⁷ from engagement with the button-holding jaws B⁴, when the latter are free to turn upon their pivots and permit the withdrawal of the button-staple.

C is the upper upholstering-roller, rigidly mounted on the shaft C'. This roller is provided with peripheral grooves C², each of which grooves coincides with one of the peripheral series of button-holding stems B³ on the lower upholstering-roller B'. At intervals in said grooves are provided the transverse depressions C³, cut somewhat deeper into the face of the upper roller C than the grooves C² for coinciding with the individual button-holding stems B³ of the lower upholstering-roller and providing a space for the spreading of the points of the button-staples. A guide-ring C⁴ lies in the bottom of each one of the peripheral grooves C², being fixed in the middle of said grooves, and spurs C⁵, projecting slightly above the surface of the upholstering-roller C, are arranged in longitudinal series thereon. These spurs are to prevent the burlap or other backing material from slipping upon the surface of the upholstering-roller C and to feed said burlap between the two upholstering-rollers B' and C.

At each end of the upper upholstering-roller C, I have provided a circumferential series of button-clenching wings C⁶, which wings are adapted individually to coincide with the button-holders of the two end series of the lower upholstering-roller B'. As shown in Figs. 10, 11, and 12, these wings are slightly curving in form and are centrally pivotally mounted in supporting-brackets C⁷. A spring C⁸, coiled about the pivot C⁹ of each of said wings, engages the bracket C⁷ with one of its ends and the wing C⁶ with its other end, its purpose being to hold the wing in contact with the supporting-bracket C⁷ and in position properly to engage the button-staple to spread and clench its prongs.

Referring to Fig. 5, the action of the wings C⁶ will be more readily understood. As the wing C⁶ and the button-staple are brought together end to end by the rotation of the two upholstering-rollers the wing enters between the prongs of the button-staple, engaging the prong rearward in the line of travel from the wing and clenches it over against its washer. When this end of the wing can bend the staple-prong down no farther, the wing rocks on its pivot and its other

end pushes down the other prong of the staple. This occurs as the successive wings C⁶ engage succeeding button-staples in the rotation of the rollers B' and C.

5 D is a shaft journaled in the upper portion of the supporting-frame A for carrying the roll of burlap D'.

E and E' are two intermeshing gear-wheels fixed on the outer ends of the shafts B and 10 C', respectively, the former gear-wheel being twice the diameter of the latter. E² is a crank fixed on the shaft C' outside of said gear-wheel E', providing means for driving the mechanism. A pulley may be mounted upon 15 said shaft in place of this crank in case it is desirable to apply other than manual power to the operation of the machine.

F is a transverse bar extending across the rear side of the machine and at suitable intervals in its length bears the spreading-wedges F', the forward end of said wedges coinciding with and lying in the peripheral grooves C² of the roller C, being intended to lie in contact with the guide-ring C⁴.

25 G is a second transverse bar extending across the framework A a little below the bar F. It bears the forward projections G', the purpose of which is to engage with the studs B⁸ of the cores B⁶ of the button-holding stems 30 B³ for moving said studs, rotating said cores, and by withdrawing the ends of the cams B⁷ from engagement with the button-holding jaws B³ to permit of the opening of said jaws and the release of said button-staples.

35 H is a series of washer-feeding tubes secured to the supporting-frame A near the upper end thereof and extending downward to the point between the two upholstering-rollers, where the forward end of the spreading-wedges F' contact the guide-rings C⁴ in 40 the peripheral grooves C². These tubes conform substantially to the curve of the upper upholstering-roller C and are divided at their lower ends, being there provided with the notch H' and the shoe H², the latter lying in the peripheral grooves C² of the roller C and bearing upon the guide-ring C⁴ therein. The 45 points of the spreading-wedges F' lie within the notches H'. The springs H³, lying on both sides of each one of said washer-feeding tubes, prevent the accidental displacement of the washers through the lower ends of said tubes H, but are flexible enough to permit of said washers being withdrawn by the extending 55 ends of the button-staples, as the washers are engaged by the moving button-staples.

I is a framework secured to the main frame A at the forward side of the machine. It overlies the lower upholstering-roller B' and 60 has as many partitions I' as said lower roller has peripheral series of button-holding stems B³, which partitions form between them the compartments I² for the reception of the filling material. The lower side of each one of 65 these partitions is provided with the shoe I³, formed of two pieces of sheet metal, one secured to each side of said partition, thus form-

ing a guide-channel I⁴ between the two parts of the shoe. The lower sides of these shoes conform substantially to the circle described 70 by the outer ends of the radial button-holding stems B³, and the said channel I⁴ is adapted to receive the extending ends of the button-staples and retain and guide said button-staples through a portion of the rotation of 75 the lower upholstering-roller B'.

