

(No Model.)

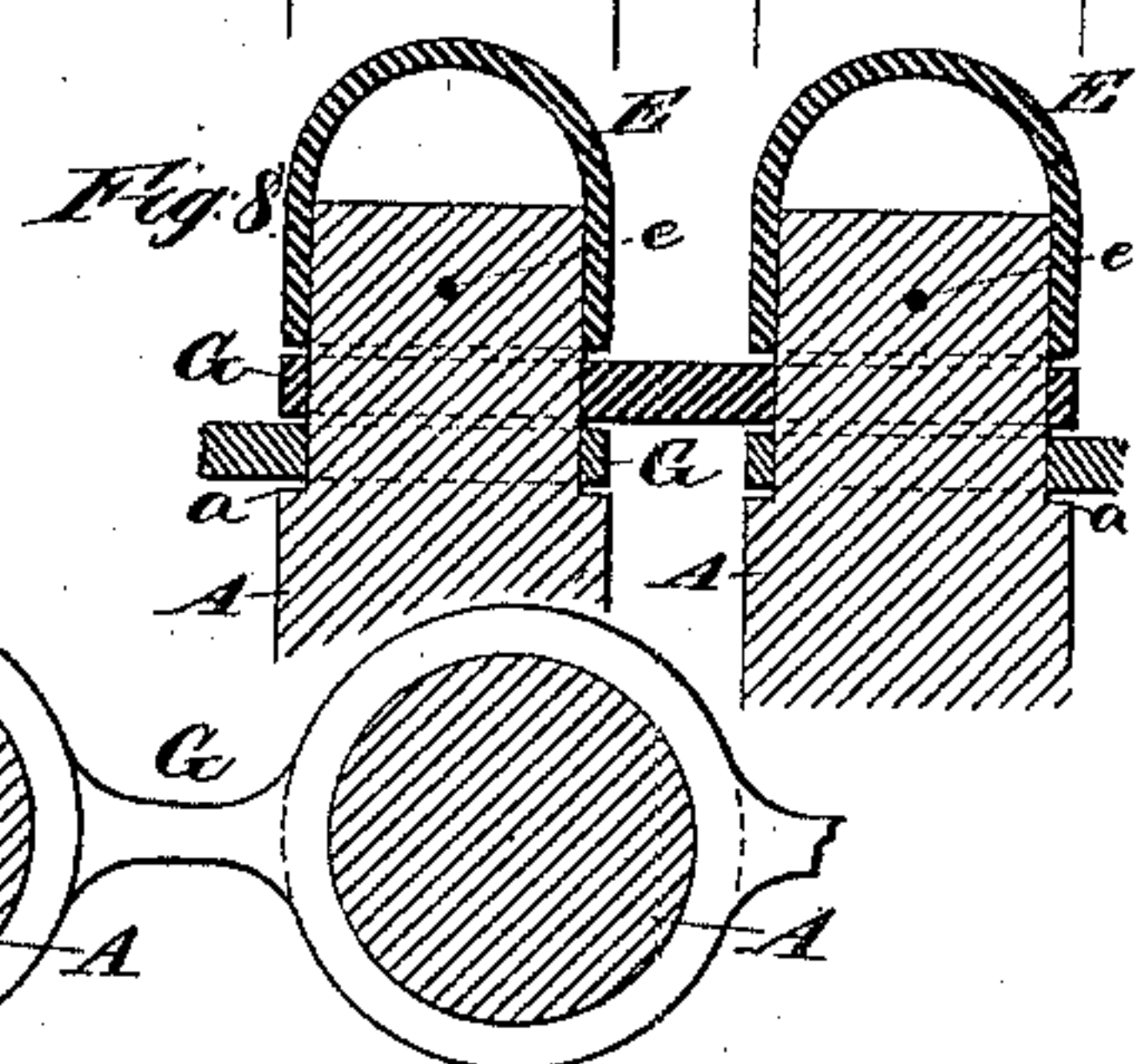
