No. 702,962. Patented June 24, 1902.

# H. C. JONES.

## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 1.

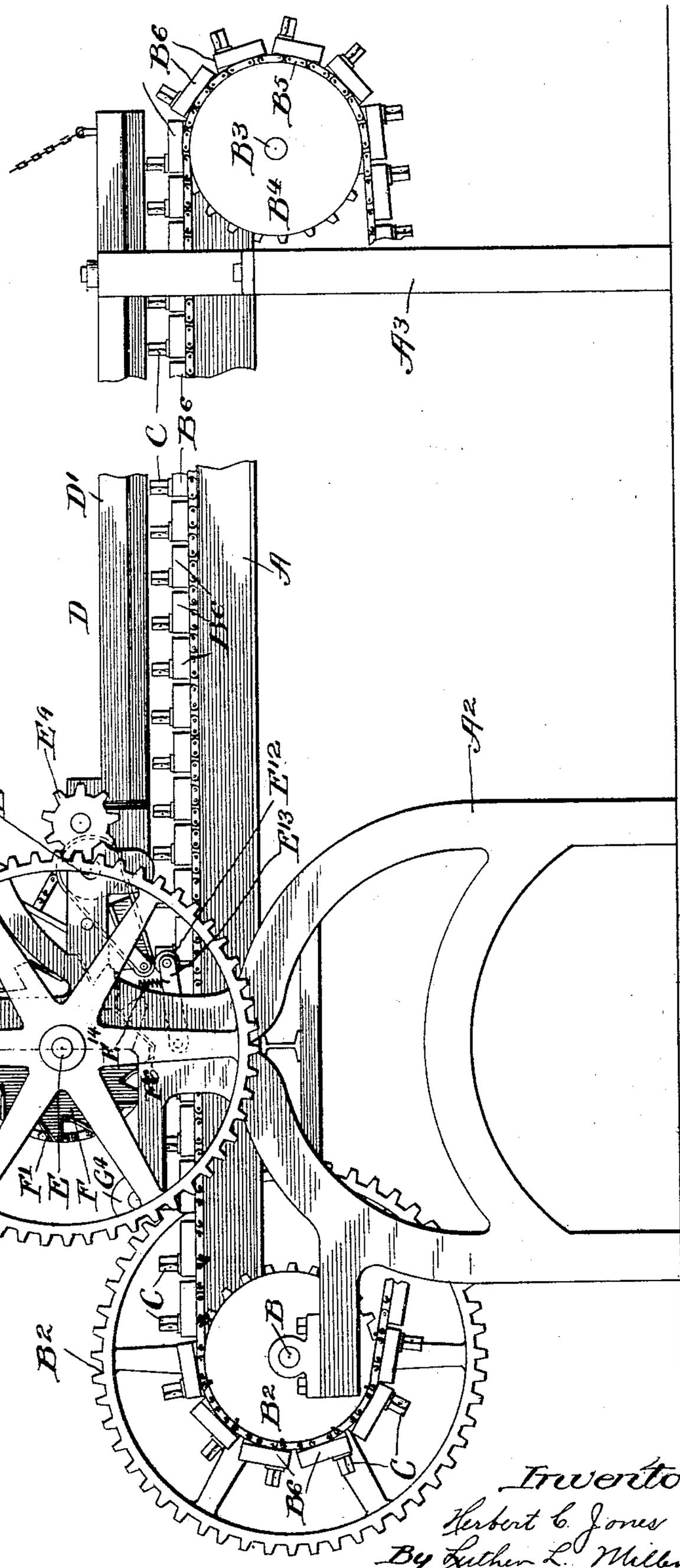


Fig. 1.

Witnesses
Geo. Chindahl
Coit Smith

Inventor
Herbert C. Jones
By Luther L. Miller
Atty.

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## UPHOLSTERING MACHINE.

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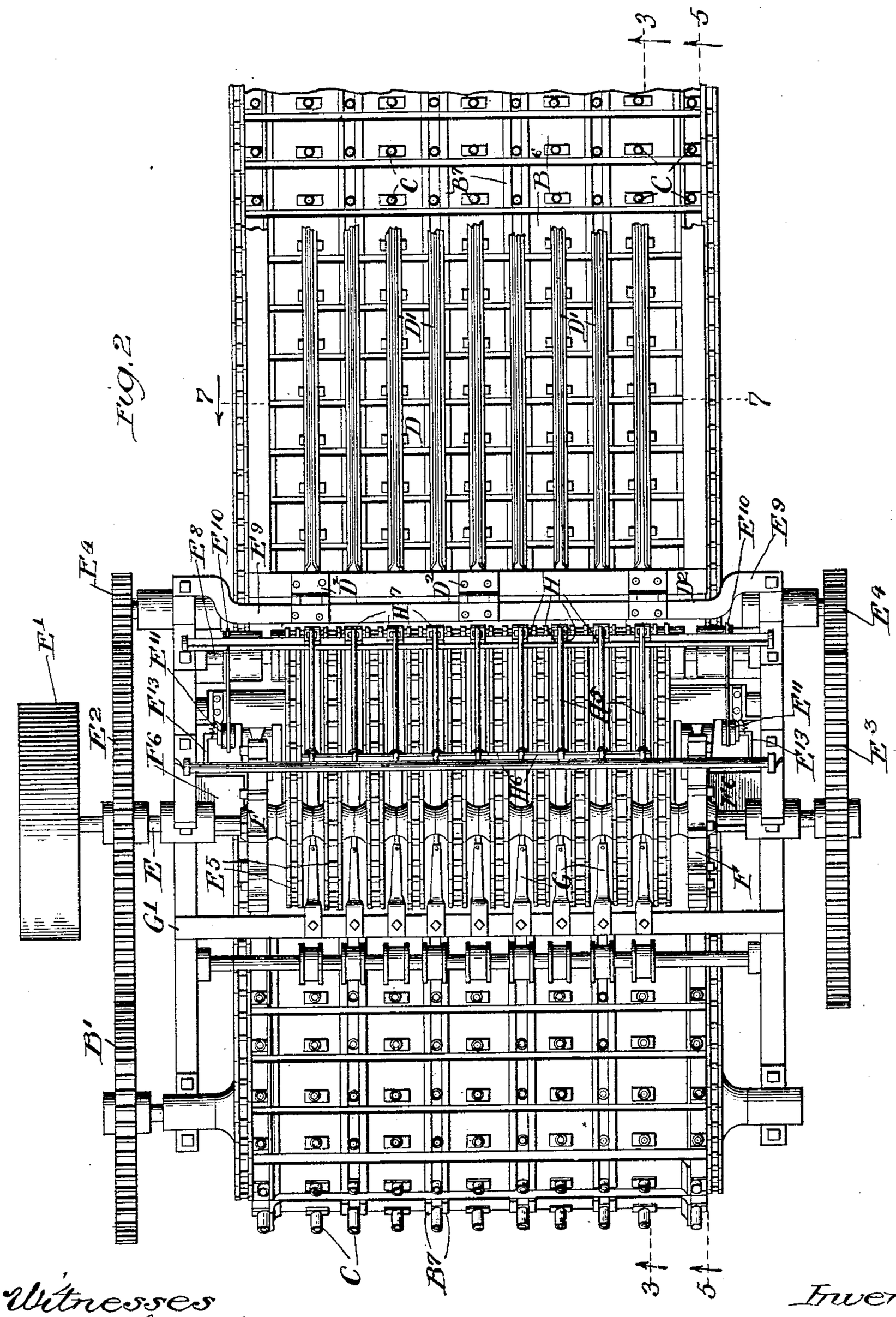
(No Model.) 8 Sheets—Sheet 2.

Fig. 2

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Coit Smith.

Inventor:
Herbert C. Jones
By Luther L. Miller
Atty.

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## UPHOLSTERING MACHINE.

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(No Model.) 8 Sheets—Sheet 3.

Fig. 9.

