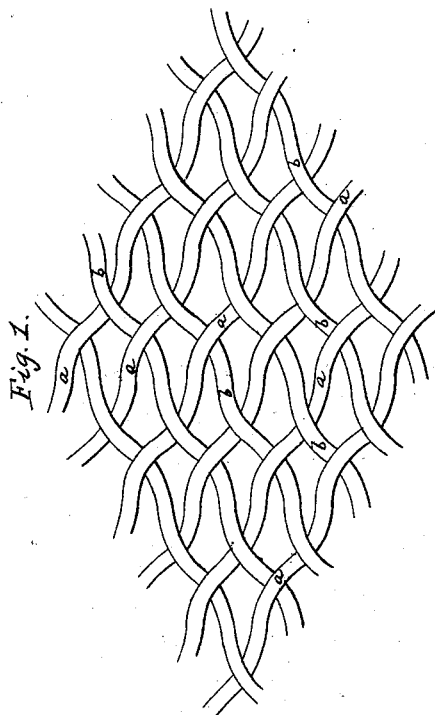


H. JENKINS.
SCREEN OF LARGE WIRE.

No. 5,006.

Patented Mar. 6, 1847



UNITED STATES PATENT OFFICE.

HENRY JENKINS, OF POTTSVILLE, PENNSYLVANIA.

IMPROVEMENT IN THE PROCESS OF MANUFACTURING WIRE GRATING, &c.

Specification forming part of Letters Patent No. 5,006, dated March 6, 1847.

To all whom it may concern:

Be it known that I, HENRY JENKINS, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful manufacture of screens or sieves for the screening or sifting of anthracite coal and other articles of a like size which are to be subjected to that operation; and I do hereby declare that the following is a full and exact description thereof.

The screens or sieves which I manufacture for the screening or sifting of broken anthracite coal and other articles requiring sieves of great strength and with large meshes have their meshes formed entirely of wrought-iron wire, and are in consequence thereof and of the particular manner in which they are made more permanent and durable than any of the screens heretofore constructed for a like purpose.

The screens for the sifting of substances that are of a large size, like broken coal, have been made in various ways; but to construct them so that the meshes should retain their size when acted upon by an article so hard and weighty has been a task of much difficulty and great expense. Attempts have been before made to construct them of woven wire, but it has failed entirely, as the woof or filling will not yield to the action of the warp, but will remain nearly straight in consequence of its being necessary to use wires of the larger sizes. The meshes thus produced are immediately rendered irregular when brought into use.

My improvement in this manufacture consists in the preparing of the wire which is to constitute what may be called the "woof" or "filling" by crinkling it preparatory to its being used in the process of weaving or putting it together, and sometimes, also, as will presently appear, in crinkling that also which may be denominated the "warp." This crinkling consists in bending it in such manner and to the same extent in which it would be desired to bend it by the action of the loom, were it possible so to do. The respective bends in the wire must of course be made at such distances apart as shall correspond with the size of the meshes; but when these are to be of the larger size I prefer to make the bends or crinkles three times as numerous as the meshes, as the length of the wire between each bend would otherwise be objectionable. This will appear more fully by reference to the accompanying drawings.

In the drawings, Figure 1 is a perspective representation of a portion of one of my screens, in which the wires *a a* may be considered as the warp-wires, and those *b b* as the woof or filling, or vice versa, there not being any apparent difference in them in the manufactured article. Fig. 2 shows a crinkled wire, seen laterally as it makes a part of the screen. In this figure the wire is so drawn as to show the manner in which I prefer to crinkle it when the meshes are to be of either of the larger sizes. It will be seen that under this arrangement there are two crinkles or bends, *c* and *d*, between every crossing-wire *e e*. This is so made for the purpose of keeping the extremities of the crinkles or bends within the general plane of the screen. When so made I crinkle the woof or longer wires in the same manner with the cross wires or filling, and that for the same reason.

I have made application for Letters Patent for a machine for bending or crinkling the wires, and for one for weaving the wire so crimped; but this crinkling or bending, and also the weaving or otherwise interlocking, may be effected in many other modes than by the application of said machinery, as will be manifest to every competent machinist. The real merit of my invention consists, therefore, in the nature of the improved article as manufactured by me, independently of the many ways in which the wires may be crinkled and interwoven.

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

The manufacturing of screens or sieves from wire of the larger sizes, either rolled or drawn, the wire from which they are made being prepared by crinkling, as herein set forth, previously to its being formed into meshes, by which procedure I am enabled to manufacture screens with meshes of the larger sizes—say four inches on the side, more or less—and in such manner as that they shall be more durable and less costly than those made in other ways, and this new manufacture of sieves I claim independently of the particular manner of effecting the crinkling or of interweaving the wire so as to form the requisite meshes.

HENRY JENKINS.

Witnesses:

THOS. P. JONES,
W. J. DONOHOO.