

(No Model.)

2 Sheets—Sheet 1.

F. G. & A. C. SARGENT.
WIRE APRON.

No. 527,722.

Patented Oct. 16, 1894.

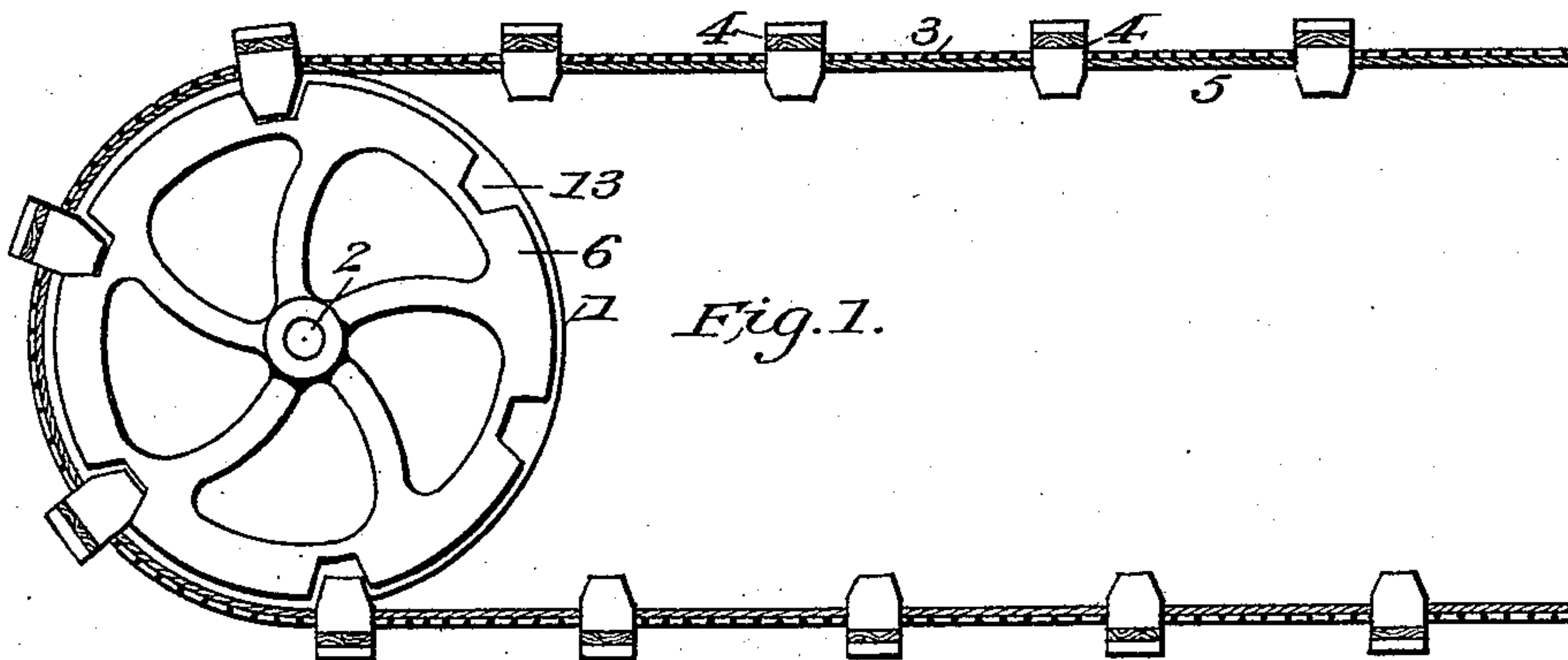


Fig. 1.

