A Novel Under-screen for Carding Engines.

The new device has for its object to provide means for extracting any foreign substances still adhering to the wool or cotton fibres during the carding process.

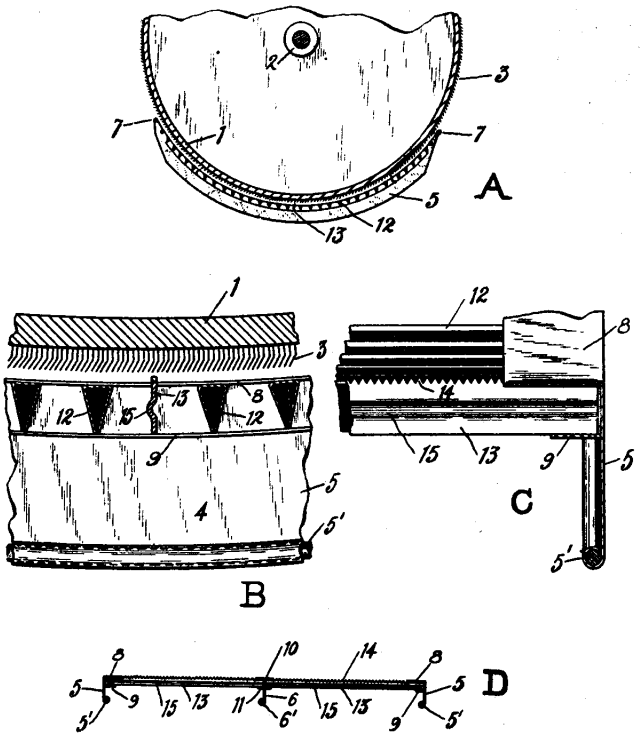
ILLUSTRATIONS: Diagram *A* is a longitudinal section of the new screen showing its relative position beneath the main cylinder of the carding engine. Diagram *B* is an enlarged (compared to diagram *A*) longitudinal sectional view of a portion of the screen and card-cylinder. Diagram *C* is an enlarged (compared to diagram *A*) perspective view of a portion of the screen, and diagram *D* a transverse section of the screen showing the manner of securing the bars in place.

DESCRIPTION OF THE CONSTRUCTION: Numerals of reference accompanying the illustrations indicate thus: 1 a portion of the main cylinder, revolving on axis 2 and being provided with card-clothing 3. Located beneath cylinder 1 is the under-screen 4, 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 5^1 and 6^1 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 diagram *D*. 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 and soldered thereto between the brackets 8 and 9, and 10 and 11, respectively.

The triangular bars 12 are arranged in the arc of a circle, parallel with the periphery of the card-cylinder, with their base portions uppermost and their apexes extending downward, as shown in diagram *B*. Such of the bars 12 as located in the central portion of the screen, are constructed in cross section in the form of isosceles triangles, as shown in diagram *B*, 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 diagram *A*. 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 fibres, 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 three flat bars 13, one in the



centre and one adjacent each end of said screen, as shown in diagram *A*. Bars 13 are mounted upon their edges in line with the radius of the main cylinder of the carding engine, 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 extend above the bars 12 and in close proximity to the periphery of the card-cylinder, as shown in diagram *B*, the upper edges being provided with a series of teeth 14, as shown in diagram *C*. To strengthen the bars 13, they are provided with a corrugation 15 extending the entire length thereof, as shown in diagrams *B* and *C*.

With this 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 fibres which will not be shaken out by the bars 12.