J is a button-staple, and K is a washer, by means of which staple and washer the upholstering materials are fastened together.

L is a fixed guard-shield to prevent the bur- 80 lap from coming in contact with the bracket C' of the upper upholstering-roller C.

In the operation of this machine button-staples are placed in the outer ends of the button-holding stems B³ at a point in the 85 lower upholstering-roller below the framework I and secured therein by turning the holding-jaws B⁴ downward against the under side of the head of said button-staples, locking said holding-jaws in position by moving 90 the stud B⁸ in the elongated opening B⁹, thereby rotating the core B⁶ and turning the ends of the cam B⁷ into engagement with the inner sides of the button-holding jaws B⁴. The button-staples placed in the circumfer- 95 ential row of button-holders at the ends of the roller B' are set so that a line passing through their prongs would extend with the travel of the upholstered goods, the buttons of the other holders transversely to the travel 100 of the goods. The covering fabric is then spread upon the periphery of said roller B' with its "right side" toward said roller, and the button-staples are forced through said fabric at their proper positions. The roller 105 B' is rotated until said covering fabric lies under the framework I. Upholstering material, such as hair or moss, is placed in the compartments I² in said framework I, washers are fed into the tubes H, and burlap from the 110 roll D' is drawn downward and forced over the upwardly-projecting ends of the front transverse row of button-staples J on the roller B'. The roller B' is again rotated, turning the points of the foremost transverse row of but- 115 ton-staples into the central openings of the washers K, and as said rotation continues drawing said washers from the tubes H and driving the button-staples, except those in the holders at each end of the roller B', against 120 the forward ends of the spreading-wedges F', at the same time forming and compressing the filling material between the two thicknesses of fabric and between the upper and the lower upholstering-rollers C and B', re- 125 spectively. The continued rotation of the rollers B' and C flattens the outward ends of the staples against the rear ends of the spreading-wedges, clenching said button-staples firmly upon the washers K. The clenching 130 of the button-staples set in the holders at the ends of the upholstering-roller B' is illustrated in Fig. 5. The springs C⁸ hold the wings C⁶ in such a position that as the two uphol-

stering-rollers B' and C are rotated the clenching-wing C⁶ and the prongs of the button-staple are turned inward end to end, the wing C⁶ entering between the prongs of the button-staple. Continued rotation of the rollers B' and C causes the clenching-wing C⁶ to bend the rearward prong of the button-staple down against the washer, and when the end of the wing can descend no farther the wing is rocked on its pivot and its opposite end pushes boldly against the forward prong of the button-staple and bends it also down, not with the point, but with the face of the wing. When the rotation of the lower roller B' carries the studs B⁸ of the cores B⁶ into contact with the projections G', said cores are rotated and the cams B⁷ at their upper ends turned from engagement with the inner sides of the button-holding jaws B⁴, releasing the button-staples and permitting the upholstered fabric to be withdrawn from the upholstering-roller B'. The course of each button-staple, except those in the holders at each end of the roller B', after being placed between the holding-jaws B⁴ is through one of the guide-channels I⁴ into the notch H' of the washer-feeding tube H, where the two-part point of the button-staple enters the central opening of a washer, immediately is divided by the guiding C⁴, and passes upon the spreading-wedge F', which as the button-staple continues to move spreads the points of the latter tightly down upon the washer K. The staples now holding the upholstered fabric closely against the series of button-holders B³ are rotated until the studs B⁸ are engaged by the projections G', when the holding-jaws B⁴ release the buttons of the button-staples. The springs B⁵ hold the jaws B⁴ open until the rotation of the roller B' brings the button-staple holders in position again to be supplied with button-staples, which staples are inserted into said stems B³ by pressing the heads of the staples into position. This pressure throws the jaws B⁴ together, and when the stud B⁸ is turned in the opening B⁹ the said jaws are firmly locked in place. Filling material is supplied to the compartments I² as it is exhausted therefrom.

50 I claim as my invention—

1. In an upholstering-machine, in combination, a supporting-frame; two relatively movable upholstering-surfaces adapted to compress the upholstering materials between them; means caused by said pressure to engage the securing means with said materials, to fasten the latter together; and means for moving one of said upholstering-surfaces.

