

No. 628,552.

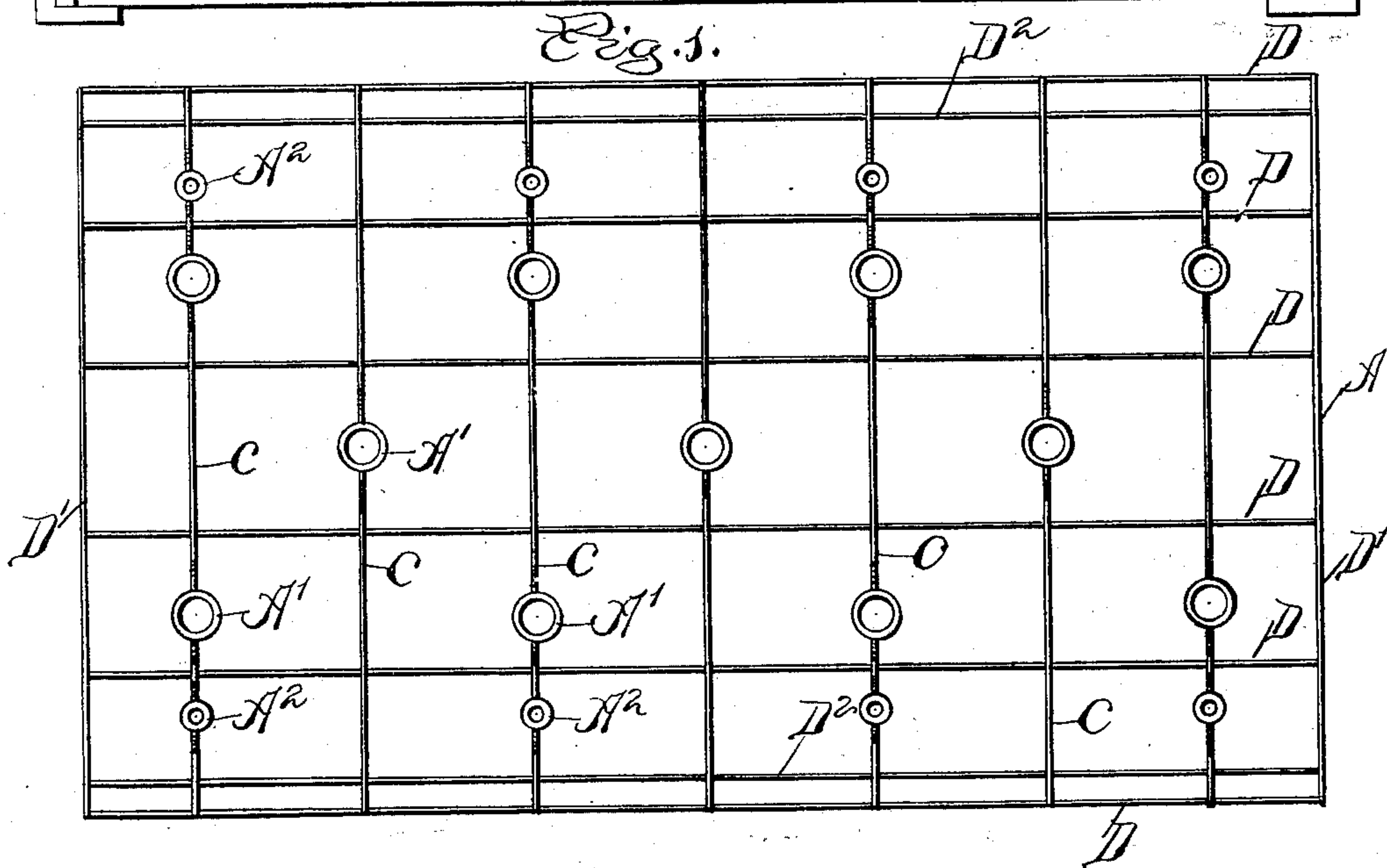
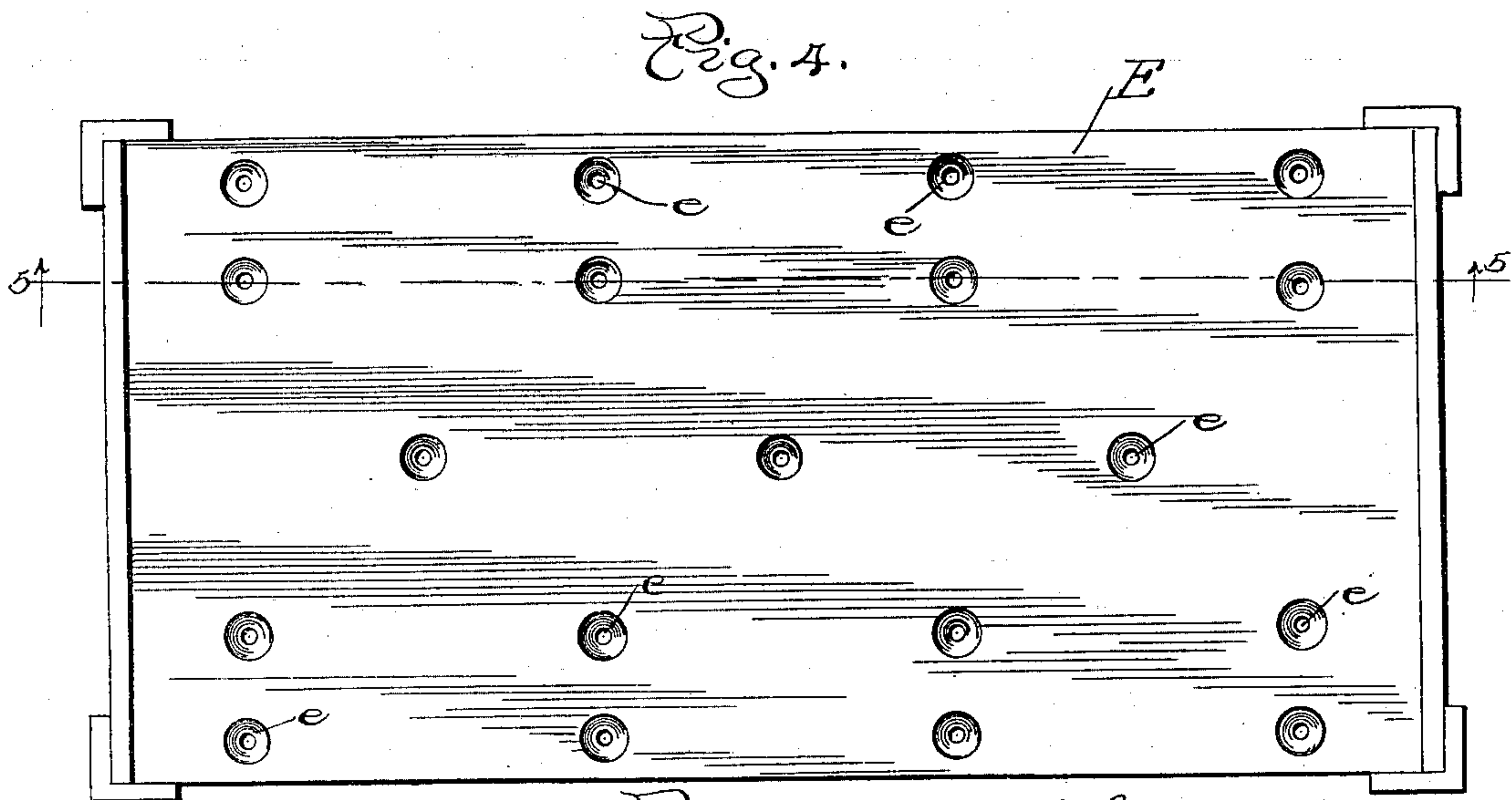
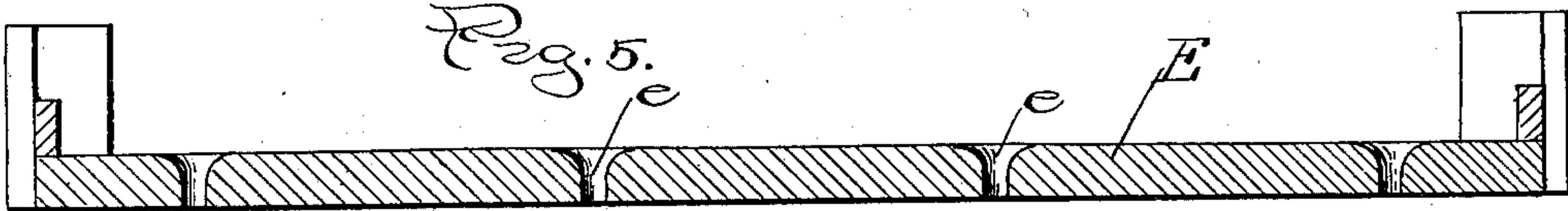
Patented July 11, 1899.

