

No. 644,426.

Patented Feb. 27, 1900.

J. L. HEFFNER.  
UPHOLSTERING APPARATUS.

(Application filed Oct. 5, 1898.)

(No Model.)

Fig. 1.

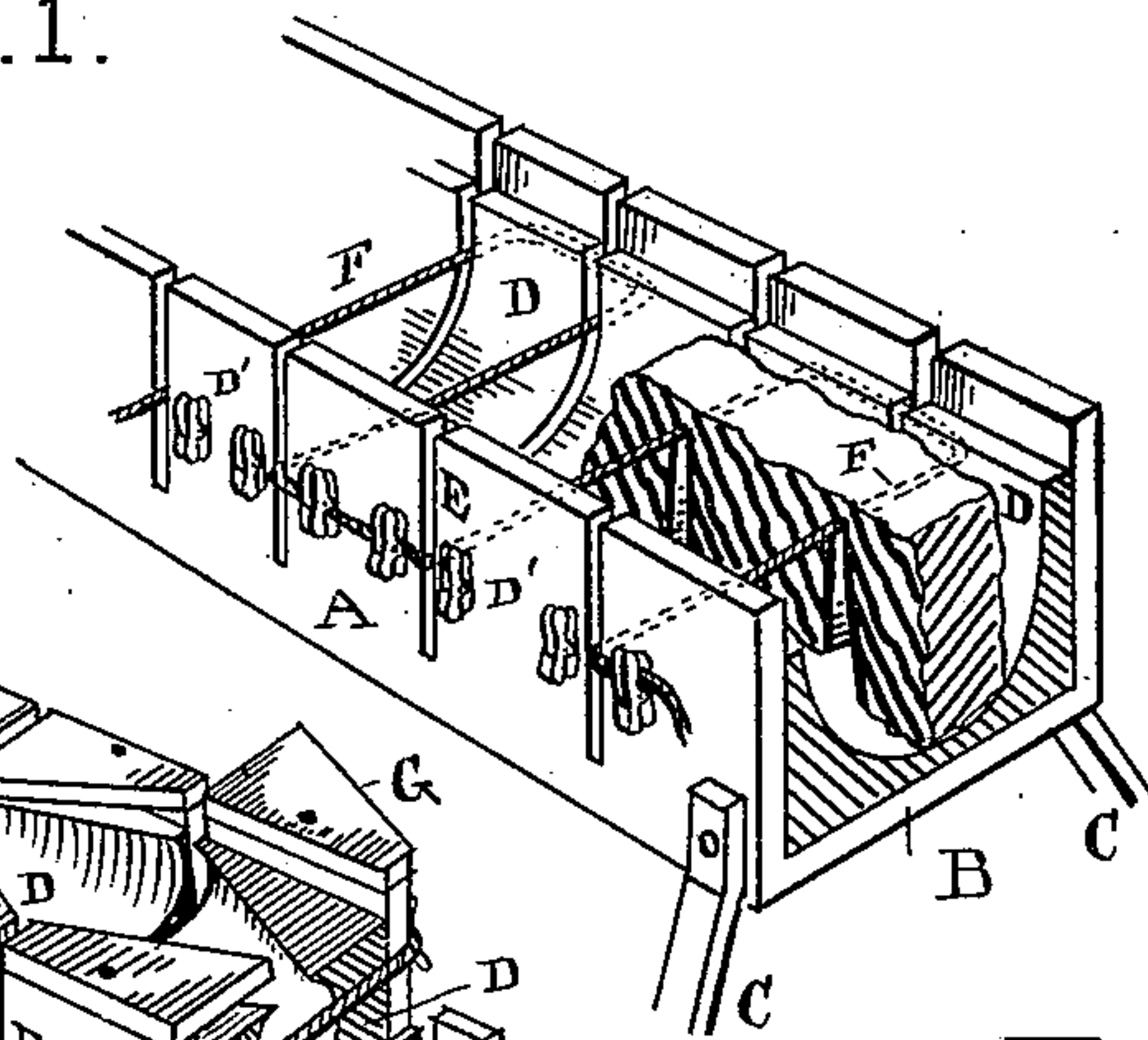


Fig. 2.

