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R. M. WHITNEY.
UNDER SCREEN FOR CARDING MACHINES.
APPLICATION FILED APR. 26, 1907.

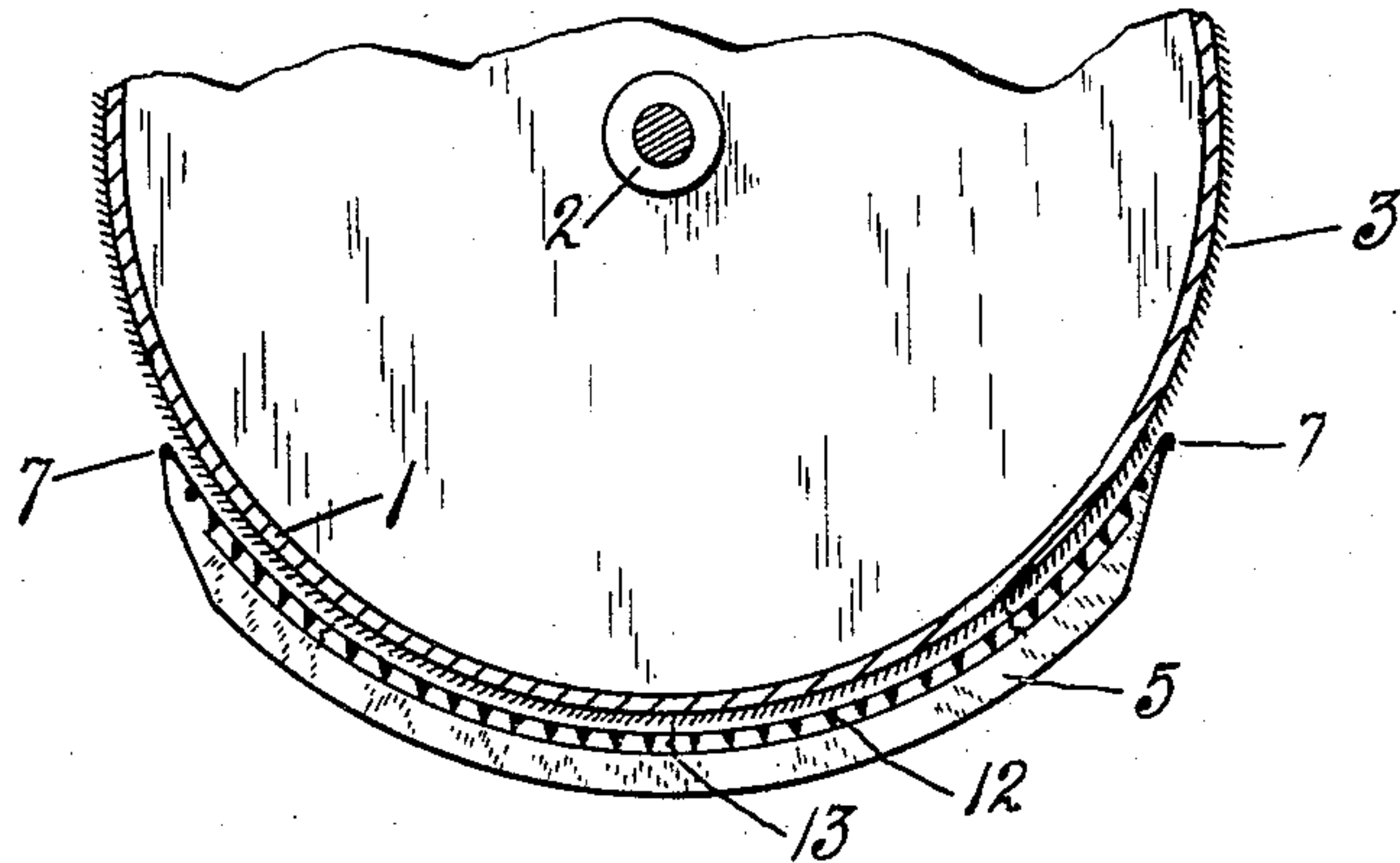


FIG. 1.