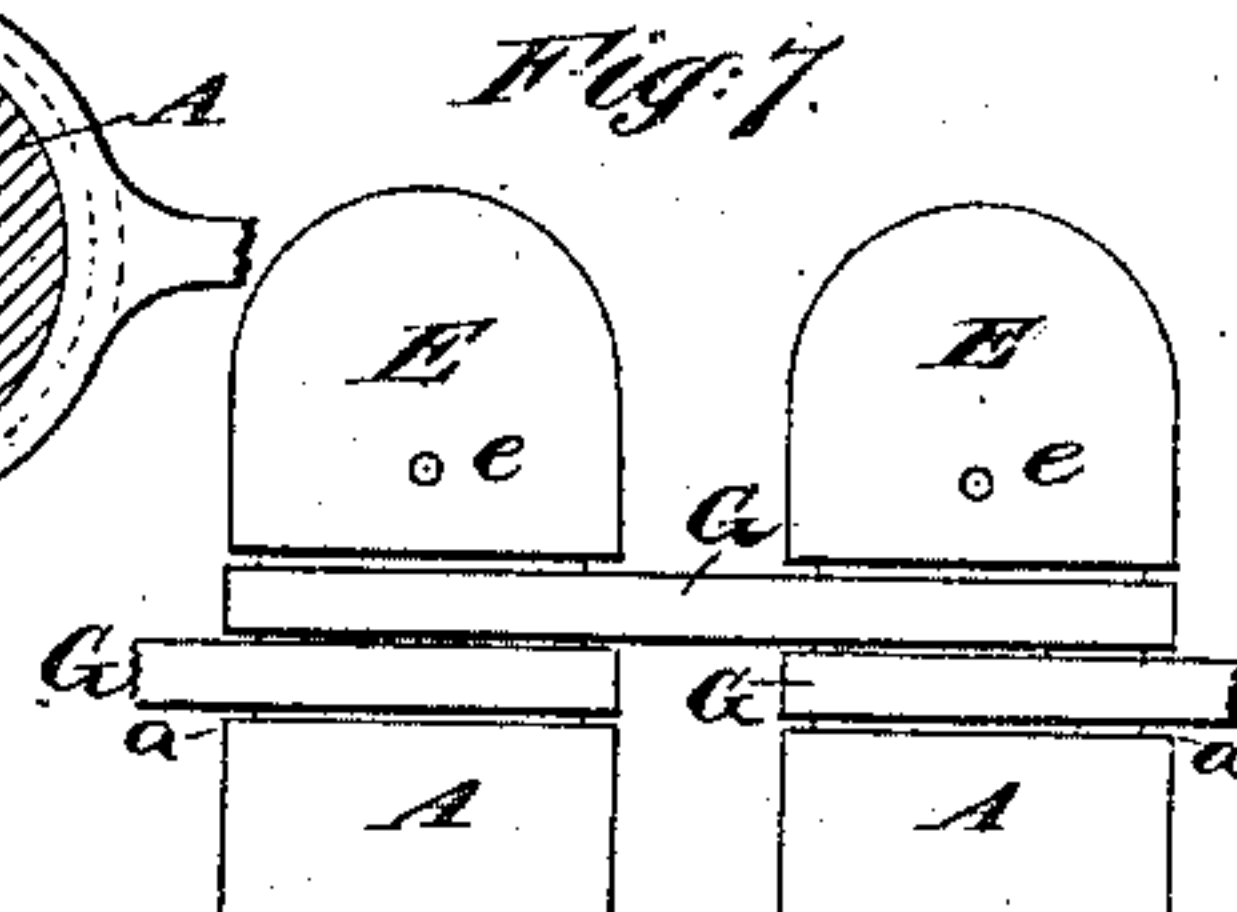
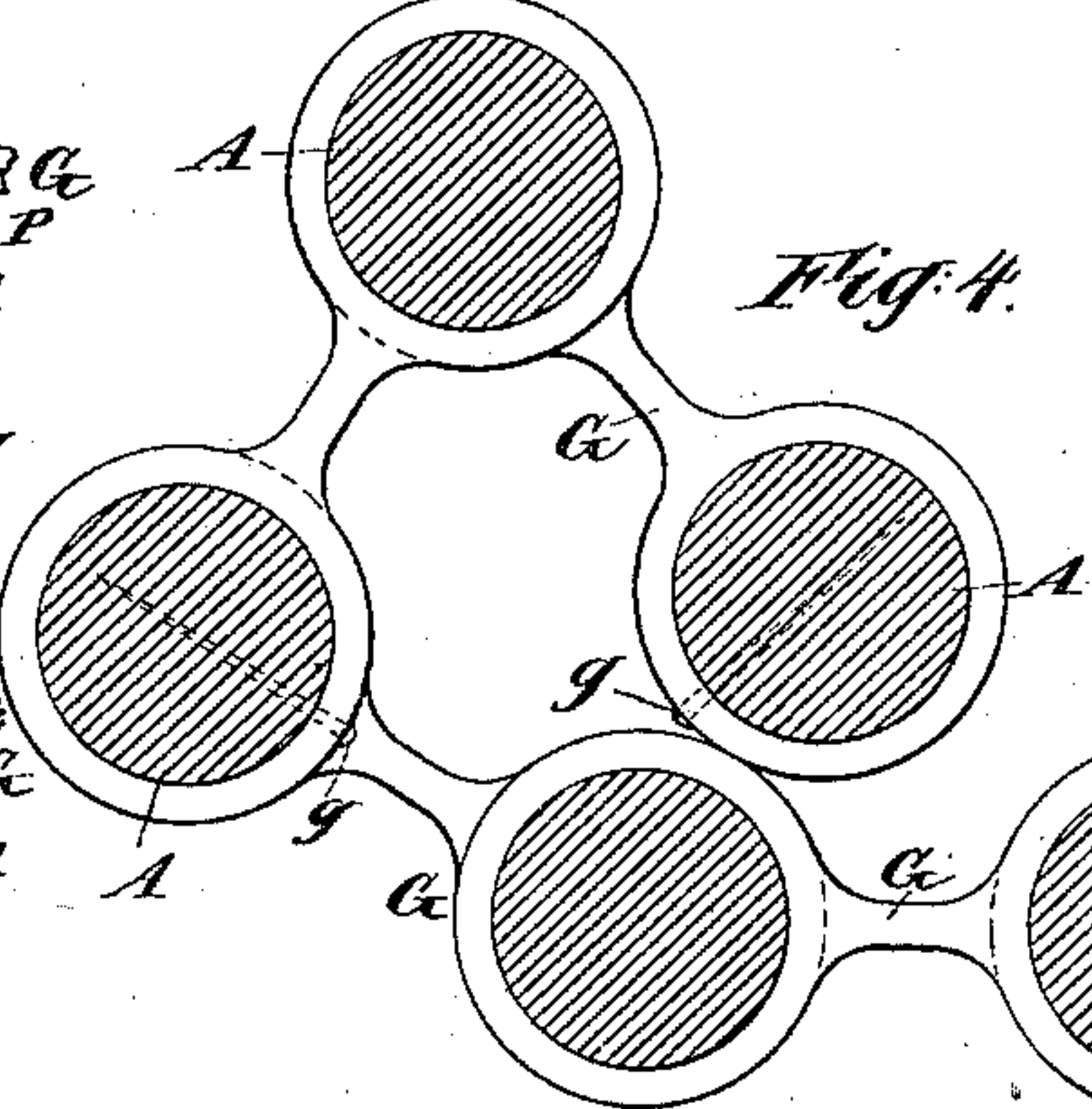
