

No. 755,643.

PATENTED MAR. 29, 1904.

C. P. ELIESON.

PROCESS OF MAKING ELECTRIC ACCUMULATOR PLATES.

APPLICATION FILED OCT. 16, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

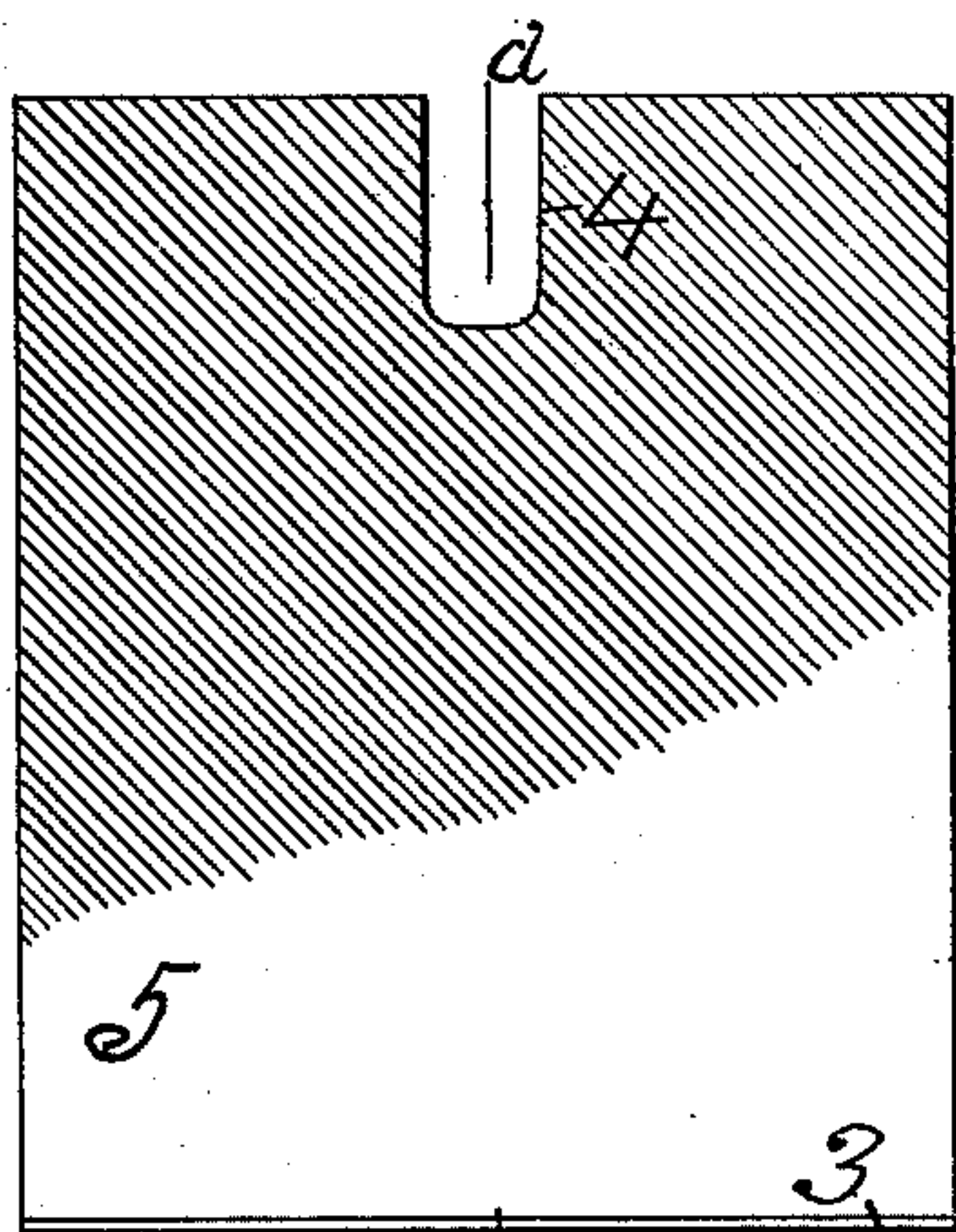


Fig. 1.