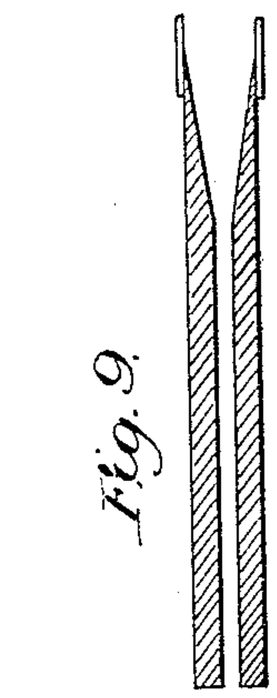
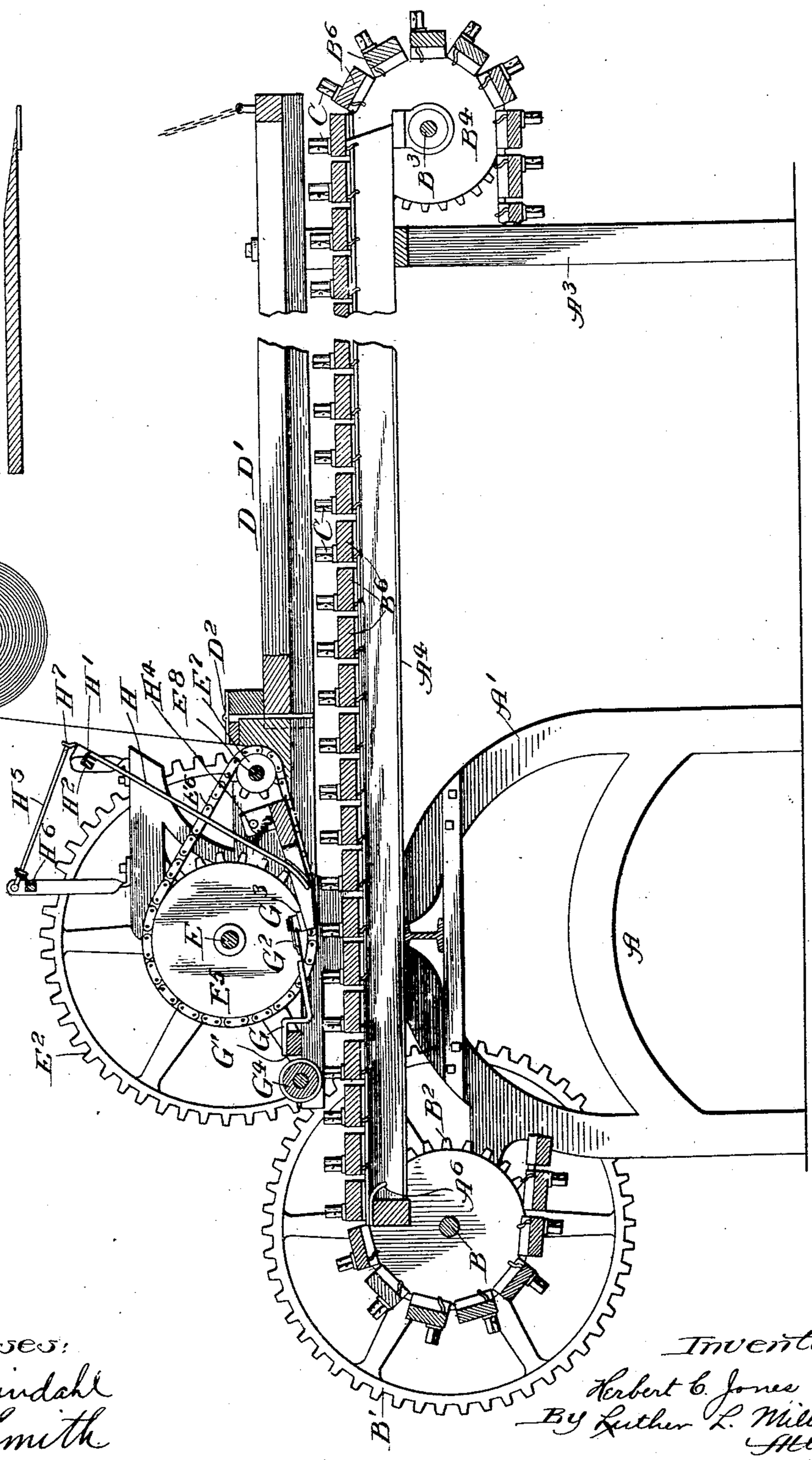


Fig. 3.




Witnesses:
Geo. L. Chindahl
Coit Smith

Inventor.
Herbert C. Jones
By Luther L. Miller
Atty.

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## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 4.

Fig. 10.

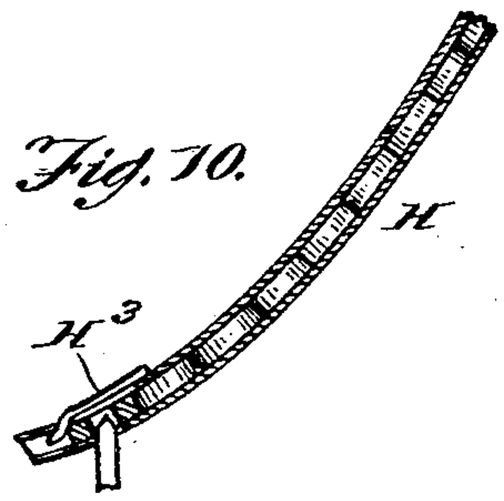
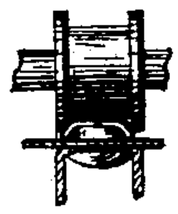



Fig. 4.

Fig. 4.a



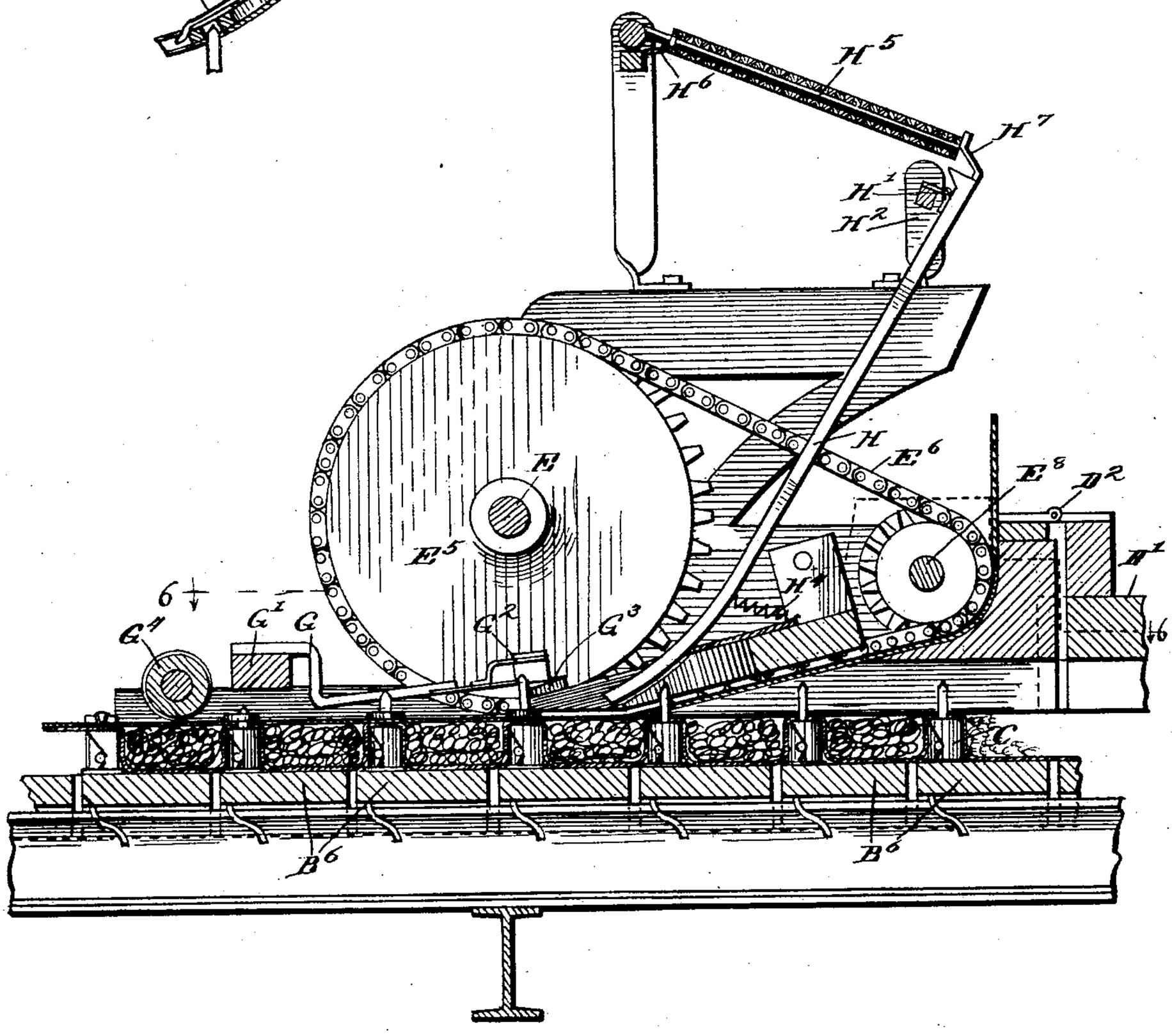
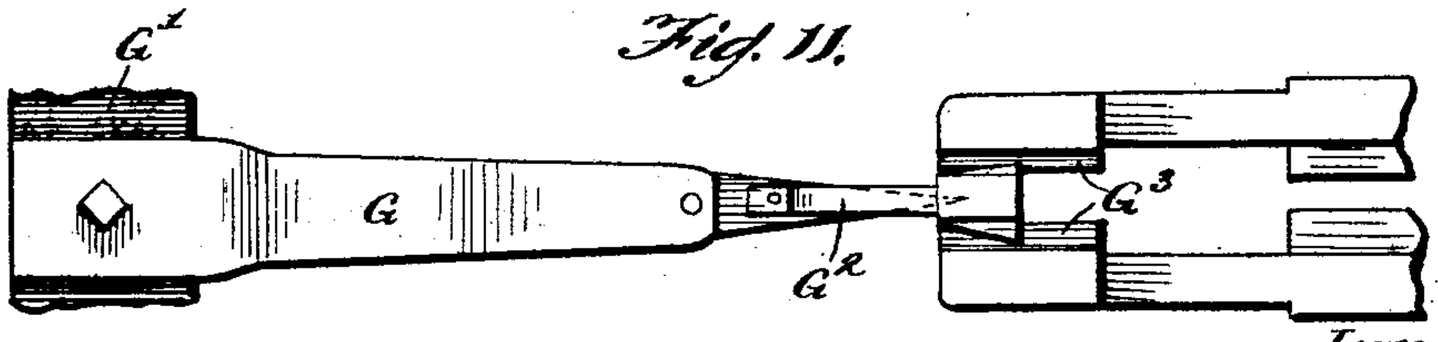