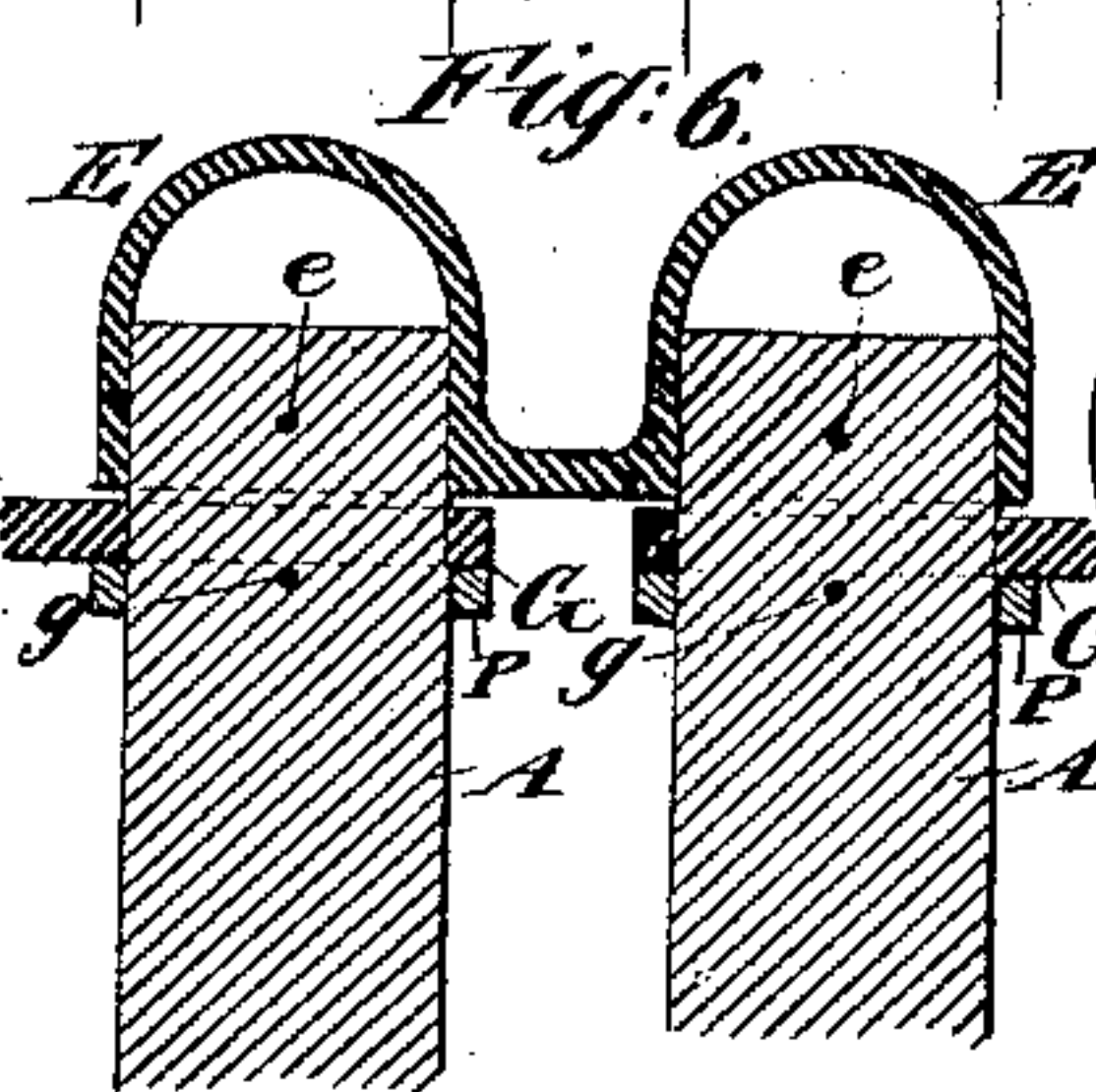
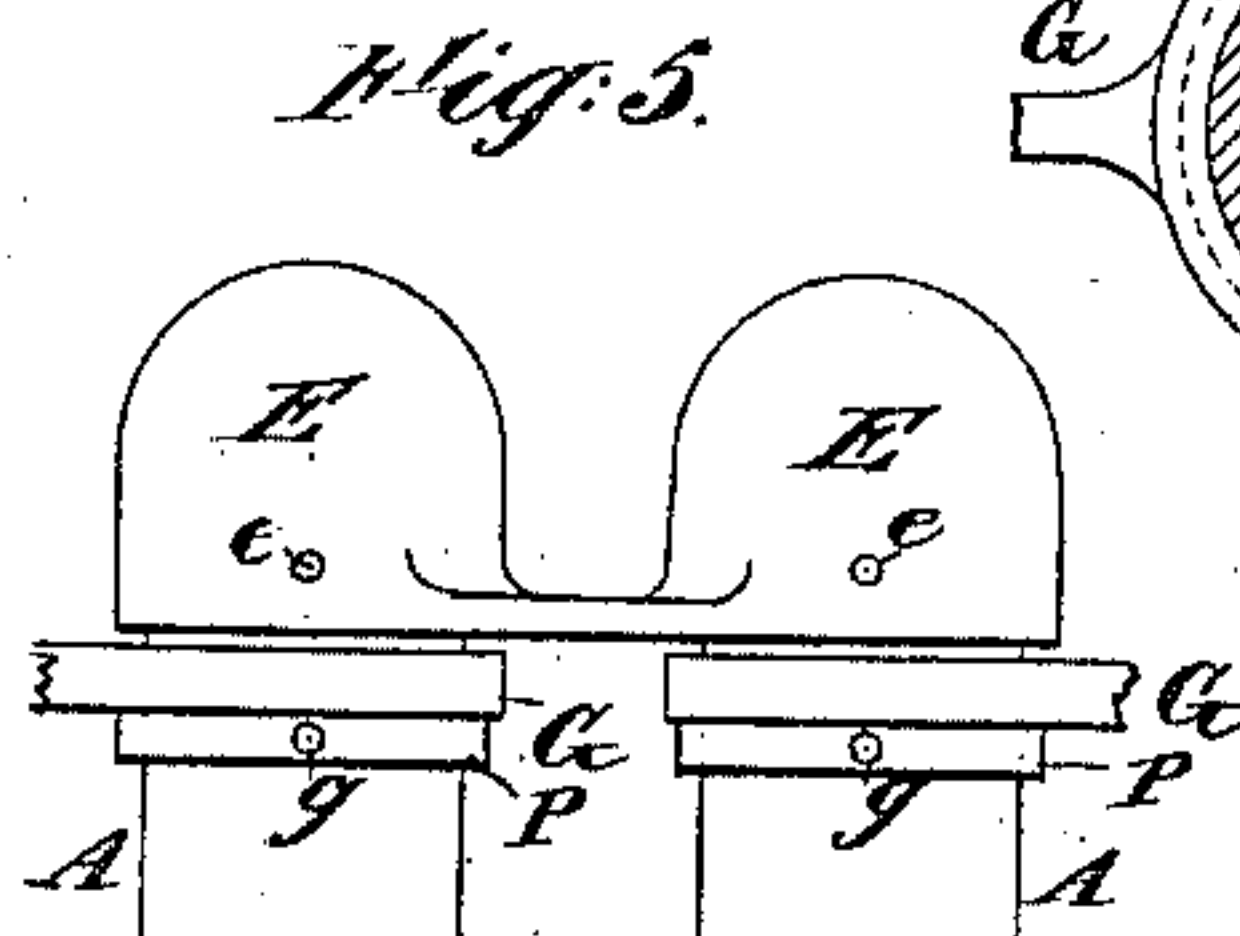