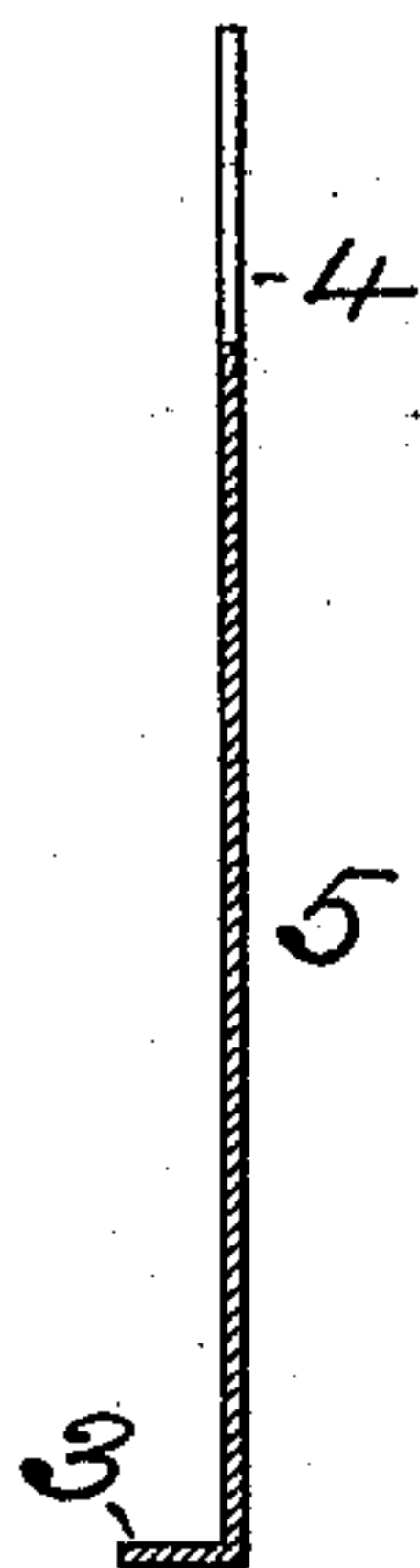


Fig. 2.

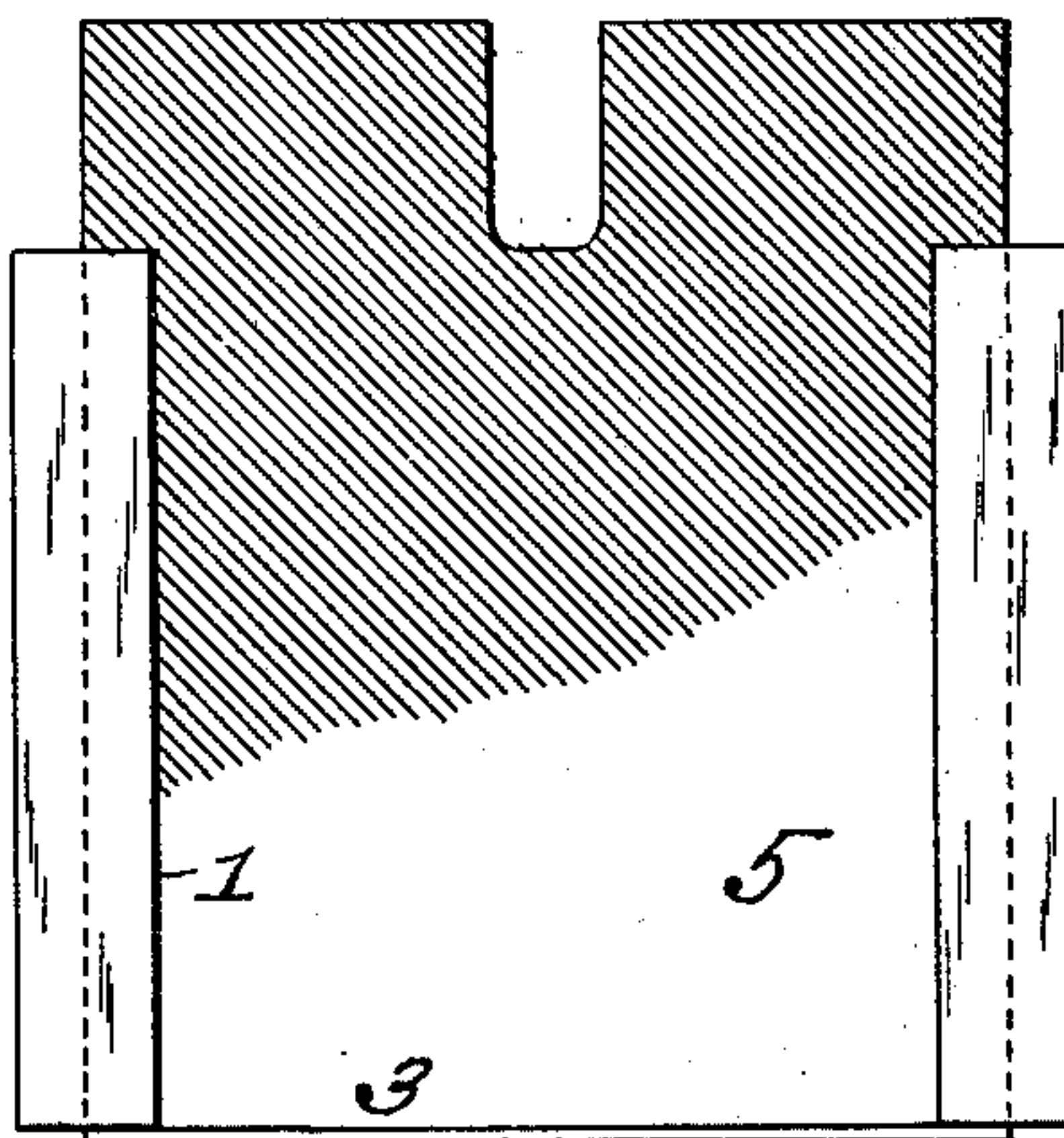


Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.