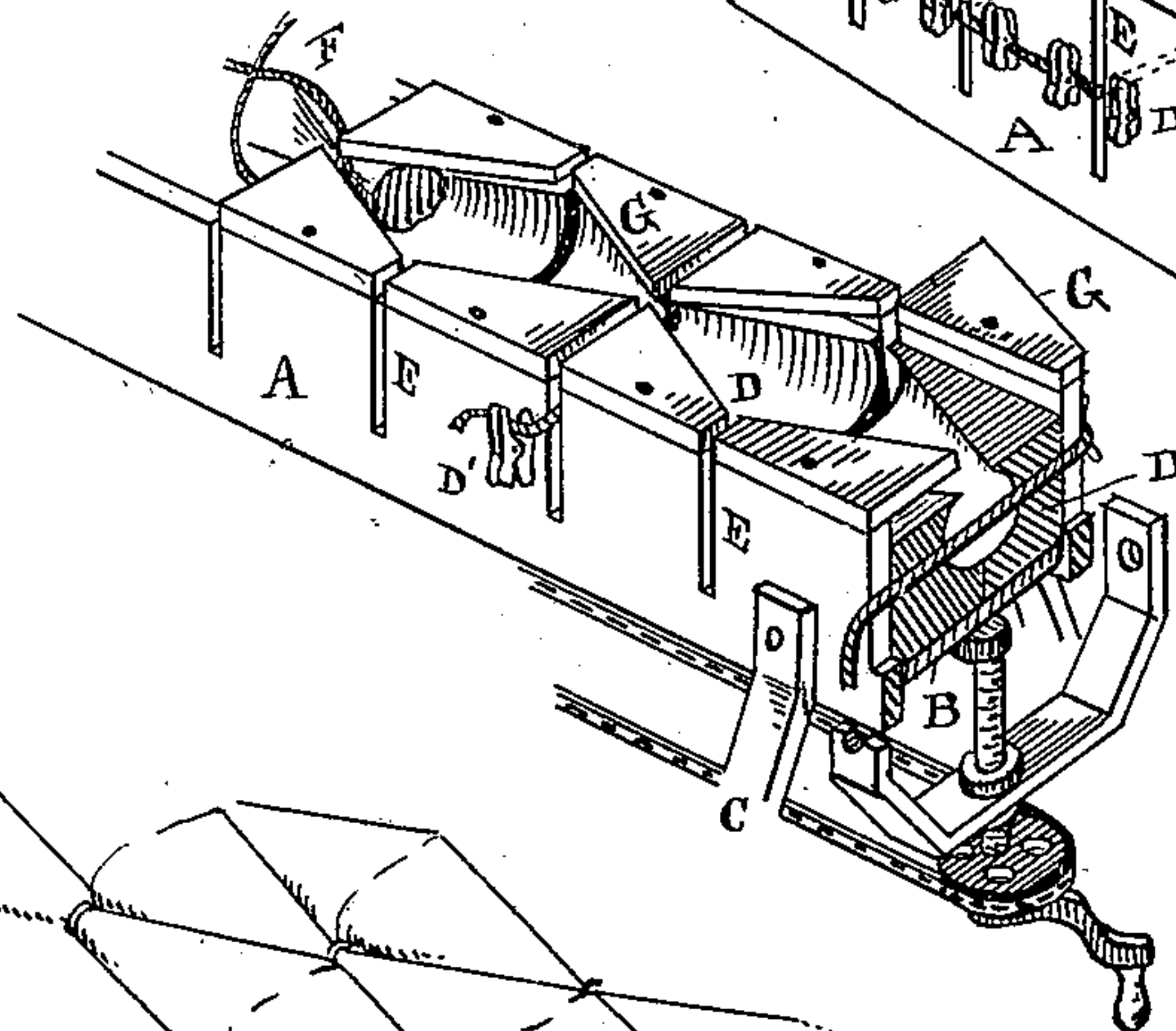


Fig. 2<sup>a</sup>.

