M. E. DAYTON.

METALLIC-SIEVES.

No. 194,033. Patented Aug. 14, 1877.

Fig. 1.

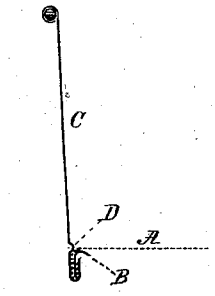


Fig. 2

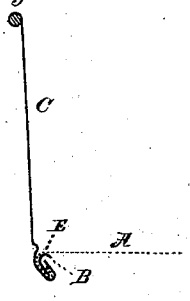


Fig. 3.

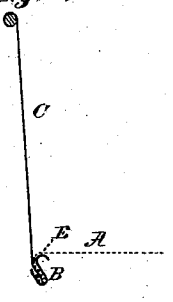


Fig. 4

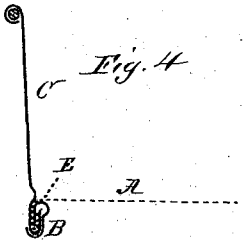
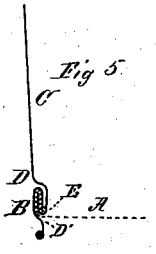


Fig 5



Witnesses.

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UNITED STATES PATENT OFFICE.

MELVILLE E. DAYTON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN METALLIC SIEVES.

Specification forming part of Letters Patent No. **194,033**, dated August 14, 1877; application filed September 28, 1876.

To all whom it may concern:

Be it known that I, MELVILLE E. DAYTON, of Chicago, Illinois, have invented a new and useful Improvement in the Construction of Metallic Sieves, of which the following is a specification:

My invention relates to that class of sieves in which the wire-cloth bottom is attached to a hoop or body of sheet metal by folding; and consists in joining an annular sheet-metal band in the fold of the bottom and body, in a manner and for the purposes hereinafter more fully set forth.

In the accompanying drawings, which form a part of the specification, the several parts of the sieve are represented in section.

The broken line A represents the wire-cloth bottom; B, a narrow annular sheet-metal band, and C a sheet-metal hoop forming the body of the sieve, as they are severally formed and mutually related in the completed sieve.

In all the figures, excepting Figure 5, the band B presents a curved surface, E, for the support of the bottom A at the point or in the line where the latter enters the fold.

Fig. 1 specially shows the bottom A passing taut over the band B, and having its margin inwardly turned over the edge of said band. It also shows the lower margin of the body C inwardly and upwardly folded to firmly clasp both wire-cloth and band. An annular shoulder, D, on the inner surface of C is also shown, which shoulder is in contact with the bottom A, in the line of its curvature over B. In this construction the firm grasp of the fold in the body upon the wire-cloth over the edge of the band prevents the slipping of the bottom under the pressure of use, and the shoulder D prevents the band and bottom from being raised out of the fold of the body.

Fig. 2 shows the same arrangement of the parts, but with the fold deflected from a perpendicular. A double object is attained by such deflection—namely, stiffening the sieve in this part and securing the band, and, hence, the bottom, against withdrawal from the fold in the body. The shoulder D may in this case be dispensed with.

Fig. 3 shows the margin of A and the lower edge of B outwardly folded over the lower edge of C, and the completed fold deflected, as in Fig. 2. The shoulder D is in this case valueless for the security of the band.

Fig. 4 shows the same arrangement as that shown in Figs. 1 and 2, but in this case the free margin of B extends beneath the fold of C, with the obvious effect of holding the other edge permanently in the fold.

Fig. 5 is substantially an inversion of Fig. 4, the shoulder D, if used, being external to C.

In making the sieve according to Figs. 1, 2, and 4, the wire-cloth may be first stretched or made taut over the band B, and afterward inserted into the body, and secured as described; or the bottom may be loosely attached to the band, and then inserted into the body, and then secured and made taut by swaging; or, again, both cloth and band may be simultaneously inserted into the body and tightened or stretched, either in the process of insertion or subsequently by swaging.

I am aware that a wire has been used as a stretcher for the wire-cloth bottom, and, with the bottom attached, has been secured to a sheet-metal body by clasping the lower edge of the body about the wire; but, owing to the circular direction of its fold over a wire, the cloth in that case soon draws out in use, leaving the wire in the fold of the body. On the other hand, in the use of the sheet-metal band herein described, the cloth, being bent and held at a sharp angle over the metallic edge, cannot well be drawn out without separating the band from the body, and this is prevented by shaping it or the body, or both, as shown, and as cannot be done with a wire.

I am also aware that a wire-cloth bottom has been secured to a sheet-metal band corresponding to B, but in that case the band and cloth constituted an independent sieve bottom, not joined to the body, and designed to be removable at pleasure.

The edge within the fold over which the wire-cloth is clasped is not necessarily a single or raw edge, but may be folded or rounded to avoid cutting the cloth.

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

In a metallic sieve, the body C, the band B, and the bottom A, when the bottom is clasped over a metallic edge within the fold uniting the band and body, and is thereby held flexed over the rounded shoulder E, and the several parts are held in place by their conformation at the fold, substantially as described and shown.

MELVILLE E. DAYTON.

Witnesses:

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