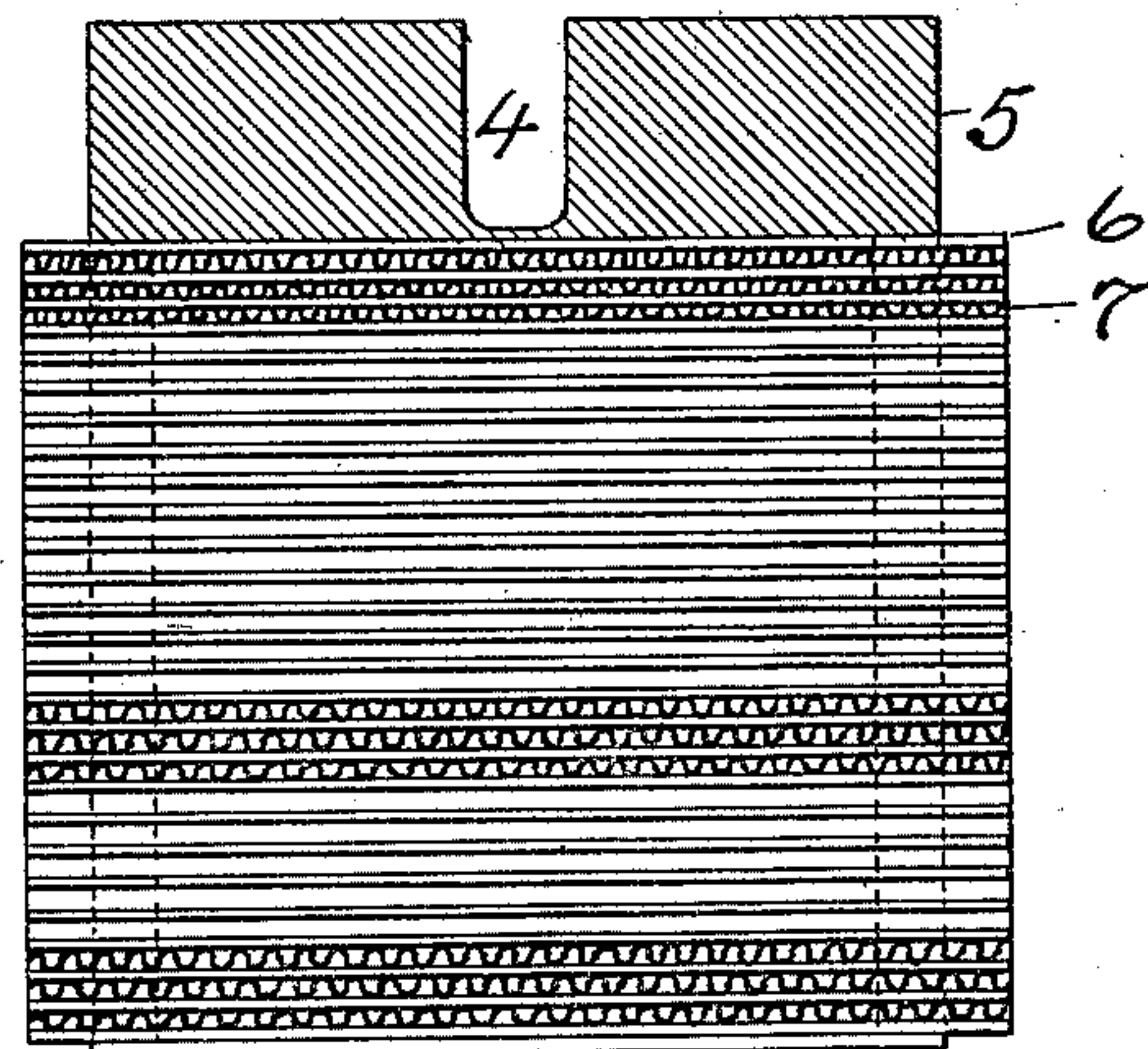


Fig. 8.