Fig. 11.




Witnesses:
Geo. Chindahl
Ernest Wehlau

Inventor:
Herbert C. Jones
By Luther L. Miller
Atty.

No. 702,962. Patented June 24, 1902.

# H. C. JONES.

## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 5.

*Fig. 5ª*

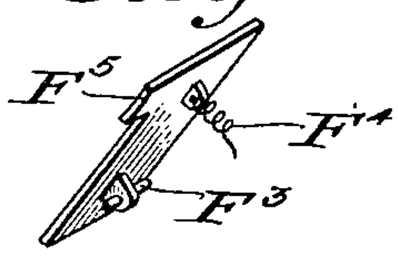
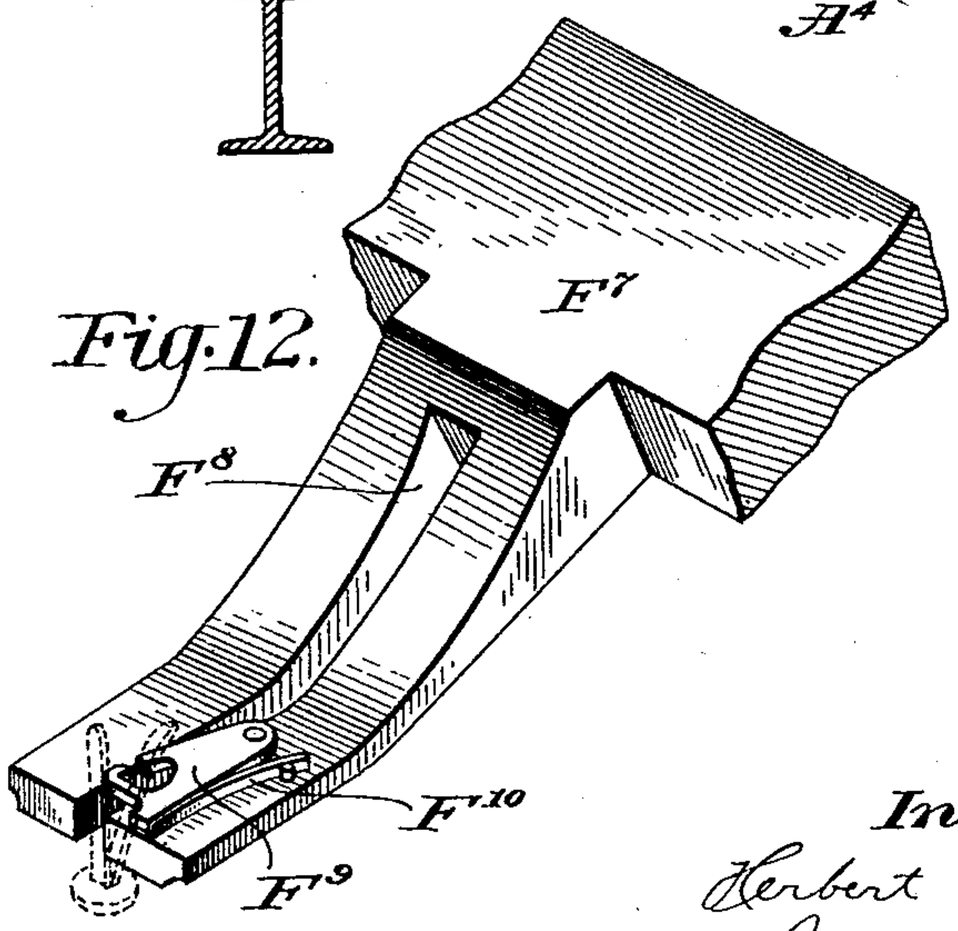



*Fig. 5.*




*Fig. 12.*




Witnesses:
Geo. L. Chindahl
Coit Smith.

Inventor:
Herbert C. Jones
By Luther L. Miller
Atty.

No. 702,962. Patented June 24, 1902.

# H. C. JONES.

## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 6.

