

(No Model.)

G. A. EDWARDS.  
COAL SCREEN.

No. 305,299.

Patented Sept. 16, 1884.

Fig- 1-

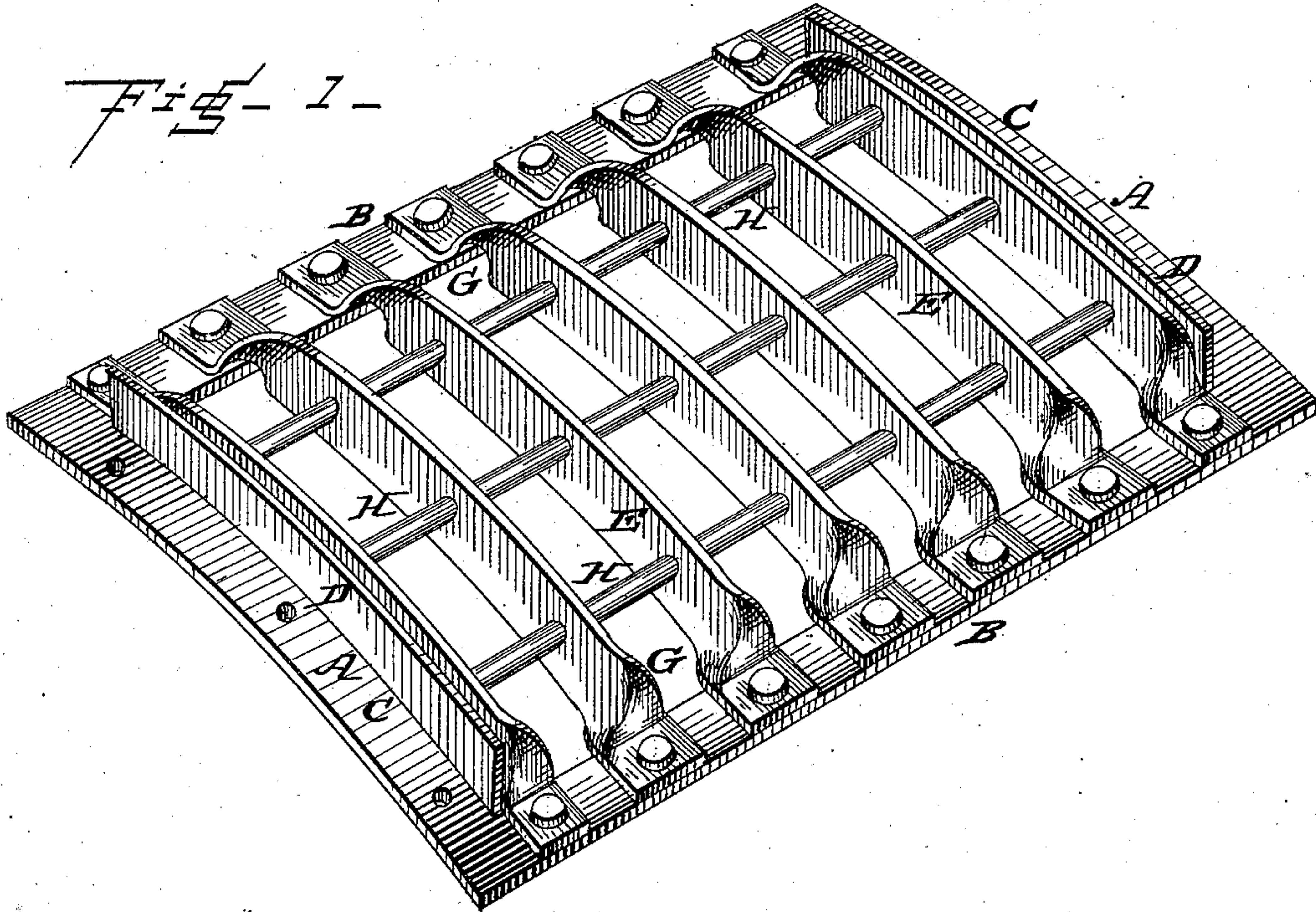