D. E. ROWLEY.  
TUFTING DEVICE.

(Application filed Mar. 30, 1899.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses:  
B. M. Keir  
O. Plummer

Inventor  
David E. Rowley  
By John W. Hill Atty.

No. 628,552.

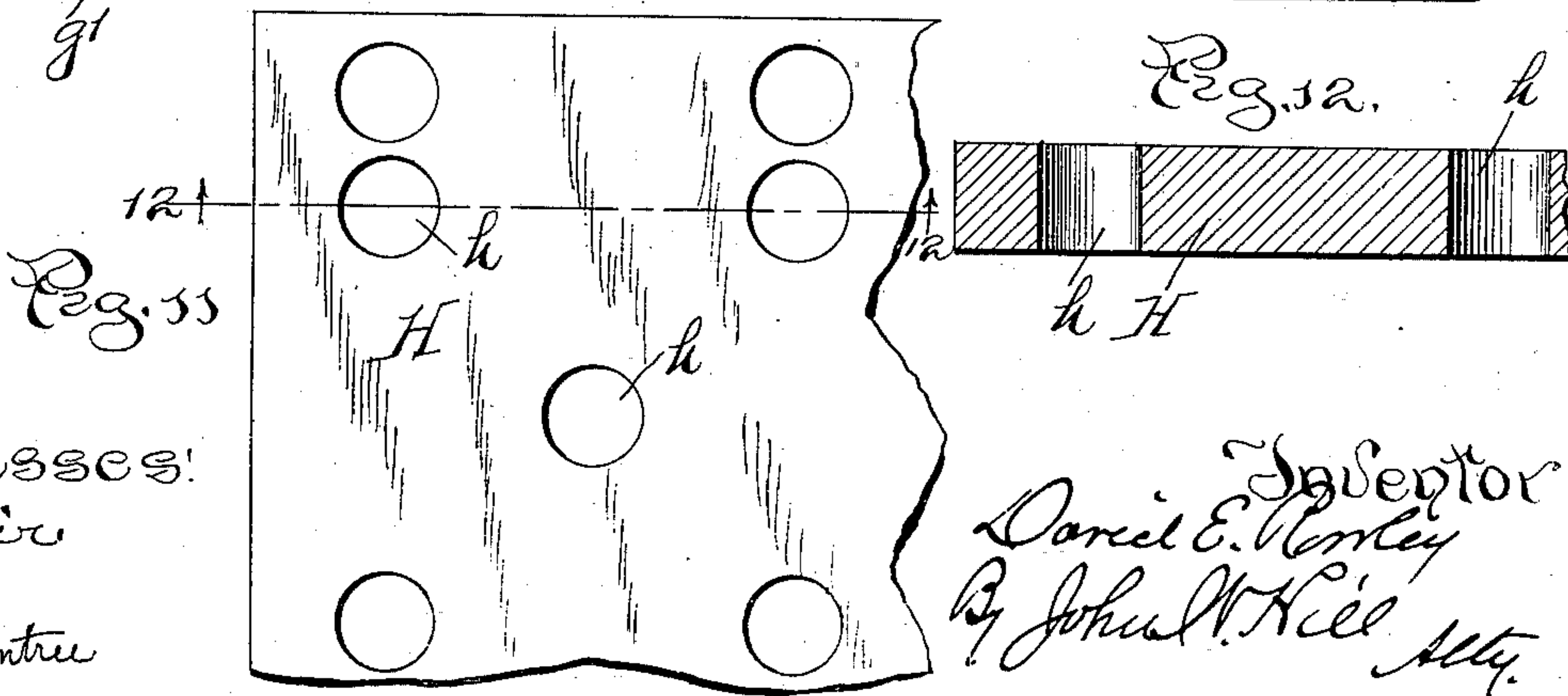
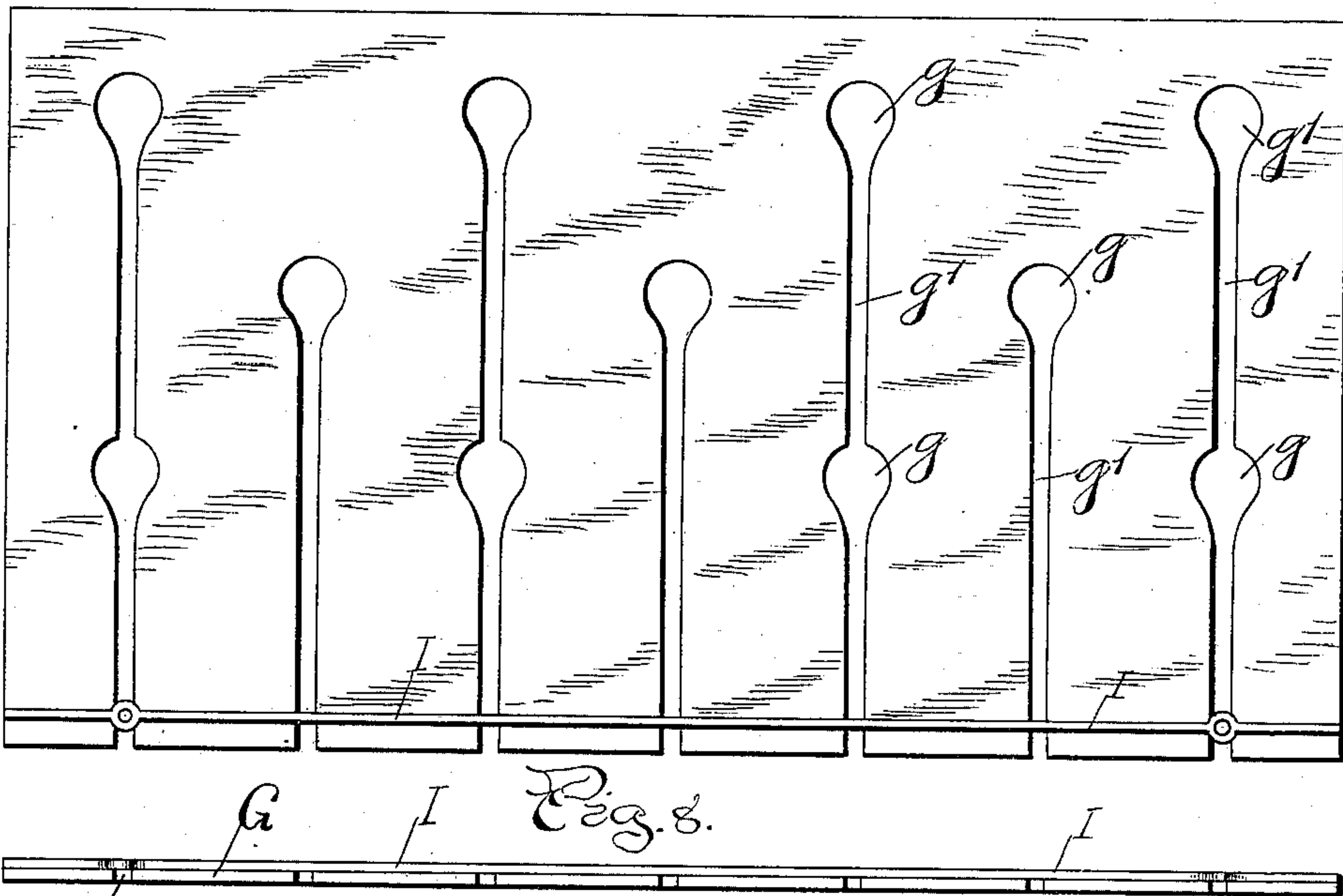
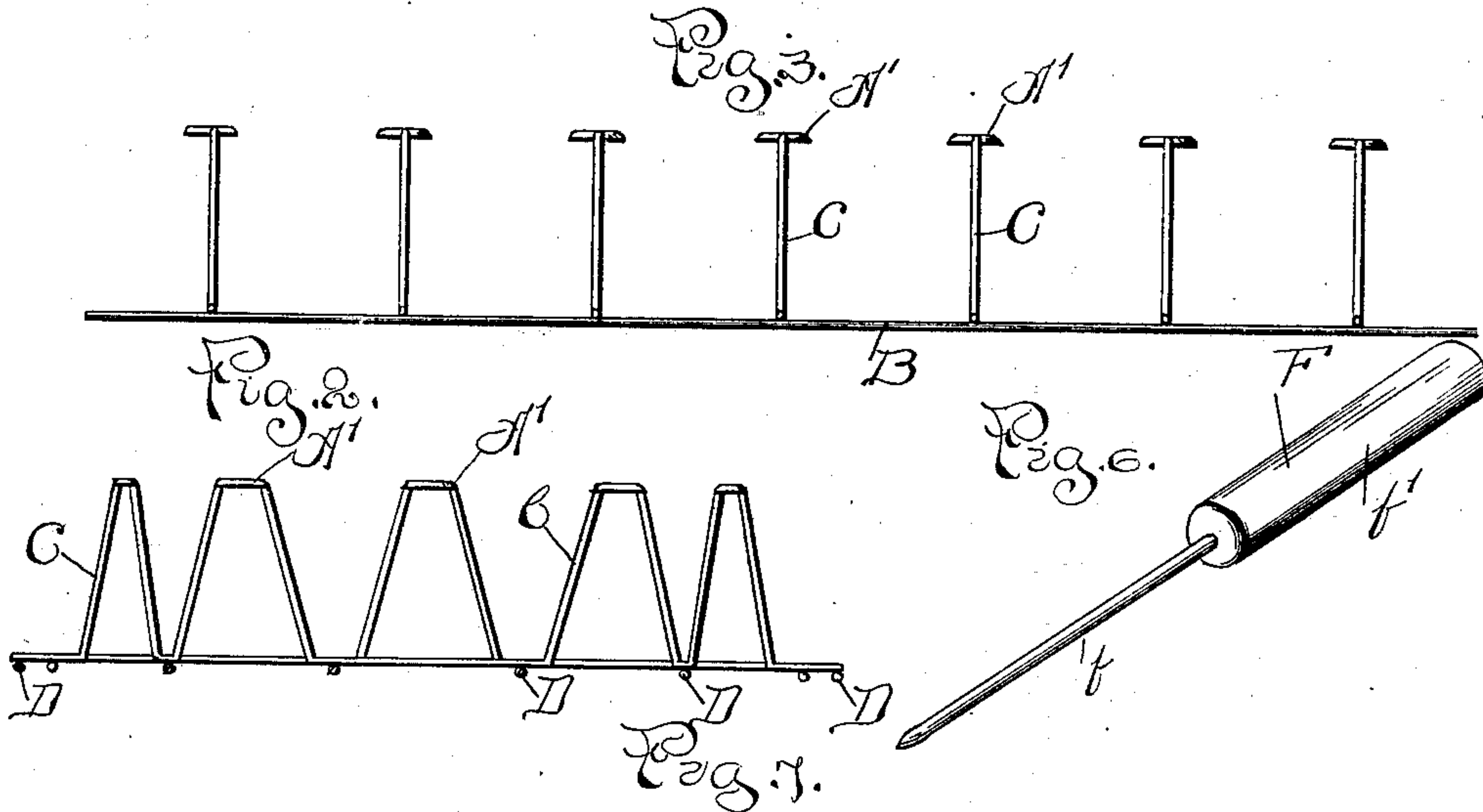
Patented July 11, 1899.

