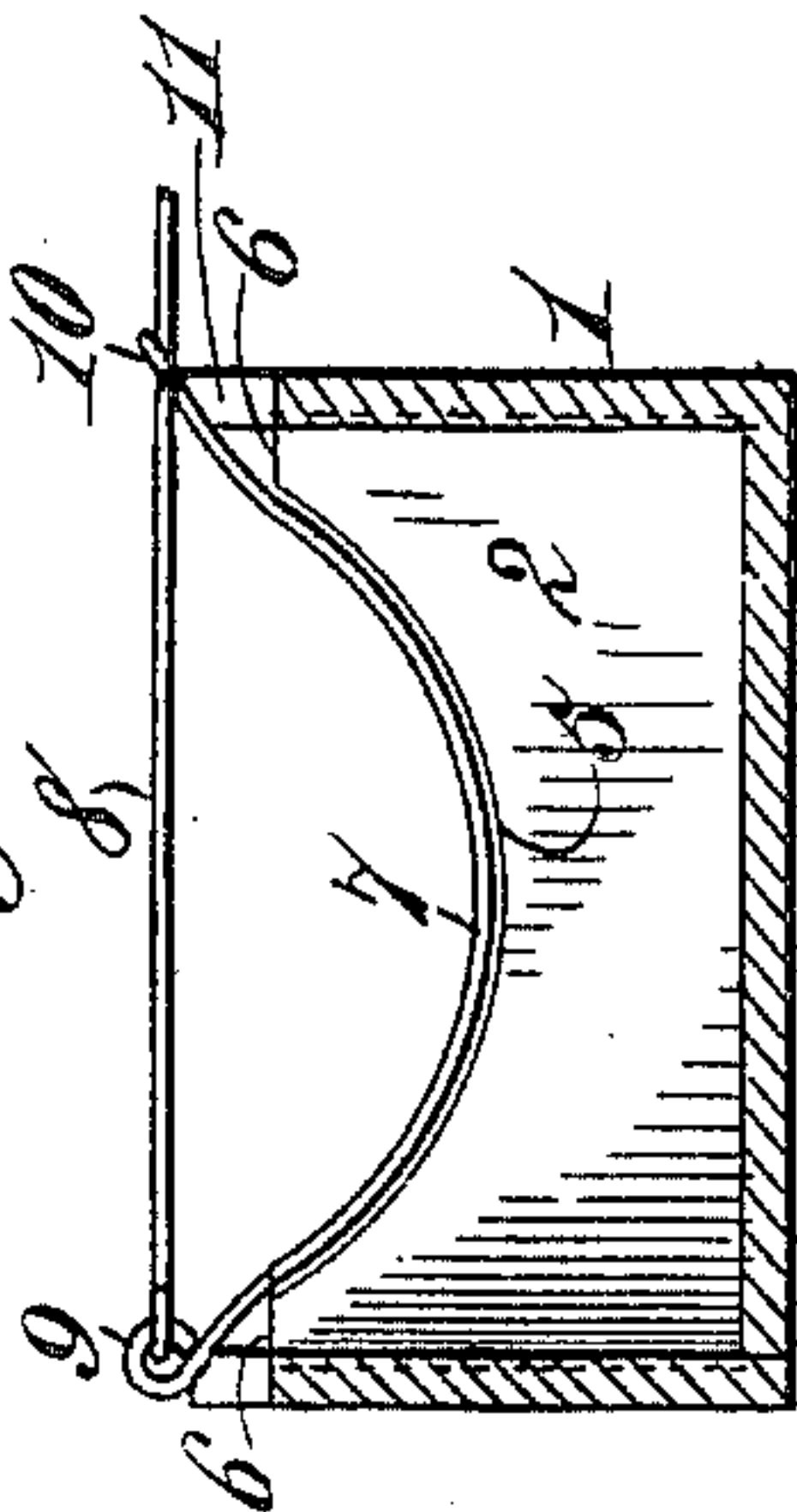