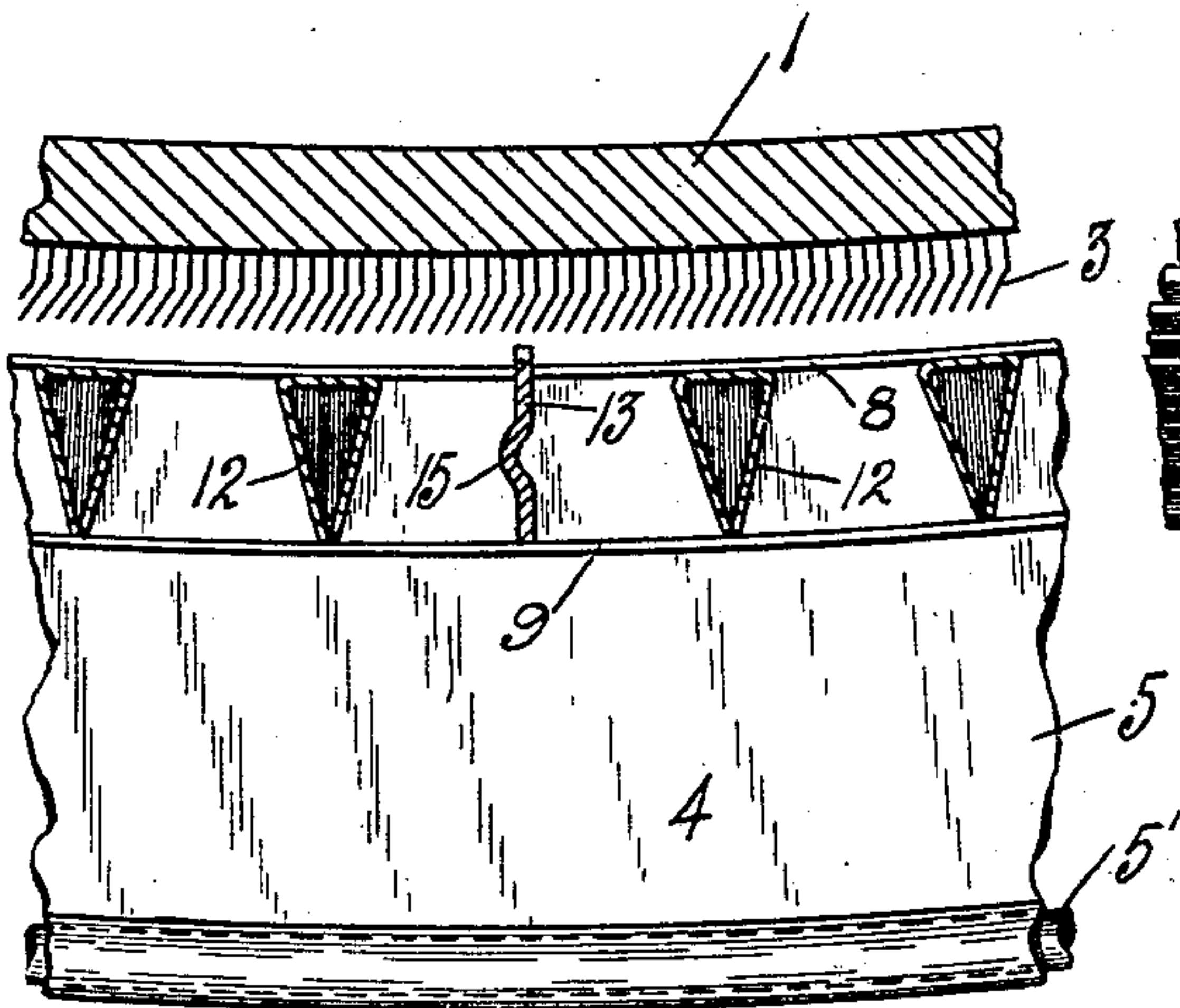


FIG. 2.