D. E. ROWLEY.  
TUFTING DEVICE.

(Application filed Mar. 30, 1899.)

(No Model.)

4 Sheets—Sheet 2.



Witnesses:  
J. B. Meir  
O. P. Plimtree

Inventor  
Daniel E. Rowley  
By John W. Hill Atty.

No. 628,552.

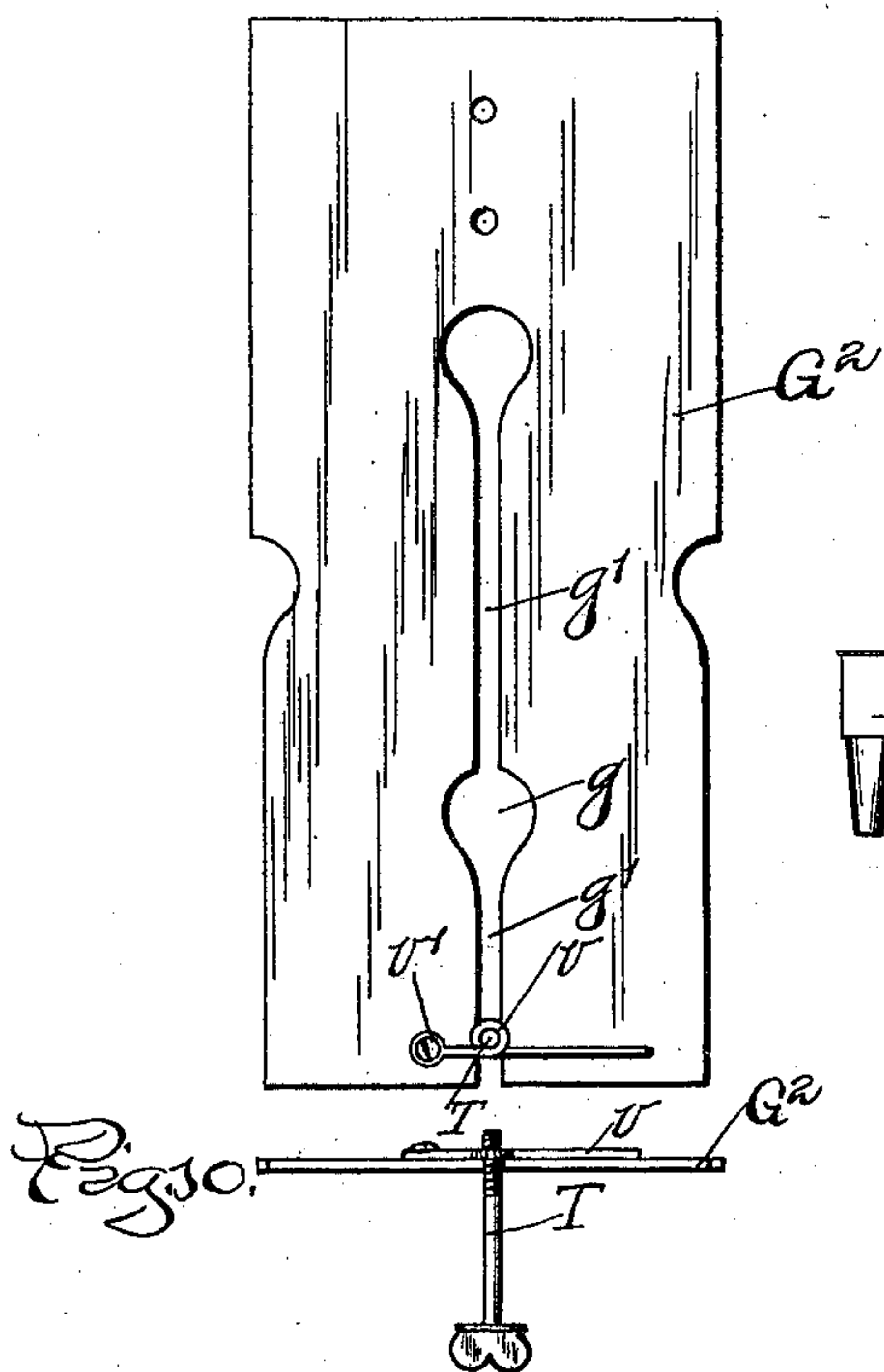
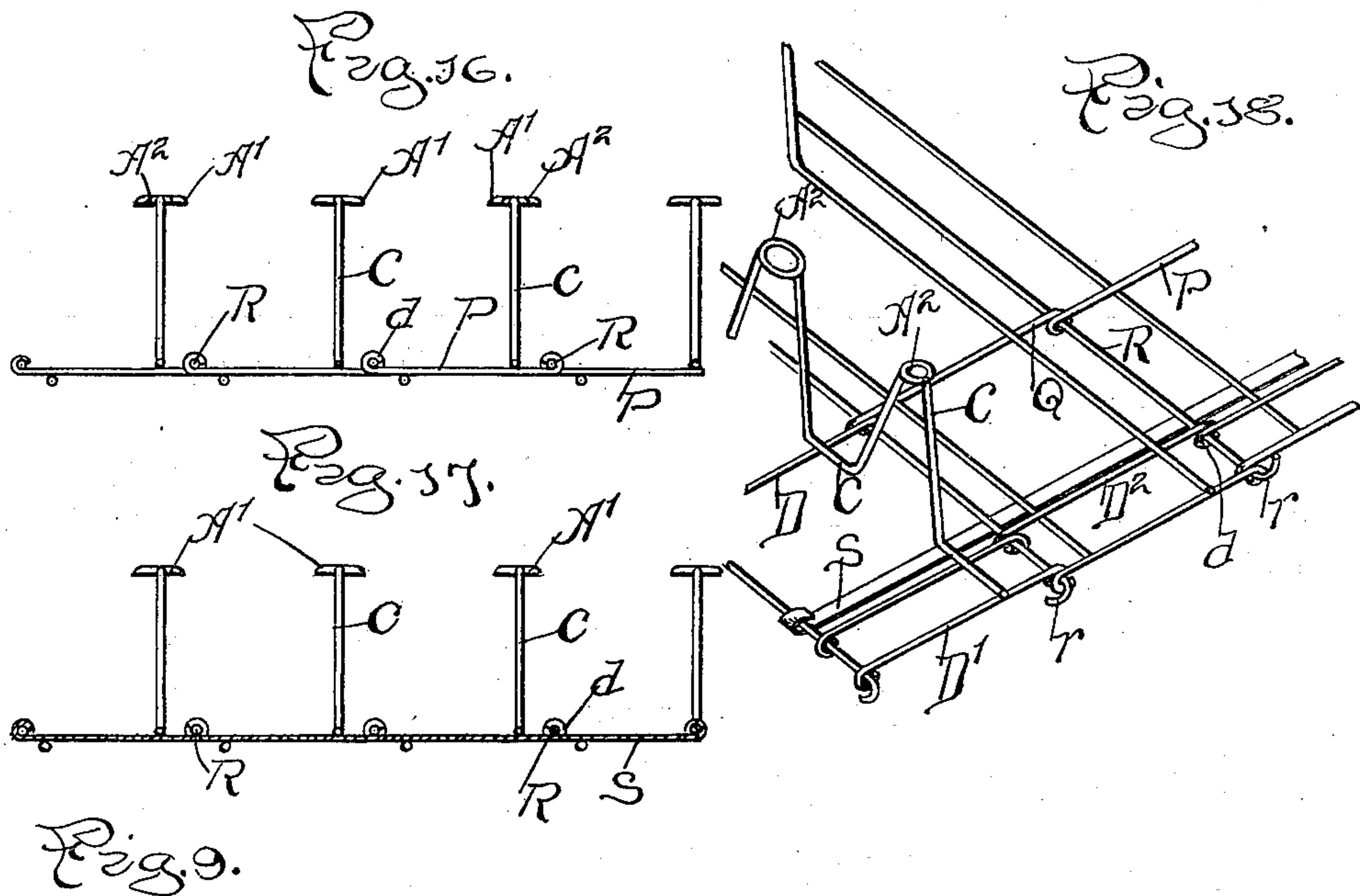
Patented July 11, 1899.

D. E. ROWLEY.  
TUFTING DEVICE.

(Application filed Mar. 30, 1899.)

(No Model.)

4 Sheets—Sheet 3.



Witnesses  
B. Steir  
O. Hunter

Inventor  
David E. Rowley  
By John W. Neil Atty



No. 628,552.