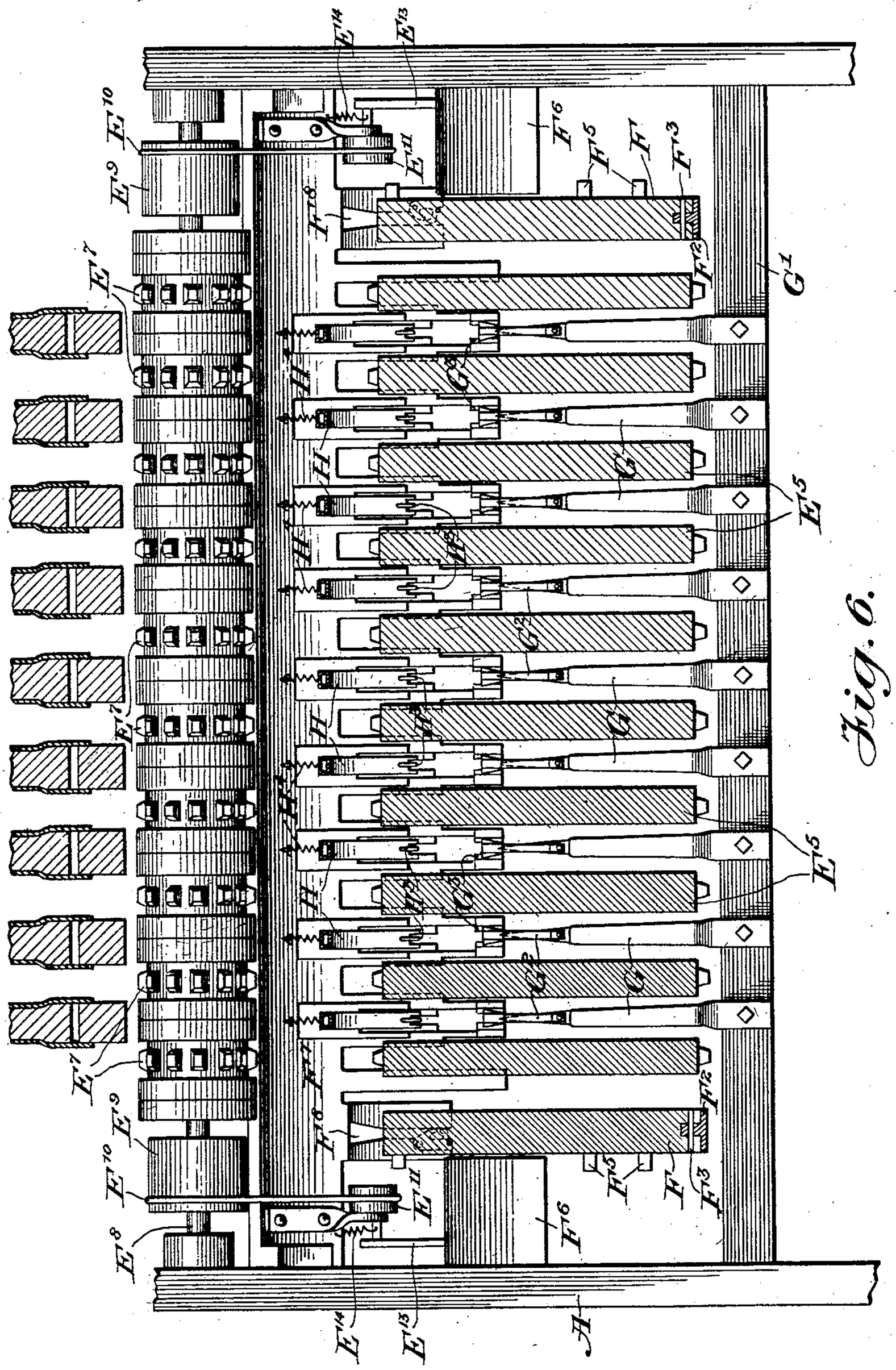


Fig. 6.

Witnesses:
Geo. L. Chindahl
Cort Smith

Inventor:
Herbert C. Jones
By Luther L. Miller
Atty.

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# H. C. JONES.

## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 7.

Fig. 7

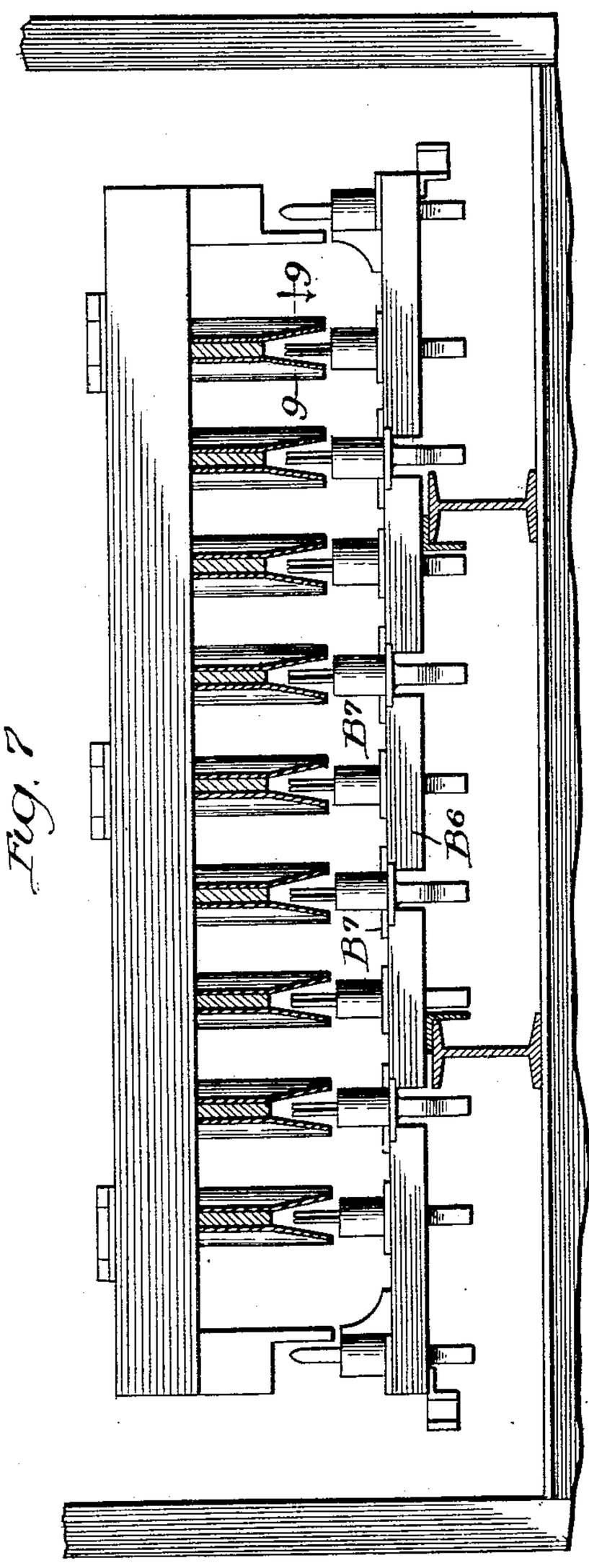
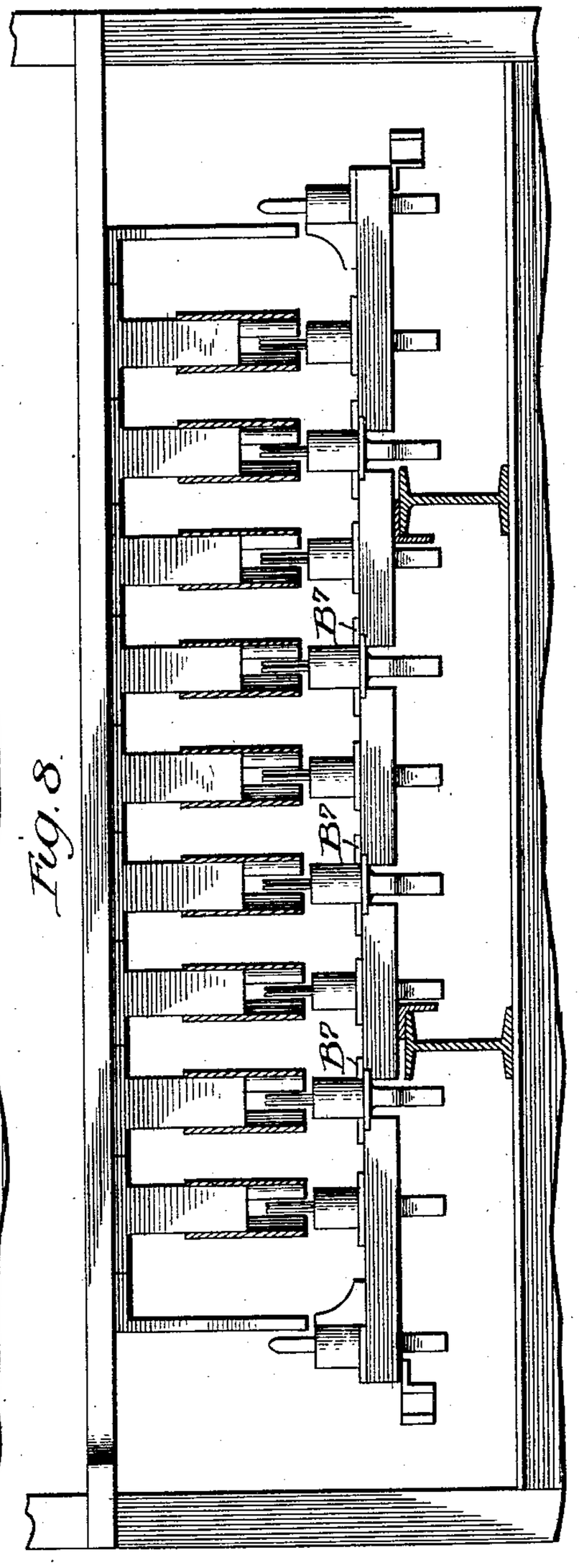



Fig. 8.




Witnesses:
Geo. L. Chindahl
Bert Smith

Inventor:
Herbert C. Jones
By Luther L. Miller
Atty.

No. 702,962. Patented June 24, 1902.

# H. C. JONES.

## UPHOLSTERING MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.) 8 Sheets—Sheet 8.

Fig. 14.