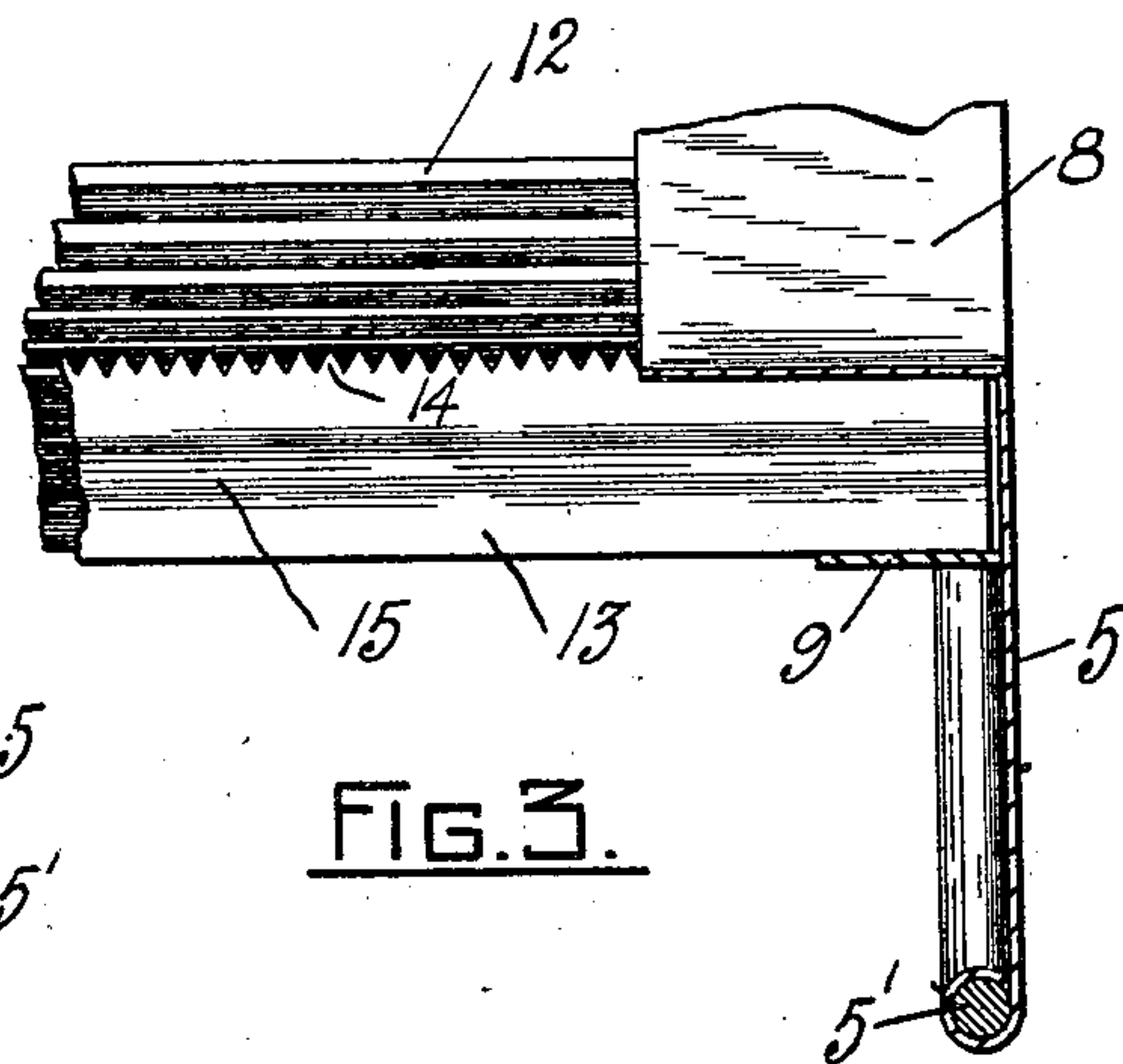


FIG. 3.

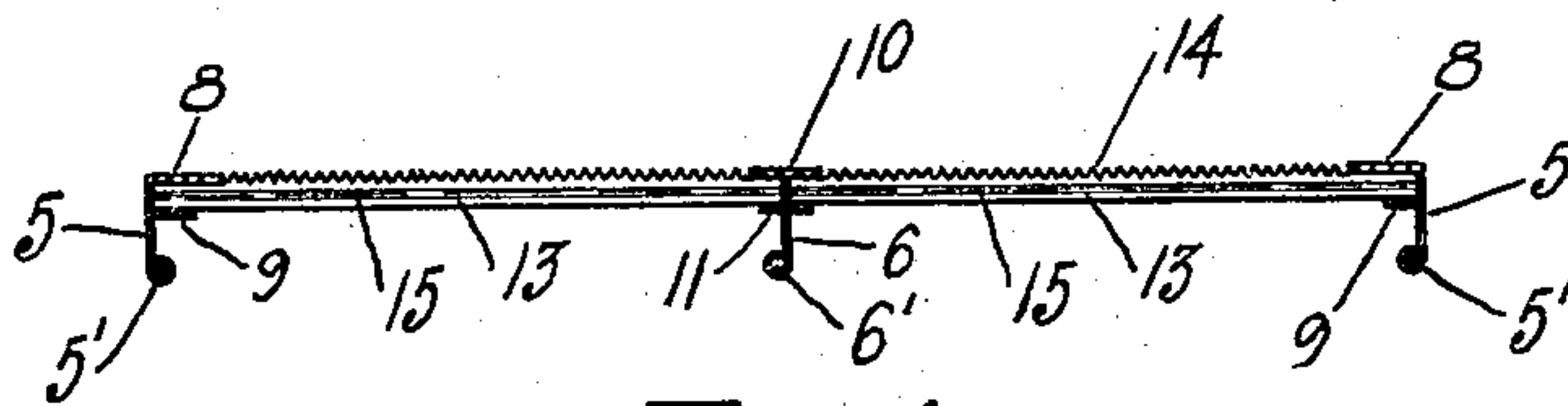


FIG. 4.

