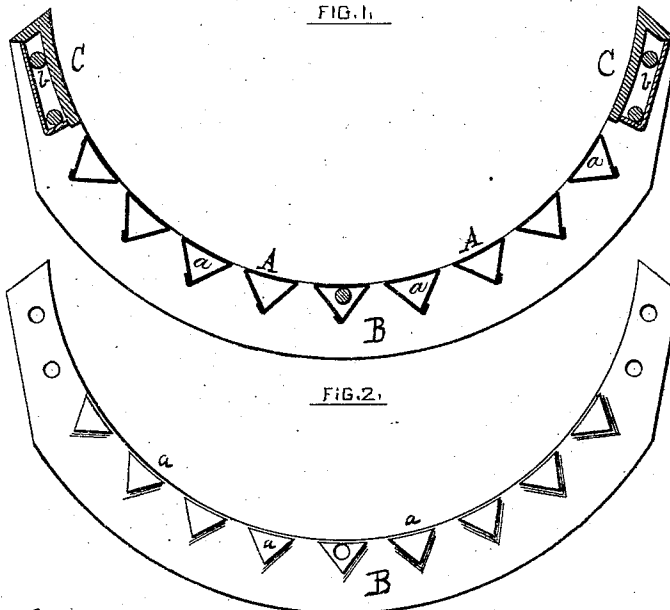
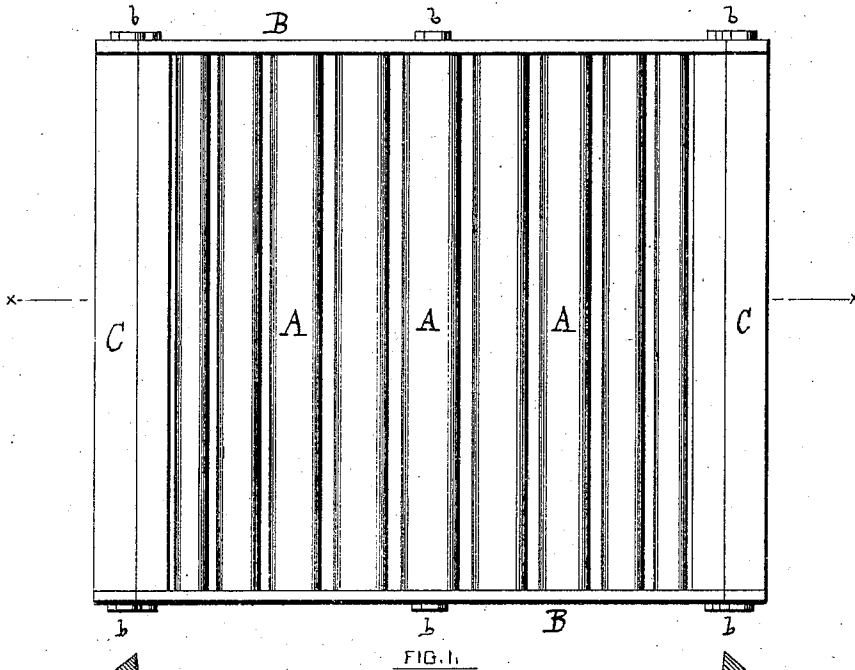


W. J. ENGLISH.

Screens for Carding-Machines.

No. 153,429.

Patented July 28, 1874.



WITNESSES.

J. C. Bright
Warren R. Pease

FIG. 3.

INVENTOR.

William J. English

UNITED STATES PATENT OFFICE.

WILLIAM J. ENGLISH, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SCREENS FOR CARDING-MACHINES.

Specification forming part of Letters Patent No. **153,429**, dated July 28, 1874; application filed April 9, 1874.

To all whom it may concern:

Be it known that I, WILLIAM J. ENGLISH, of the city and county of Providence, in the State of Rhode Island, have invented a new and Improved Card-Screen for Carding-Machines; and do declare the following to be a specification thereof, reference being made to the accompanying drawings.

Figure 1 is a top view of my invention. Fig. 2 is a sectional view on the line *x x*. Fig. 3 shows the inner side of one of the ribs, detached, and the hubs cast thereon.

Like letters indicate like parts.

My invention is designed for use upon woolen or cotton carding-machines. Its purpose is to save material by retaining the long fibers which may fall from the card, so that they are caught up again and carried forward by the revolving cylinder, while the short and useless fibers, together with the dirt and foreign matter which have been separated from the material, can fall through the screen. It is common now to place a sheet of metal beneath the cylinder, wherein perforations have been cut, but the cotton or wool is apt to catch upon the rough edges of these holes, and to be pulled out thereby, and soon clog these openings so that the dirt and refuse matter cannot drop through.

I accomplish the purpose by means of bars of sheet metal A A, bent into angular or semicircular shape, and stationarily fastened to the ribs B B. These bars are arranged in rows longitudinally, and with open spaces between them. They have a slightly-curved surface above, and the edges of the metal are united below, either by soldering or by folding one over the other, as shown in Fig. 2. They are in this way made stiff as if solid, able to resist pressure from any direction, and to rigidly maintain the desired position in close proximity to the carding-cylinder. Bars thus made do not warp or vibrate as do bars of wood, nor bend nor sag as do bars of solid metal. As the bars are made of bent metal, they present smooth edges on the upper surface, and the fiber is not caught or entangled by them, but passes over or between them, without "lashing" or clogging. These trian-

gular bars fit upon and are supported by hubs *a a*, cast upon the inner surface of the ribs B B, which ribs are bolted together by the rods *b b*, and thus held firmly in position, while the hubs *a a* prevent any rotary motion of the bars. The inner or upper edges of the ribs are arranged in the arc of a circle, to inclose the lower part of the carding-cylinder. The series of bars A A terminates at both ends with a heavier metallic tip, C, through which from side to side pass the rods *b b*, bolted as shown. It may be found useful to provide other ribs, B, at the middle or other points of the screen, to give it increased rigidity.

The whole screen, thus constructed, is adjusted as closely as may be desired to the carding-cylinder, and there retains its position, every point of its inner surface being equidistant from the cylinder, thus avoiding all danger of actual contact with the card-teeth and insuring the taking up upon the card of all such fibers as lie upon the surface of the bars.

The difficulty heretofore experienced in the use of aprons or sheets of perforated metal suspended beneath the cylinder is, that they sag or bend by their own weight so as not to be at equal distances from the card at all points. The lowest part is thus so far beneath the card that the fibers thrown out cannot be reached by the cylinder, but accumulate, causing needless waste of material and inferiority and uncleanness of work. By making my screen semicircular on its inner surface I avoid these difficulties and results, as shown.

I am aware that it is not new to construct card-screens with parallel longitudinal bars and openings, nor do I claim such an arrangement broadly; but

I do claim as a novel and useful invention, and desire to secure by Letters Patent—

The card-screen composed of hollow sheet-metal bars A A, bent angularly, as described, and fitting upon hubs *a a*, projecting from the ribs B B, substantially as shown.

WILLIAM J. ENGLISH.

Witnesses:

WM. F. WRIGHT,
WARREN R. PERCE.