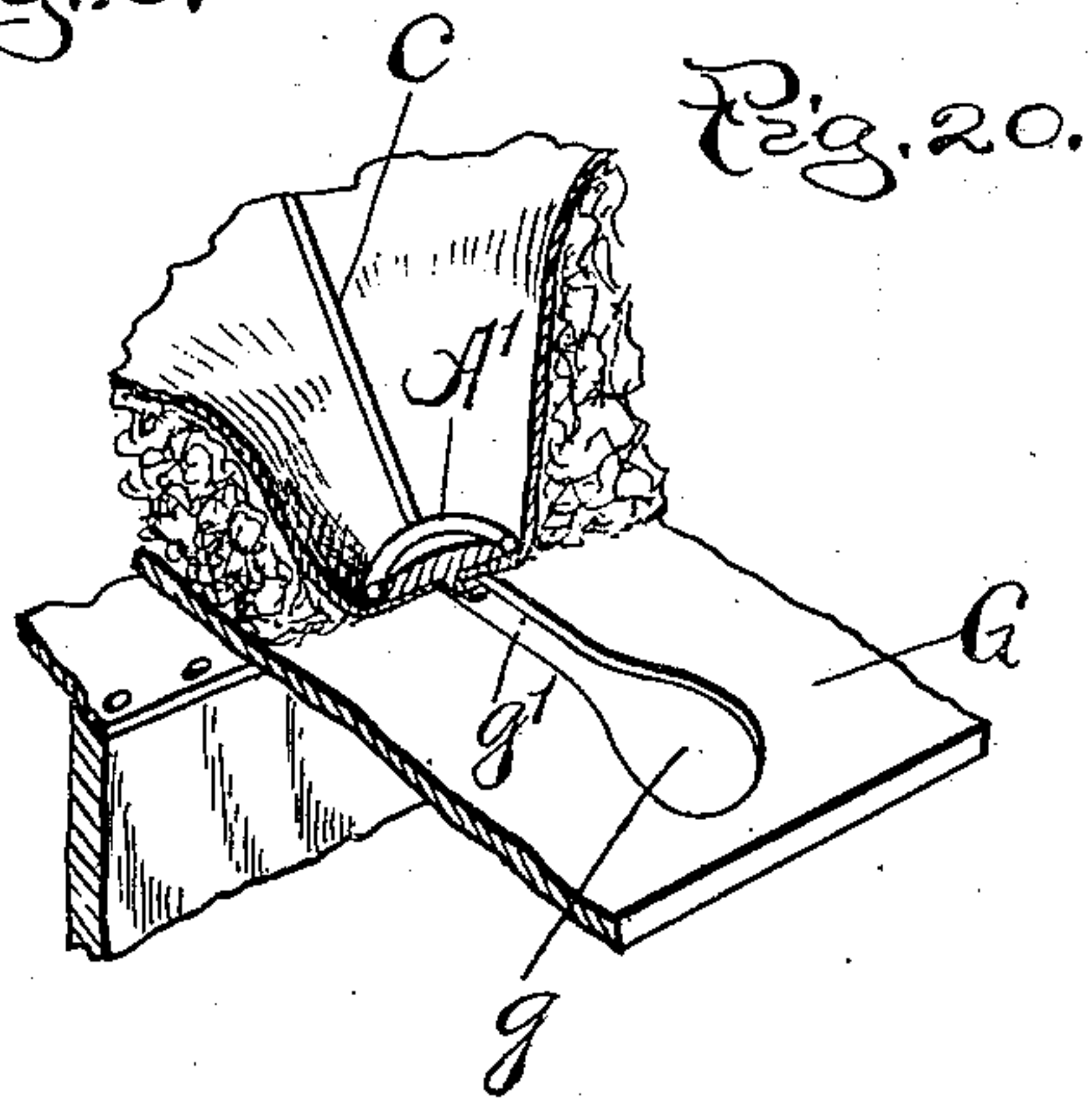
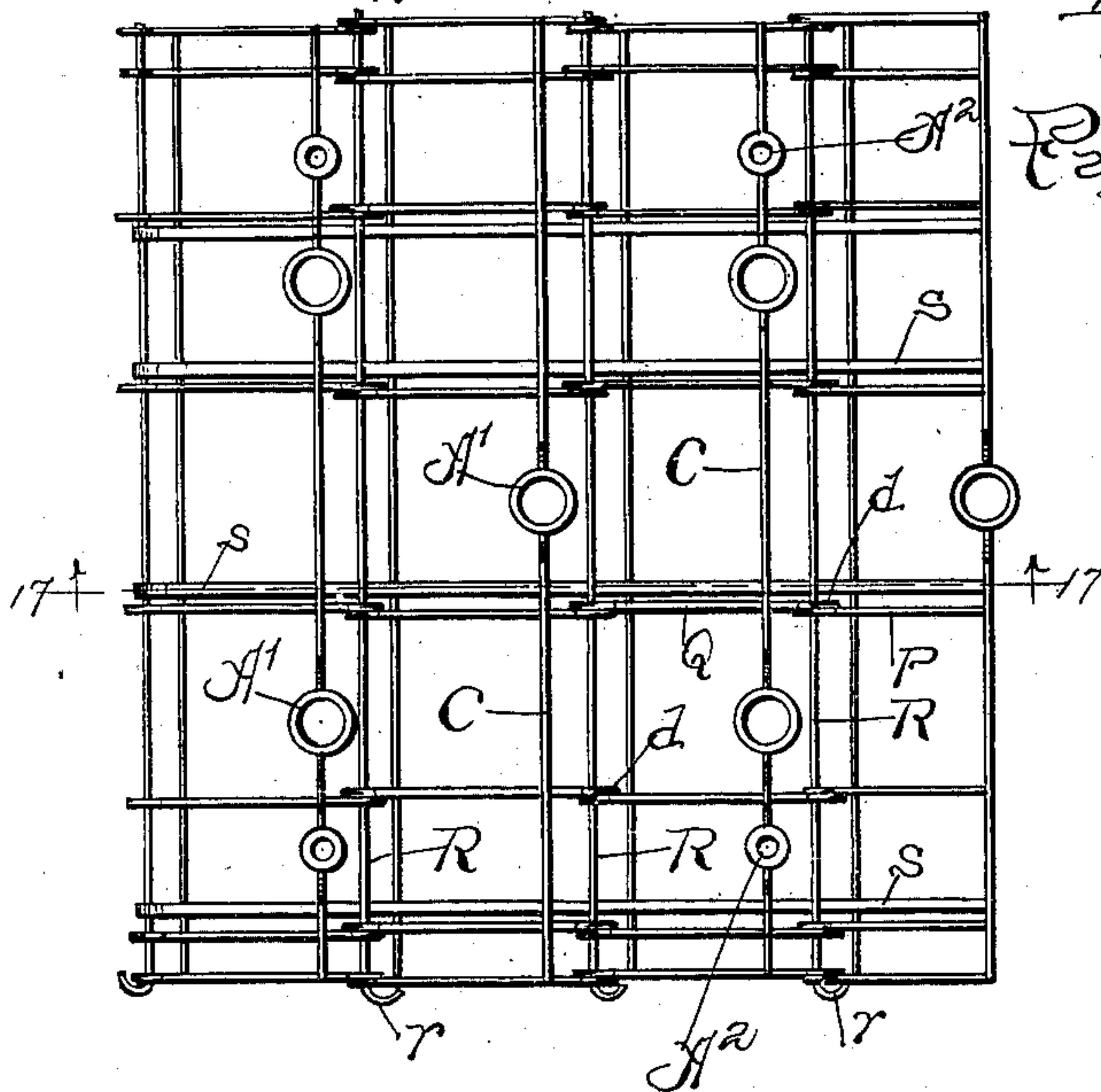