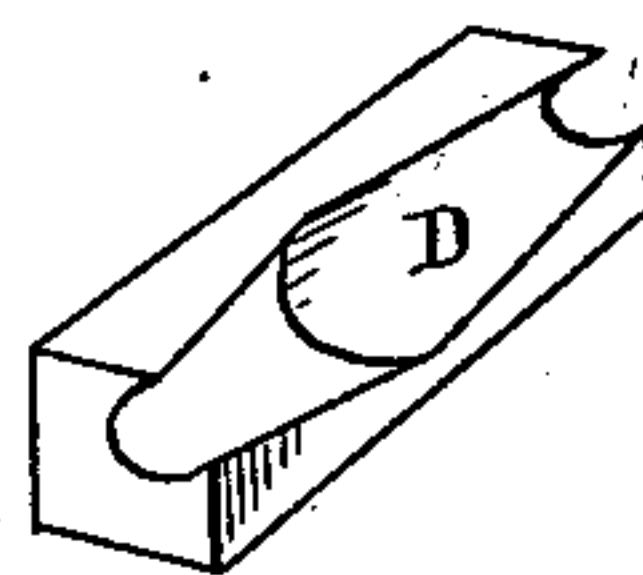


Fig. 3.

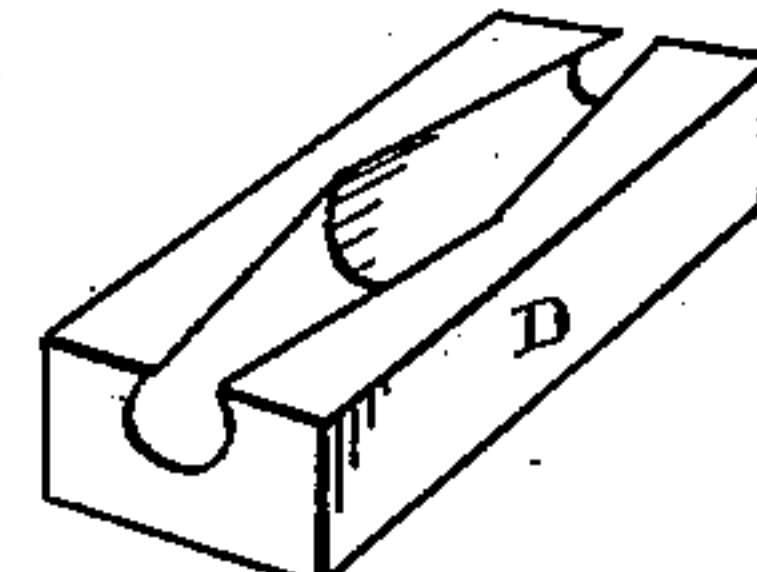
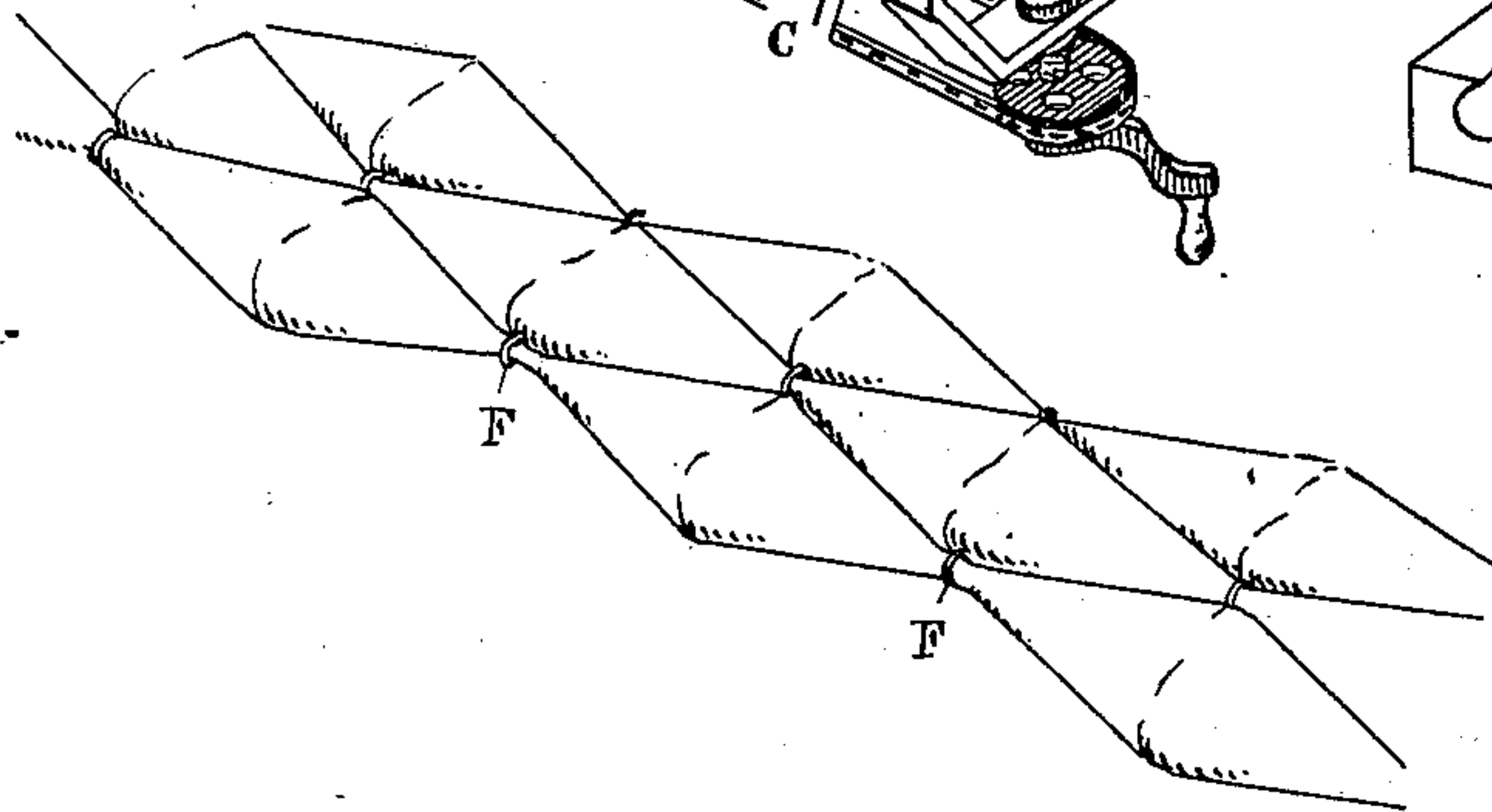