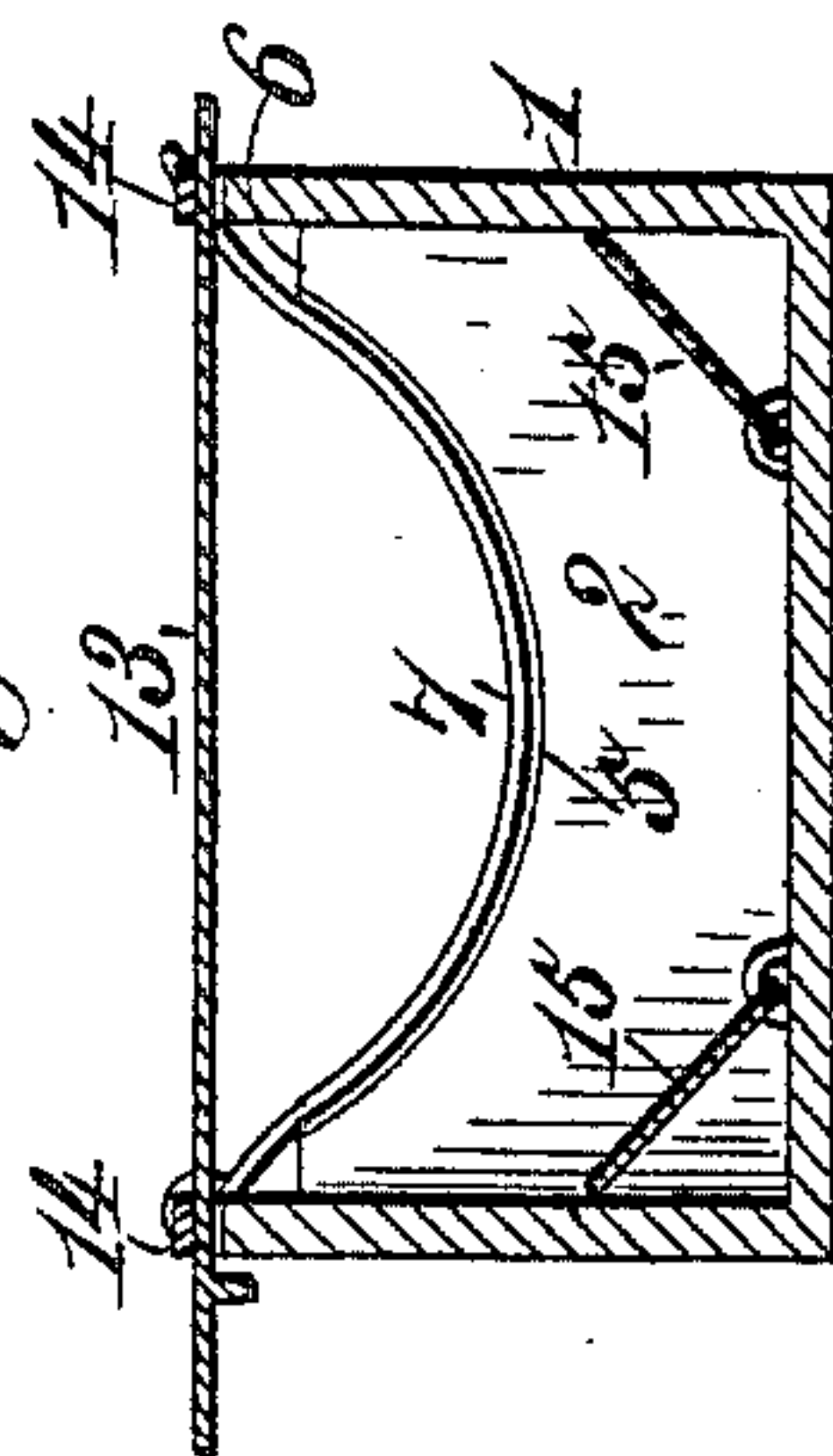