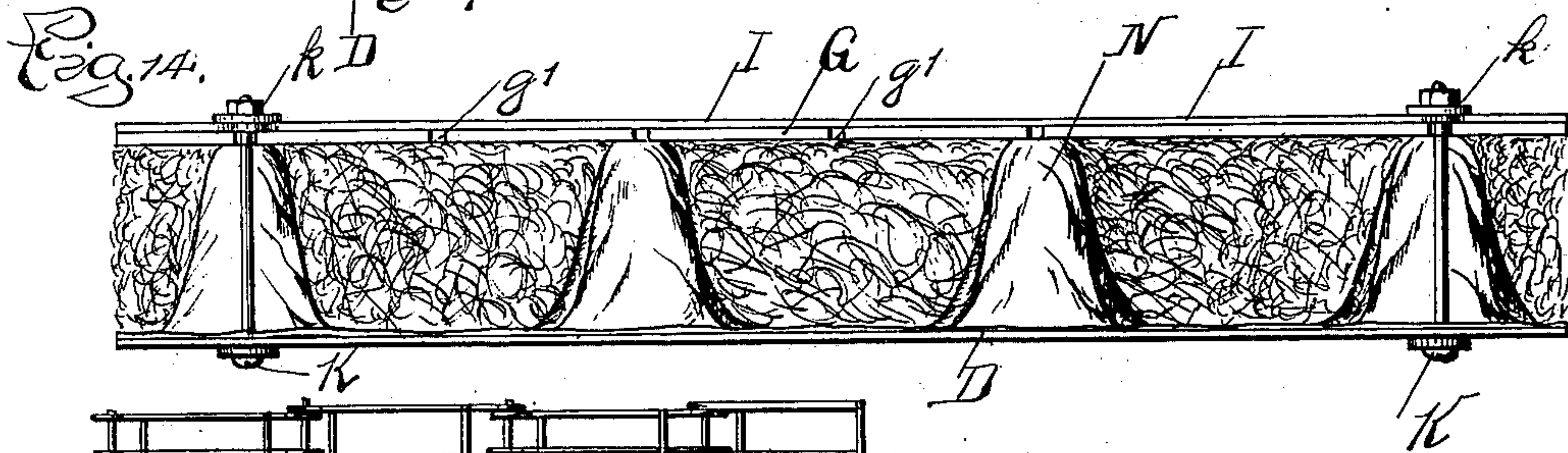
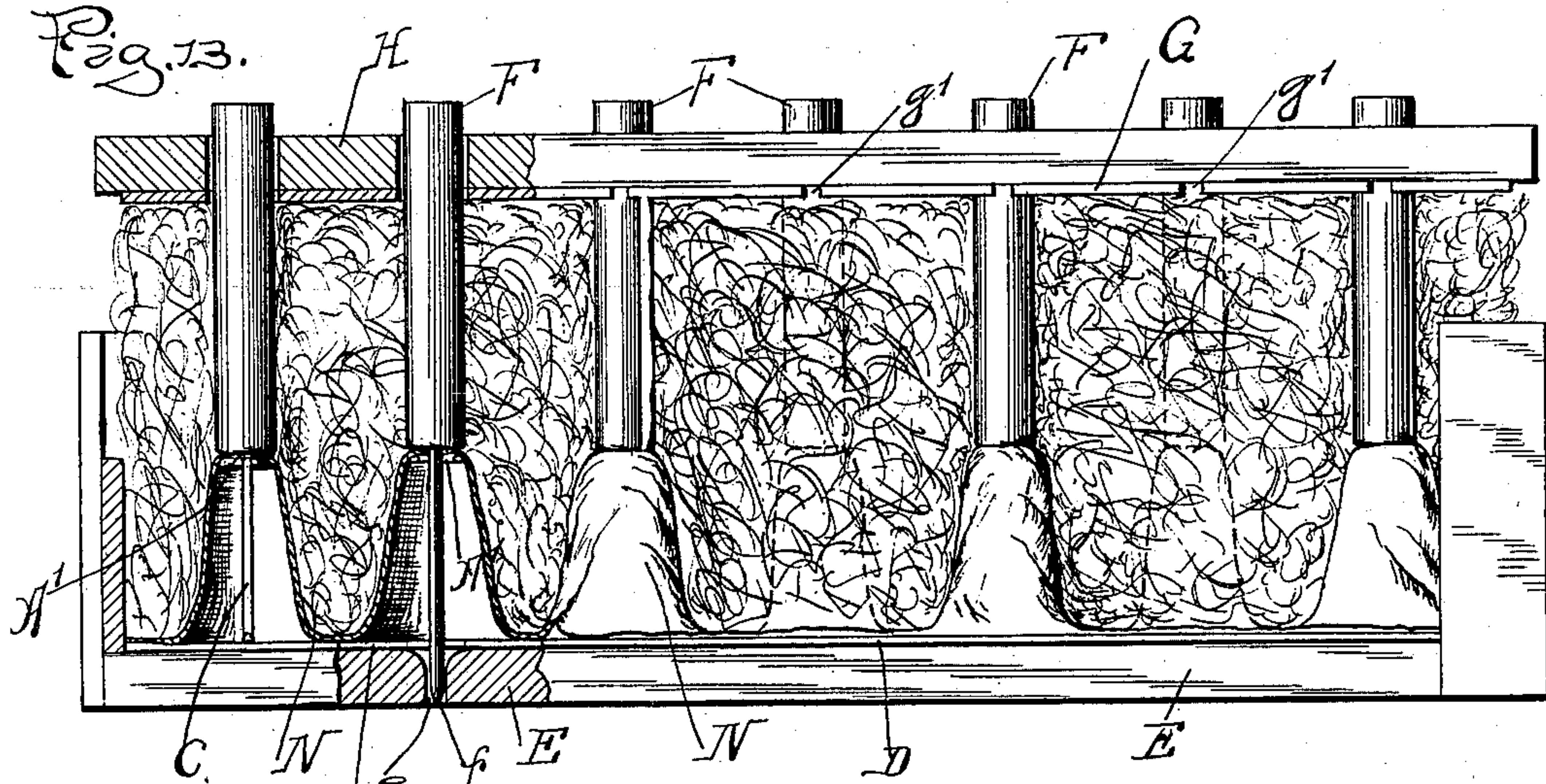
Patented July 11, 1899.