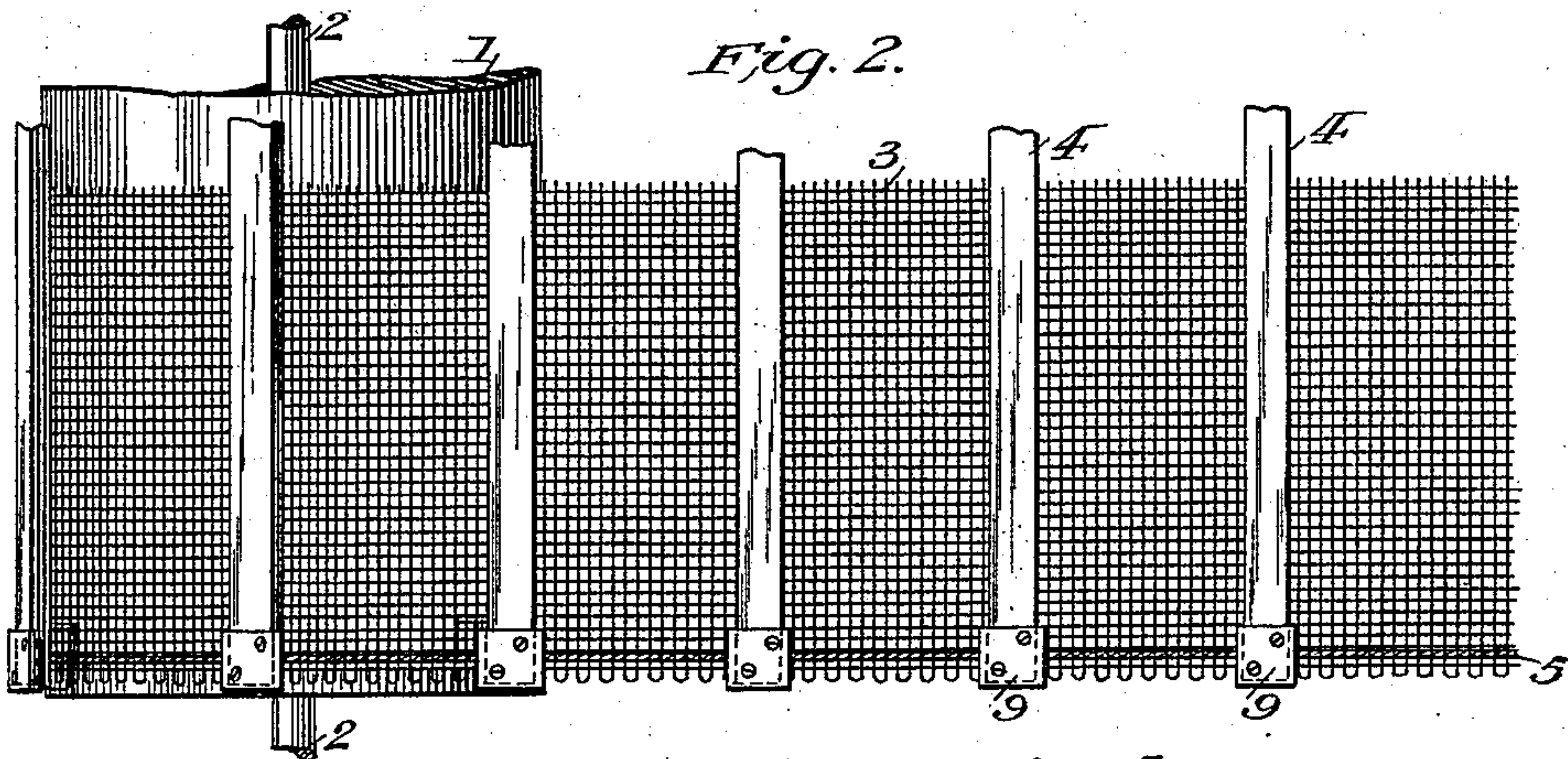


Fig. 2.

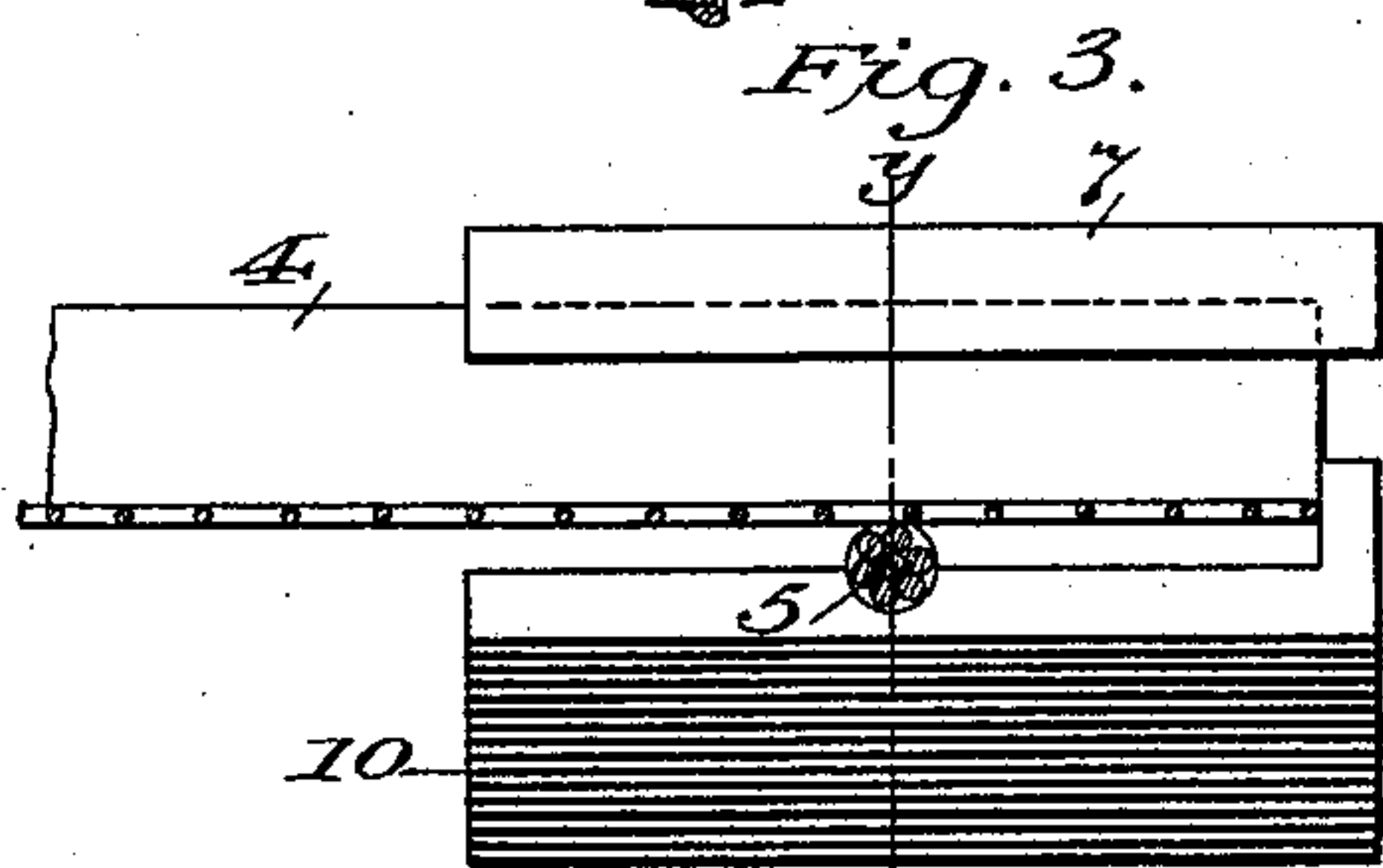


Fig. 3.