2. In an upholstering-machine, in combination, a supporting-frame; two relatively movable upholstering-surfaces adapted to compress the upholstering materials between them; holding mechanism for the means for securing together the materials to be upholstered; means caused by the pressure between the upholstering-surfaces to engage the securing means with said materials to fasten

the latter together; and means for moving one of said upholstering-surfaces.

3. In an upholstering-machine, in combination, a supporting-frame; two relatively movable upholstering-surfaces adapted to compress the upholstering materials between them; holding mechanism for the means for securing together the materials to be upholstered, which holding mechanism is fixed with relation to one of said upholstering-surfaces; a device on one of said upholstering-surfaces caused by the pressure between the upholstering-surfaces to fix the securing means to permanently unite said materials; and means for moving one of said surfaces.

4. In an upholstering-machine, in combination, a supporting-frame; two relatively movable upholstering-surfaces adapted to compress the upholstering materials between them; holding mechanism for the means for securing together the materials to be upholstered, which holding mechanism is fixed with relation to one of said upholstering-surfaces; means for releasing said holding mechanism; a device on one of said upholstering-surfaces caused by the pressure between the upholstering-surfaces to fix the securing means to permanently unite said materials; and means for moving one of said surfaces.

5. In an upholstering-machine, in combination, a supporting-frame; holding mechanism for the means for securing together the materials to be upholstered; means for releasing said holding mechanism; means for feeding forward and compressing the upholstering materials; and a device on the compressing means, adapted to fix the securing means to permanently unite said materials.

6. In an upholstering-machine, in combination, a supporting-frame; button-staple holders; means for releasing said holders; means for feeding forward and compressing the upholstering materials; and a device on the compressing means, adapted to clench the button-staples in said holders to permanently unite said materials.

7. In an upholstering-machine, in combination, a supporting-frame; mechanism for holding the means for securing together the materials to be upholstered; means for releasing said holding mechanism; a roller for passing over the upholstering materials to compress the same; and a device on said roller adapted to fix the securing means to permanently unite said materials.

8. In an upholstering-machine, in combination, a supporting-frame; button-staple holders; means for releasing said holders; an upholstering-roller adapted to pass over and compress the materials to be upholstered; and a device on said roller adapted to clench the button-staples in said holders to permanently unite said materials.

9. In an upholstering-machine, in combination, a supporting-frame; means comprising an upholstering-roller for feeding forward and compressing the upholstering materials;

a button-staple holder; means for releasing said button-staple holder; and a device on said roller adapted to clench a button-staple in said holder to permanently unite said materials.

10. In an upholstering-machine, in combination, a supporting-frame; means for moving the materials to be upholstered into contact with a button-staple to cause said button-staple to penetrate certain of said materials, and for compressing said upholstering materials; and a device on the compressing means, actuated by the pressure compressing said upholstering materials, to clench said button-staple to permanently unite said materials.

11. In an upholstering-machine, in combination, a supporting-frame; means comprising an upholstering-roller for feeding forward the materials to be upholstered; a button-staple holder; means for releasing said holder; means for rotating said roller; and a device on said roller adapted to clench a button-staple in said holder to permanently unite said materials.

12. In an upholstering-machine, in combination, a supporting-frame; an upholstering-roller journaled thereon and adapted to rotate with the travel of the upholstering materials; holding mechanism for a button-staple, adapted to move the staple in the direction of travel of said upholstering materials to cause said button-staple to penetrate certain of the upholstering materials; means for moving said holding mechanism; means for releasing said holding mechanism; and a device on said upholstering-roller adapted to clench the button-staple in said holding mechanism to permanently unite said materials.

13. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; holding mechanism on one of said rollers for the means for securing together the materials to be upholstered; means for releasing said holding mechanism; a device for the other of said rollers adapted to fix the securing means to permanently unite said materials; and means for rotating said rollers.

14. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; a button-staple holder on one of said rollers; means for releasing a button-staple from said holder; a device for the other of said rollers adapted to clench a button-staple in said holder to permanently unite said materials; and means for rotating said rollers.

15. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; holding mechanism for a button-staple, for one of said rollers, and a pivoted wing for the other roller, which wing is adapted to spread the prongs of the button-staple and

cause them to be clenched by the pressure between said rollers; and means for rotating said rollers.

16. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; holding mechanisms for button-staples, arranged peripherally upon one of said rollers; a series of wings for spreading the prongs of the button-staples, arranged peripherally upon the other of said rollers and adapted individually to engage a button-staple, separate its prongs and clench said button-staple by means of the pressure between said rollers; and means for rotating said rollers.