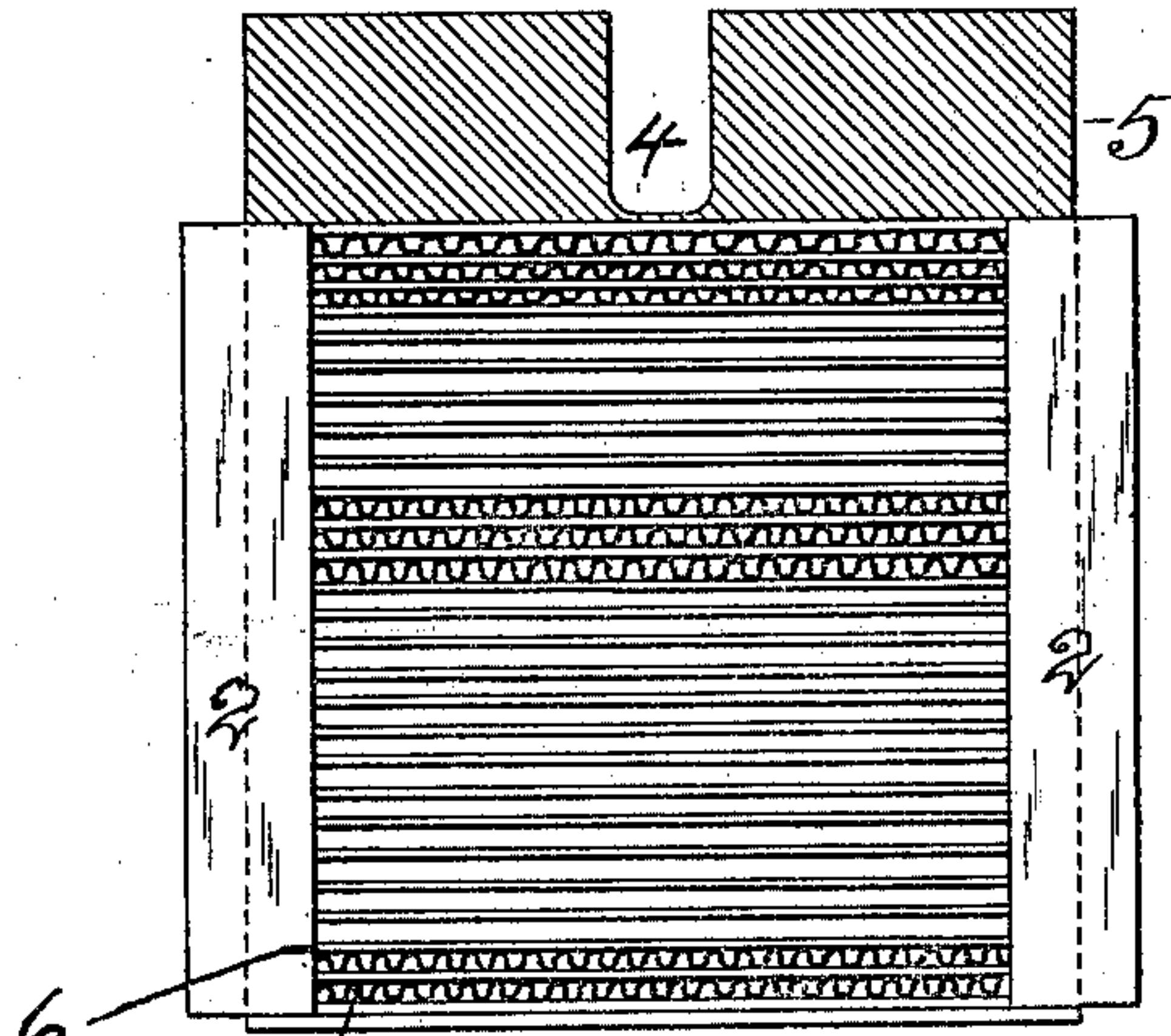


Fig. 9.

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2 SHEETS—SHEET 2.