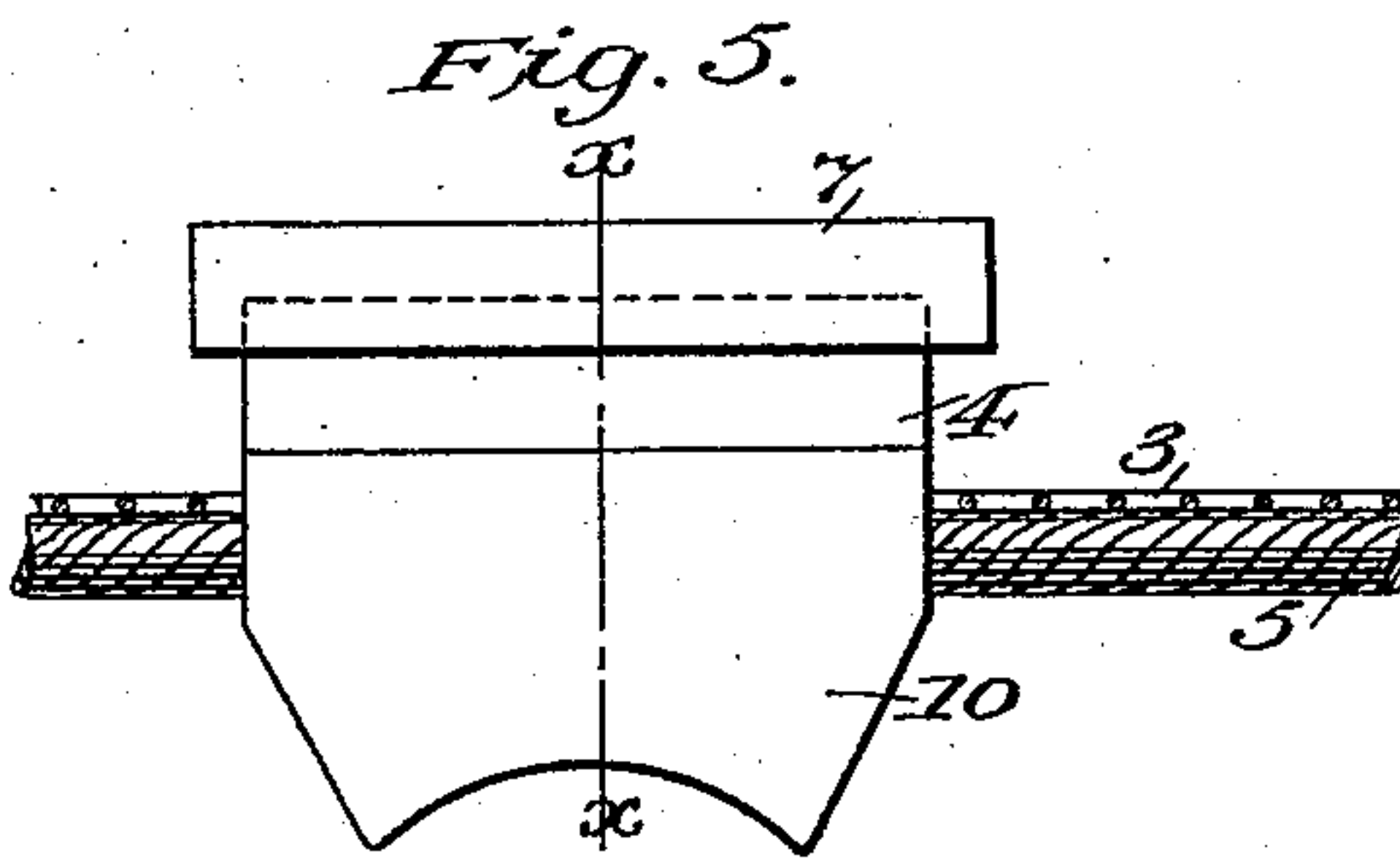


Fig. 5.

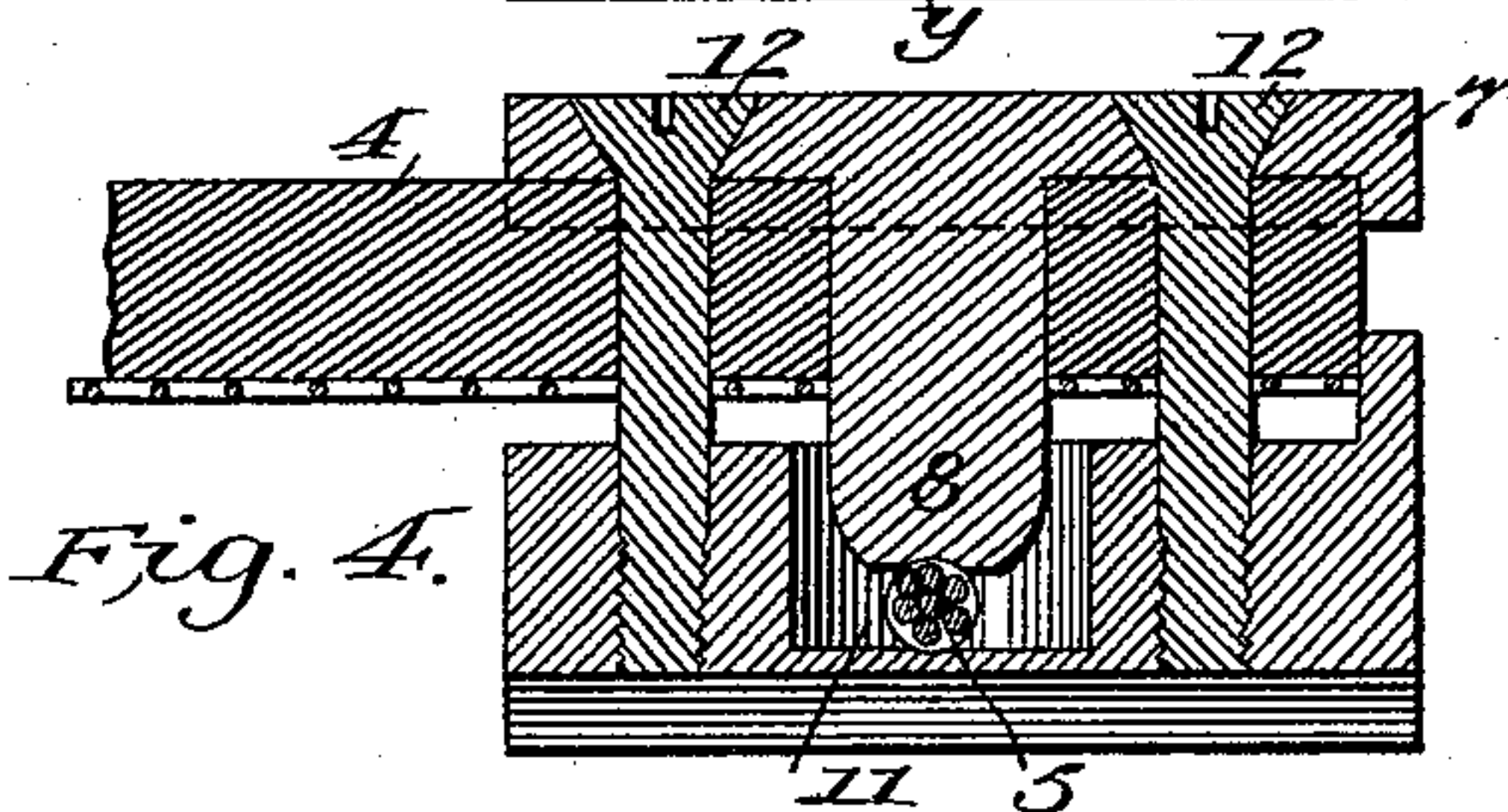


Fig. 4.