D. E. ROWLEY.  
TUFTING DEVICE.

(Application filed Mar. 30, 1899.)

(No Model.)

4 Sheets—Sheet 4.



Witnesses:  
B. Keir  
O. Pluntree

Inventor:  
David E. Rowley  
By John W. Hill, Atty.



# UNITED STATES PATENT OFFICE.

DAVID E. ROWLEY, OF CHICAGO, ILLINOIS.

## TUFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 628,552, dated July 11, 1899.

Application filed March 30, 1899. Serial No. 711,177. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID E. ROWLEY, a citizen of the United States of America, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Tufting Devices, of which the following is a description.

Referring to the accompanying drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a top plan view of the skeleton frame of my improved device. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation taken at right angles to that shown in Fig. 1. Fig. 4 is a top plan view of the base-board of my improved device. Fig. 5 is a vertical section of the same in lines 5 5 of Fig. 4. Fig. 6 is a view of the securing and guiding pins adapted to secure the fabric upon the top of the skeleton frame and also guide the advance of the follower and presser boards. Fig. 7 is a top plan view of the follower-board adapted to secure the stuffing material upon the skeleton frame and retain the same in position thereon. Fig. 8 is an edge view of the same. Fig. 9 is a modification showing one section of a sectional follower-board. Fig. 10 is an end view of the same. Fig. 11 is a partial top plan view of a presser-board adapted to press the follower-board toward the skeleton frame in the operation of the device. Fig. 12 is a sectional view of the same in the line 12 12 of Fig. 11. Fig. 13 shows the relative position of the several parts with the stuffing material in position before compression. Fig. 14 is a similar view showing the follower-board compressed upon the skeleton frame and secured thereto, with the presser-board and base removed. Fig. 15 is a top plan view of a modified form of sectional skeleton frame. Fig. 16 is an elevation of the same. Fig. 17 is a sectional view taken on the same elevation. Fig. 18 is a detail view of the same. Fig. 19 is a detail view showing the method of using my improved device upon articles having curved or irregular surfaces, and Fig. 20 is a view in partial section, showing the method of withdrawing the follower-board.

