R. J. MANN.

Improvement in Machines for Forming Metallic Sieve-Bodies.

No. 130,512. Patented Aug. 13, 1872.

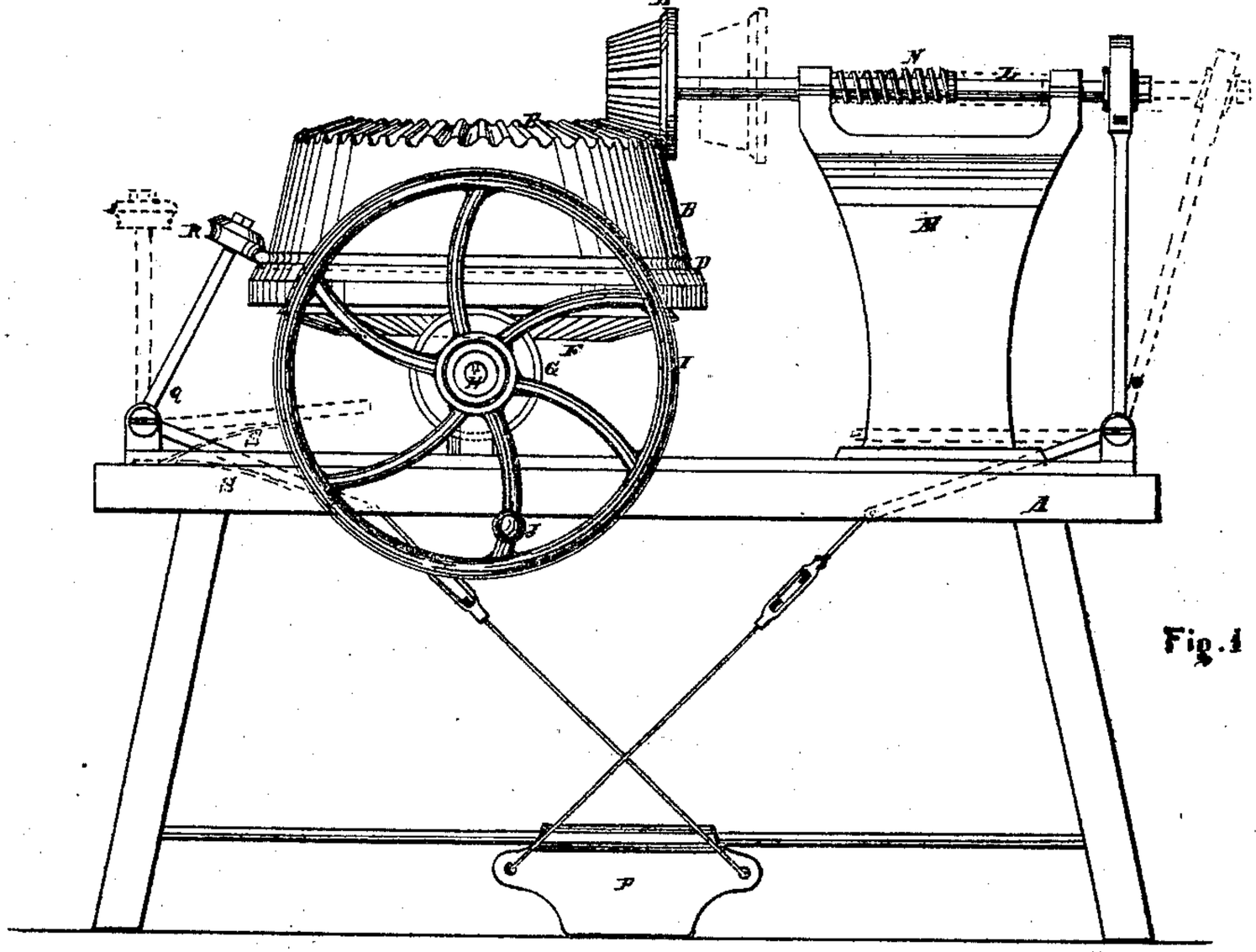

Fig. 1

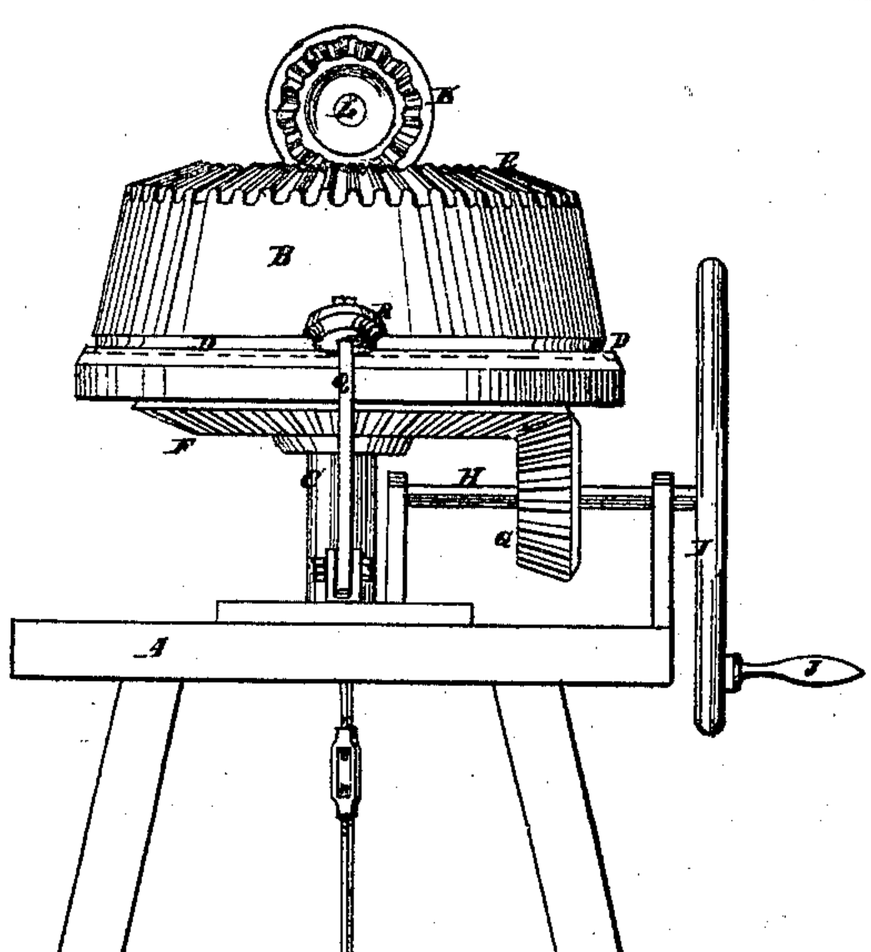

Fig. 2.

Witnesses:

Heinl. F. Bacon

R. B. Bacon

Inventor:

R. J. Mann
by Coburn & Munday
his attys.

UNITED STATES PATENT OFFICE.

ROBERT J. MANN, OF BURLINGTON, IOWA.

IMPROVEMENT IN MACHINES FOR FORMING METALLIC SIEVE-BODIES.

Specification forming part of Letters Patent No. **130,512**, dated August 13, 1872.

SPECIFICATION.

To 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 certain Improvements in Machines for Forming Metallic Sieve-Bodies; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which, together with the letters and figures marked thereon, form part of this specification, and in which—

Figure 1 is a front elevation of my invention, and Fig. 2 is an end elevation of the same, taken at the left of Fig. 1.

Like letters of reference made use of in the several figures indicate like parts.

Nature of the Invention.

In the manufacture of sieve-bodies for metallic-bodied sieves, in accordance with the several patents heretofore granted to me for improvements in metallic-bodied sieves, No. 106,597, No. 113,184, No. 117,790, and No. 122,728, it is necessary that the bottom edge of the metal sides should be turned in to form an angle to the sides preparatory to applying and fixing by a swaging process the wire gauze or net to the sieve-bottom; and it is desirable that the upper edge should be wired to strengthen and stiffen the body; and this invention relates to a machine for preparing the metal-sieve bodies to receive the wire-gauze or sieve-cloth by bending the bottom edge into the desired preparatory shape, and which machine, at the same time and by the same revolution, incloses an annular wire in a previously-formed swage at the upper edge of the sieve-body; and the invention consists in the combination and arrangement of the various parts, more explicitly hereinafter described and claimed.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with particularity, making use in so doing of the aforesaid drawing by letters of reference thereto.

General Description.