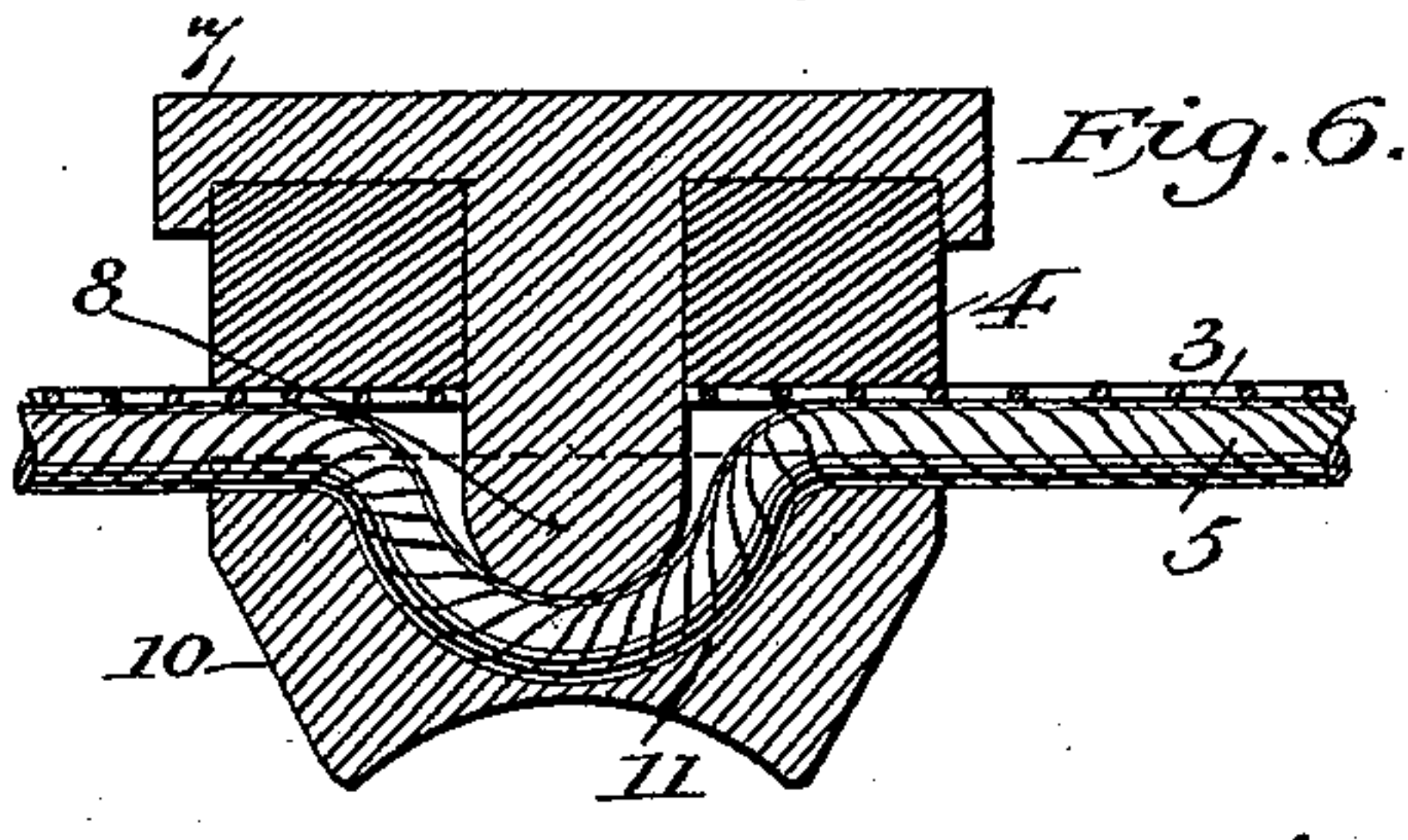


Fig. 6.

Witnesses.

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by their attorney

Lepine Hall Rice

(No Model.)

2 Sheets—Sheet 2.

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WIRE APRON.

No. 527,722.

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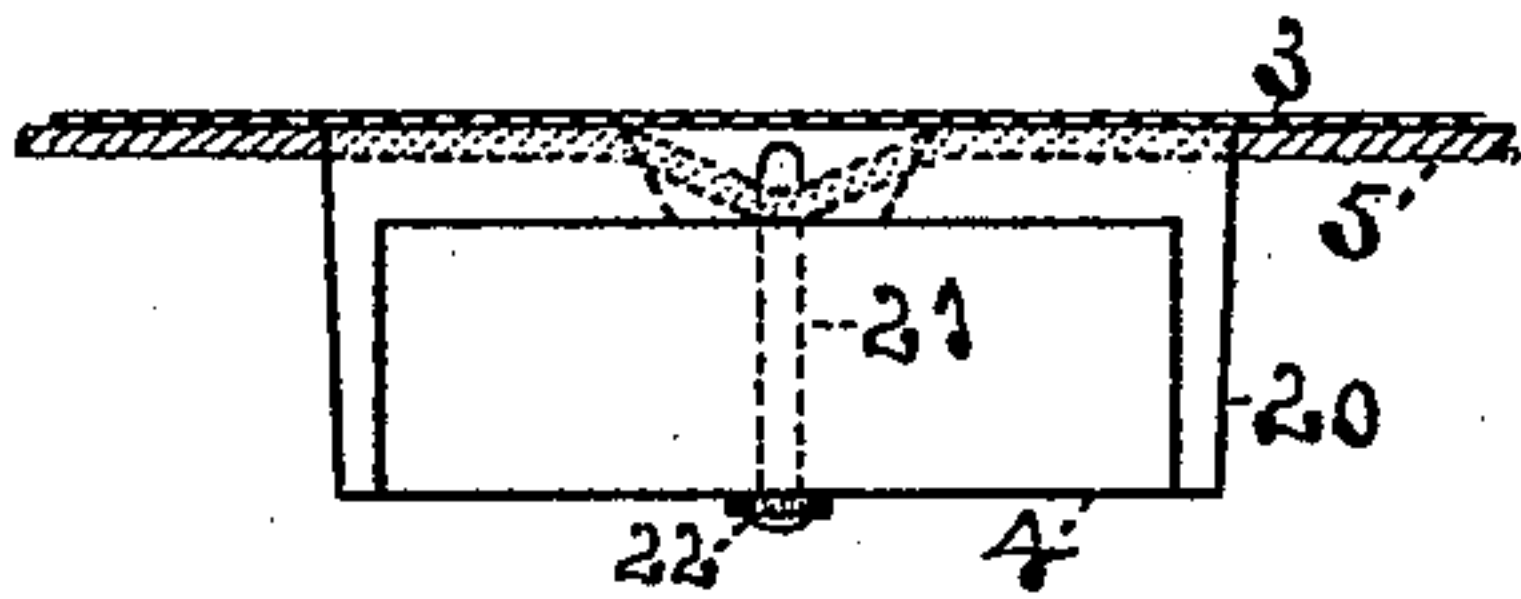


Fig. 8.