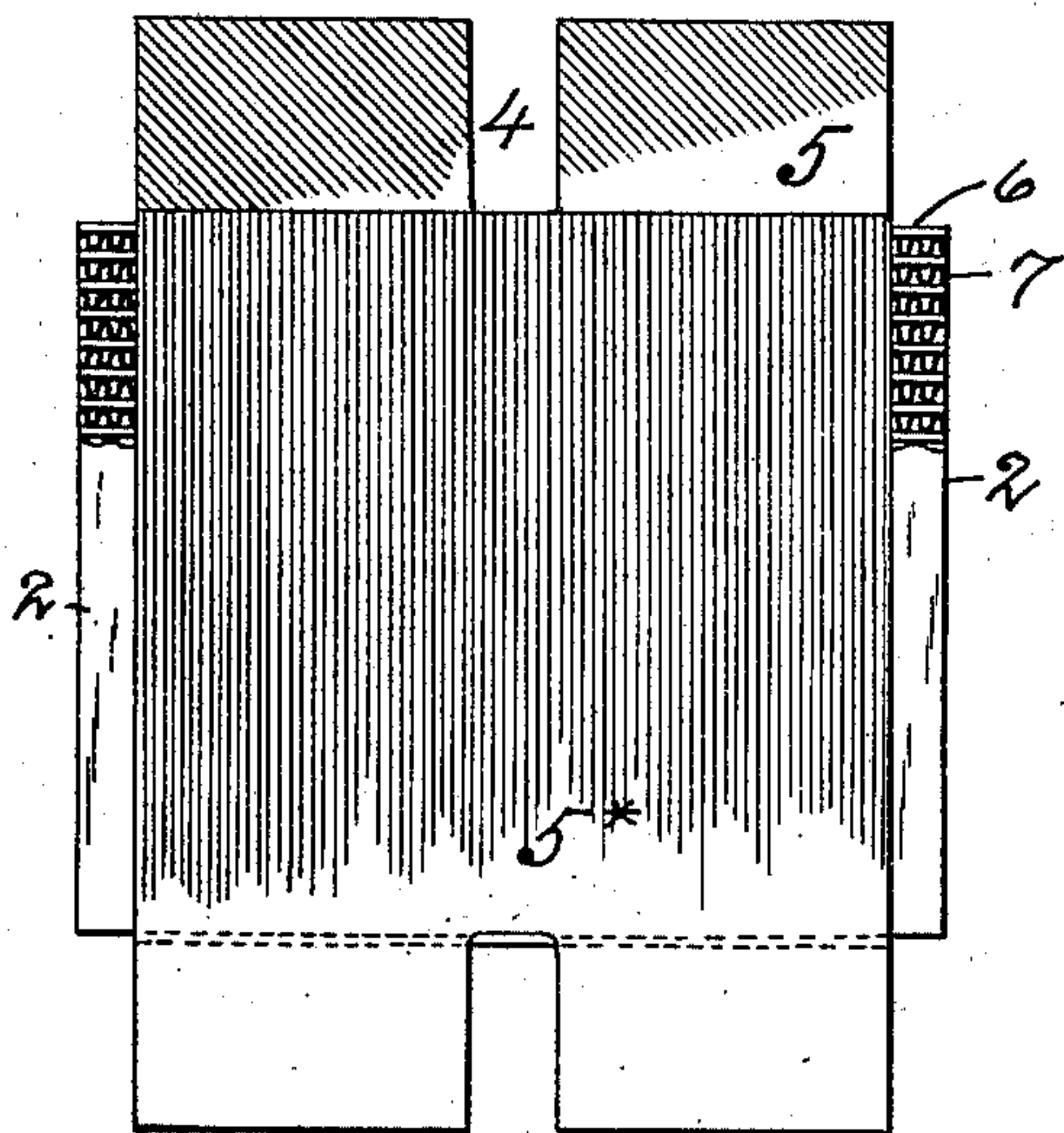


Fig. 10.

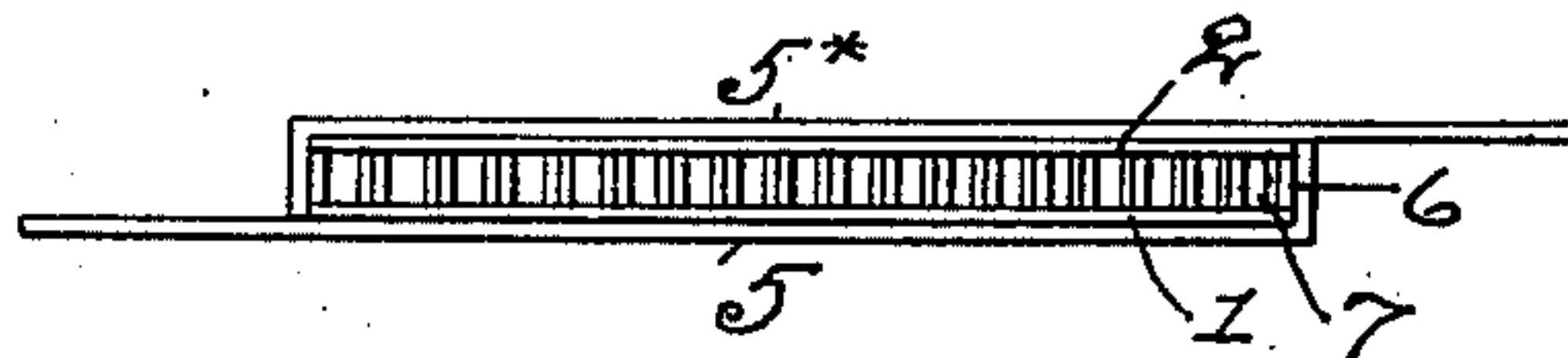


Fig. 11.