A is a substantial frame-work constructed to sustain the mechanism and elevate it to a convenient height. B is a revolving form supported upon a pillar, C, resting upon the frame-work A. This form is made of a shape to correspond to the body of the sieve, and has around its lower periphery an annular groove or gutter, D, and is made at the top with a corrugated surface, E, the corrugations radiating from the center. F is a miter cog-wheel carried upon the form B below, and meshing into the vertical mitered cog-wheel G upon the shaft H, which is provided at its outer extremity with the crank-wheel I and handle J. By this mechanism the form B may be revolved by the hand of the operator applied to the handle J. K is a corrugated wheel meshing into the corrugated upper surface of the form B. This wheel K is carried upon the shaft L having bearings in the support M. The shaft L is fitted to slide in its bearings, and the wheel K is held, when other pressure is removed, in the position indicated by the dotted lines, by means of the spring N. A bell-crank lever, O, connected to the treadle P, serves to throw the wheel K in and out of gear. Q is a bell-crank lever pivoted to the frame-work A and attached to the treadle P. This lever, upon its free end, carries the beveled grooved pulley or roller R, arranged to engage the metal of the sieve-body at a point over the groove D. When the treadle is raised this roller and lever is held by the spring S in the position indicated in dotted lines.

The operation is as follows: The sieve-body, made of metal, generally of tinned iron, is first joined into an annular band by a side seam, and the upper edge turned outward and downward to form a groove to receive the strengthening-wire. The body, in this condition, is placed on the form B with the groove resting in the groove D of the form. An annular wire of proper length is placed within the groove of the sieve-body and the treadle P brought down. This brings the wheel K against the metal projecting above the top of the form, and it is bent over, and at the same time the roller R descends against the metal of the sieve-body at the groove. The form is now revolved, and the wheel K and roller R press down the tin or metal and inclose the wire and form the bent lower edge. The wheel K and upper surface of the form B are made corrugated, so that the metal will be taken up by the corrugations and the bend accomplished

without danger of breaking the edges. When the work is done the treadle is released, and the springs throw back the wheel K and roller R so that the sieve-body may be readily removed.

Claim.

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

The form B, arranged to revolve, and having a crimped or corrugated upper surface, E, and the gutter D, in combination with the wheel K, roller R, and a mechanism for removing and applying them to the form, substantially as specified.

ROBT. J. MANN.

Witnesses:
JOHN W. MUNDAY,
HEINR. F. BRUNS.