2 Sheets—Sheet 1.

No. 599,240.

Patented Feb. 15, 1898.



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(No Model.)

2 Sheets—Sheet 2.

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UPHOLSTERING APPARATUS.

No. 599,240.

Patented Feb. 15, 1898.

Fig. 6.

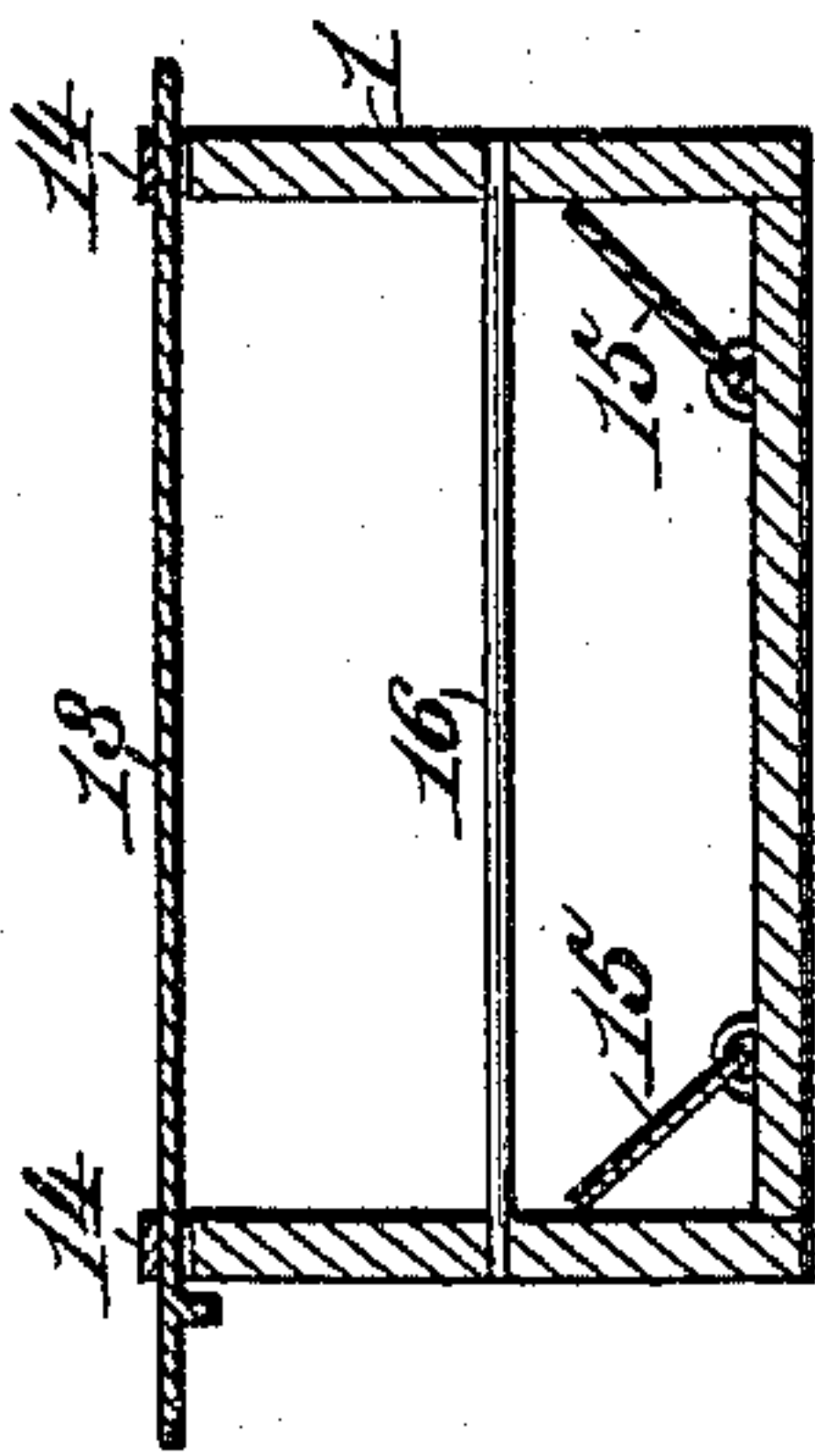


Fig. 5.