Fig. 2<sup>b</sup>.

Fig. 4.

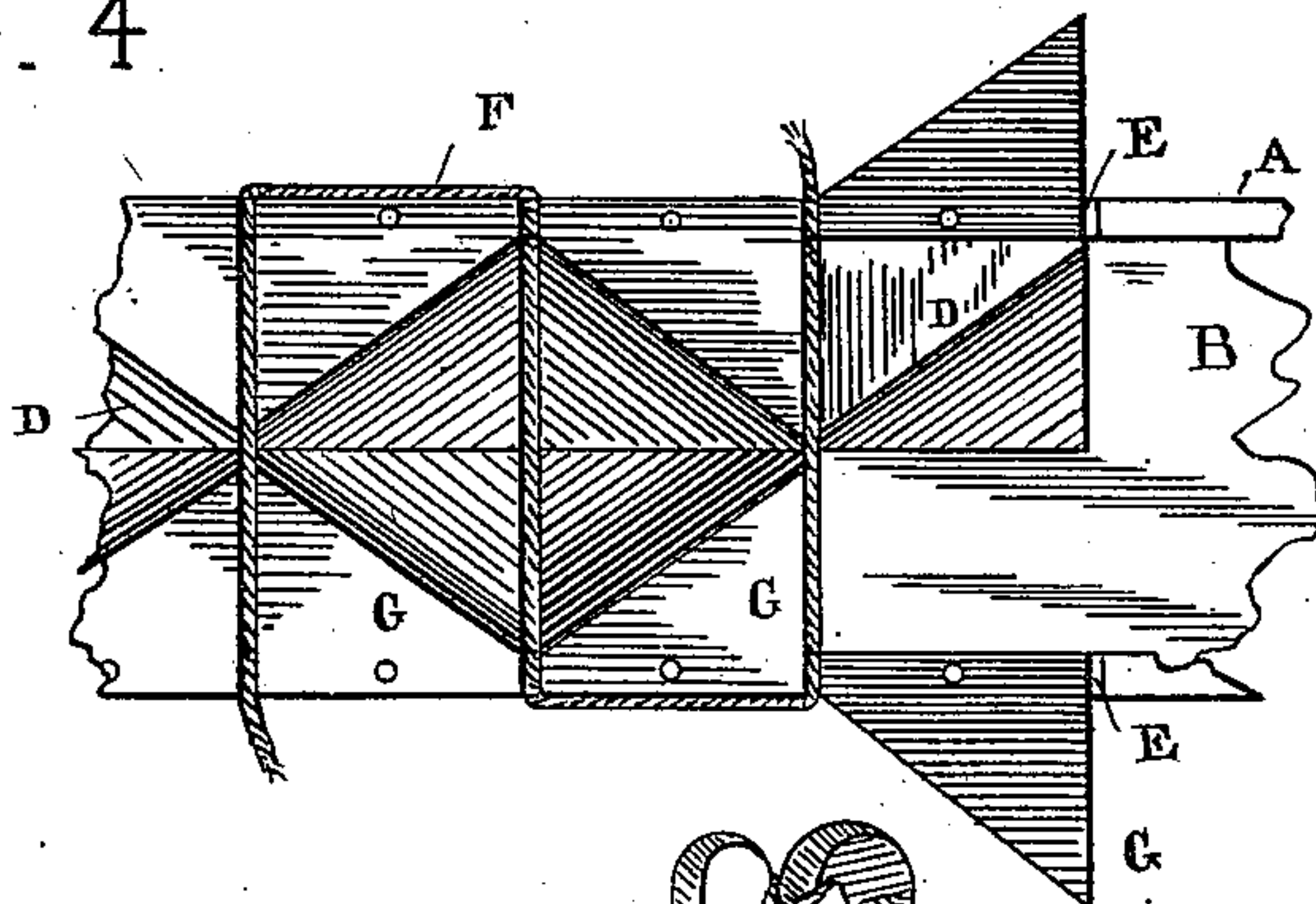


