

(No Model.)

2 Sheets—Sheet 1.

J. H. WHITTLE.
SCREEN FOR CARDING ENGINES.

No. 566,362.

Patented Aug. 25, 1896.

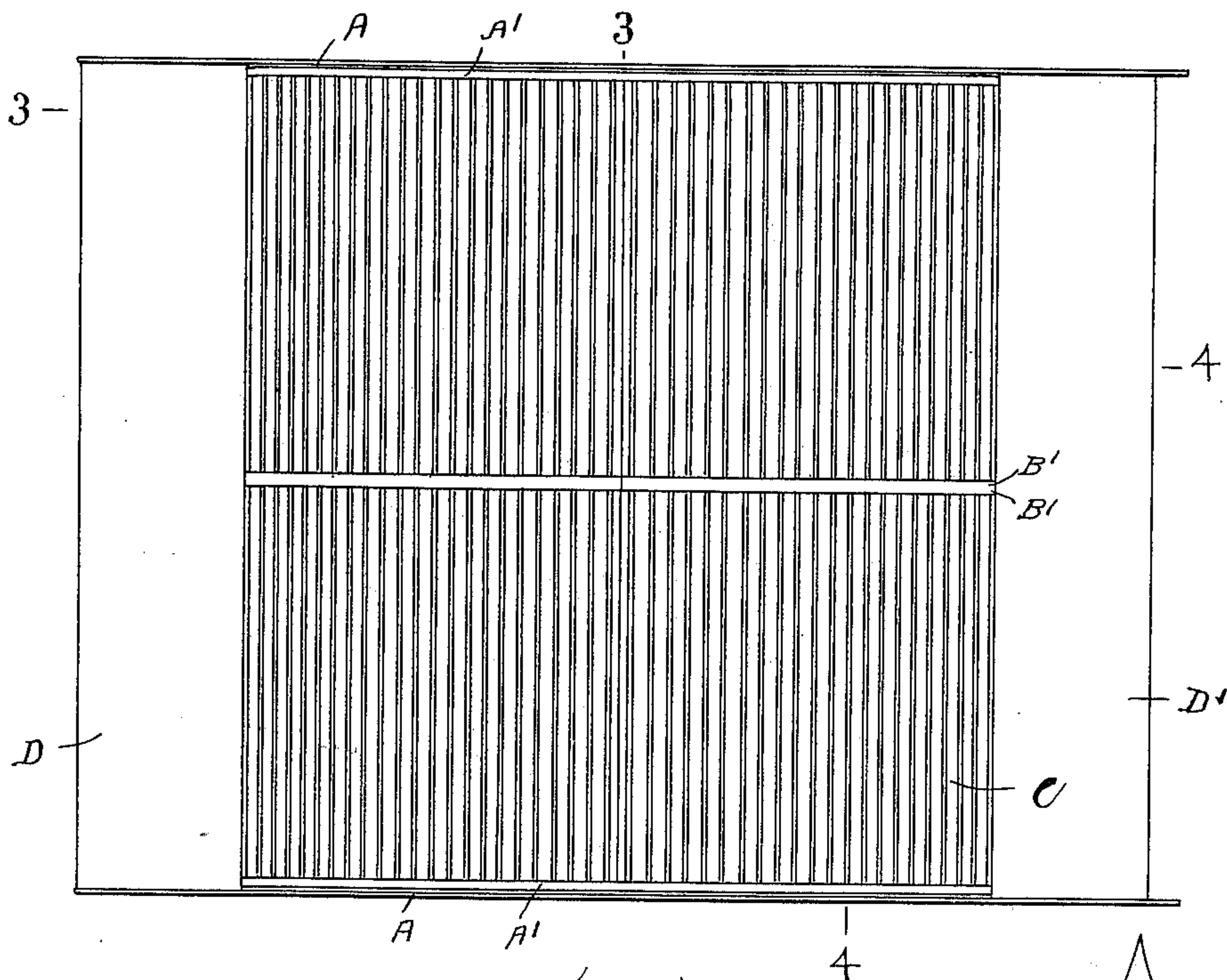


Fig. 1.

