

ROBERT J. MANN

Imptn Sieves

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PATENTED AUG 8 1871

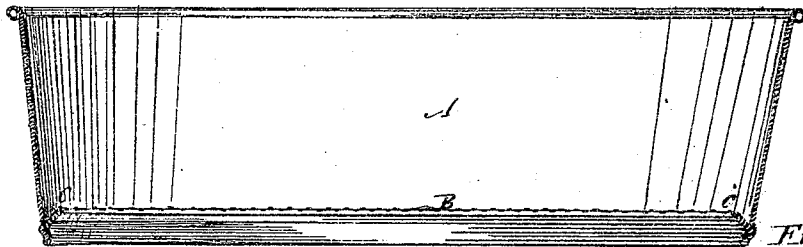


Fig. 1.

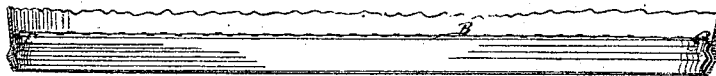


Fig. 2.

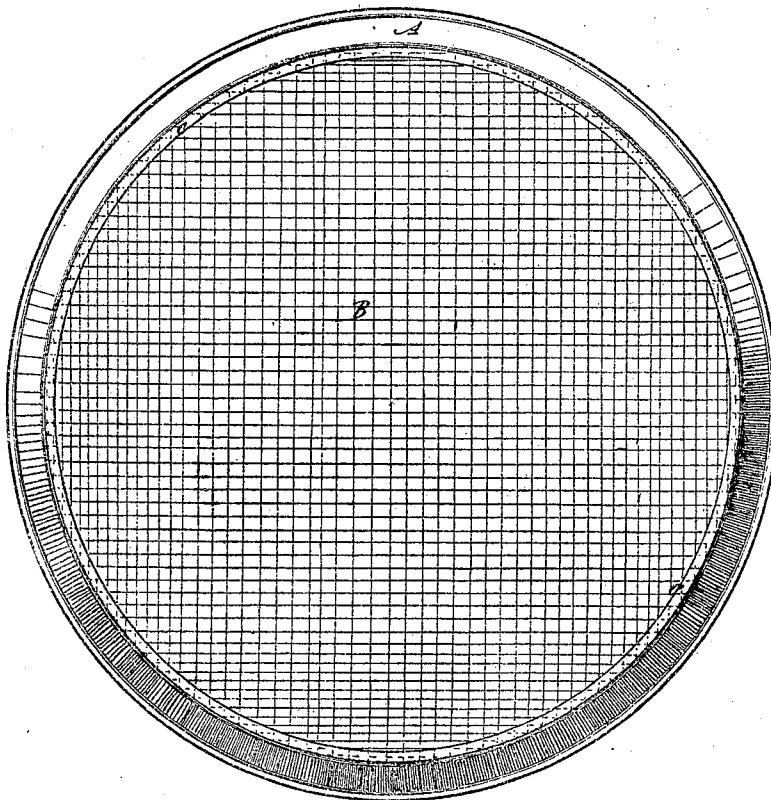


Fig. 3.

Witnesses:

F. F. Warner.
J. P. Brown.

Inventor:

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UNITED STATES PATENT OFFICE.

ROBERT J. MANN, OF BURLINGTON, IOWA.

IMPROVEMENT IN METHODS OF CONSTRUCTING SIEVES.

Specification forming part of Letters Patent No. 117,790, dated August 8, 1871.

To all whom it may concern:

Be it known that I, ROBERT J. MANN, of Burlington, in the county of Des Moines and State of Iowa, have invented a new and useful Process in the Manufacture of Metallic Sieves, of which the following is a specification:

My invention relates to the process of manufacturing my metallic sieve, heretofore patented; and it consists in fastening the wire-cloth to the metallic band by two or more distinct operations. By the first operation the edge of the wire-cloth is fastened, as hereafter described, leaving the cloth loose or unrestrained in the band; and by the second operation the wire-cloth is clamped or fastened a distance above its edge, and strained or tightened evenly and firmly within the band.

Figure 1 represents a vertical sectional view of the sieve, showing the first operation performed. Fig. 2 represents the same view of the sieve, showing both operations performed. Fig. 3 represents the top view of the sieve with the operation of clamping the wire-cloth.

A represents the metallic hoop or band of my sieve, and B the wire-cloth. The bottom of the metallic band being turned inward, the wire-cloth, which is cut somewhat larger than the diameter of the bottom of the hoop, is placed with its edges within the bend of the bottom of the hoop. I then, by a pressure produced in any suitable manner, firmly press the turned-over part of the metallic hoop, just above the place where it is bent, firmly against the vertical part of the hoop, clamping between the two the edge of the wire-cloth B. This is what I term the first operation in fastening the wire-cloth, and it leaves the sieve as shown in Fig. 1.

It will be readily understood that, the wire-cloth still being slack or loose, the edge of it, while being swaged out and clasped on one side of the hoop, will not be drawn up from its place on the opposite side of the hoop, where it is still unclasped, but it will remain down in place, and, as the swaging-tool passes around, the edge will be clasped evenly and securely at the lower part of the turned-over edge of the hoop.

The second operation is then performed by raising the pressing or swaging-tool close to the

upper edge of the turned-over part of the hoop and passing it around, pressing it out firmly against the upright part of the hoop, thereby tightening the wire-cloth, as shown in Fig. 2. While this operation is being performed I am able to apply considerable strain to the wire-cloth and make it firm and tight across the hoop, on account of its edge being held firmly in place on account of the first operation, above described.

By making these two independent operations in securing the wire-cloth I am enabled to secure the edge thereof evenly and uniformly between the upright part and the turned-over part of the hoop, and thus, in tightening the wire-cloth by a second operation, put a uniform and equal strain upon all of the wires or threads of the wire or sieve-cloth, and at the same time stretch or strain the cloth more rigidly within the sieve than I would be able to do by fastening it in a single operation.

It is apparent that the same results of the two operations will be produced if, instead of turning over the lower edge of the metallic hoop A, as above described, which turned-over part I have marked in the drawing C, a separate piece or band is used to secure the edge of the wire-cloth in place of the turned-over edge of the metallic band A, the object of this invention being to secure the wire-cloth in any of my heretofore patented forms or construction of the sieve by two operations, substantially as described, for the purpose of making a more uniform and rigid fastening than I have been able to secure by a single operation; and I am able to make this rigid and secure fastening whether I actually swage out the clamping parts, as shown in the drawing, or only secure the edge by a firm and solid pressure, providing the pressure is performed by two operations, as above described.

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

The process of securing the wire or sieve-cloth to a metallic sieve, substantially as above described.

Witnesses: ROBERT J. MANN.
F. F. WARNER,
H. F. BRUNS.