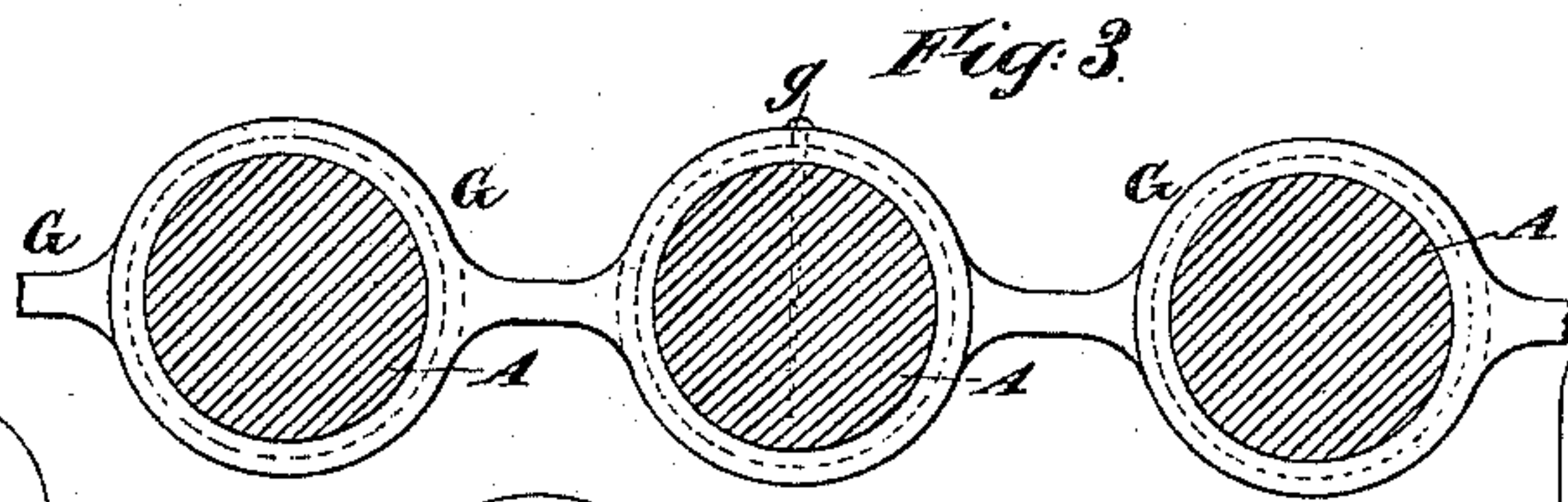
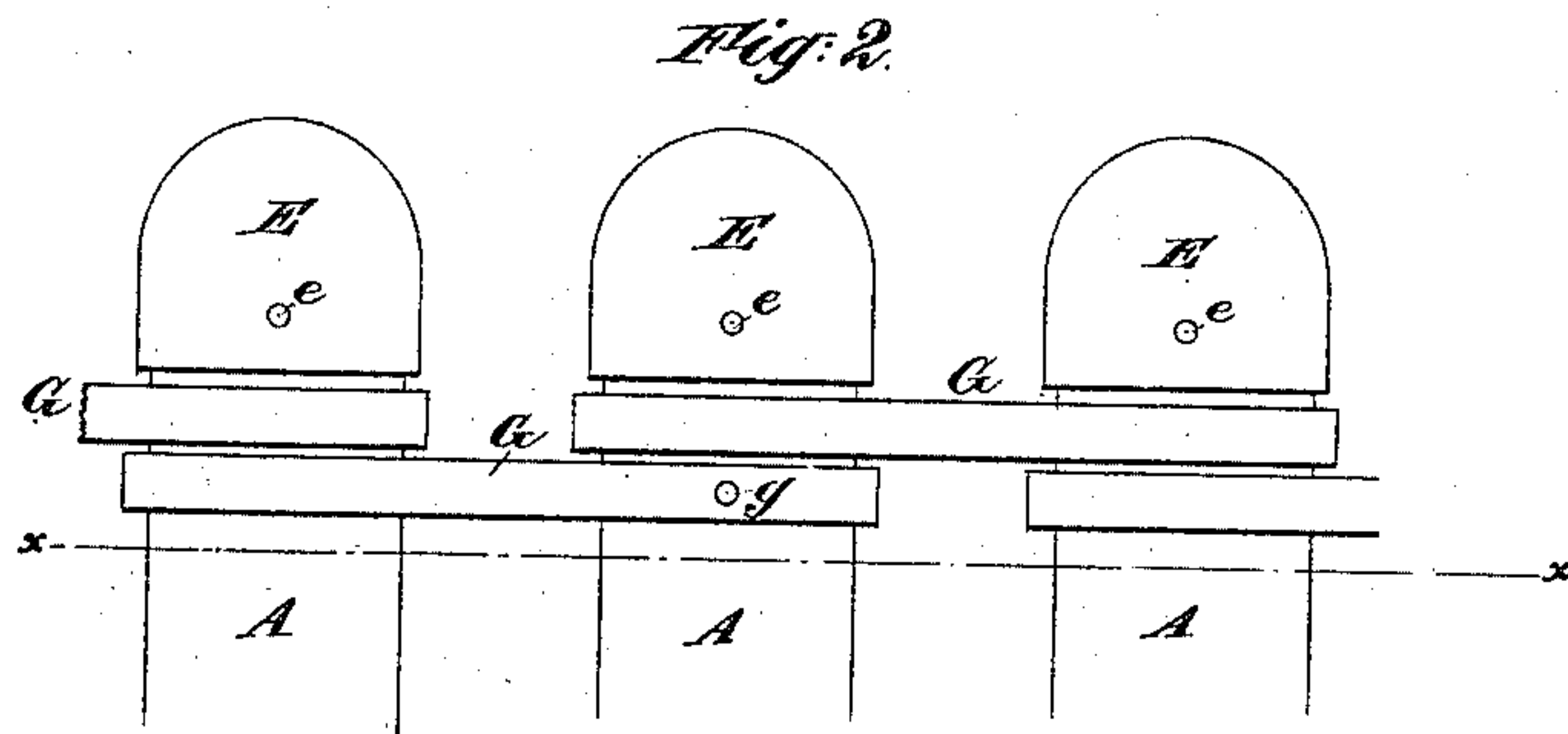