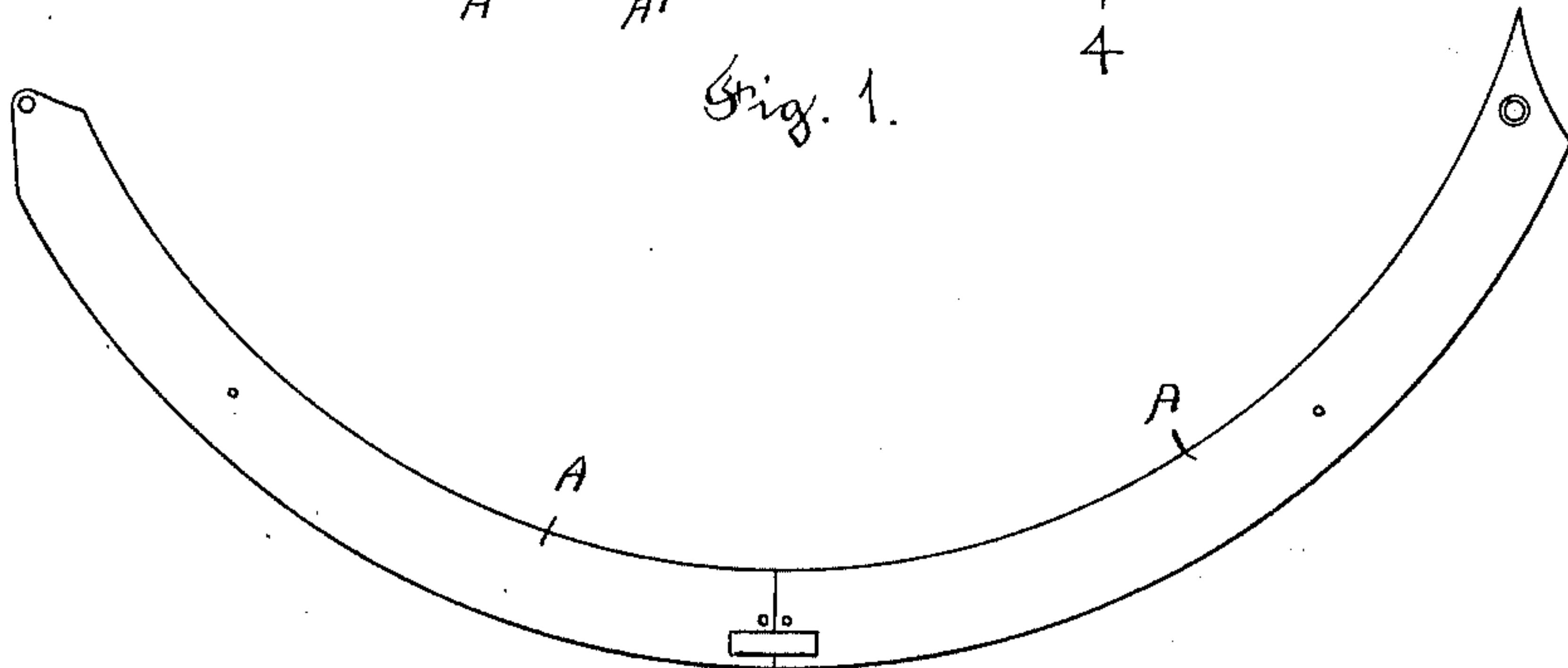


Fig. 2.