Fig- 2-

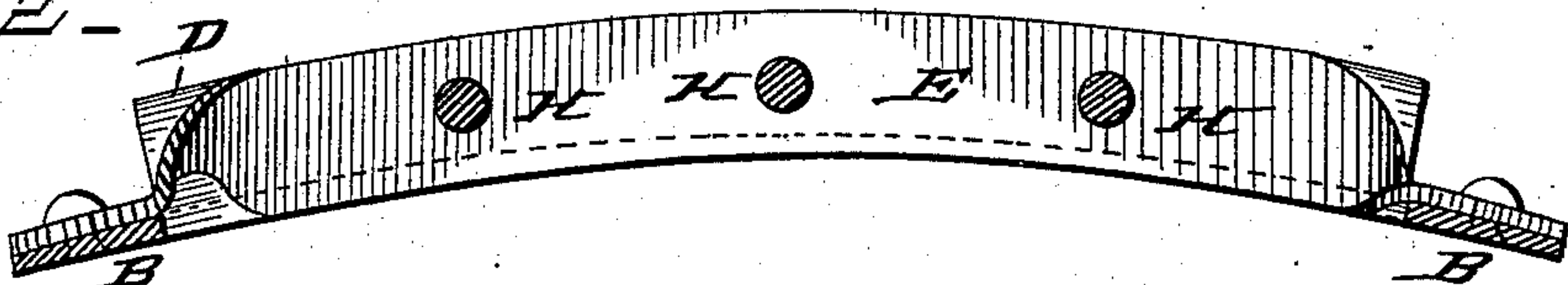


Fig- 3-

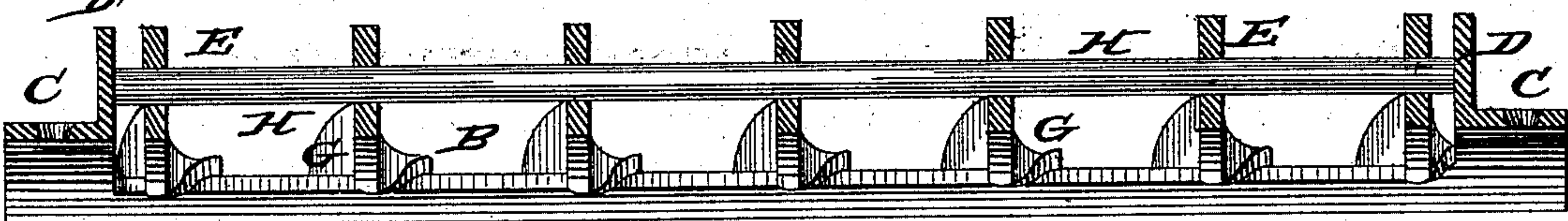
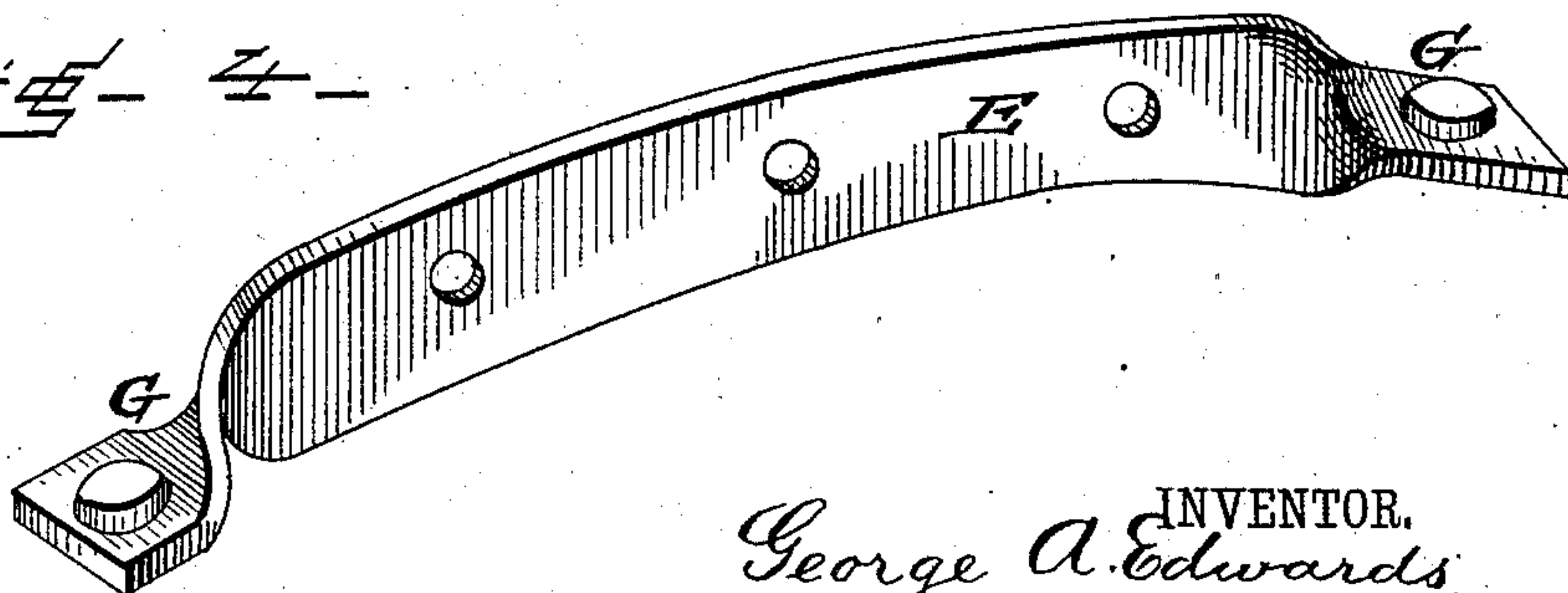