The object of devices of this character is to furnish means to assist the upholsterer in performing his work more economically, as well as to aid him in arranging the tufts or bis-

cuits of the upholstering in a more regular and attractive manner; and the object of my invention is to furnish a device of this character which shall greatly reduce and simplify the labor of the upholsterer in this direction.

To this end my invention consists in the novel construction and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, A represents a skeleton frame consisting of rings A' A', regularly disposed and suitably arranged to locate the buttons or clench-pins in the upholstering. The rings A' are elevated above the base B of the frame by means of the supports C. These supports preferably diverge in opposite directions from the rings, as shown in Figs. 2, 13, and 18. The base of the skeleton frame A is constructed to furnish a suitable foundation for the several supports C and may be made of such material and in such form as may be preferred so long as it is substantially open in its form and arrangement to permit the operator to employ the device to the best advantage. In the preferred form here shown the base is composed of longitudinal metal rods D, suitably connected by the transverse rods D' D' and the supports C C, which are connected with the longitudinal rods. (See Figs. 2 and 18.) In this form I also prefer to employ two additional longitudinal rods D<sup>2</sup> D<sup>2</sup>, located near the outer edge of the base, for a purpose which will be hereinafter explained. This construction forms a skeleton frame having an open base and provided at regular intervals with rings elevated to a plane above the base a distance corresponding with the desired depth of the tufting. The rings are provided with an aperture of sufficient size to permit a button or clench-pin, head to readily pass therethrough.

E is a base-board of a size corresponding with the outlines of the skeleton frame described and provided with apertures or holes e, registering with the center of the rings A' when the frame is placed thereon.

F is a securing and guiding pin provided with a rod or needle f of sufficient length to extend from the upper surface of the ring A' to engage with the holes or apertures in the base-board E, while the enlarged portion f' extends upward from said ring for the purpose



of guiding the follower-board and presser-board.

G is a follower-board constructed of any suitable material, preferably metal, provided with holes or apertures *g*, registering with the several rings A' and the guiding-pins F when in position, the said holes or apertures being of sufficient size to loosely embrace the part *f'* of the guiding-pin F. In the preferred construction channels *g'* extend from each of the apertures *g* to one of the outer edges of the follower-board for reasons which will be hereinafter explained.

H is a presser-board provided with apertures *h* so located and of such size as also to loosely embrace that part *f'* of the guiding-pin F.

The mode of operation is as follows: The skeleton frame A is placed upon the base-board E and the fabric N loosely placed over the elevated rings A' and positioned as desired by the hands of the operator, the part between the rings being of sufficient fullness to extend nearly or quite to the base. The guiding and securing pins F are then placed in position, the rod or pin *f* being pressed downward through the fabric and ring and entering one of the apertures *e* in the base-board E. The stuffing or upholstering material is then placed upon the top of the fabric to the extent desired and the follower-board G placed thereon, the apertures *g* loosely embracing the upper part of the pin F. The presser-board H is then placed upon the follower G, the aperture *h* also embracing the upper part of the pins F. (See Fig. 13.) The follower and presser boards are then forced toward the rings A' by a press or any suitable means (not shown) until the follower-board is substantially in the plane of the said rings. Means are then employed to temporarily secure the follower-board and skeleton frame in the relative positions they then occupy. Any suitable means may be employed for this purpose. In the preferred form I pass a rod I along over each longitudinal edge of the follower-board. A bolt K, extending from between the rods D D<sup>2</sup> where it engages with the base, engages with the rod I in any preferred manner. This may be done by means of screw-threads or otherwise in the rod I itself or by means of an independent screw-nut *k* and permits the follower-board and skeleton frame to be temporarily secured together. The skeleton frame and follower-board, with the fabric and compressed material between them, may now be removed and set aside until it is desired to secure the tufting upon some article of furniture. (See Fig. 14.)

In placing the tufting or upholstering upon the article of furniture the follower-board may be first removed and the tufting secured in the usual manner. In the preferred construction, however, in which the channels *g'* are employed, I position the bolts K on one side of the follower-board in the channels *g'*.

I may now place the device upon the article to be tufted, the follower-board G resting upon the surface of the said article. The button or clench-pin may then be easily inserted through the rings A' and apertures *g*, the skeleton form of the frame furnishing ample opportunity for the operator to use his hands without embarrassment. After the clench-pins or buttons are placed in position and secured the bolts K on the side of the follower opposite to the side of the channel *g'* may be removed, when the several channels being in line with the buttons or clench-pins, the follower-board, composed of thin smooth material for this particular purpose, may be easily removed by withdrawing it outward, the channels permitting the board to slip readily by the clench-pins or buttons. By this means the tufting or upholstering is secured in position upon the article while still retained in proper position between the follower-board and skeleton frame and while under compression. The work is therefore uniform.

In the preferred form shown in the drawings a series of auxiliary elevations A<sup>2</sup> on the outer edges of the frame provided with small eyes substantially the size of the rod *f* of the guiding and securing pin F and apertures *e* in the base-board E, registering therewith, afford additional means for securely retaining the skeleton frame upon the base-board E. It is obvious that in many cases the presser-board H may be dispensed with. This will depend upon the material and construction of the follower-board G and also, perhaps, upon the degree of compression desired. In practice I prefer to use it, although I do not wish to be understood as limiting myself to its use in all cases. It is also obvious that in some cases the base-board E may be dispensed with or equivalent means employed to steady the parts.

I prefer in all cases to construct the skeleton frame and the follower-board of material that will permit of a considerable degree of flexibility when the device is used upon slightly-curved surfaces. This may be accomplished by making the base of the skeleton frame of metal rods of comparatively light weight or of equivalent sheet metal cut out to accomplish the same objects and purposes and of making the follower-board G of sheet metal. In many cases, however, a greater degree of flexibility is required than may be conveniently secured by the means stated. As an independent invention, therefore, I construct the skeleton frame in sectional form, as shown in Figs. 15, 16, 17, and 18. In this form the adjacent sections, as P Q, are flexibly or pivotally connected by any preferred means, as by the transverse rod R, which is preferably so constructed that it may be readily withdrawn to disconnect the two sections. As here shown, the longitudinal rods D D, &c., are in short sections, the ends being bent to form loops *d* of a size sufficient to loosely



embrace the rod R. The rod R may have a simple hook *r* or other equivalent means at one end to prevent an unintentional disengagement of the parts, while the other end may be lacking such part, thus permitting its withdrawal. It is sometimes desirable to provide means to retain the flexible skeleton frame with the attached sections of the follower-board in a desired curve or irregular position. For this purpose I prefer to use one or more straps, bars, or rods S, extending longitudinally of the skeleton frame and transversely of the sections. This strap may be of any preferred material; but for practical use I have found a malleable-metal strap to serve the purpose satisfactorily. The strap may be secured to the several sections in any preferred manner, as by interlacing or otherwise, and may thus connect two or more sections, as desired. In cases where the sectional skeleton frame is used and in others, if desired, a follower-board composed of sections G<sup>2</sup> (shown in Figs. 9 and 10) may be employed in which each section is preferably separately secured to the skeleton frame for the purpose before stated. In such cases I prefer to use a bolt T, provided with a head that permits it to be used as a thumb-screw, while upon the channeled end of the follower-board a cross-piece V is located provided with means *v* for engaging with the other end of the thumb-screw T. To prevent accidental disengagement of the parts, I prefer to pivotally secure the piece V to the follower-board at *v'*. By this arrangement the cross-piece V easily swings outward upon disengaging the thumb-screw T when removing the section, and thus does not interfere with its disengagement. It is obvious that, if preferred, the strap S may be of spring metal instead of malleable.