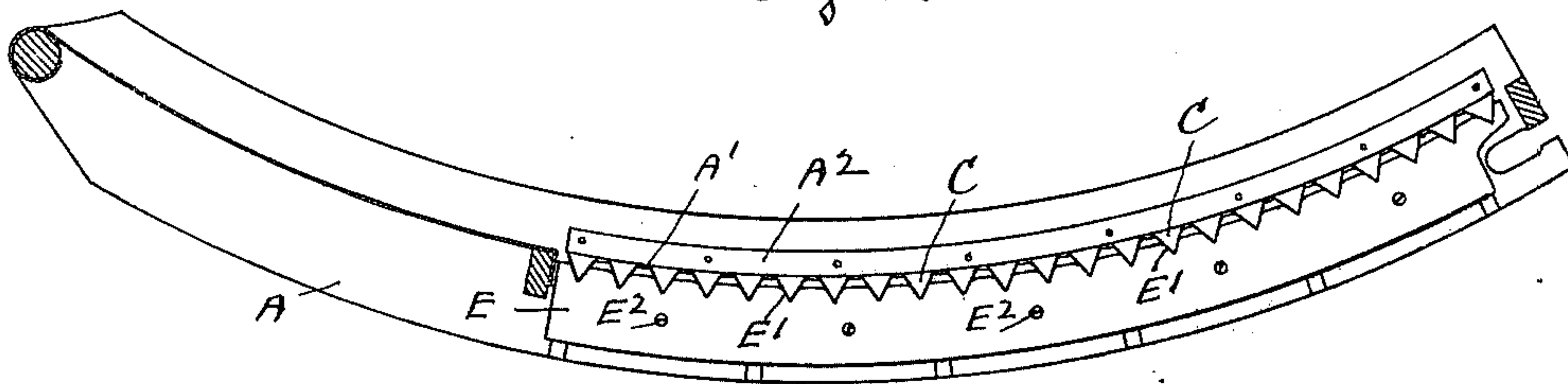


Fig. 3.

Witnesses
A. Whiting.
Emma Kester

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James H. Whittle.
By his Attorney
Rufus B. Fowler