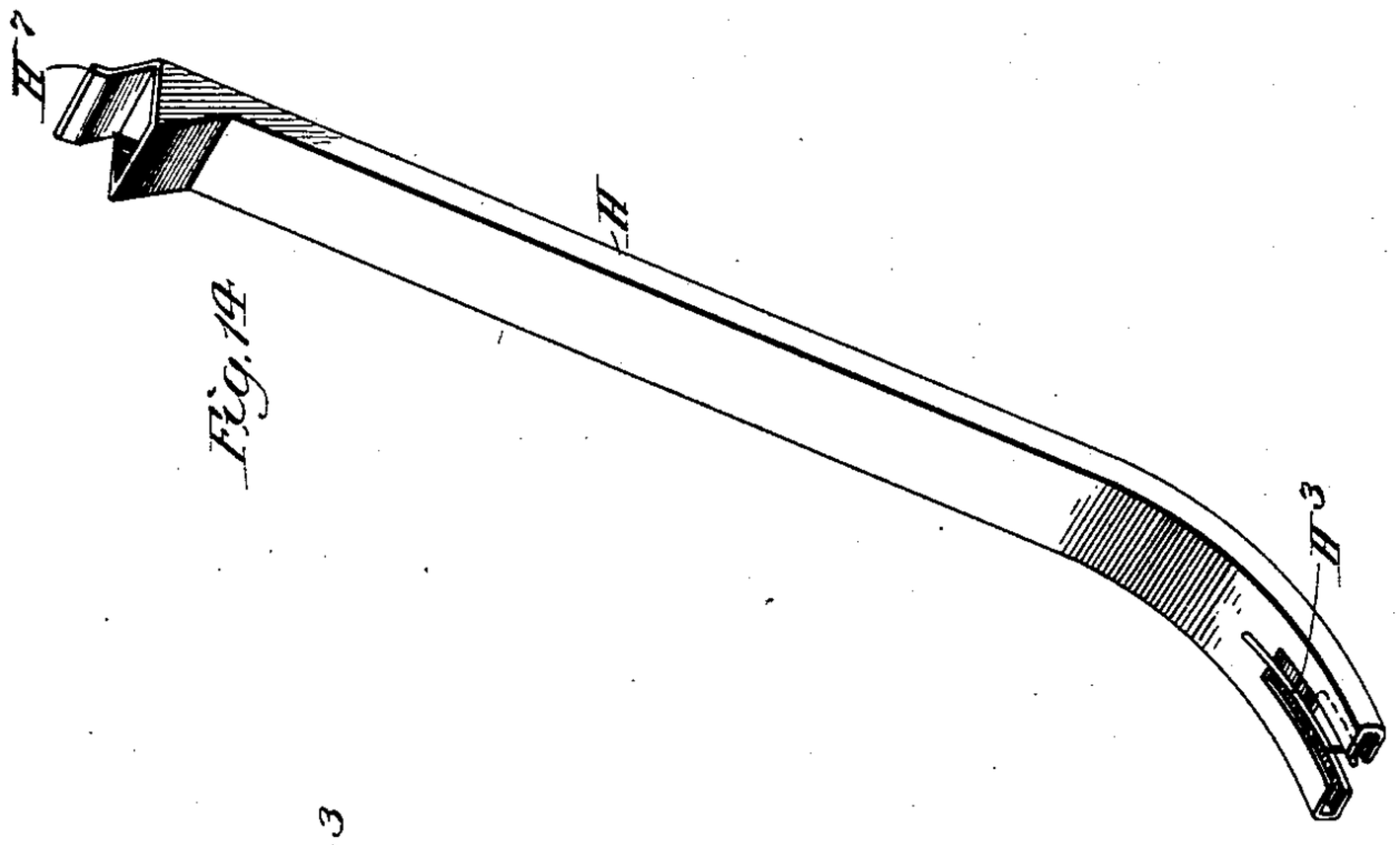



Fig. 13.

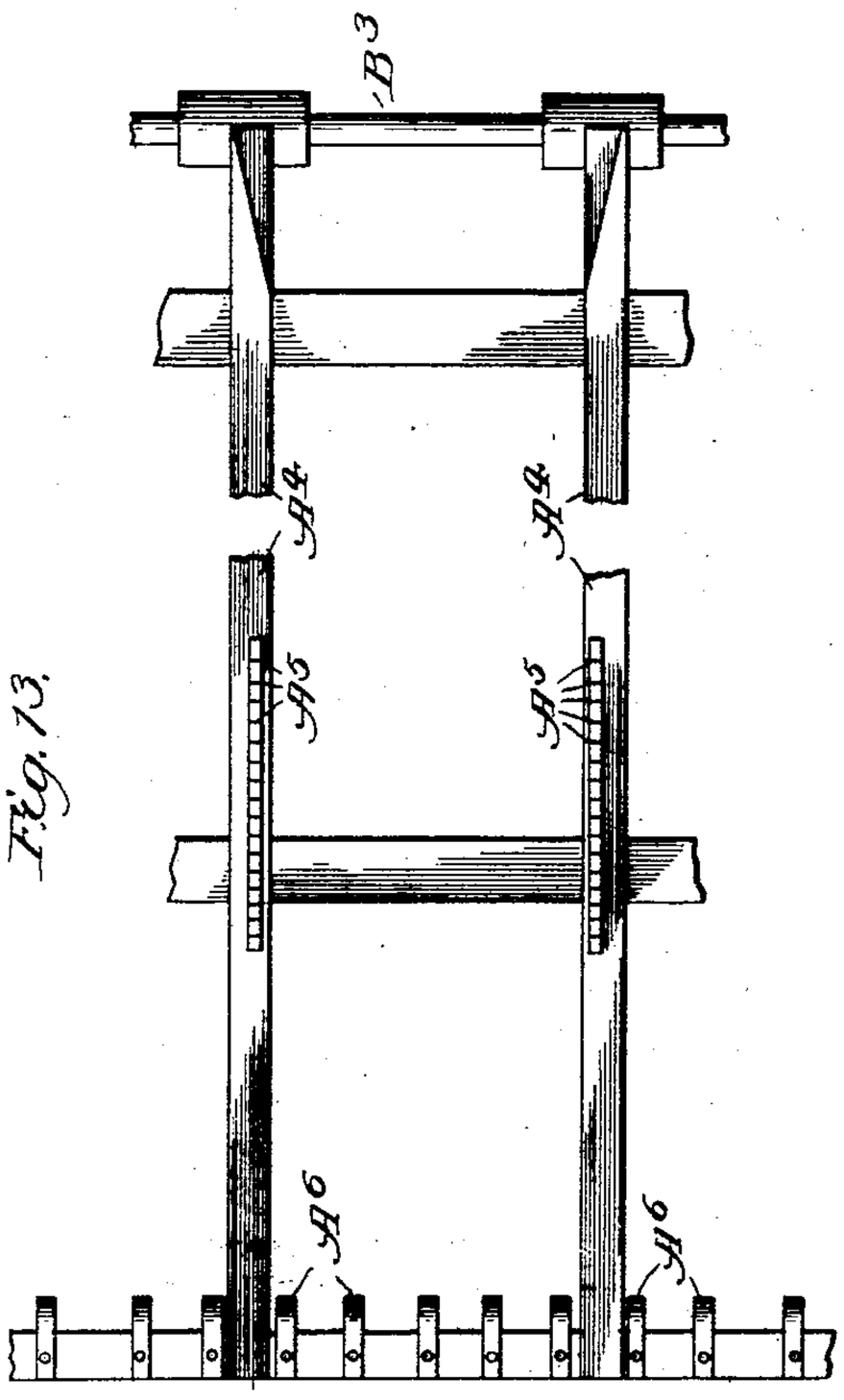



Fig. 16.

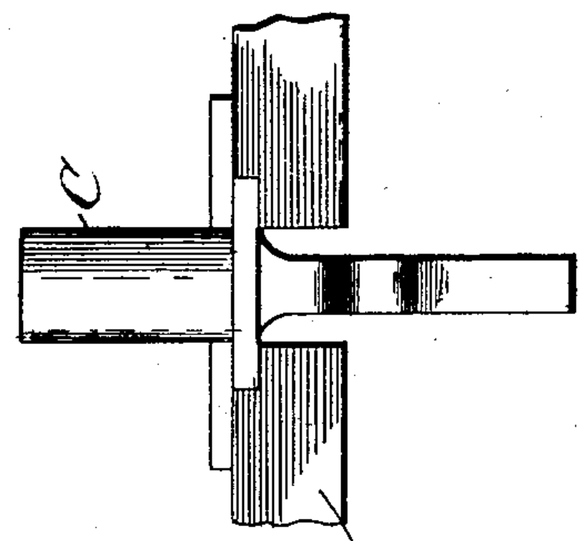



Fig. 15.