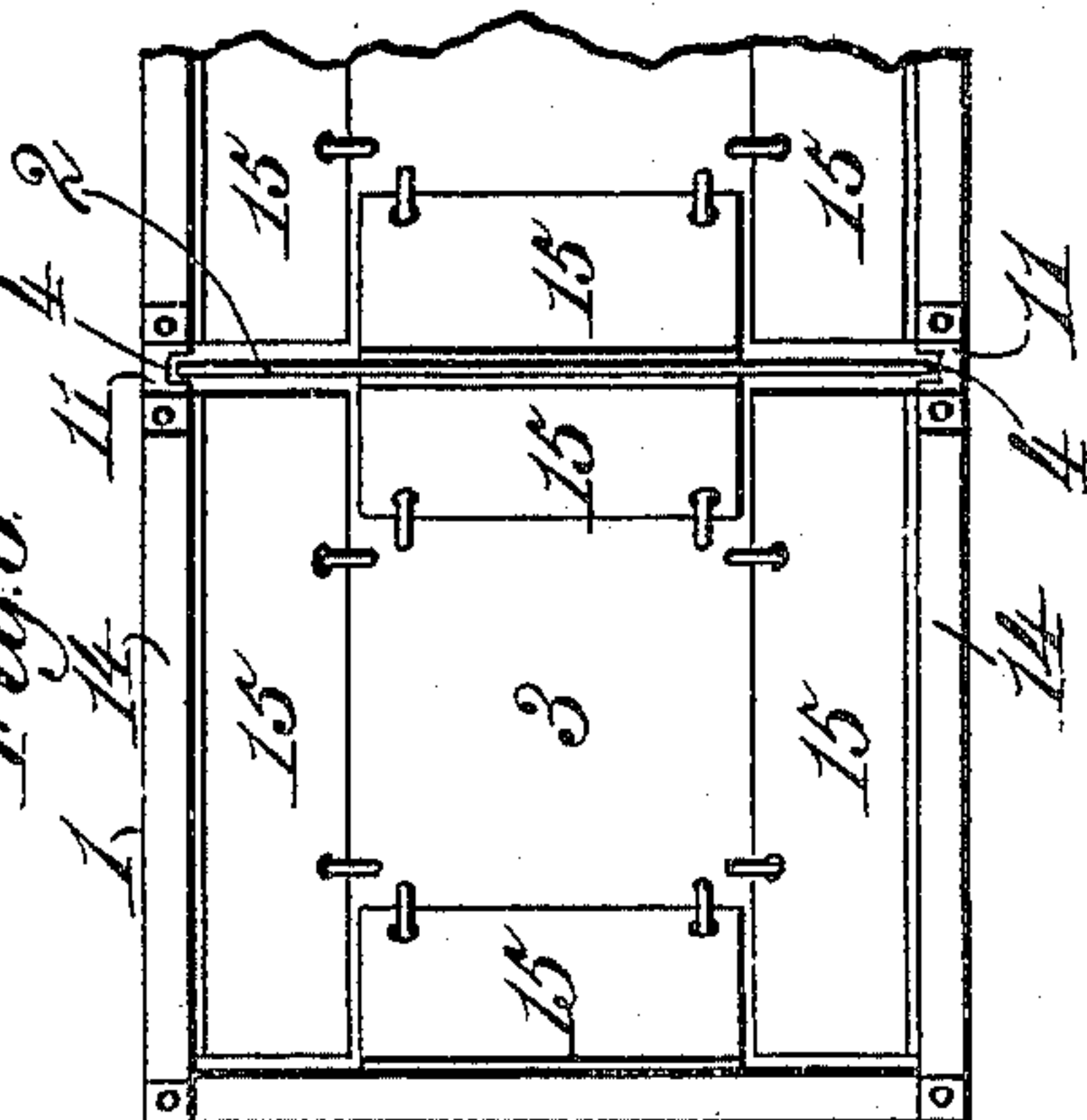