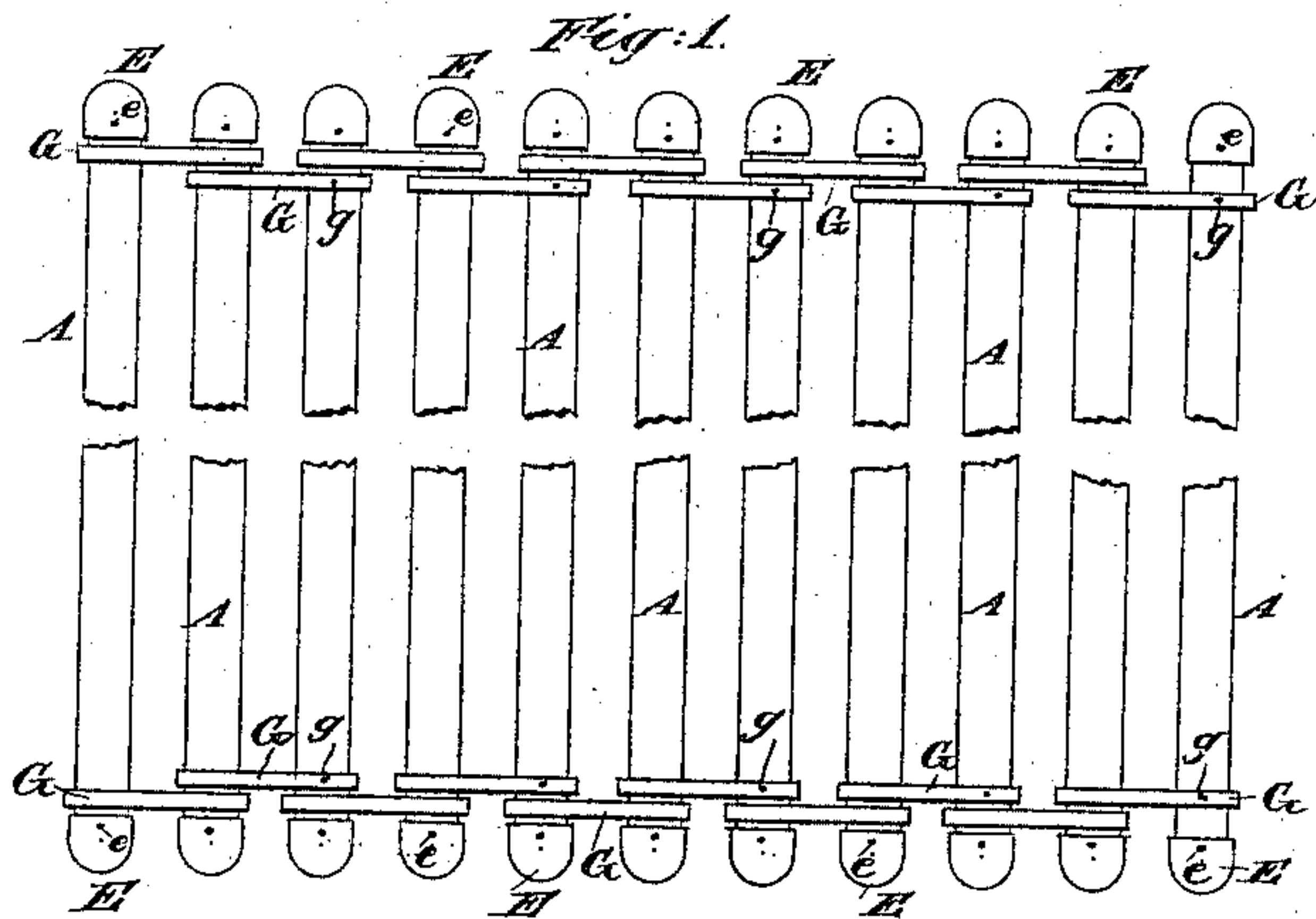
R. MARTINEZ.