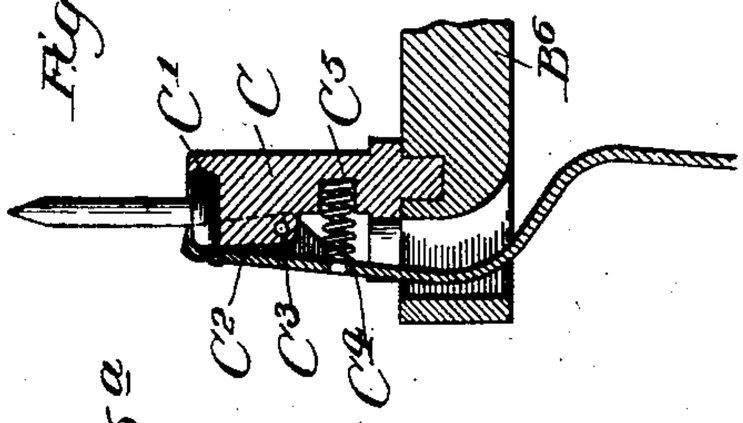



Fig. 15a.


Witnesses:
Geo. H. Chindahl
Coit Smith

Inventor:
Hubert C. Jones
By Luther L. Millin
Atty.

# UNITED STATES PATENT OFFICE.

HERBERT C. JONES, OF CHICAGO, ILLINOIS.

## UPHOLSTERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 702,962, dated June 24, 1902.

Application filed March 21, 1902. Serial No. 99,291. (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 securing together the materials to be upholstered.

In the embodiment herein shown of this invention an endless table is movably mounted upon a suitable supporting-frame. This endless table or apron is made up of cross-pieces, each bearing a series of button-holders for receiving and holding the tufting-buttons, which tufting-buttons are ordinarily arranged both in longitudinal and in transverse series upon the table. A drum and a roller rotatably mounted above said endless table carry a number of endless chain belts, one of said belts being arranged to occupy each of the spaces between the adjacent longitudinal rows of button-holders. The drum is located at a point nearer to the table than the roller, and as a consequence the lower side of the chain belts inclines downward and forward toward the table, the object of this arrangement being to compress the upholstering materials between the endless chain belts and the table as the materials are fed forward by the movement of the table. Tubes for conveying washers to the button-staples are arranged one over each longitudinal series of button-holders, and a series of spreading-wedges for clenching the button-staples is arranged near the front of the machine, one of said spreading-wedges being provided for each longitudinal series of button-holders excepting the two outside rows. For clenching these outside rows I provide a different means, consisting of a spring-actuated pawl adapted to engage and pull down one of the prongs of the button-staple and a clenching-wing adapted to bend over the other of said prongs. In clenching the side rows it is necessary to bend the prongs of the button-staple lengthwise of the upholstering instead of transversely. Therefore this different clenching means is employed to accomplish this result. Suitable means is also provided for supplying filling material, and a roller for supporting the backing or lining of the tufted fabric is rotatably supported above the table.

In the accompanying drawings, Figure 1 is a side elevation of an upholstering-machine embodying the features of my invention, a portion of the length of the bed of said machine being represented as broken away. Fig. 2 is a top plan view of this upholstering-machine, the rear end of the bed thereof being shown as broken away. Fig. 3 is a longitudinal vertical section through the machine on the plane of dotted line 3 3 of Fig. 2. Fig. 4 is an enlarged view of the compressing and clenching mechanism shown in the next preceding figure. Fig. 4ª is a face view of a portion of the clenching-roller. Fig. 5 is a longitudinal vertical section on dotted line 5 5 of Fig. 2, showing the clenching-roller in side elevation. This view illustrates the operation of the side clenchers. Fig. 5ª is a perspective view of one of the clenching-wings of the side clenchers detached from the clenching-roller, upon which latter it normally is pivotally mounted. Fig. 6 is a sectional view on dotted line 6 6 of Fig. 4. Fig. 7 is a transverse vertical sectional view through the bed of the machine, taken on dotted line 7 7 of Fig. 2. Fig. 8 is a view similar to the preceding one, taken on dotted line 8 8 of Fig. 5. Fig. 9 is a horizontal section taken on dotted line 9 9 of Fig. 7. Fig. 10 is a vertical central section through the lower end of one of the washer-feeding tubes, showing the spring for normally retaining the washers in said tube. Fig. 11 is an enlarged plan view of one of the clenching-wedges for the button-staples. Fig. 12 is a perspective view of the mechanism for opening the button-staples in the outside rows—to wit, the side clenchers. Fig. 13 is a plan view of the frame which supports the moving upholstering-bed. Fig. 14 is a perspective view of one of the washer-holding tubes. Fig. 15 is a transverse vertical central section through one of the button-holders, taken on a plane parallel with the line of advance of said button-holder. Fig. 15ª is a view illustrating the peculiar conformation of the jaws of the holder, which adapts said holder to re-

ceive either covered or metal buttons. Fig. 16 is a front elevation of the form of button-holder used to hold the side rows of buttons.

Like letters of reference indicate corresponding parts throughout the several views.

In the construction of this upholstering-machine I provide a supporting-frame A, comprising two pairs of forward legs A′ and $A^2$ and a pair of rear legs $A^3$. Two parallel I-beams $A^4$ are rigidly supported upon the legs A′, $A^2$, and $A^3$, the rear ends of said I-beams being chamfered off on their inner upper sides to guide between the beams the endless upholstering-table, to be later herein described. Over the supporting-legs A′ and $A^2$ each of said I-beams is provided with a series of antifriction-rollers $A^5$ for carrying the slats of the endless movable upholstering-table at the point where clenching-pressure is exerted upon them. $A^6$ represents a series of projections rigidly secured to the main frame A, their purpose being to engage with the rearward portions of the jaws of the button-holders in order to open said jaws and release the button-staples at a certain point in the operation of the mechanism.

A shaft B, rotatably mounted near the forward end of the supporting-frame A, carries a gear-wheel B′ and two sprocket-wheels $B^2$, all rigidly fixed to said shaft, and a similar shaft $B^3$ at the opposite end of said frame likewise carries two sprocket-wheels $B^4$ in line with the two sprocket-wheels $B^2$ on the shaft B. An endless chain belt $B^5$ runs over each of said alined sprocket-wheels $B^2$ and $B^4$ on the shafts B and $B^3$, respectively, and on the outer side of said endless chain belts are secured cross-pieces $B^6$, which collectively make up the surface of the endless upholstering-table. Upon the face of each of said cleats, near the forward edge thereof, is mounted a transverse series of button-holders, to be later described herein. The two holders at the opposite ends of each cleat are fixed in position; but the remaining holders are alternately fixed and movable. The movable holders are slidably mounted between the ways $B^7$, extending transversely across the cleats $B^6$. When rectangular tufting is to be made, all the button-holders are arranged in transverse, as well as in longitudinal, rows; but when diamond-shape tufting is desired the movable button-holders are slid in their ways $B^7$ to the rear edges of the cross-pieces $B^6$. The longitudinal rows remain intact; but the transverse rows are separated into two rows.

Individually the button-holders comprise a rigid stem C, hollowed out at the top to form a retaining-seat C′ for the head of the button-staple, and a movable jaw $C^2$, pivotally connected, by means of the rivet $C^3$, to said rigid stem. A coil-spring $C^4$ lies in a pocket $C^5$ in said stem and extends between said stem and the pivoted jaw $C^2$, the tendency of the spring being to hold the jaw closed upon the head of the button-staple. Rearward from its pivotal support the jaw assumes a curved form, extending downward through a suitable opening in the cross-piece upon which it is mounted, being adapted to engage the releasing device $A^6$ on the supporting-frame to open the button-holder and release the button at a certain point in the forward movement of the upholstering-table. The button-staple holder shown in Fig. 16 is similar to that shown in Fig. 15, save that the former is mounted upon a slidable plate, permitting it to be moved in the ways $B^7$ transversely of the cross-piece $B^6$ to form diamond tufting, as hereinbefore described.