17. In an upholstering-machine, in combination, an upholstering-roller having button-staple holders arranged in circumferential and in transverse series, certain of said circumferential series being rigidly affixed to the periphery of the upholstering-roller; a ring upon said upholstering-roller, for supporting one of said circumferential series of button-staples; means for rotating said ring with reference to said roller; means for rotating said roller; and means for clenching said button-staples.

18. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; button-staple holders for one of said upholstering-rollers, which holders are arranged in circumferential series, some of which series are mounted rigidly upon the periphery of said roller; rings for supporting the other of said circumferential series of button-staple holders; means for rotating said ring with reference to said roller; means for rotating said rollers; and means for clenching said button-staples.

19. In an upholstering-machine, in combination, biscuit-forming projections adapted to be arranged in longitudinal and in transverse series; means for moving certain of said longitudinal series, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

20. In an upholstering-machine, in combination, biscuit-forming projections adapted to be arranged in longitudinal and in transverse series; means for moving alternate longitudinal series of said projections, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

21. In an upholstering-machine, in combination, an upholstering-roller having biscuit-forming projections adapted to be arranged in circumferential and in transverse series; means for moving certain of said circumferential series, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

22. In an upholstering-machine, in combination, an upholstering-roller having biscuit-

forming projections adapted to be arranged in circumferential and in transverse series, the projections of certain of said circumferential series being rigidly connected and adapted to be moved with relation to the transverse series, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

23. In an upholstering-machine, in combination, holding mechanisms for the means for securing together the materials to be upholstered; means for shifting the relative positions of certain of said holding mechanisms, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

24. In an upholstering-machine, in combination, holding mechanisms for the means for securing together the materials to be upholstered, which mechanisms are adapted to be arranged in series; means for moving certain of said series to change the form of the upholstering; and mechanism for securing the upholstering materials together.

25. In an upholstering-machine, in combination, holding mechanisms for the means for securing together the materials to be upholstered, which mechanisms are adapted to be arranged in longitudinal and in transverse series; means for moving certain of said longitudinal series, to change the form of the upholstering; and mechanism for securing together the upholstering materials.

26. In an upholstering-machine, in combination, holding mechanisms for the means for securing together the materials to be upholstered, which mechanisms are adapted to be arranged in longitudinal and in transverse series; means for moving alternate longitudinal series with relation to adjacent longitudinal series, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

27. In an upholstering-machine, in combination, an upholstering-roller having holding mechanisms for the means for securing together the materials to be upholstered, mounted on said roller in circumferential and in transverse series; means for moving certain of the circumferential series with relation to the transverse series, to change the form of the upholstering; and mechanism for securing the upholstering materials together.

28. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them; button-staple holders for one of said upholstering-rollers, which holders are arranged in circumferential series, certain ones of which series are mounted rigidly upon the periphery of said roller; rings for supporting the other of said circumferential series of button-staple holders; means for rotating said ring with reference to said roller; a series of spreading-wedges secured to the supporting-frame for clenching certain of the button-

staples; a series of clenching-wings, each pivotally mounted on the periphery of the other upholstering-roller; and means for rotating said upholstering-rollers.

29. In an upholstering-machine, in combination, a supporting-frame; two upholstering-rollers journaled thereon and adapted to pass the upholstering materials between them, the lower one of which upholstering-rollers has a number of radially-extending button-staple holders arranged in peripheral series, the other of which upholstering-rollers has a series of peripheral grooves having depressions at intervals in said grooves, for receiving the ends of the button-staples; a series of washer-feeding tubes adapted to deliver washers at a point adjacent to said button-staple holders; a series of spreading-wedges; clenching-wings pivotally mounted upon the upper upholstering-roller; and means for rotating said upholstering-rollers.

30. In a button-staple-clenching device, in combination, means for holding the button-staple; and a pivoted clenching-wing for separating the prongs of said button-staple and clenching the same by pressure, which said holding means and clenching means are mounted upon independent, rotatable axes.

31. In a button-staple-clenching device, in combination, means for holding a button-staple; a wing for separating the prongs of said button-staple, which wing is pivotally mounted near its center; and means for moving the wing and the button-staple together, for clenching the prongs of said button-staple by pressure.

32. In a button-staple-clenching device, in combination, means for holding a button-staple; a pivoted wing for separating the prongs of said button-staple, and for clenching said prongs; and means for moving said wing.