Fig- 4-



WITNESSES:

*Fred. G. Dieterich*  
*Wm. Bagger*

INVENTOR.

*George A. Edwards*  
by: *Louis Bagger & Co.*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

GEORGE A. EDWARDS, OF WILKES-BARRÉ, PENNSYLVANIA.

## COAL-SCREEN.

SPECIFICATION forming part of Letters Patent No. 305,299, dated September 16, 1884.

Application filed May 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. EDWARDS, a citizen of the United States, and a resident of Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Screens; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved coal-screen. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a longitudinal sectional view, and Fig. 4 is a detail view of one of the transverse bars detached from the screen.

The same letters refer to the same parts in all the figures.

This invention relates to that class of coal-screens which are used in and about mines for the purpose of screening and separating the coal into proper grades or sizes. For this purpose it has been customary to employ either wire screens or screens constructed of cast metal, both of which have been found defective, the former for the reason that in case one of the wires should become broken or loosened from the frame it would soon become entirely detached and render the screen worthless, or entailing expense for its repairs. On the other hand, cast-iron screens have been liable to break, and thus be rendered absolutely worthless.

In the drawings hereto annexed, A represents a rectangular frame, constructed of strips or bars of wrought-iron or steel of the proper dimensions. The side bars, B B, are straight, and the end bars, C C, are curved or arched, so as to produce a frame in the shape of a cylinder-segment. The inner edges of the end bars, C, are provided with flanges D, extending in an upward direction.

E E are the transverse bars, of which any desired number may be used, and which connect the side bars of the frame, they being placed any suitable distance apart. These

transverse bars consist of flat iron strips, the ends of which are twisted, as shown at G, they being given a one-quarter turn, so as to enable them to be riveted or otherwise attached to the side bars of the frame, in relation to which they occupy a vertical position, as will be clearly seen in Figs. 2 and 3 of the drawings. The transverse bars E are perforated to receive the longitudinal bars H, which are made, preferably, of round iron, and one or both ends of which may be suitably attached to the flanges D of the end bars, C, of the frame.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. The construction is simple and exceedingly durable, and in case of injury to any part of the screen such injury may be easily repaired.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. As an improvement in coal-screens, the combination of a frame constructed of flat iron bars, the end bars of which have upturned flanges, with the flat vertical transverse bars, having quarter-twisted ends, whereby they are attached to the side bars of the frame, and longitudinal bars extending through perforations in the transverse bars, substantially as herein set forth.

2. In a coal-screen, the combination, with a frame constructed of flat metal strips, and the ends of which are curved or arched and provided with upturned flanges at their inner edges, of the transverse flat vertical bars having suitable perforations, and round longitudinal bars extending through the said perforations, and retained by the flanges of the end bars of the frame, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE A. EDWARDS.

Witnesses:

LOUIS BAGGER,  
ARTHUR L. MORSELL.