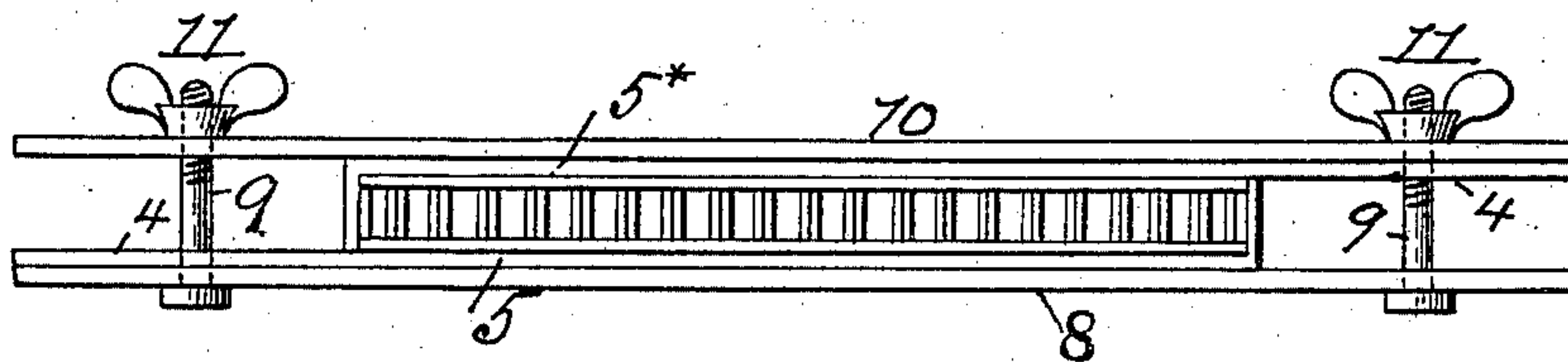


Fig. 12.

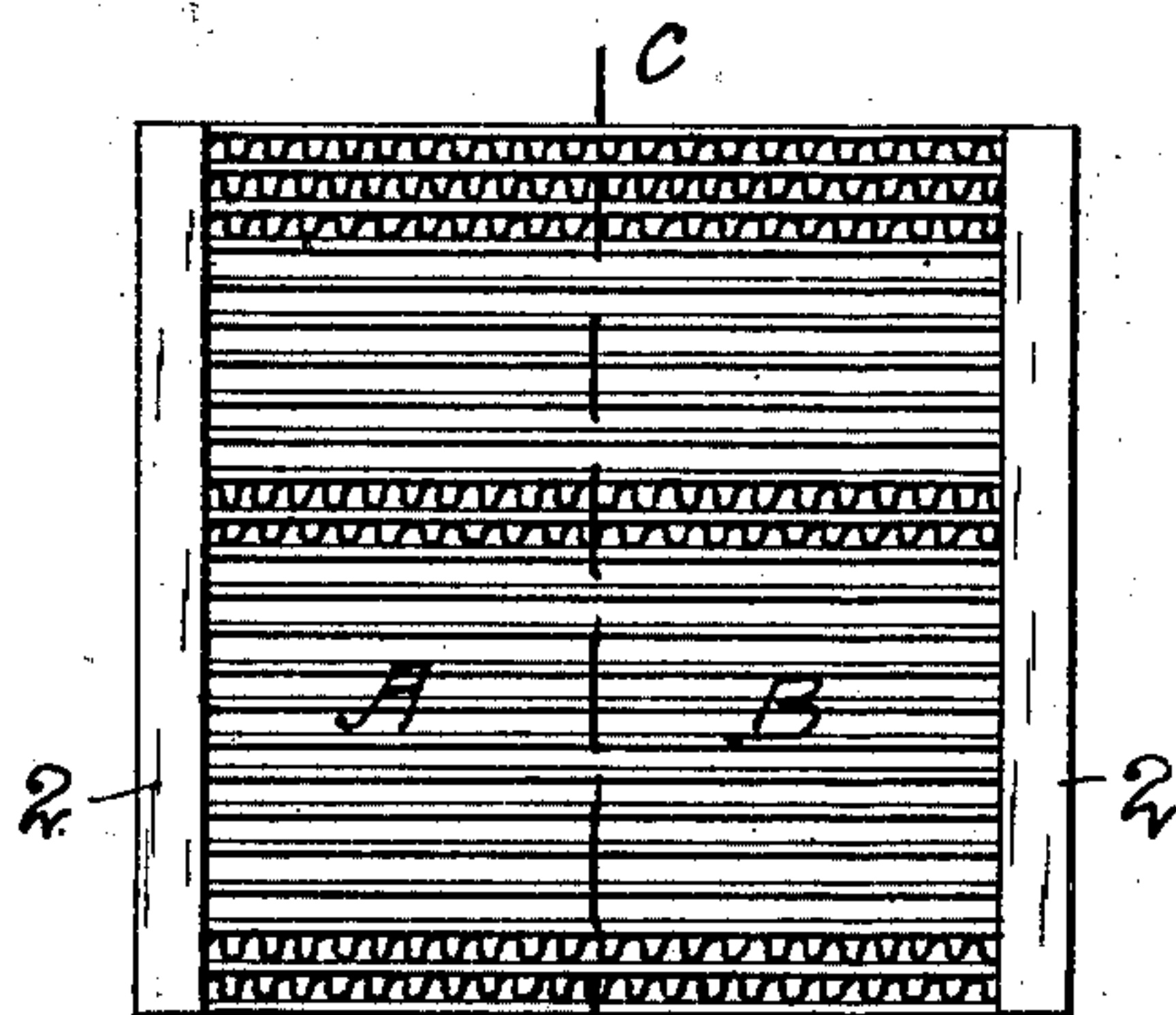


Fig. 13.