33. In a button-staple-clenching device, in combination, means for holding a button-staple; a pivoted wing for separating the prongs of said button-staple, which wing has a movement toward said button-staple to clench the prongs of said button-staple by pressure; and means for moving said wing.

34. In a button-staple-clenching device, in combination, means for holding a button-staple; and a pivoted wing for separating the prongs of said button-staple, and for clenching said prongs, which said holding means and said pivoted wing are mounted upon independent, rotatable axes.

35. In an upholstering-machine, in combination, a button-staple holder; means for feeding continuously forward the upholstering materials and for moving the button-staple holder with said materials; and means adapted to travel continuously forward with said materials, for clenching a button-staple to fasten said materials together during the forward movement of the upholstering materials to permanently secure said materials together.

36. In an upholstering-machine, in combi-

nation, means for feeding the upholstering materials continuously forward; and mechanism adapted to travel continuously forward with said upholstering materials for securing said materials together during their forward movement.

37. In an upholstering-machine, in combination, means for feeding the upholstering materials continuously forward; and means adapted to travel continuously forward with said upholstering materials for inserting and clenching a device for securing said materials together during the forward movement of said materials.

38. In an upholstering-machine, in combination, means for feeding the upholstering materials continuously forward; and means adapted to travel continuously forward with said upholstering materials for inserting and clenching a button-staple in said materials during the forward movement of said materials.

39. In an upholstering-machine, in combination, means for feeding the upholstering materials continuously forward; holding mechanism for the means for securing together the materials to be upholstered, which holding mechanism moves forward with said upholstering materials; and means adapted to travel continuously forward with said upholstering materials for causing the securing means to permanently unite said materials during the forward movement of said materials.

40. In an upholstering-machine, in combination, holding mechanism for the means for securing together the materials to be upholstered, which holding mechanism is movable in the direction of travel of the upholstering materials; means for moving said holding mechanism and for feeding continuously forward said upholstering materials; and means adapted to travel continuously forward with said upholstering materials for causing the securing means to permanently unite said materials during the forward movement of said materials.

41. In an upholstering-machine, in combination, means for feeding the materials to be upholstered continuously forward into contact with a button-staple to cause said button-staple to penetrate certain of said materials; and means adapted to travel continuously forward with said upholstering materials for clenching said button-staples during the forward movement of said materials.

42. In an upholstering-machine, in combination, an upholstering-roller adapted to rotate with the travel of the upholstering materials; holding mechanism for the means for securing together said materials, which holding mechanism is movable in the direction of travel of said materials to cause the securing means to penetrate certain of said materials; means for moving said holding mechanism;

and means traveling continuously forward with the upholstering materials, adapted to permanently unite said materials during their continuous forward movement.

43. In an upholstering-machine, in combination, means comprising an upholstering-roller for feeding continuously forward the materials to be upholstered; a button-staple holder; and a device on said roller adapted to clench a button-staple in said holder during the forward movement of said materials.

44. In an upholstering-machine, in combination, an upholstering-roller adapted to rotate with the travel of the upholstering materials; holding mechanism for a button-staple adapted to move the staple in the direction of travel of said upholstering materials to cause a button-staple in said holding mechanism to penetrate certain of said upholstering materials; means for moving said holding mechanism; and means adapted to travel continuously forward with said upholstering materials for clenching said button-staple during the continuous forward movement of said materials.

45. In an upholstering-machine, in combination, a means for compressing and feeding continuously forward the upholstering materials, which means comprises an upholstering-roller; holding mechanism for the means for securing together the upholstering materials adapted to travel with said materials; and a device on said upholstering-roller adapted to fix the securing means to permanently unite said materials during their continuous forward movement.

46. In an upholstering-machine, in combination, a means for compressing and feeding continuously forward the upholstering materials, which means comprises an upholstering-roller adapted to rotate with the travel of the upholstering materials; means for inserting a device for securing said upholstering materials together, during the forward movement of said materials; and mechanism carried by said upholstering-roller adapted to fix the securing means to permanently unite said upholstering materials during their continuous forward movement.

47. In an upholstering-machine, in combination, a means for compressing and feeding continuously forward the upholstering materials, which means comprises an upholstering-roller adapted to rotate with the travel of the upholstering materials; button-staple holders adapted to travel with said materials; and a device carried by said roller for clenching button-staples in said holders during the continuous forward movement of said materials.

HERBERT C. JONES.

Witnesses:

L. L. MILLER,
GEO. L. CHINDAHL.