WITNESSES.

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UNDER-SCREEN FOR CARDING-MACHINES.

No. 870,264.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed April 26, 1907. Serial No. 370,439.

To all whom it may concern:

Be it known that I, RANDALL M. WHITNEY, of Worcester, county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Under-Screens for Carding-Machines; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The invention relates to an improvement in the under-screen for carding machines, and has for its object to provide means for extracting the foreign substances from the wool or cotton fibers while being operated upon by the card-cylinder.

To this end the invention consists in the novel construction and arrangement of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which

Figure 1 is a longitudinal section of my improved screen showing its relative position beneath the card-cylinder. Fig. 2 is an enlarged longitudinal sectional view of a portion of the screen and card-cylinder. Fig. 3 is an enlarged perspective view of a portion of the screen. Fig. 4 is a transverse section of the screen showing the manner of securing the bars in place.

Referring to the drawings, 1 represents a portion of a card-cylinder which is mounted to revolve on a suitable axis 2 and is provided with a covering of card-cloth 3 upon its periphery. Secured to the frame of the machine and located beneath the card-cylinder 1 is the under-screen 4 preferably made of tinned sheet-iron and having the side walls 5 and the central partition 6, the edges of which are spun over the stiffening wires 5' and 6' and joined at each end by wire-rods 7. The side walls 5 are provided with inwardly extending brackets 8 and 9, and the central partition 6 is provided with similar brackets 10 and 11 extending laterally from each side thereof and in line with the brackets 8 and 9 respectively, as shown in Fig. 4. Extending transversely across from each side of the central partition 6 to the side walls 5 are a series of triangular bars 12, having their end portions mounted between the brackets 8 and 9, and 10 and 11, respectively, and secured thereto by solder or other suitable means.

The triangular bars 12 are arranged in the arc of a circle substantially parallel with the periphery of the card-cylinder with their base portions uppermost and their apexes extending downward, as shown in Fig. 2. The triangular bars 12, which are in the central portion of the screen, are constructed in cross section in the

form of isosceles triangles, as shown in Fig. 2, while as said bars approach the end portions of the screen the form of the triangle is gradually changed to a right angle triangle, as shown in Fig. 1. These bars in the end portions of the screen are arranged with their right angular sides facing the central portion of the screen, the other side being inclined toward said central portion. With this construction and arrangement of the bars the dirt and foreign substances which are removed from the fibers will fall through the openings between the bars and will engage the inclined sides of the bars and be directed downward away from said bars, thereby obviating the liability of the openings between said bars becoming choked or clogged.

Extending transversely across the screen 4 between the triangular bars 12 are a series of flat bars 13, preferably three in number and located one in the center and one adjacent each end of said screen, as shown in Fig. 1. The bars 13 are mounted upon their edges in line with the radius of the card-cylinder and are secured at their ends between the brackets 8 and 9, and 10 and 11, in the same manner as the triangular bars 12. Said bars 13 are constructed and arranged so that their upper edges will extend above the bars 12 and in close proximity to the periphery of the card-cylinder, as shown in Fig. 2, and said upper edges are preferably provided with a series of teeth 14, as shown in Fig. 3. In order to strengthen the bars 13, they are also preferably provided with a corrugation 15 extending the entire length thereof, as shown in Figs. 2 and 3.

With the above construction a very efficient screen is produced, the triangular bars 12 serving to shake out the dirt and the flat bars 13 extracting any foreign substances from the fibers which will not be shaken out by the bars 12.

What I claim as my invention and desire to secure by Letters Patent is:

1. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a flat bar mounted upon its edge between said triangular bars, and having its upper edge extend above said triangular bars.

2. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a corrugated flat bar mounted upon its edge between said triangular bars, and having its upper edge extend above said triangular bars.

3. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a flat bar mounted upon its edge between said triangular bars, and having its upper edge provided with a series of teeth extending above said triangular bars.

4. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a corrugated flat bar mounted upon its edge between triangular bars and in line with the radius of the card-cylinder, and having its upper edge provided with a series of teeth extending above said triangular bars.
5. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a series of flat bars mounted upon

their edges between said triangular bars, and having their upper edges provided with teeth extending above said triangular bars. 10

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