2 Sheets—Sheet 1.

MAT.

No. 298,763.

Patented May 20, 1884.



WITNESSES—
Charles F. Searle,
Adrian Boyle

INVENTOR—
Rafael Martinez
by his attorney
Thomas Drew Peterson

(No Model.)

R. MARTINEZ.

2 Sheets—Sheet 2.

MAT.

No. 298,763.

Patented May 20, 1884.

Fig. 9.

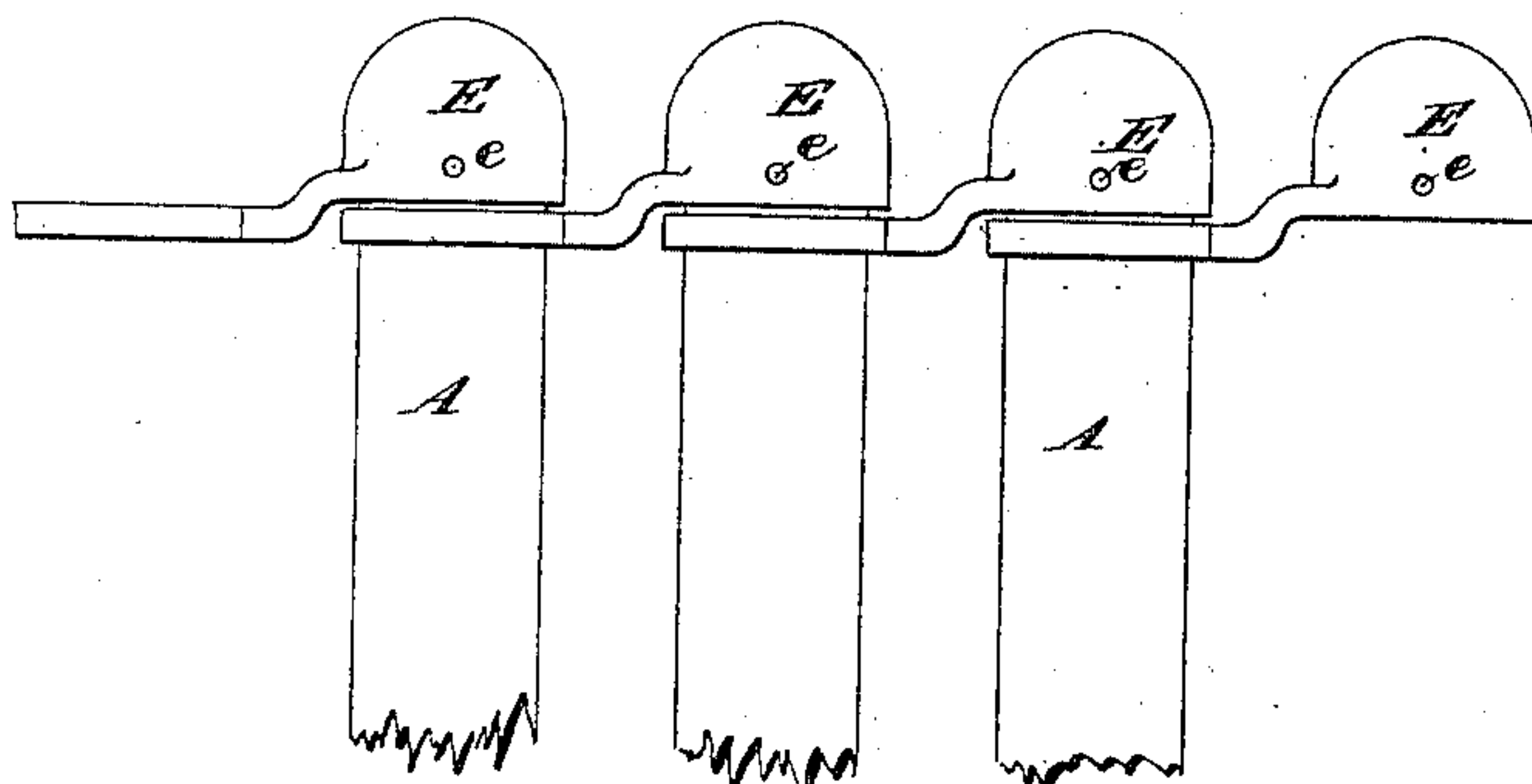


Fig. 10.

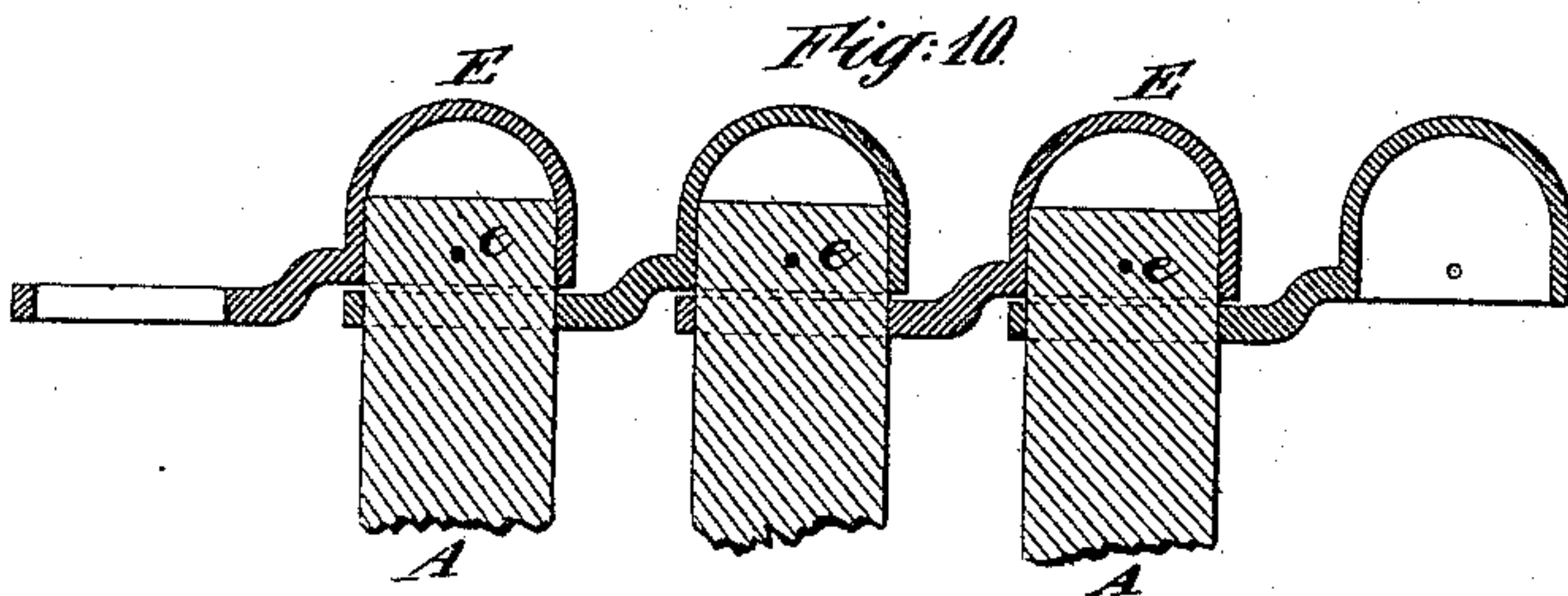


Fig. 13.

Fig. 11.

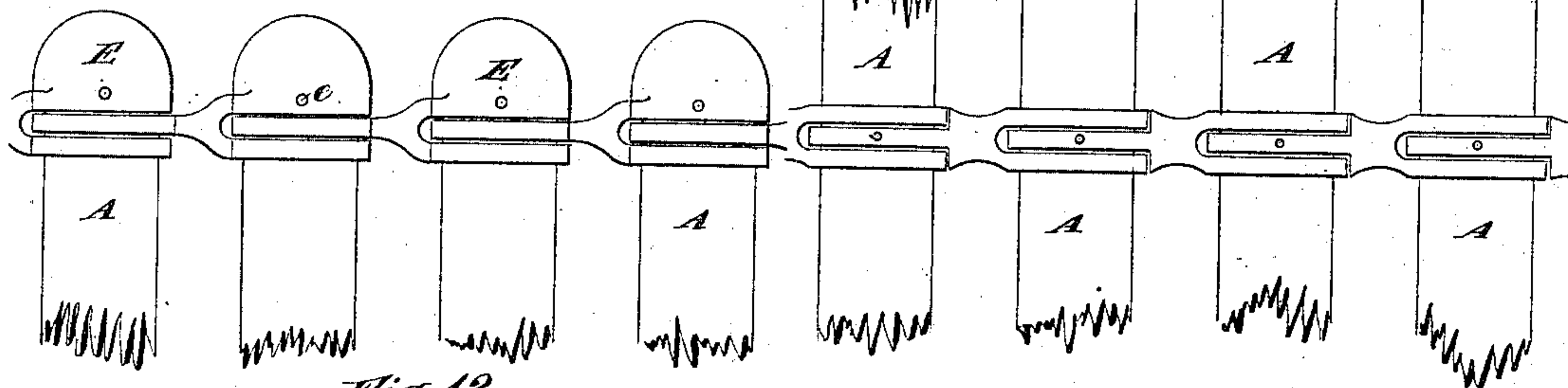


Fig. 12.