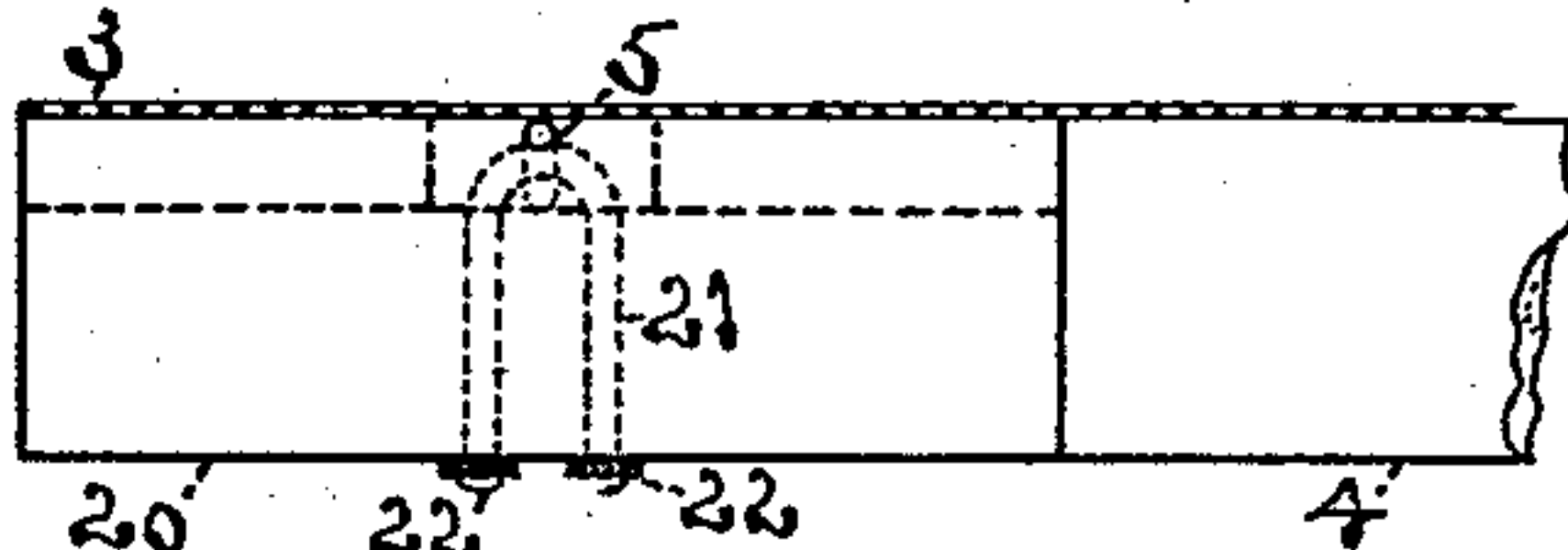


Fig. 9.