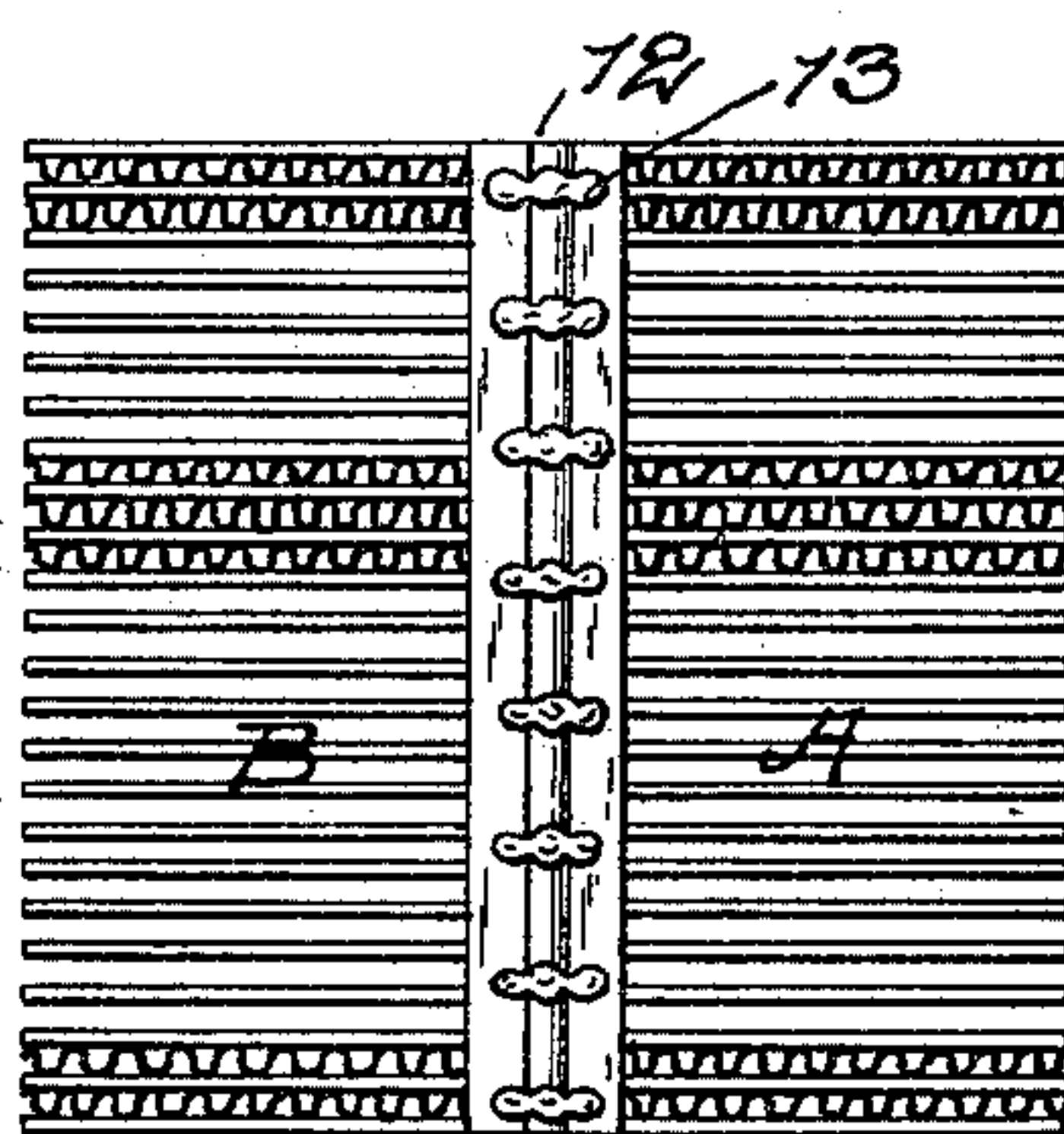


Fig. 14.

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHAIMSONOVITZ PROSPER ELIESON, OF PARIS, FRANCE.

PROCESS OF MAKING ELECTRIC ACCUMULATOR-PLATES.

SPECIFICATION forming part of Letters Patent No. 755,643, dated March 29, 1904.

Application filed October 16, 1903. Serial No. 177,292. (No model.)

To all whom it may concern:

Be it known that I, CHAIMSONOVITZ PROSPER ELIESON, of Paris, France, have invented a new and useful Improvement in Processes of Making Electric Accumulator-Plates, of which the following is a specification.

The invention relates to electric accumulator-plates of the type illustrated in United States Patent No. 692,433, dated February 4, 1902, and granted to myself and Vladimir de Bobinsky; and it consists in the process for the manufacture of such a plate whereby I am enabled to construct the same in an improved manner and so as to insure uniform conductivity throughout the plate.