The button-holders at the rear end of the movable table are covered and protected by a framework D, the bars D′ of said framework forming longitudinal channels through which the button-holders and the button-staples therein pass when the machine is in operation. This framework is hinged at $D^2$ to the supporting-frame A and serves to receive the filling material of cotton, hair, moss, &c., between its bars D′.

A drive-shaft E, rotatably mounted in the upper part of the supporting-frame A, is provided with the drive-pulley E′ and the gear-wheels $E^2$ and $E^3$, fixed to said shaft at opposite ends thereof. The gear-wheels $E^2$ and $E^3$ mesh with the idler-pinions $E^4$, the purpose of these pinions being merely to steady the action of the machine. The gear-wheel $E^2$ also meshes with and communicates motion to the gear-wheel B′ for the purpose of driving the endless upholstering-table hereinbefore described. Sprocket-wheels $E^5$ are fixed at intervals of the shaft intermediate its journal-bearings in the frame A, and these wheels carry sprocket-chains $E^6$, running over the alined sprockets $E^7$ on the rotatable shaft $E^8$. The shaft $E^8$ is also provided with the grooved rollers $E^9$, adapted to carry the endless cords $E^{10}$, driven by said rollers $E^9$ and running over and supported by the idler-sheaves $E^{11}$. One of these endless cords is provided for each side of the machine, their purpose being to hold the backing of ducking or burlap in proper position to be presented to the button-staples. A roller $E^{12}$, rotatably mounted in the free end of the pivoted link $E^{13}$, is held upward in contact with the peripheral face of the idler-sheave $E^{11}$ and the cord $E^{10}$ by means of the coil-spring $E^{14}$. The backing material is intended to pass between the idler-sheave $E^{11}$ and the yielding roller $E^{12}$.

To clench the outside longitudinal rows of button-staples, I provide the clencher-wheels F, two of which are fixed on said shaft E at points coinciding with the outer rows of button-holders on the endless upholstering-table. These wheels are of substantially the same diameter as the sprocket-wheels $E^5$ and are provided in their peripheral faces with a series of angular notches F′, one side of each of said notches being on a radial line. Within each of said notches a flat clencher-wing $F^2$

is mounted upon the pivotal bearing $F^3$, the free end of each of said clencher-wings being held, by means of the spring $F^4$, toward the center of the clencher-wheel F. Each wing is provided with the extension $F^5$, adapted to engage a fixed block $F^6$, rigid with the supporting-frame A, to cause said clencher-wing to be moved upon its pivotal support as the wheel F is rotated. The clencher-wings are adapted to bend forward one of the prongs of the button-staple, the other prong of said staple being dragged down by mechanism which is interposed in the path of said single prong as the button-staple is moved forward in the upholstering-machine. This last-mentioned mechanism consists of a block $F^7$, having a longitudinal groove $F^8$ therein. On one side of said groove a hooked pawl $F^9$ is pivoted, said pawl being held over said groove by means of a flat spring $F^{10}$. The button-staples of the outer row pass forward through said groove. The forward leg of the staple is not engaged by the pawl $F^9$, the latter being held from movement toward the groove by the contact of the second leg of the button-staple upon the base of the pawl $F^9$. As soon as the first leg has passed the pawl $F^9$ and the second one coincides with the opening in its side said spring $F^{10}$ throws the pawl over the groove, catching the rear leg of the staple in the opening of the pawl. The continued forward movement of the button-staple drags the rear leg down, clenching it against the fabric. The prongs of the button-staples are normally spread sufficiently to permit the pawl $F^9$ to enter between them.

The clenching means for the intermediate rows of button-staples comprises a series of spreading-wedges G, rigidly fixed to the cross-bar G′, mounted upon the supporting-frame A. Each of these spreading-wedges has at its forward end a pivoted guide $G^2$, capable of a lateral movement. This guide lies within the guide-channel $G^3$, through which the button-staples are moved forward to protect them from the filling material. These wedges are set to incline downward from point to rear and are thus adapted to gradually flatten the prongs of the button-staples as they advance through the machine. After leaving the clenching-wedges the button-staples, flattened out against their washers, pass under a series of rollers $G^4$, which complete the clenching process.

Washer-feeding tubes H are hinged at H′ near their upper ends to the rigid supports $H^2$, passing through the machine. The lower ends of the washer-feeding tubes are bifurcated, the ends of the button-staples held in the button-holders being adapted to pass through said bifurcations. The washers within the feeding-tubes are stopped at the lower ends of said tubes by the spring $H^3$ in each tube, holding the washer in such position that its central aperture is engaged by the point of the button-staple at a suitable point as the latter advances through the machine. The feeding-tube H is susceptible of being slightly raised at its lower end, but is held in normal position by the coil-spring $H^4$.

The upper end of each washer-feeding tube is somewhat enlarged in hopper form to receive washers from the rod $H^5$. This rod is pivoted to a fixed support upon the frame and is provided with a stop $H^6$ to limit the downward hinge movement. It may be raised into an upright position to be filled with washers, they being strung upon said rod. The finger $H^7$, extending upward from the washer-feeding tube, bears against the lower washer on the rod $H^5$ and prevents it from slipping into the hopper at the upper end of the tube. When the button-staple engages the washer, it tilts the tube slightly upon its pivot, withdraws the finger $H^7$, and permits a single washer to slip from the rod into said tube.

In operation button-staples are placed by hand in the button-holders of the endless upholstering-table. The facing material to be upholstered is then placed over the button-staples and said facing material pressed downward upon the staples, so that the latter penetrate the facing material at proper intervals. The framework D is then moved downward upon the upholstering-table to protect the upwardly-extending points of the button-staples, said staples lying within the longitudinal channels of said framework. Filling material in sufficient quantity is then packed between the bars of the framework, and the end of the ducking or burlap is passed through the machine and placed under the feeding-cords $E^{10}$. Washers are placed within the feeding-tubes H and a number of them strung upon the washer-holding rods $H^5$. Rotatory motion is now imparted to the shaft E, rotating the endless chain belts $E^6$, that run over the sprocket-wheels $E^5$ on said shaft, also moving forward the endless upholstering-table by reason of the gear B′ and chain $B^5$ connection between the shaft and said endless table. This movement of the table passes the upholstering materials beneath the series of chain belts $E^6$, pressing said upholstering materials between said belts and the upholstering-table, the antifriction-rollers $A^5$ in the upper faces of the I-beams $A^4$ carrying the pressure and relieving the friction between the table and said I-beams, which otherwise would be considerable. The button-staples are thus advanced through the channels of the framework D into the guide-channels $G^3$, passing into the bifurcated end of the washer-feeding tube H, where their points enter the central perforations of the washers, each button-staple picking up and drawing out a washer as it proceeds in its course. After leaving the washer-feeding tube the button-staple is directed by the pivoted guide $G^2$ against one of the clenching-wedges. The prongs of the button-staple are separated by the clenching-wedge, and as the staple moves forward the prongs are folded over sidewise

and flattened by the inclined under face of the wedge. At the rear of the clenching-wedge the prongs of the bent-over staples are further flattened by passing under the clenching-roller $G^4$, which presses them down against their washer and turns the points downward against the backing. After leaving the clenching-roller the button-staple is released from the button-holder, the downward extension of the jaw of the button-holder encountering the projection $C^6$ and opening the pivoted jaw of the button-holder.

Canvas, ducking, burlap, or any other suitable material may be used as a backing, leather, plush, or other material as a facing, and cotton, hair, moss, or fiber as a filling material.

The mechanism is adapted for operation either by hand or by power.

I claim as my invention—

1. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces is a plane surface inclined at an angle with the other; means for fixing the securing means to permanently fasten the upholstering materials together; and means for moving said upholstering-surfaces.

2. In an upholstering-machine, in combination, a supporting-frame; two movable upholstering-surfaces, one of which is a plane surface inclined at an angle with the other; means for engaging the securing means employed to fasten the upholstering materials together; and means for moving said upholstering-surfaces.

3. In an upholstering-machine, in combination, a supporting-frame; a table movably mounted on said supporting-frame; an upholstering-surface inclined at an angle with said table; means for fixing the securing means to permanently fasten the upholstering materials together; and means for moving said table.

4. In an upholstering-machine, in combination, a supporting-frame; a table movably mounted on said supporting-frame; an upholstering-surface inclined at an angle with said table and adapted to move in the same general direction with said table; means for fixing the securing means to permanently fasten the upholstering materials together; and means for moving said table and said upholstering-surface.