Fig. 5.

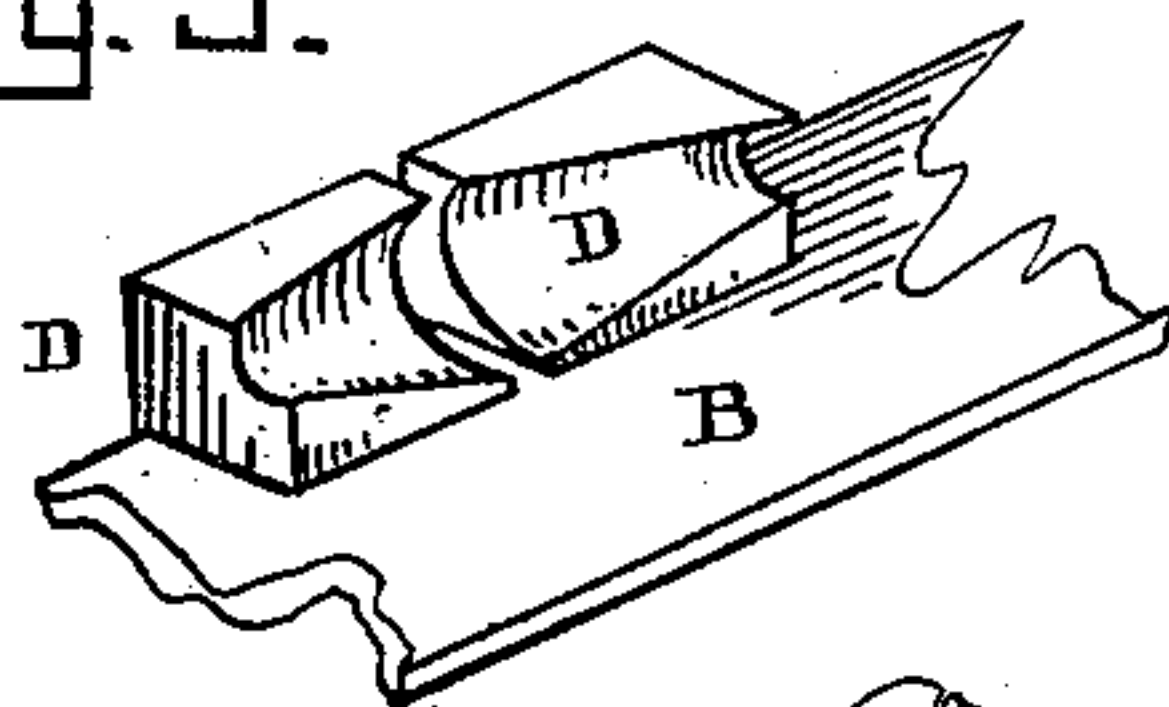


Fig. 6.