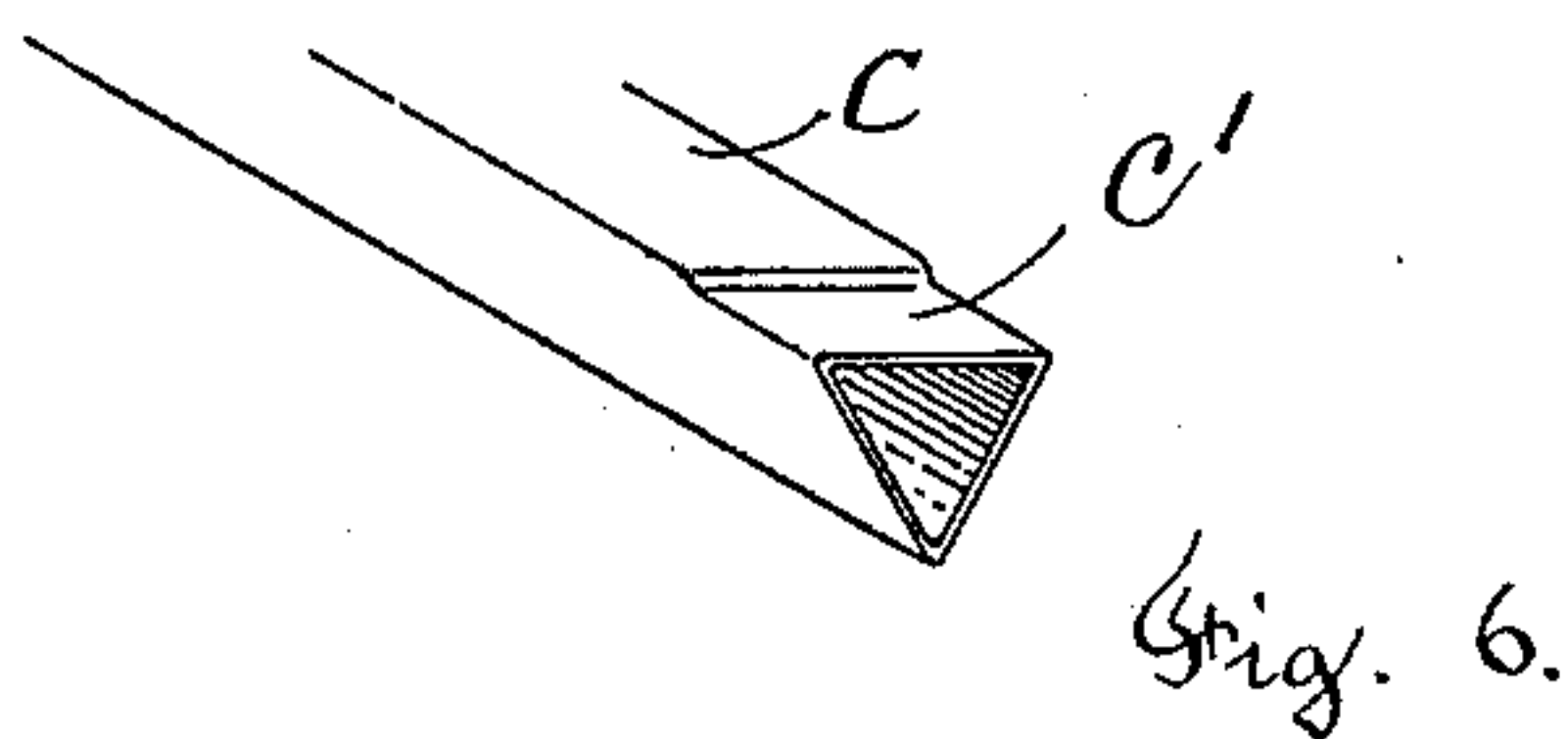
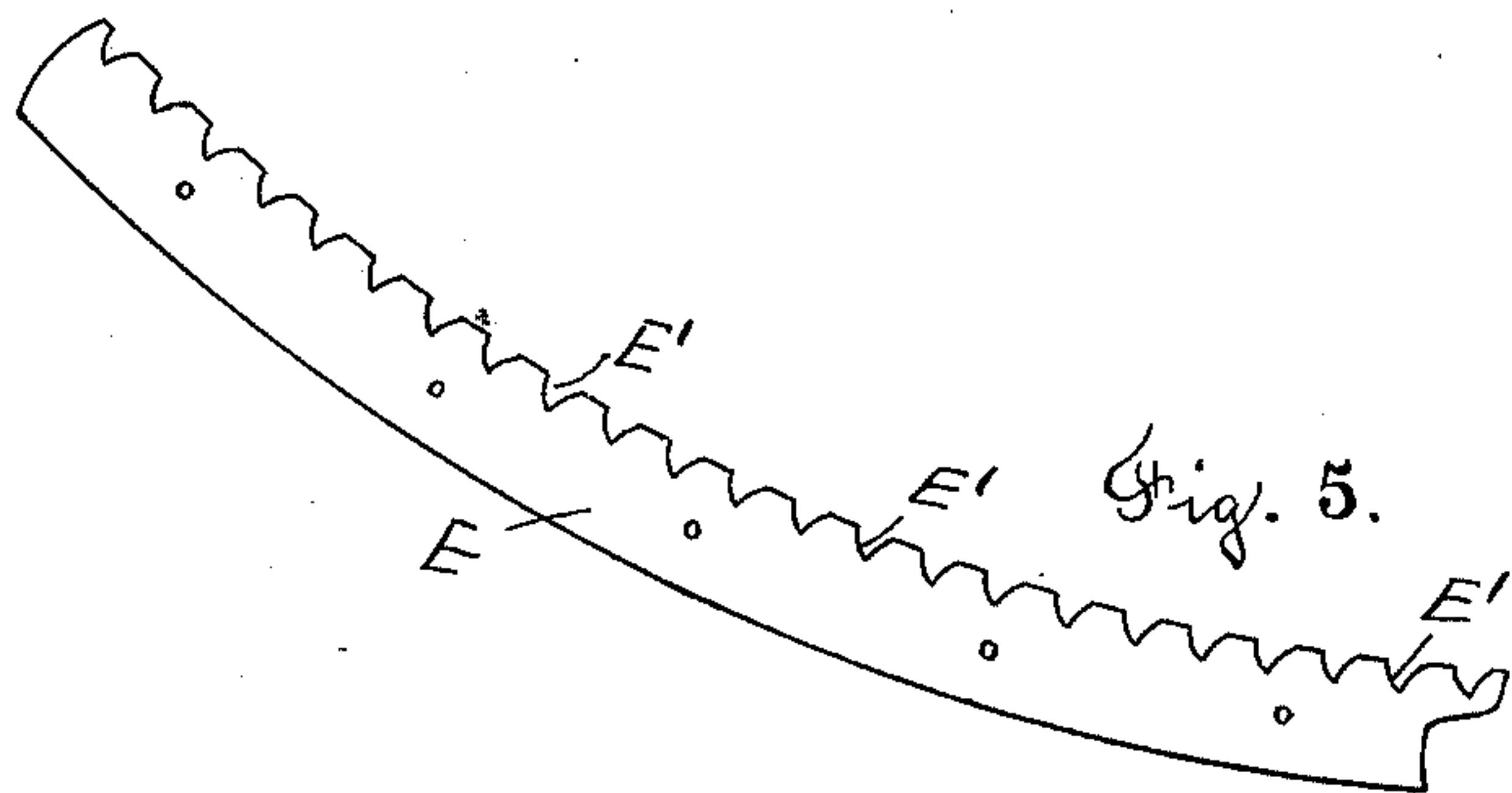