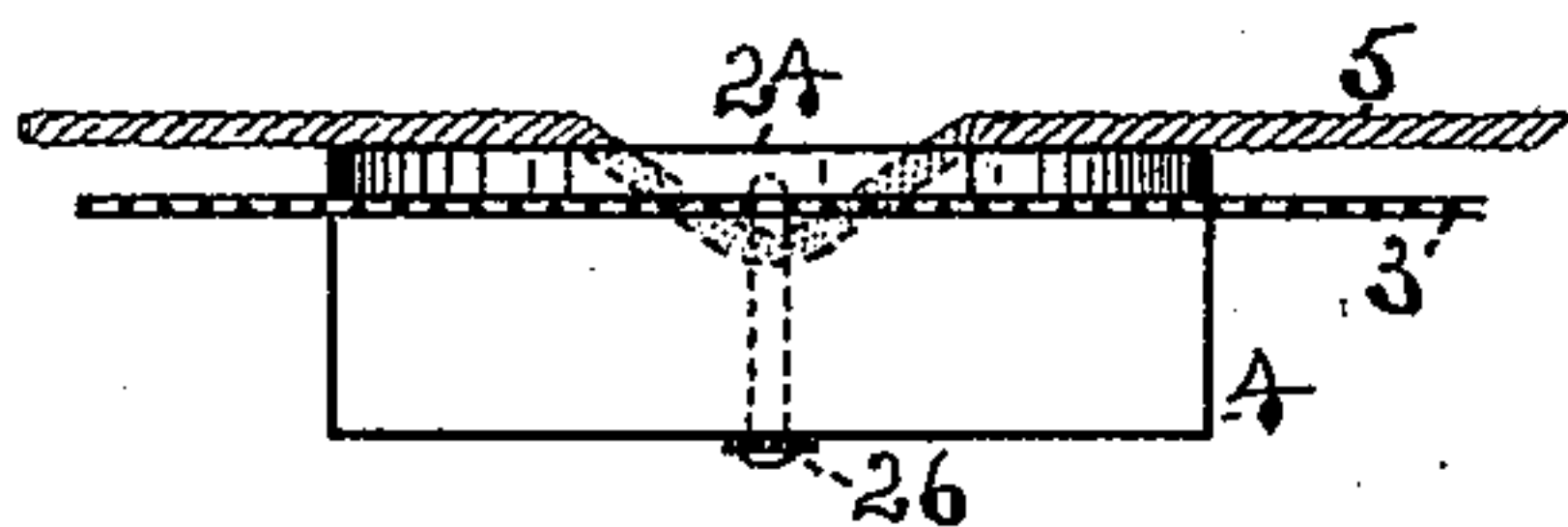
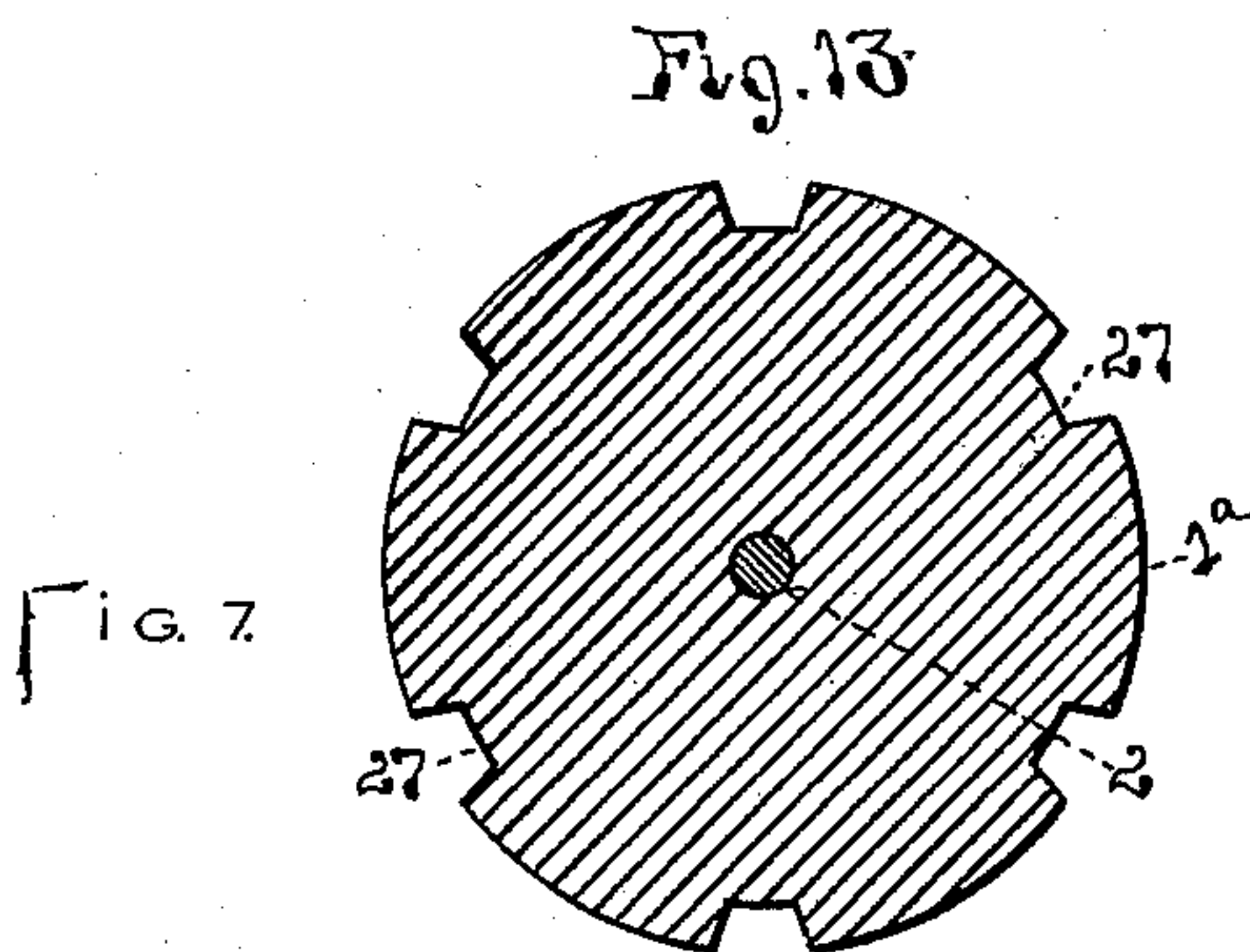
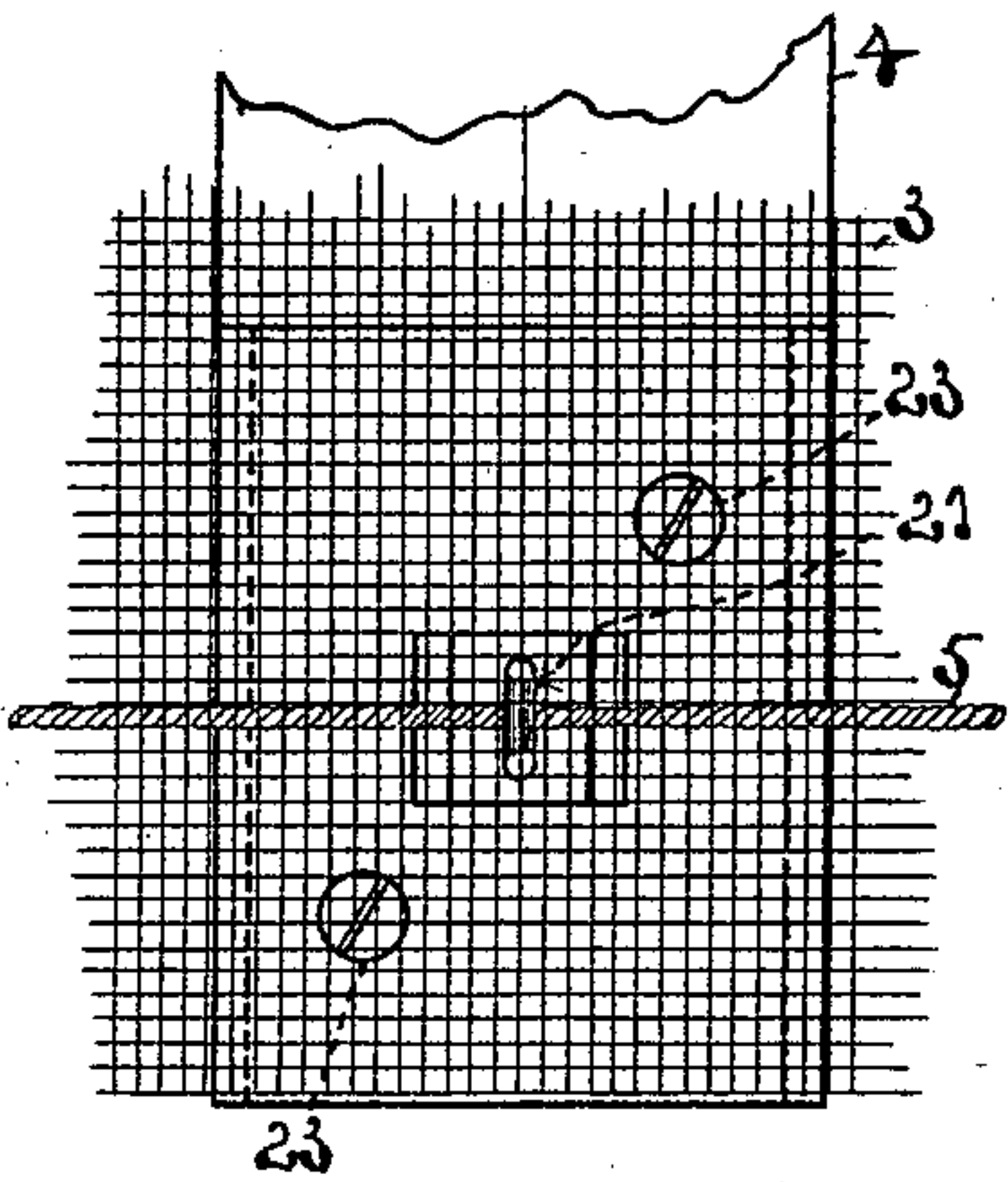


Fig. 11.

