

J. G. Frick,

Screen.

No. 107,171.

Patented Sep. 6. 1870.

Fig. 1.

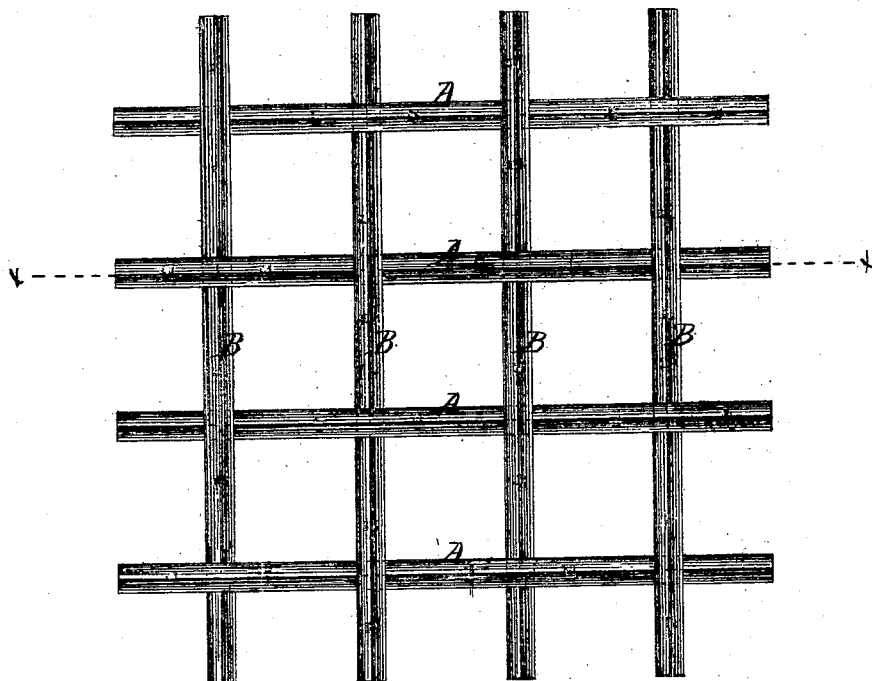


Fig. 2.



Attest
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UNITED STATES PATENT OFFICE.

JACOB G. FRICK, OF POTTSVILLE, PENNSYLVANIA.

IMPROVEMENT IN WIRE-CLOTH FOR COAL-SCREENS.

Specification forming part of Letters Patent No. **107,171**, dated September 6, 1870.

To all whom it may concern:

Be it known that I, JACOB G. FRICK, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a certain Improvement in Wire-Cloth for Coal-Screens; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a plan view of a section of my improved cloth. Fig. 2 is a sectional elevation of the same on line *x x* of Fig. 1, showing the crimps or curves and the position of the warp with reference to the woof.

This invention relates to that class of wire-cloth for coal-screens which is constructed of rods of square or angular iron crimped and woven together, and arranged with their angles or corners facing each other; and it consists in giving to the wires of which it is formed a series of crimps or curves, which shall be so arranged as to hold the parts in position without the aid of notches or other devices, as will be more fully explained hereinafter.

A A in the drawing represent the warp of the weft, it being composed of square wires of any required size. B B refer to the woof, which is also composed of wires of the same shape and size as are those of the warp.

In constructing cloth of this description, I take square wires of any desired length and place them, with their angles or corners down, in or over a die or dies which have formed in their upper surfaces angular corrugations of such form as to give the required crimps or curves to the wires. When the wires or rods are thus placed they are pressed upon by swages placed in any suitable machine, and the wires are bent into the form shown in Fig. 2, after which they are put together as shown in Fig. 1, in which form they constitute cloth which may be used to construct screens of any desired size.

It will be seen, upon referring to the drawing, that there is one upward and one downward curve formed between both the parallel

and transverse wires, or, in other words, between each of the wires both in the warp and woof, as a consequence of which each particular wire has formed for itself a seat or bed, in which it rests, and in which it is firmly held without the necessity of notching and thus to a great extent weakening the wires, or without the employment of any other means to produce such a result.

I am aware that the wires or rods of wire-cloth made of round iron have been constructed with two crimps or more in the meshes; but it has been demonstrated that such cloth does not screen the coal properly, because its surface is too smooth, and permits the pieces of coal to slide over it without being constantly turned over or rolled, which operation is essential; and coal-screens made of square or angular iron have always been constructed with only one crimp to the mesh, which necessitates, in screens with large meshes, the formation of notches alternately in the warp and woof where the wires or rods crossed each other, in order to hold them firmly in place.

I do not claim, broadly, wire-cloth in which the wires have two or more crimps to each mesh, nor wire-cloth made of square or angular iron arranged with the angles or corners facing each other; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, wire-cloth for coal-screens, constructed as herein described—namely, of square or angular wires or rods arranged with their angles or corners facing each other, and provided with two or more crimps in each side of a mesh—substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB G. FRICK.

Witnesses:

JNO. P. MCGINNES,
ALFRED J. DERR.