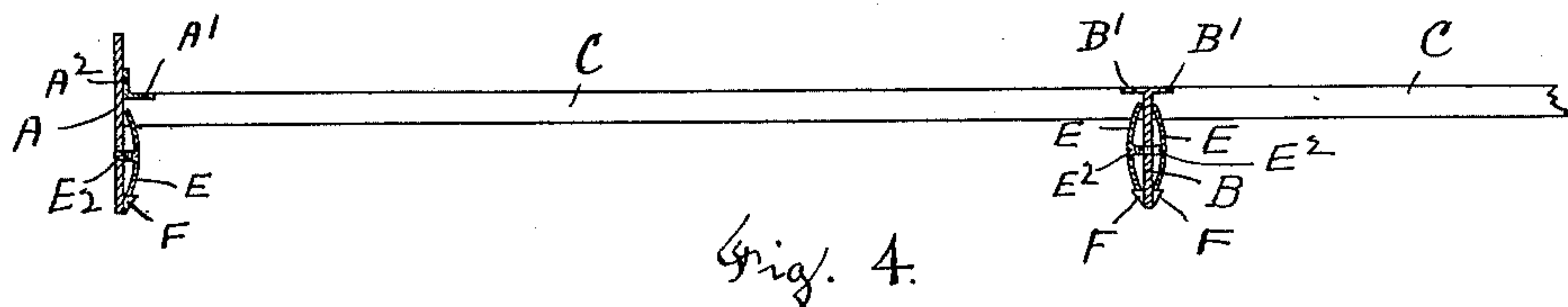
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2 Sheets—Sheet 2.

