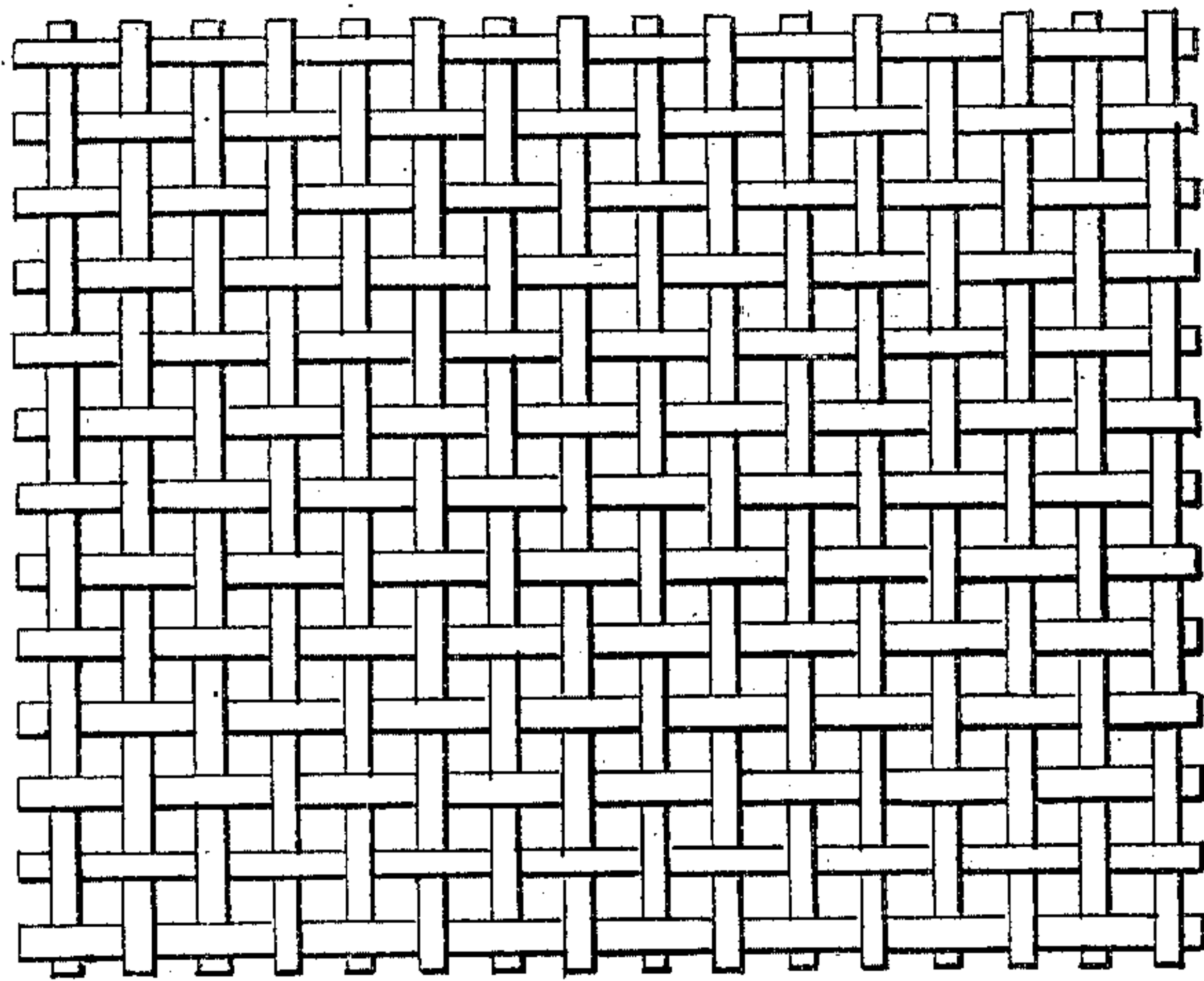


J. Hopkins,
Metal Screen.
N^o 36,957. Patented Nov, 18, 1862.

Fig. 1



Fig. 2.



Witnesses;

Lemuel W. Perrell

Thos. Geo. Harold

Inventor

James Hopkins

UNITED STATES PATENT OFFICE.

JAMES HOPKINS, OF NEW YORK, N. Y.

IMPROVEMENT IN METAL SCREENS.

Specification forming part of Letters Patent No. 36,957, dated November 18, 1862.

To all whom it may concern:

Be it known that I, JAMES HOPKINS, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Metal Screens; and I do hereby declare the following to be a full, clear, and exact description of my said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of my said screen, and Fig. 2 is a section of the same.

In Letters Patent granted to Henry Jenkins, March 6, 1847, a method of making screens is set forth, consisting of bending the wires or rods before they are woven up, whereby heavier wire can be used in proportion to the size of mesh.

In Letters Patent granted February 4, 1862, to J. Laubenstein, a screen is shown composed of square wires notched and laid together, with the diagonal of the square of the wires in the plane of the screen, so that the surface of the screen presents the angles of the wires. In this instance the diagonal of the square section of wire being longer than the side of the square causes the meshes to be smaller, with a given distance from center to center of the wires, than would be the case if the square wires were placed so that their sides were at right angles to the plane of the screen and the flat part of the wires formed the surface of the screen. Besides this, the meshes in said patent are pyramidal or tapering from each side, thereby allowing small lumps and particles to wedge into said meshes, and where the square wires are laid together, with the edges of the square sections touching each other at the points of intersection, a wedged-shaped cavity is produced between the wires at the points of intersection, where substances will lodge and obstruct the screen, particularly if such screen were employed for the spark-arrester of a locomotive, and in such screens the edge of the wire, being exposed to wear, is more quickly

abraded than a larger extent of surface would be.

My invention is a new article of manufacture, especially designed for the screens or spark-arresters of locomotive engines, but applicable to other uses, and is manufactured under the aforesaid patent of Henry Jenkins and is an improvement upon the same.

My invention consists in a screen made of square wires laid together, with the sides of the wires at right angles to the plane of the screen, whereby square or parallel sided meshes are produced of the same size all through, that prevent any substance becoming wedged into the meshes, and the surfaces of the wires at the points of intersection are in close contact, so that no substance can become wedged at that point; and the surface exposed to wear is formed by the flat side of the wire. Thereby the durability is increased, and the screen is made with as much weight and strength of metal as is possible with the given size of wire to the given size of mesh.

The drawings illustrate the mode of placing the square wires in the screen. Said wires are to be crimped or bent before being laid or woven up.

My screen is a new article of manufacture, especially adapted to the spark-arresters of locomotives, as being more durable than any screen heretofore made and less liable to become clogged by the sparks.

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

The screen formed of square wires woven up or laid together, as specified, with the sides of the said wire at right angles to the plane of the screen, for the purposes and as specified.

In witness whereof I have hereunto set my signature this 25th day of July, 1862.

JAMES HOPKINS.

Witnesses:

LEMUEL W. SERRELL,
THOS. GEO. HAROLD.