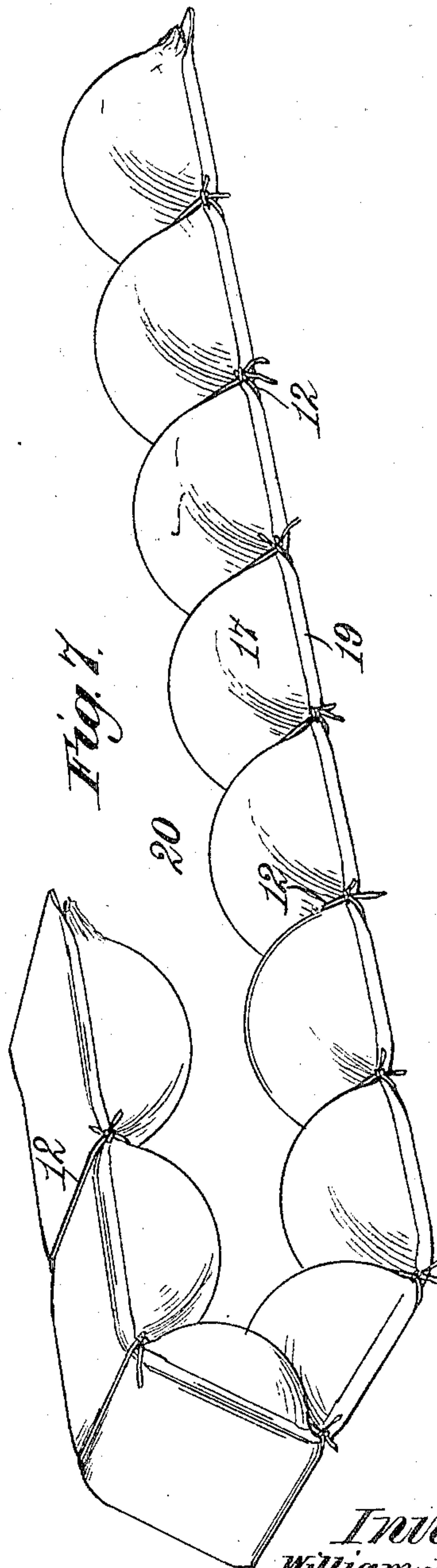