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Witnesses

A. C. Whiting
Emm. Kistler

Inventor

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By his Attorney

Rufus B. Fowler

UNITED STATES PATENT OFFICE.

JAMES H. WHITTLE, OF WORCESTER, MASSACHUSETTS.

SCREEN FOR CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 566,362, dated August 25, 1896.

Application filed November 11, 1895. Serial No. 568,511. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WHITTLE, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Screens for Carding-Engines, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, and in which—

Figure 1 represents a top view of one of my improved screens. Fig. 2 is a side view. Fig. 3 is a sectional view, on a larger scale, on line 3 3, Fig. 1. Fig. 4 represents a sectional view on line 4 4, Fig. 1. Fig. 5 is a detached view of one of the notched plates in which the triangular bars are held, and Fig. 6 is a perspective view of a portion of one of the triangular bars.

Similar letters refer to similar parts in the different figures.

My present invention relates to and consists in certain improvements in that class of screens for carding-engines which forms the subject of Letters Patent No. 488,684, granted to me December 27, 1892; and it has for its object to provide a screen in which the spaces between the transverse triangular bars may be enlarged or diminished in order to adapt the screen to the character and quality of the cotton to be carded, and also to provide means by which the spaces can be varied.

Referring to the accompanying drawings, A A denote a pair of side ribs curved concentrically with the main cylinder of the carding-engine, and B denotes a curved central rib, which, with the side ribs A A, form a framework supporting a series of transverse triangular bars C. The side ribs A A are provided with flanges A' A', projecting over the ends of the bars C, said flanges being conveniently formed by attaching an angle-plate to the inner side of the side ribs, the vertical member A² of the angle-plate being attached to the inside of the side ribs, which extends above the triangular bars C, and the horizontal member of the angle-plate forming the flange A'.

The central rib B is provided with the flanges B' B', projecting on opposite sides of the central rib and lying in the same circular plane as the flanges A'.

The ends of the screen are solid and formed of sheet metal at D D', and the central portion of the screen is formed of a series of triangular bars C, extending transversely across the screen from the side ribs A to the central rib B.

The upper surface of the outer ends of the triangular bars C bear against the under surface of the flanges A' A', and the ends of the bars are recessed, as at C', to receive the flanges A' B' in order to bring the upper surface of the central section of the bar flush with the upper surface of the flanges.

The triangular bars C are held at their ends in the triangular notches E' of the plates E, which are attached to the sides or the ribs A and B by screws E².

The notched plates E are curved in cross-section, so the edges of the plates will bear against the sides of the ribs A and B and the attaching-screws E² pass through the central section of the curved plates E and are screwed into the ribs A and B, having screw-driver heads which are countersunk in the plates E, so that as the screws E² are tightened the elasticity of the plates E will allow the upper or notched edge of the plates to be crowded against the triangular bars C, clamping them firmly between the notched edges of the plates E and the under side of the flanges A' and B', and the lower edges of the plates E are held by a projecting shoulder or lip F, formed on the ribs A and B.

The spaces between the triangular ribs C will be determined by the distance between the notches E' in the plates E, and when it is desired to vary the spaces between the triangular bars the plates E are removed and other notched plates substituted, having notches at different distances apart, two or more sets of notched plates being furnished with each screen to allow for the desired variation in the spaces between the bars C.

In the accompanying drawings I have represented a screen having its central section formed of a series of short transverse bars C, extending half-way across the screen and having their inner ends held by a central rib B; but my invention is equally applicable to those screens in which the transverse bars extend entirely across from one side of the

screen to the other; and I do not confine myself, so far as the first feature of my invention is concerned, to any special form of construction.

5 In the screen forming the subject of Letters Patent No. 488,684 the ends of the triangular bars were soldered to their supporting-ribs and the operation of soldering was liable to warp and twist the framework of the screen,
 10 requiring considerable labor and care to bring the upper surface of the screen into true circular form, so it could be made concentric to the cylinder of the carding-engine, and the above described method of securing the triangular bars in plates obviates the necessity
 15 of soldering the ends of the bars to the ribs.

In the screens for carding-engines hitherto in use, so far as I am aware, the triangular bars have been rigidly attached to the ribs of
 20 the screen and I believe it to be new to construct a screen having the bars detachable from their supporting-ribs.

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

25 1. In a screen for carding-engines, the combination of side ribs, as A, A, triangular bars inserted between said side ribs detachable notched plates attached to the inner sides of
 30 said side ribs, and supporting said triangular bars in their notches, whereby said bars are rendered removable and the distance between

said bars varied by exchanging said notched plates, substantially as described.

2. In a screen for carding-engines, the combination of the side ribs provided with flanges 35 on their inner sides, notched plates detachably attached to the inner sides of said side ribs, and triangular bars held in said notched plates and against said flanges, substantially as described. 40

3. In a screen for carding-engines, the combination of supporting-ribs provided with projecting lips, or shoulders, plates attached to said ribs and having one edge bearing against said lips, or shoulders, and provided with a 45 series of notches in the opposite edge, and a series of transverse bars held in said notches, substantially as described.

4. In a screen for carding-engines, the combination of ribs provided with projecting 50 flanges, plates curved in their cross-section having one edge held from movement and having a series of notches in their opposite edge, a series of transverse bars held in said notches and against said flanges, and screws 55 by which said curved plates are drawn against said flanges, substantially as described.

Dated this 26th day of October, 1895.

JAMES H. WHITTLE.

Witnesses:

RUFUS B. FOWLER,
 EMMA KESTER.