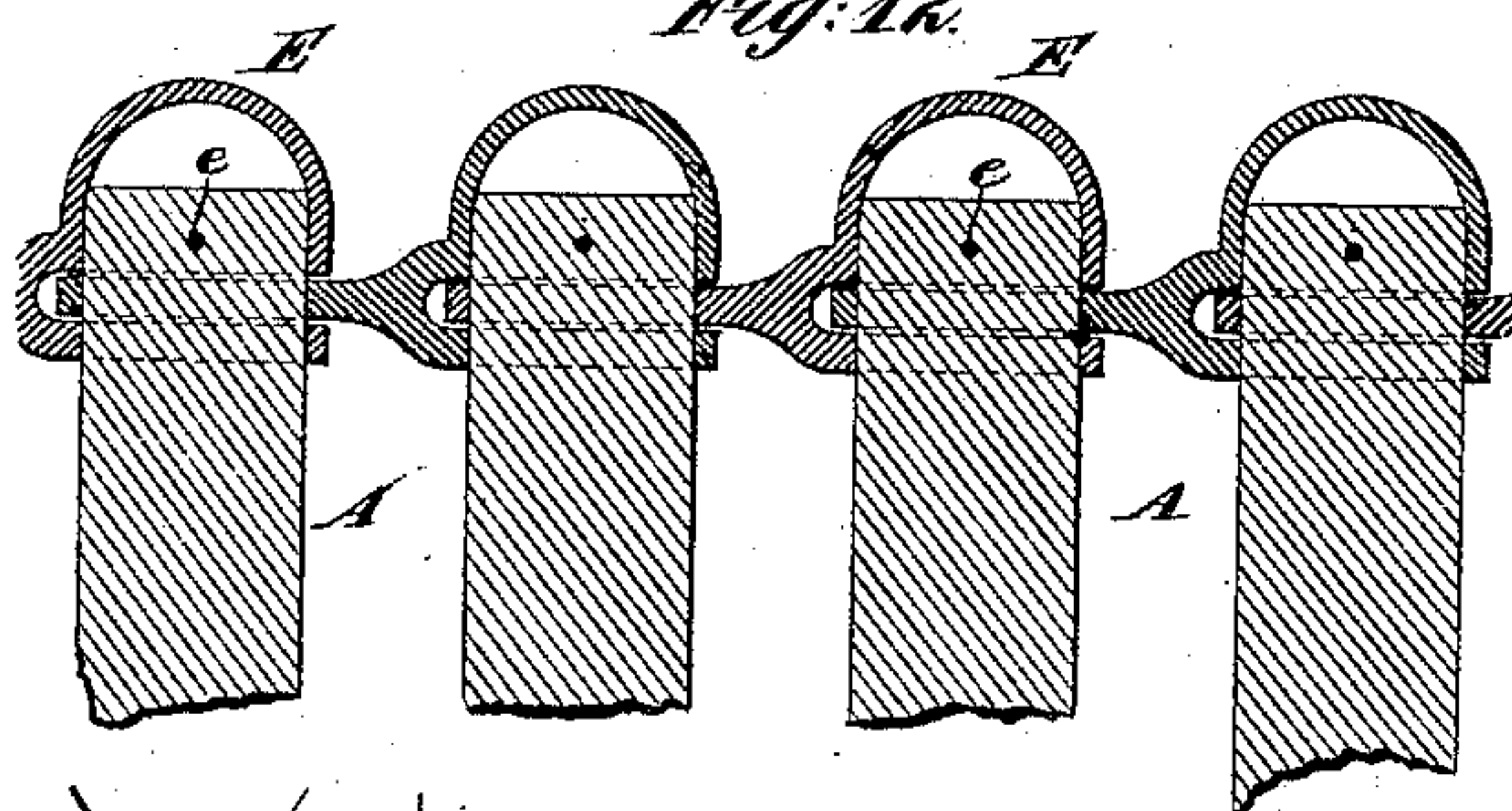
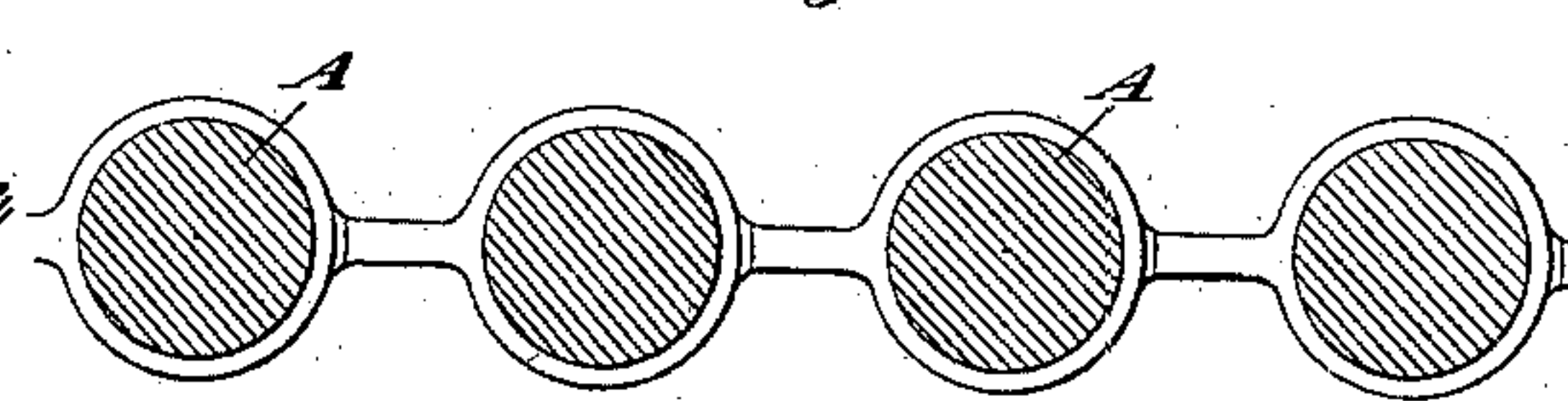


Fig. 14.