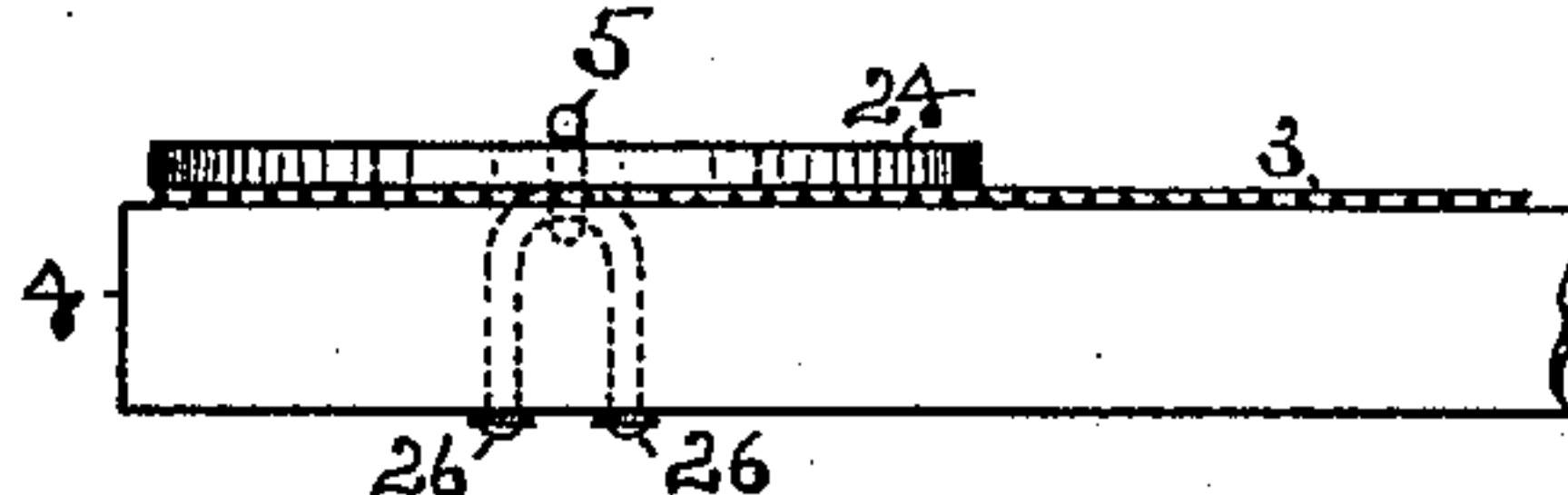


Fig. 12.

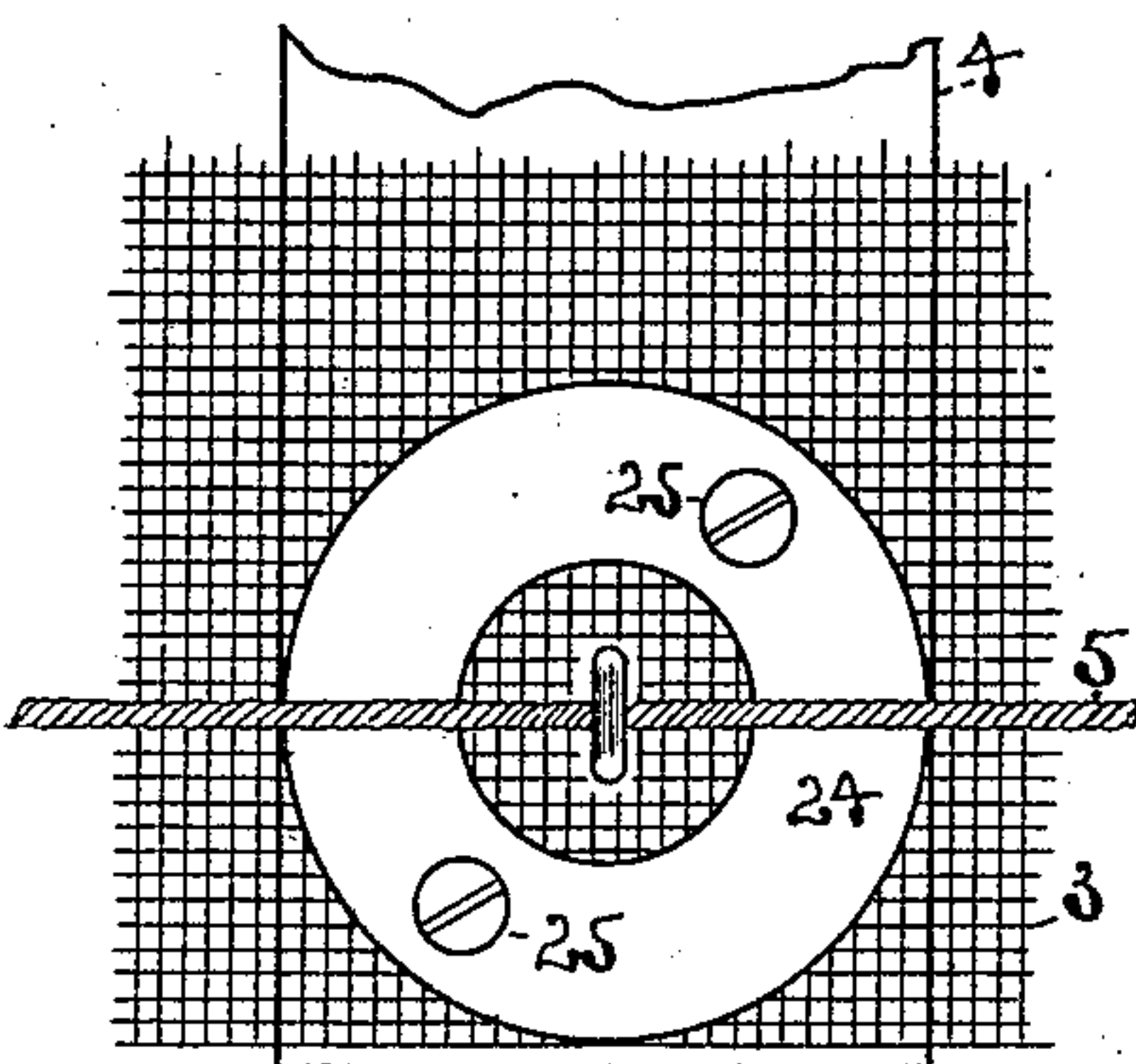


Fig. 10.