5. In an upholstering-machine, in combination, a supporting-frame; a table movably mounted on said supporting-frame; an upholstering-surface comprising a series of endless chain belts, said upholstering-surface being inclined at an angle with said table, to compress the upholstering materials between said belts and said table; means for engaging the securing means employed to fasten the upholstering materials together; and means for moving said table and said upholstering-surface.

6. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces is a plane surface inclined at an angle with the other; a spreading-wedge for engaging the securing means employed to fasten the upholstering materials together; and means for moving said upholstering-surfaces.

7. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces, one of which is a plane surface inclined at an angle with the other; a spreading-wedge adapted to clench the button-staples employed to fasten the upholstering materials together; and means for moving said upholstering-surfaces to compress the upholstering materials between them.

8. In an upholstering-machine, in combination, a supporting-frame; a table movably mounted on said supporting-frame; an upholstering-surface inclined at an angle with said table; button-staple holders carried by said table; means for clenching said button-staples; and means for moving said table.

9. In an upholstering-machine, in combination, a supporting-frame; an endless table rotatably mounted on said supporting-frame; an upholstering-surface inclined at an angle with said table; button-staple holders carried by said table; means for clenching said botton-staples; and means for moving said table and said upholstering-surface.

10. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted on said supporting-frame; means for fixing the securing means to permanently fasten the upholstering materials together; and means for rotating said table.

11. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted on said frame; means for compressing the upholstering materials upon said table; means for engaging the securing means employed to fasten the upholstering materials together; and means for rotating said endless table.

12. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted on said frame; a series of inclined chain belts rotatably mounted over said table for compressing the upholstering materials upon the table; means for engaging the securing means employed to fasten the upholstering materials together; and means for rotating said table and said chain belts.

13. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted on said frame; a series of inclined chain belts rotatably mounted over said table and adapted to compress the upholstering materials upon the table; means for presenting button-staples; means for clenching said button-staples to fasten the upholstering materials together;

and means for rotating said table and said chain belts.

14. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; a series of inclined chain belts rotatably mounted over said table; a longitudinal series of button-staple holders secured to said table; a spreading-wedge for the button-staples; and means for rotating the endless table and said inclined chain belts.

15. In an upholstering-machine, in combination, a supporting-frame; an endless table rotatably mounted on said supporting-frame; an upholstering-surface inclined at an angle with said table; button-staple holders carried by said table; a clenching-wedge for clenching said button-staples; a roller for flattening the spreading ends of said clenched button-staples; and means for moving said table and said upholstering-surface.

16. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon, said table being composed of transverse cleats; a button-staple holder for each cleat; a series of inclined chain belts rotatably mounted over said table; a series of spreading-wedges adapted to engage the button-staples employed to fasten the upholstering materials together; and means for rotating said table and said inclined chain belts.

17. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; button-staple holders for said upholstering-table; a series of inclined chain belts rotatably mounted over said table; a series of clenching-wedges for the button-staples secured to the supporting-frame; a series of washer-feeding tubes; and means for rotating said table and said inclined chain belts.

18. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; means for compressing the materials to be upholstered upon said table; means for presenting button-staples; means for presenting washers; means for clenching button-staples; and means for rotating said table.

19. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted on said frame; button-staple holders for said table; means for compressing the upholstering materials upon said table; means for clenching the button-staples; and means for releasing said button-staples from said holders at a certain point in the rotation of the upholstering-table.

20. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; button-staple holders for said upholstering-table; a series of inclined chain belts rotatably mounted over said table; a series of clenching-wedges for the button-staples secured to the supporting-frame, which wedges have pivoted points, each of which points carries a guide to direct the button-staple upon the point of the clenching-wedge; a series of washer-feeding tubes to supply washers to the button-staples; and means for rotating said table and said chain belts.

21. In an upholstering-machine, in combination, a supporting-frame; sprocket-wheels rotatably mounted on said frame; two endless chain belts adapted to run over said sprocket-wheels; transverse cleats supported by said endless chain belts, which cleats comprise an endless upholstering-table; a series of button-staple holders for each of said cleats; a series of inclined chain belts rotatably mounted over said upholstering-table; a series of clenching-wedges; a series of washer-feeding tubes; and means for rotating said endless upholstering-table and said inclined chain belts.

22. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; a plurality of longitudinal series of button-staple holders for said upholstering-table; a framework for the filling material, pivotally mounted over said upholstering-table; means for compressing the upholstering materials upon the upholstering-table; means for presenting washers to the button-staples; means for clenching said button-staples; and means for rotating said endless table.

23. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon, said table being composed of transverse cleats; a series of button-staple holders for each cleat, certain of said button-staple holders being secured to said cleats, and others being mounted in ways thereon and capable of being slid transversely of said cleat; means for compressing the upholstering materials upon said table; means for clenching the button-staples to fasten the upholstering materials together; and means for rotating said table.

24. In an upholstering-machine, in combination, means for compressing the materials to be upholstered; a series of button-staple holders; a pivotally-mounted washer-feeding tube for presenting washers to the button-staples; a hinged rod for carrying a supply of washers, which rod terminates near the upper end of said tube; and a clenching-wedge for spreading the prongs of the button-staples.

25. In an upholstering-machine, in combination, a supporting-frame; an endless upholstering-table rotatably mounted thereon; button-staple holders for said upholstering-table; a series of inclined chain belts rotatably mounted over said table; an endless cord at each side of the upholstering-table for holding the backing material; a series of clenching-wedges for the button-staples secured to

the supporting-frame; a series of washer-feeding tubes; and means for rotating said table and said inclined chain belts.

26. In a holder for button-staples, in combination, a stem having a pocket at its upper end; a jaw pivoted on said stem; and a spring for holding said jaw in a closed position, said jaw extending downward from said button-staple into a position to be engaged by a fixed projection when the button-staple reaches a certain point in its travel.

27. In a feeding device for upholstering-washers, in combination, a curved tube for the washers, having a bifurcated lower end; means for oscillating said tube; a flat spring upon one side of said tube, extending into said bifurcation and adapted to impinge upon the lower edge of the lowest washer in the tube, to prevent the accidental escape of said washer; an enlarged upper end for said tube; a rod for holding a series of washers; a pivotal support for said tube near the upper end thereof; and a finger extending upwardly from the upper end of said tube and adapted to engage one of the said series of washers to normally hold said washers from entering said tube but to permit them to enter the tube one at a time when said tube is oscillated upon its pivotal support.

28. A clenching device for button-staples, comprising a rotatable wheel having clenching-wings pivoted thereon; an integral extension at the side of each of said wings; a spring for holding the free end of each of said wings inward toward the center of said wheel; a fixed projection for engaging the free end of each of said wings and moving them outward against the action of said springs as the wheel is rotated; and a spring-actuated hooked pawl for engaging and dragging downward one leg of the button-staple.

29. A clenching-wedge for button-staples, having a pivoted point and a guide fixed on said point for directing the prongs of the button-staples against the point of the clenching-wedge.

30. A clenching-wedge for button-staples, having a flat rearwardly-inclined under face, a pivoted point and a guide fixed on said point adapted to direct the prongs of the button-staple against the point of the clenching-wedge.

31. A clenching-wedge for button-staples, having a flat rearwardly-inclined lower face, a pivoted point and a guide fixed on said point adapted to direct the prongs of the button-staple against the point of the clenching-wedge, which guide projects forward from said point and is flaring to receive the button-staple.

32. In a clenching device for button-staples, in combination, means for holding and for advancing the button-staple; a framework having a guide-channel through which the button-staples are advanced; a clenching-wedge having a pivoted point; and a guide fixed on said point, which guide lies within said channel and is adapted to move laterally thereof to receive the button-staple and to present it to the point of the clenching-wedge.

33. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and holding mechanism for the means for securing together the materials to be upholstered.

34. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and 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.

35. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and holding mechanism for the means for securing together the materials to be upholstered, which holding mechanism is secured to one of said upholstering-surfaces.

36. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and button-staple holders.

37. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and button-staple holders movable in the direction of travel of the upholstering materials.

38. In an upholstering-machine, in combination, a supporting-frame; two upholstering-surfaces adapted to move in the same direction, one of which surfaces comprises a series of endless belts; means for moving said upholstering-surfaces; and button-staple holders secured to one of said upholstering-surfaces.

HERBERT C. JONES.

Witnesses:
L. L. MILLER,
GEO. L. CHINDAHL.