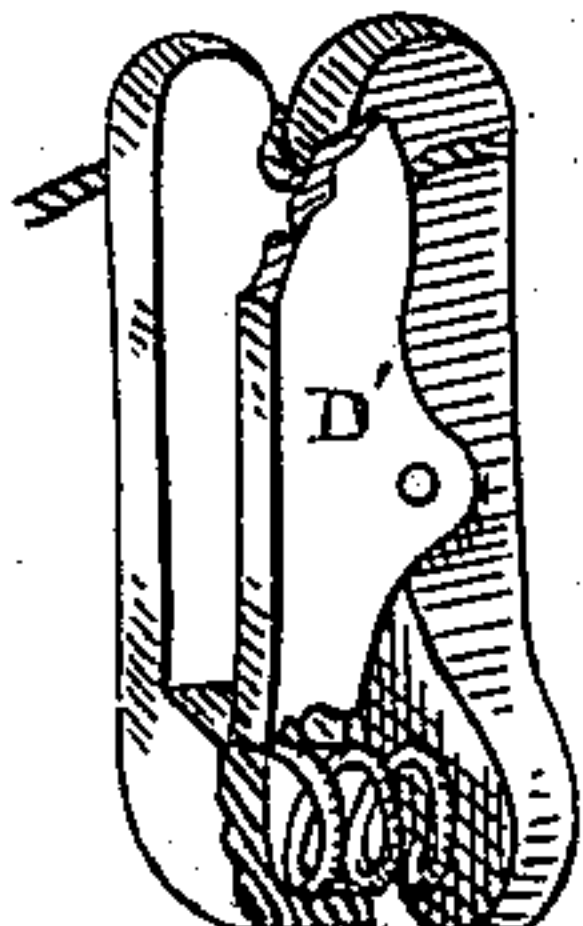


Fig. 7.



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# UNITED STATES PATENT OFFICE.

JOHN L. HEFFNER, OF PEORIA, ILLINOIS.

## UPHOLSTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 644,426, dated February 27, 1900.

Application filed October 5, 1898. Serial No. 692,685. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. HEFFNER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Upholstering Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to upholstering apparatus.

The object of my invention is to simplify upholstering-machines and to provide a device that can be cheaply made, easily manipulated, will be effective in its work, and accomplish much more than others of its class are capable of doing with as little trouble and expense.

In the accompanying drawings, Figure 1 is a perspective view of an upholstering device for making the biscuit form of tufting. Fig. 2 is a perspective view of a modified form of the machine, showing the manner of making the familiar diamond tufting. Fig. 2<sup>a</sup> is a perspective view of a shaping-block. Fig. 2<sup>b</sup> is also a view of a shaping-block. Fig. 3 shows diamond-tufted padding as made by my machine. Fig. 4 is a plan view of the form of device shown in Fig. 2. Fig. 5 is a perspective view of a portion of the bottom of the tufting-machine shown in Figs. 2 and 4 with shaping-blocks thereon. Fig. 6 is a perspective view of a clip or fastening for the binding material or tying medium. Fig. 7 shows a portion of the biscuit form of tufting made in either of the forms of the machine shown.

The apparatus is composed of the sides A, slotted at E, the series of slots on one side being opposite those on the other, the bottom B, legs C, and the usual form of shaping-blocks D, the latter being either fixed to the bottom or permitted to lie loosely thereon. The new features which I embody are, first, the cord, string, or wire F, stretched from side to side of the body or former within the slots E mentioned, and, secondly, the use of some means for forming diamond-shaped tufting, all of which will be described at some length hereinafter.

Although the making of diamond tufting is not new, I consider it new to make such tuft-

ing with a machine constructed as I show it, as well as the particular form of blocks shown.

A spring-clip D', similar to that shown in Fig. 6, is secured at each side of the former adjacent to each slot E, and a cord F or its equivalent is stretched across the machine from side to side within each pair of slots, as shown, and is held tightly stretched in that position by the said clips. In order to make the machine as convenient as possible, I provide a clip at each side of the several slots; but it is evident that only one need be used, or other means of holding the cords may be employed, since my idea is to provide a cord, wire, or equivalent for upholstering-machines which will take the place of the partitions heretofore employed. The cord may be of one continuous length placed in zigzag manner through the several pairs of slots, as shown, or may be used in various short lengths, but held in either case by the binding devices. The tufting material, as shown in part section in Fig. 1, is laid upon the tightened cords, is forced down into each space, and treated, as in ordinary practice, with burlap or its equivalent as a body, the cords being then released from their fastenings and tied as usual. When using the cord in one continuous length, it is severed between the fastenings before being tied. The continuous length is employed to facilitate the work of placing the machine in condition for work. The form of tufting made by the machine so arranged is shown in Fig. 7. Fig. 2 shows the same machine, except for the arrangement of the shaping-blocks D, which are triangular in form and have a conical groove in one of the upper corners of each and so arranged that when four of the blocks are placed together in the former or mold a diamond-shaped recess is created. The ends of the blocks are separated slightly when placed in position within the said mold, so as to leave a passage in line with each pair of slots for the tying-cord. Fig. 4 shows the said cord run through each slot, as shown in Fig. 1; but in this case the diamond form of block must be replaced by the form used for biscuit tufting.