Fig. 7.



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UNITED STATES PATENT OFFICE.

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UPHOLSTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 599,240, dated February 15, 1898.

Application filed November 30, 1897. Serial No. 660,284. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. KELLY, THOMAS F. KELLY, PETER H. KELLY, and JOSEPH A. KELLY, citizens of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented new and useful Improvements in Upholstering Apparatus, of which the following is a specification.

10 This invention relates to upholstery apparatus for use in the production of a continuously-tufted cushion, pad, or cushion-section that can be readily applied to a variety of upholstery purposes; and the invention has for its object to simplify and facilitate the stuffing, molding, and tufting of cushions, or cushion-sections for couches, carriage seats and backs, chairs, and other articles of furniture.

20 Our invention consists in features of construction and novel combinations of parts in upholstery apparatus, as hereinafter described and claimed.

25 In the annexed drawings, illustrating the invention, Figure 1 represents one form of our improved upholstery apparatus in plan or top view. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse section on the line 3 3 of Fig. 2. Fig. 4 is a vertical transverse section on the line 4 4 of Fig. 2. Fig. 5 is a detail view of one of the mold-compartments. Fig. 6 illustrates a modification. Fig. 7 represents a tufted cushion-section ready to be applied to an article of furniture.

35 By referring to the drawings it will be seen that the mold or former 1 is divided by vertical partitions 2 into a series of tufting-compartments 3, which may be of equal or varying sizes, as preferred. The mold and its tufting-compartments may have any dimensions and any shape suited to the size and desired conformation of the cushion or part of a cushion to be made. While the sides and 45 bottom of the mold are most conveniently made from wood, it may be preferable to make the vertical partitions 2 from metal plates that can be removably engaged in grooves 4 provided for that purpose in the sides of the mold. The height of the partitions 2 separating the compartments 3 will be less than

the depth of the mold, so that there will be sufficient space above said partitions for the intervening portions of upholstering material when the mold is covered or closed.

55 The upper edge of each vertical partition 2 is partly cut away on a curved line to form a concave 5 between two remaining straight portions 6 of the top edge. A partition made in this shape allows more material to be placed in the center of the tuft than would be possible where the partition is wholly straight along its top and at the same time enables us to form a tufted cushion with greater ease and more quickly than by using 65 a partition having an entirely straight upper edge. The straight portions 6 at the top edge of the partition will allow the tuft to be thin at those points, so that the buttons can be put in there without any strain on them.

70 As a means for holding the parts of a continuously-tufted cushion in place until the buttons can be attached we may employ clasps that are each composed of a curved wire 7 and a straight wire 8, about as shown. At 75 one end these wires 7 and 8 are looped together to form a jointed connection 9, and at its other end the curved wire 7 is formed with a hook 10 to engage and fasten the straight wire. The curvature of the wire 7 80 corresponds with the curved edge 5 of the partitions 2 and is adapted to rest thereon while the cushion material is being packed into the tufting-compartments and across said wire and partition. By securing these 85 clasps around the cushion pad or section between the continuously-formed tufts the cushion or section will be held in shape until laid upon and secured to a couch or other article to be upholstered, and then the clasps can be 90 easily removed by disengaging the two wires 7 and 8 at the hook 10, so that the clasp can be drawn out, leaving the tufted pad in its molded shape, the same as if it had been sewed. Thus the tufted pad or cushion is 95 made without sewing and in such manner that it will not lose its shape while being adjusted to its required position in the upholstery of an article of furniture.

100 The top of the mold 1 is preferably provided on each side, at opposite ends of the partitions 2, with slots or notches 11, that serve to hold

in place the curved wire 7 of each clasp while the mold is being packed.

Instead of employing wire clasps to retain the shape of the tufted cushion a string 12 may be laid crosswise the mold in each pair of slots or notches 11 and be tied permanently around the cushion-pad after it has been properly molded or tufted.

The mold or former 1 is provided with a cover composed of separate sliding sections 13, spaced apart to form an independent lid or covering for each mold-compartment. On the top of the mold, at opposite sides, there are provided guides 14, in which these cover-sections slide. The covers or cover-sections 13 hold the tufted cushion material in place and compress the same more or less while the wire clasps are being adjusted or while the strings 12 are being tied, as the case may be.

In order to give a somewhat rounded or beveled contour to the tufts in certain kinds of work, there may be placed in the bottom of each tuft-compartment two or more metal strips 15, which are hinged to the bottom of said compartment near its sides and also near its ends, if desired. These hinged metal strips or plates 15 may be inclined against the sides of the mold-compartment, so as to make the bottoms of said compartments somewhat concaved and thereby impart a corresponding shape to the tufts. If it should not be desired to use these hinged strips or plates at all times, they may be turned over flat onto the bottom of the compartment. Obviously these hinged metal plates 15 can be arranged at the ends of each compartment as well as at the sides.

Instead of providing partitions between the tufting-compartment 3 it would be practicable to arrange a rod 16 in a transverse position and at a suitable height to provide a support for the cushion material between the tufts to be formed continuously therein; but the partitions 2 are preferable as providing more distinct divisions between the tufts.

As was before said, the mold and its compartments may have any shape suited to the character and requirements of the cushions or cushion-sections to be made, and, if desired, the configuration of the mold could be conformed to the curvatures of the couch or other article of furniture to be upholstered, so that where the cushion is bent around the article the tufts would not spread or open out in an unseemly manner.