WITNESSES.

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UNITED STATES PATENT OFFICE.

FREDERICK G. SARGENT AND ALLAN C. SARGENT, OF GRANITEVILLE,
MASSACHUSETTS.

WIRE APRON.

SPECIFICATION forming part of Letters Patent No. 527,722, dated October 16, 1894.

Application filed January 11, 1894. Serial No. 496,515. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK G. SARGENT and ALLAN C. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Wire Aprons, of which the following is a specification.

Our invention relates to wire aprons such as are used in fiber driers and other similar machines, and it consists in certain new and useful constructions and combinations of the various parts thereof, substantially as hereinafter described and claimed.

In the drawings: Figure 1 is an end view of a roller with the wire screen apron running over it. Fig. 2 is a top view of the same, the farther end of the roller and shaft and apron and slats being broken away. Fig. 3 is a side view of one end of a slat. Fig. 5 is an end view of the same. Fig. 4 is a section on line $x-x$ of Fig. 5. Fig. 6 is a section on the line $y-y$ of Fig. 3. Fig. 7 is a view from the same position as in Fig. 2 of a modification of the method of gripping the cable. Fig. 8 is an end view of a slat with the modification. Fig. 9 is a side view of the same. Fig. 10 is a view from the same position as in Fig. 7 of another modification of the method of gripping the cable. Fig. 11 is an end view of the slat with this modification. Fig. 12 is a side view of the same. Fig. 13 is a section of a roller to be used with these two modified arrangements.

1 is the roller.

2 is the shaft.

3 is the endless traveling wire screen apron.

4, 4, are the slats running across, either underneath or above the apron.

5 is the wire cable.

In the first arrangement shown there is fixed to the end of the roller a wheel, 6, with depressions, 13, in its circumference at intervals equal to the distance between the slats 4, 4. Over the end of each slat is put the casting, 7, which has a projection, 8, at its center which passes through a round hole in the slat and through the wire screen apron, and is slightly grooved in a direction crosswise of the slat on its under side. This cast-

ing may be made to fit the slat closely, or it may be attached to the slat by screws 9, 9, from the top, as shown in Fig. 2.

Underneath the slat is placed another casting, 10, which has a depression, 11, in it corresponding to the projection on the casting 7. Two set screws, 12, 12, pass down through the casting 7 and through the slat and have a screw thread on their lower ends fitting an inside screw thread in casting 10. By turning these from the top the casting, 10, may be drawn nearer to the slat 4, thus decreasing the space between the end of the projection 8 and the bottom of the depression 11.

Between the wire screen apron 3 and the casting 10 is run a cable, 5, which is gripped between the projection 8 and depression 11 by setting up the screws 12 as before described. The casting 10 is shaped on the bottom and sides so as to fit into the depressions, 13, in the circumference of the wheel 6. There would be a similar wheel upon the other roller, not shown in the drawings, and there might be such a wheel with such depressions on the opposite end of each roller.

As the slats are shown in Figs. 2 to 6, inclusive, they do not support the wire screen apron, but serve merely to connect the cables at each edge of the apron and keep them running at the same rate over the roller, so that if the apron should stretch a little on one side it would still run straight on that side and not get more and more out of true; nor would a slight difference in the diameters of the ends of the roller have this same effect of displacing the apron.

In Figs. 7, 8 and 9 is shown a modification of the gripping mechanism, and in these figures the slats are shown as underneath the apron, thus supporting it. In this modification there is but one casting or plate, 20, which has a square hole cut in the top large enough to allow the staple, 21, to pass down through it, and two holes are bored in the slat to allow the ends of the staple to project below the slat and be held there by the nuts 22, 22. By laying the cable over the hole in the casting and putting the staple over it and through the holes in the slat and turning up

the nuts, 22, the cable will be drawn downward and gripped between the bend in the staple and the slat, as shown in these figures. The casting, 20, is attached to slat 4 in the same manner as the casting 7 is attached to the slat as shown in Fig. 2, by screws 23, 23.

In Figs. 10, 11 and 12 a round washer or plate, 24, is shown as taking the place of the casting, held to the slat by screws 25, 25. The cable is run over this washer and the staple is passed over the cable down through the slat and turned up as before by nuts, 26, till it grips the cable. In these modifications of the first arrangement shown, the wheel 6 used with that arrangement would not work, because the slats extend clear across the apron on the under side thereof and they would rest upon the surface of the roller and slip upon it, one way or the other. Grooves, 27, are therefore cut in the roller parallel with its shaft, as shown in Fig. 13, being placed at intervals equal to the distance between the slats. The slats will then fit into these grooves and the wire apron will lie upon the surface of the roller.

The cable might be arranged to run in circumferential grooves in the roller, so as to allow the apron to lie flat upon the roller, and there might also be one or more cables near the middle of the apron as well as at its edges, thus giving extra support to it.

The use of the cable instead of chains, or other support at the edges, has the advantage of simplicity. It has the further advantage that the slats can be gripped at any desired point and can be readily readjusted, in case either cable stretches more than the other, or in case the apron stretches at one side more than at the other, so that the apron can always be kept running true.

What we claim as new and of our invention is—

1. In an endless wire apron, the combination of cables, cross-slats, and wire apron, with fasteners consisting of a perforated plate secured at each end of each slat, a staple which encircles the cable and passes through the said perforation in the plate, and means for drawing down the said staple to grip the cable, substantially as described.

2. In an endless wire apron, the combination of cables, cross-slats, and a wire apron, with fasteners consisting of a perforated plate secured to each end of each slat, a staple which encircles the cable and passes through the perforation of said plate and through a slat, and means for drawing the staple into the perforation and thereby gripping the cable.

3. The combination of an endless wire apron, flexible cables to guide the same, cross-slats at intervals between said cables, and fasteners which engage the cables and are adjustably secured to the slats, thereby attaching the several parts together.

4. The combination of an endless wire apron, flexible cables to guide it, cross-slats at intervals between said cables, fasteners which engage the cables and are adjustably secured to the slats, thereby attaching the several parts together, and supporting rollers provided with grooves in their peripheries at proper intervals to receive the said slats, substantially as described.

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ALLAN C. SARGENT.

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GEO. E. TALBOT.