WITNESSES—

Charles R. Searles,
M. F. Boyle.

INVENTOR—

Rafael Martinez
by his Attorney
Thomas S. Peterson.

UNITED STATES PATENT OFFICE.

RAFAEL MARTINEZ, OF NEW YORK, N. Y., ASSIGNOR TO EMIL GUTMANN
AND HENRY GOODMAN, BOTH OF SAME PLACE.

MAT.

SPECIFICATION forming part of Letters Patent No. 298,763, dated May 20, 1884.

Application filed November 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, RAFAEL MARTINEZ, a subject of the King of Spain, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in the Construction of Mats or Floor-Coverings, of which the following is a specification.

My improved mat is of that class which is composed of a number of cylindrical bars or rods of wood connected flexibly together in positions parallel to each other, so that the mat may be rolled up.

The invention relates to means for strongly and flexibly uniting the rods.

I provide ties of malleable cast-iron or other suitable material, composed each of two rings, each ring of sufficient size to receive one of the rods loosely in its interior with a sufficiently stout rigid connection. One pair of rings connects a rod with the adjacent rod on the right hand, and another similar independent tie connects with the adjacent rod on the left-hand side. Each end of each rod is thus connected to its neighboring rod on each side. When the rods are long, there may be also a similar double connection at one or more intermediate points, if desired.

In what I esteem the best means of carrying out the invention one ring of each pair is made sufficiently wide to receive a nail inserted through a hole provided.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a plan view showing the mat in an extended condition. The remaining figures are on a larger scale. Fig. 2 is a plan view of a portion in an extended condition. Fig. 3 is a corresponding section on the line *xx*, Fig. 2. Fig. 4 is a section showing the mat partially rolled up. Figs. 5 and 6 represent a modification. Fig. 5 is a plan view, and Fig. 6 a horizontal section. Figs. 7 and 8 represent another modification. Fig. 7 is a plan view, and Fig. 8 a horizontal section. Figs. 9 and 10 represent another modification. Fig. 9 is a plan view, and Fig. 10 a horizontal section. Figs.

11 and 12 represent another modification. Fig. 11 is a plan view, and Fig. 12 a horizontal section. Figs. 13 and 14 represent another modification. Fig. 13 is a plan view, and Fig. 14 a section transverse to the several rods.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A A, &c., are cylindrical rods, of pine or other suitable wood.

E E, &c., are caps of malleable cast-iron or other suitable material, fitted on the ends and secured by nails *e*, driven into the wood through holes in the caps, as will be understood.

G G, &c., are flexible ties, composed each of two rings, with a connection, as clearly shown. These ties are arranged as shown, each embracing two adjacent rods and forming a flexible connection between them. They are arranged in two series, one series lying adjacent to and in contact with the edges of the caps E, and the other series lying just interior thereto. The last series are fixed to their respective rods A by nails *g*, driven through holes provided. Each nail not only keeps the tie in which it is inserted in place, but also the adjacent tie, which turns loosely on the rod between it and the cap E. The connected rings G may be made of malleable cast-iron, the holes being rapidly and cheaply smoothed and enlarged to the proper size by a revolving burr or grinding device. Wide mats may be provided, with a duplicate series of rings, not only at each end but at the middle; or, if required, at two or more points intermediate between the end series. The connection is strong and reliable. A little looseness is not seriously objectionable; but with ordinary care the parts will fit closely and yet allow the mat to be readily rolled. The mats may always be unrolled readily. They may be rolled up again with facility, even when the wood is swelled. In muddy or snowy weather the mat is sufficiently flexible to facilitate removal and cleaning.

Figs. 5 and 6 show a modification, in which substantially the same end is attained by connecting the caps E in pairs and causing such connected caps to perform the functions, not

only of caps but also of one series of the ties G. It will be understood that the caps are secured firmly on their respective rods by nails *e*, and that the ties G are loose at each end. A ring, P is fixed on each rod A adjacent to the ties G, to prevent its displacement laterally. Nails or pins *g* are set in the rods A to keep the ties G in position. The rods may turn in the holes in the ties G, but cannot move endwise therein.

Figs. 7 and 8 show the rods reduced in diameter near each end, so that the shoulder *a* performs an important function in holding the ties against displacement endwise. The rods thus shouldered may be employed with either the double series of ties G, as shown in Figs. 1 and 2, or with the caps E, connected in pairs, and a single pair of ties, G, as shown in Figs. 5 and 6. The best effect is produced by inserting the nails or pins *g* through rings P, applied as shown.

Figs. 9 and 10 show a construction in which a cap and a ring are joined. The cap is rigidly fastened on the end of a rod, while the ring embraces an adjacent rod loosely.

Figs. 11 and 12 show a modification in which there is a ring on one end of each tie-casting and cap, and also a ring on the other end. Each cap is rigidly attached to its respective rod.

Figs. 13 and 14 show a corresponding construction of the tie-castings, but without any end caps connected. This form of tie may be applied near the ends of the rods, a separate cap being applied on the end of each rod; or it may be applied, as shown, at the middle, or at any other point in the length of the rods.

Further modifications may be made in the forms and proportions. The end caps, E, may

be soft rubber, as set forth in the patent to me, dated July 17, 1883, No. 101,036. I can employ rubber in the form of strips or other forms to avoid noise. The connected rings G may be cut by dies, by suitable machinery, from stout sheets of iron, brass, or other suitable metal. In such cases the nails or pins may be set in the wood of each rod, to keep the ties in position endwise on their respective rods and allow them to turn freely.

I have in my experiments used always rods which are cylindrical throughout; but it is not essential that they be cylindrical except at the points where the rings G turn. The main bodies of the rods can be of rectangular section, or of various other forms. It may be of advantage in many or most cases to make the first and last rods of each mat of a wedge-section, with the thin part of the wedge outward.

I claim as my invention—

1. In a floor-mat, a series of cylindrical rods, A, embraced loosely within rings G, connected in pairs, arranged to form flexible joints, substantially as and for the purposes herein specified.

2. In a floor-mat, the parallel rods A, in combination with the end caps, E, two series of loosely-embracing rings G, and means, as *g*, for preventing displacement of the rods endwise, all substantially as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 5th day, of November, 1883, in the presence of two subscribing witnesses.

RAFAEL MARTINEZ.

Witnesses:

JOHN KINGSLEY,
THOS. W. FOLSOM.