We have shown the mold or former as having only a single series of tufting-compartments, whereby it is adapted to the production of a lengthened cushion section or pad composed of a single series of tufts, several of these cushion-sections being ordinarily employed in the work of upholstering such an article of furniture as a couch, for instance. It will be understood, however, that one mold-frame may contain several series of tufting-compartments, so as to permit in one

operation the giving of any desired width to the cushion, according to the purpose for which it may be intended. Obviously the several compartments in the mold or former may be of equal or varying dimensions or of any desired shape, according to the requirements of the upholstering work.

In using this apparatus to make a continuously-tufted cushion or cushion-section the covers 13 will be removed and the clasp-wires 7 or strings 12 will be laid across in the slots or notches 11 of the mold-frame. A sufficient quantity of cotton-batting or other suitable material 17 will then be laid along in the consecutive mold-compartments 3 and across the tops of the partitions to completely line the bottoms and sides of these compartments, into which the batting may be pressed with the fingers or otherwise. The compartments of the mold are next supplied with due quantities of curled hair, moss, jute, or other filling material 18, properly pressed into place, and this is then covered with burlap or other suitable backing 19, as shown. The covers 13 are next slid into place to compress the material in each tufting-compartment and to hold the same firmly while the clasp-wires 7 and 8 are being hooked together or while the strings 12 are being tied. A cushion of any softness or hardness can be easily produced, according to the degree of compactness with which the material is placed in the mold-compartments. After the clasp-wires 7 and 8 have been hooked together or the strings 12 tied the mold-covers 13 will be removed, and then the tufted cushion or cushion-section 20 can be lifted out of the mold without losing its molded shape. The tufting-buttons may now be attached and the wire clasps removed, or if strings 12 have been used they may remain permanently. A series of these tufted cushions or cushion-sections may be placed side by side in the upholstering of a couch or other article of furniture, and, if desired, they may be provided with an outer covering of suitable material secured in place by any ordinary and well-known means.

What we claim as our invention is—

1. In an upholstering apparatus, a mold or former comprising a series of tufting-compartments separated by partitions of less height than the depth of the mold and each having a curved top edge, in combination with separate covers for the several mold-compartments, substantially as described.

2. In an upholstering apparatus, a mold or former comprising a series of tufting-compartments separated by partitions that each have a top edge which is partly straight and partly concaved, in combination with separate spaced-apart covers for the several mold-compartments, substantially as described.

3. In an upholstering apparatus, the combination with a mold or former comprising a series of tufting-compartments separated by partitions of less height than the depth of the mold, of separate and spaced-apart sliding

covers for the several tufting-compartments, and guides for said sliding covers, substantially as described.

4. In an upholstering apparatus, the combination with a mold or former comprising a series of tufting-compartments separated by partitions of less height than the depth of the mold and each having a concaved top edge, of separate spaced-apart covers for said compartments, and clasps adapted to embrace the upholstery material at points above said partitions and between the said covers, substantially as described.

5. In an upholstering apparatus, the combination with a mold or former comprising a series of tufting-compartments separated by partitions having concaved top edges, of spaced-apart covers for said compartments, and clasps that are each composed of a curved wire and a straight wire adapted to embrace the upholstery material at points above the said partitions and between the spaced-apart covers, substantially as described.

6. In an upholstering apparatus, the combination with a mold or former comprising a

series of tufting-compartments, of hinged plates arranged in the bottoms of each of said compartments adjacent to its walls to incline against said walls, and covers for the said tufting-compartments, substantially as described.

7. In an upholstering apparatus, the combination with a mold or former comprising a series of tufting-compartments, of plates adj- justably arranged in the bottoms of said compartments adjacent to its walls and adapted to be inclined against said walls to give a concave form to the bottom of said compartments, and separate spaced-apart covers for the tufting-compartments, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM J. KELLY.
THOMAS F. KELLY.
PETER H. KELLY.
JOSEPH A. KELLY.

Witnesses:

JAMES E. BROWN,
JOHN BRENNAN.