I do not wish to be understood as limiting myself to the transverse-rod construction of the skeleton frame, as shown, as it is obvious any skeleton frame constructed to retain the important features and advantages described would accomplish the same results. Thus light castings, malleable or otherwise, would serve the same purpose, as would also sheet metal cut out to preserve the skeleton features. The important object to be secured by this construction or equivalent means is a skeleton frame permitting the operator at all times to see substantially all of the outer surface of the tufting material and at the same time give him ample opportunity to apply his hands to the best advantage. Neither do I wish to be understood as limiting myself to the exact construction otherwise shown, as after thus fully describing my invention it is obvious that various immaterial modifications may be suggested without departing from the spirit of my invention.

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

1. In a device of the kind described, a skele-

ton frame comprising a series of regularly-disposed rings supported at an elevation above a skeleton base, a base-board, and guiding-pins adapted to engage with the base-board to secure the fabric upon the ends of the rings and also to guide the follower-board in its advance toward the frame, in combination with a follower-board provided with openings registering with the rings and adapted to loosely embrace the guiding-pins, substantially as described.

2. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings supported at an elevation above a skeleton base, in combination with securing and guiding pins adapted to secure the fabric upon the rings and a follower-board guided in its approach toward the skeleton frame by the guiding-pins, substantially as described.

3. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings supported at an elevation above a skeleton base, and securing and guiding pins adapted to secure the fabric upon the rings and also direct the advance of the follower-board, in combination with a follower-board provided with a series of apertures registering with the rings and adapted to embrace the guiding-pins, and slots or channels extending from the several apertures in the follower-board to one of the edges of the same, substantially as described.

4. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings supported at an elevation above a skeleton base, and securing and guiding pins adapted to secure the fabric upon the rings and also direct the advance of the follower-board, in combination with a follower-board provided with a series of apertures extending therethrough registering with the rings and adapted to embrace the guiding-pins, and slots or channels extending from the several apertures in the board to one of the edges of the same, and means for securing the follower-board to the skeleton frame when the former is compressed substantially to the plane of the rings, substantially as described.

5. In a device of the kind described, a frame provided with means to elevate the fabric at the points where the buttons are to be located, and means for securing the fabric upon the elevations, in combination with a follower-board provided with the openings *g*, and guiding-channels *g'*, substantially as described.

6. In a device of the kind described, a frame provided with means to elevate the fabric at the points where the buttons are to be located, and means for securing the fabric upon the elevations, in combination with a follower-board provided with openings *g*, and channels *g'*, and means for temporarily securing the follower-board to the frame, substantially as described.

7. In a device of the kind described, a frame provided with means to elevate the fabric at the points where the buttons are to be located,



and means for securing the fabric upon the elevations, in combination with a follower-board composed of sections  $G^2$ , provided with openings  $g$ , and channels  $g'$ , substantially as described.

8. In a device of the kind described, a frame provided with means to elevate the fabric at the points where the buttons are to be located, and means for securing the fabric upon the elevations, in combination with a follower-board composed of sections  $G^2$ , provided with openings  $g$ , and channels  $g'$ , and means for temporarily securing the several sections of the follower to the frame, substantially as described.

9. In a device of the kind described, a skeleton frame provided with regularly-disposed rings supported at an elevation above a suitable base and securing and guiding pins adapted to secure the fabric upon the rings and guide the advance of the follower in combination with a follower-board provided with holes or openings registering with the rings and adapted to embrace the guiding-pins, a presser-board adapted to rest upon the follower and adapted to be compressed with the same, and means for compressing the follower and presser-board upon the frame, substantially as described.

10. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings, supported at an elevation above a skeleton base, and securing and guiding pins adapted to secure the fabric upon the rings, in combination with a follower-board provided with openings  $g$ , and channels  $g'$ , and means for securing the follower to the frame, substantially as described.

11. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings supported at an elevation above a base consisting of longitudinal and transverse rods or bars suitably connected, and guiding-pins  $F$ , in combination with a follower-board, provided with openings  $g$ , and channels  $g'$ , substantially as described.

12. In a device of the kind described, a skeleton frame comprising a series of regularly-disposed rings supported at an elevation above a base consisting of longitudinal and transverse rods or bars suitably connected, and guiding-pins  $F$ , in combination with a follower-board consisting of sections  $G^2$ , and means for securing the sections to the frame, substantially as described.

13. In a device of the kind described, a skeleton frame consisting of regularly-disposed rings  $A'$  supported at an elevation above a skeleton base, a base-board  $E$  and securing and guiding pins  $F$ , in combination with a follower-board provided with openings  $g$ , and

channels  $g'$ , a presser-board  $H$ , and means for securing the follower and frame together, substantially as described.

14. In a device of the kind described, a sectional skeleton frame consisting of a base comprising flexibly-connected skeleton sections the elevated rings  $A'$  supported thereby, in combination with means for securing the fabric upon the rings and means for compressing the stuffing material upon the fabric, substantially as described.

15. In a device of the kind described, a sectional skeleton frame consisting of skeleton sections flexibly connected, a series of elevated rings supported thereby and means for securing the fabric upon the rings in combination with a follower-board provided with openings  $g$ , registering with the rings, and means for securing the follower-board to the frame, substantially as described.

16. In a device of the kind described, a flexible skeleton frame consisting of skeleton sections flexibly connected, the elevated rings  $A'$  supported thereby, in combination with a base-board  $E$ , securing-pins  $F$ , sectional followers  $G^2$ , and means for securing the follower to the frame, substantially as described.

17. In a device of the kind described, a flexible skeleton frame consisting of skeleton sections pivotally connected, the rings  $A'$  supported thereby, a base-board  $E$ , and securing and guiding pins  $F$ , in combination with the sectional follower  $G^2$ , provided with openings  $g$ , and channels  $g'$ , substantially as described.

18. In a device of the kind described, a flexible skeleton frame consisting of skeleton sections flexibly connected, the rings  $A'$  supported thereby, a base-board  $E$ , and securing and guiding pins  $F$ , in combination with a sectional follower  $G^2$ , provided with openings  $g$ , and channels  $g'$ , securing device  $T$ ,  $V$ , and a presser-board  $H$ , substantially as described.

19. A flexible skeleton frame consisting of skeleton sections flexibly connected, elevated rings  $A'$  supported thereby, in combination with the connecting-straps  $S$ , substantially as and for the purpose described.

20. In a device of the kind described, a flexible skeleton frame consisting of skeleton sections flexibly connected, the rings  $A'$  supported thereby, and securing and guiding pins  $F$ , in combination with the sectional follower  $G^2$ , provided with apertures  $g$ , and channels  $g'$ , substantially as described.

21. In a tufting device a follower-board provided with openings  $g$ , and channels  $g'$ , substantially as described.

DAVID E. ROWLEY.

Witnesses:

JOHN W. HILL,  
BESSIE SHADBOLT.