In the accompanying drawings, Figure 1 represents a flanged metal tray upon which the strips are placed during the construction of the plate. Fig. 2 is a section of the tray shown in Fig. 1 on the line *a a* of said figure. Fig. 3 shows the tray of Fig. 1 with the guard-strips 1 placed in position thereon. Figs. 4 and 5 show, respectively, plan and edge views of the flat strips used in building up the plate. Figs. 6 and 7 are similar views of the corrugated strips. Fig. 8 shows the tray of Fig. 1 with the alternate straight and corrugated strips superposed and resting thereon. Fig. 9 shows the same as Fig. 8 with the guard-strips 2 adjusted in position. Fig. 10 shows a second tray, similar to the tray of Fig. 1, inverted and placed over the built-up strips. Fig. 11 is a sectional view on the line *b b* of Fig. 10. Fig. 12 is a section showing the trays and strips as in Fig. 11 united together by a clamp preparatory to autogenously soldering the protruding edges of the alternate straight and corrugated strips. Fig. 13 shows the condition of the plate after said protruding edges have been soldered. Fig. 14 shows the plate of Fig. 13 divided on the line *c c* with the soldered edges brought into juxtaposition and united to a central leading in and out conductor.

Similar numbers of reference indicate like parts.

I carry my process into effect in the following manner and by the following means: I first take a rectangular tray 5, preferably of iron, having at one end a flange 3 and in the

other edge a slot 4, and place on said tray the guard-strips 1, with their edges extending beyond the longitudinal edges of said tray. Then holding said tray in inclined position with the flange 3 downward I place upon said flange, with their inner edges resting against the face of the tray, alternate flat strips 6 and corrugated strips 7 of thin flexible lead. The length of these strips is to be such as that they will protrude slightly beyond the longitudinal edges of the tray 5, in practice to a distance of about a quarter of an inch. The piling up of the strips may continue until the slot 4 is reached, as shown in Fig. 8. I then place upon the assembled strips 6 7 the guard-strips 2, with their outer edges coinciding with the outer edges of the under guard-strips 1, as shown in Fig. 9. I then take a second flanged tray 5*, similar to tray 5, and place it over the assembled strips, so that said strips will be held between the flanges of the two trays, as illustrated in Figs. 10 and 11. I then place the under tray 5 upon a plate 8, from which clamping-screws 9 extend upwardly through the slots 4 in the two trays. On these screws I place a longitudinal bar 10 and above the bar clamp-nuts 11, so that by setting up these nuts the trays and strips between them are securely clamped together. The ends of the strips will then protrude to about the distance stated and as shown in Fig. 10. Then by means of a hydrogen-flame or any other suitable source of high temperature I fuse together these protruding ends. By reason of the chilling due to the presence of the iron trays this fusing (autogenous soldering) does not take place inward of the outer longitudinal edges of said trays. The effect of the fusing operation is to reduce the width of the plate formed by the assembled strips to the width of the supporting-tray and to leave all of the strips connected along the outer edges by a rib of solid metal. The resulting plate is shown in Fig. 13. This plate I divide longitudinally in the middle along the line *c c*, forming two groups A B, the strips of each group being free at one end and united at the other. To unite the two groups to form a plate, I may join their soldered edges by solder or otherwise; but preferably I connect

them to a rod or bar 12 by short transverse pieces of solder 13, disposed at numerous points along the length of the bar. In this way I produce the plate very expeditiously and
5 cheaply and also make both sections of it, A and B, exactly alike in dimensions.

I claim—

1. The process of making an electric accumulator-plate which consists in superposing a
10 series of strips of thin flexible lead, soldering the ends of said strips, dividing said strips transversely into two sections of equal area and uniting said sections at their edges formed by said solder ends.

15 2. The process of making an electric accumulator-plate which consists in superposing on a suitable supporting-plate a series of strips of thin flexible lead of such length that their ends shall protrude beyond the edges of
20 said plate autogenously soldering the protruding ends of said strips, dividing said strips transversely into two sections of equal area and uniting said sections at their autogenously-soldered edges.

25 3. The process of making an electric accu-

mulator-plate which consists first in disposing on a suitable supporting-plate (1) guard-strips placed in their longitudinal edges protruding beyond the corresponding edges of said supporting-plate, (2) transverse strips of thin flexible lead superposed and having their ends extending to the edges of said guard-strips (3) guard-strips having their longitudinal edges coinciding the ends of said strips; second, clamping the aforesaid parts in position; third, autogenously soldering together the portions of said guard-strips and said transverse strips which protrude beyond said supporting-plate; fourth dividing the plate so united transversely into two sections of equal area; fifth
4 uniting said sections at their autogenously-soldered edges.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAIMSONOVITZ PROSPER ELIESON.

Witnesses:

WM. H. SIEGMAN,
I. A. VAN WART.