A series of blocks G are pivotally secured to the top edges of the sides A above the series of shaping-blocks and project beyond the tops thereof. The tufting material is pushed



under these and is more easily held in place. In this form of mold it will be observed that the same number of slots are shown as for Fig. 1; but only such slots as are in line with the junction of the diamonds are employed. The other slots are used only when the blocks G are swung out of position and the diamond-tufting blocks are replaced by those used in Fig. 1, thus admitting of making the biscuit tufting in this form of device also. It is not necessary to have the shaping-blocks separated, except at the ends where the tying is done, and therefore said blocks may be made as shown in Fig. 2<sup>a</sup> or Fig. 2<sup>b</sup>—that is, either with the half-diamond or a solid block showing the entire diamond-shaped groove—thus accomplishing the object sought with less parts. The diamond tufting is shown in Fig. 3. The advantage of being able to make diamond tufting with this machine will be appreciated.

I show also in Fig. 2 an adjustable bottom, which aids materially in making the various kinds of padding and is a valuable adjunct, since the depth of the mold may be changed at will. This, however, is not new, except in combination with my improved mechanism described.

By having the cords or other tying medium held so as to permit the tufting to be done upon them the partitions or other devices ordinarily used are dispensed with, thus simplifying construction and operation. The advantages of my method over the old will be likewise appreciated; but in the use of the diamond form as arranged in Fig. 2 it is not necessary to use the spring-clips unless desired, because the rising taper of the grooves in the blocks at the apex of the diamond act as partitions and it is only necessary to lay the tying medium within the slots. Then after placing the material in the mold the strings are raised and tied about the necks of the adjoining diamonds in the manner indicated in the figure named.

Various changes may be made in the construction of the device without departing from the spirit of my invention. The swinging blocks G are not essential in making the tufting, but are aids thereto.

The clips may be adjustable vertically, whereby the cords can be fixed at any height to suit the demand. It is evident that holes in the sides of the former would answer as well as the slots E, and the sides would be stiffer and stand more strain when so constructed.

I have shown and referred to the adjustable

bottom in connection with my upholstering-machine; but I wish it understood that I may or may not use that feature.

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

1. In an upholstering apparatus, a mold or former in which to form tufting, openings in the sides for the passage of the tying medium stretched across the former and fastening devices for holding such tying medium for the purposes set forth.

2. In an upholstering apparatus comprising a mold or former, openings in the sides for the passage of the tying medium stretched across the former, fastening devices for holding the said tying medium and shaping-blocks within the former substantially as described and for the purposes set forth.

3. In an upholstering apparatus comprising a mold or former, openings in the sides for the passage of the tying medium stretched across the former, fastening devices for holding the said tying medium, shaping-blocks within the former, and swinging blocks above the shaping-blocks for the purposes set forth and described.

4. In an upholstering apparatus, a mold or former in which to form tufting, openings in the sides, for the passage of the tying medium stretched across the former, and fastening devices secured near the openings for the purposes set forth in combination with an adjustable bottom for changing the depth of the mold substantially as described and shown.

5. For use in an upholstering-machine a shaping-block having a conical opening cut in each end thereof the largest ends of such openings coming together within the block, such double-coned cavity forming a depression in the block wherein to form tufts substantially as set forth.

6. In an upholstering-machine, the combination of the former consisting of the sides A and bottom B, slots or openings in the sides thereof, tying medium within the openings, fastening devices for grasping the said tying medium, suitable forming-blocks within the mold, pivotal blocks above the forming-blocks adapted to swing as set forth and an adjustable bottom for changing the depth of the mold substantially as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN L. HIEFFNER.

Witnesses:

J. H. BLUSCH,

CHARLES J. WOLFE.