

(No Model.)

N. C. STILES.

DIE FOR FORMING PULLEY CENTERS.

No. 294,698.

Patented Mar. 4, 1884.

fig. 1

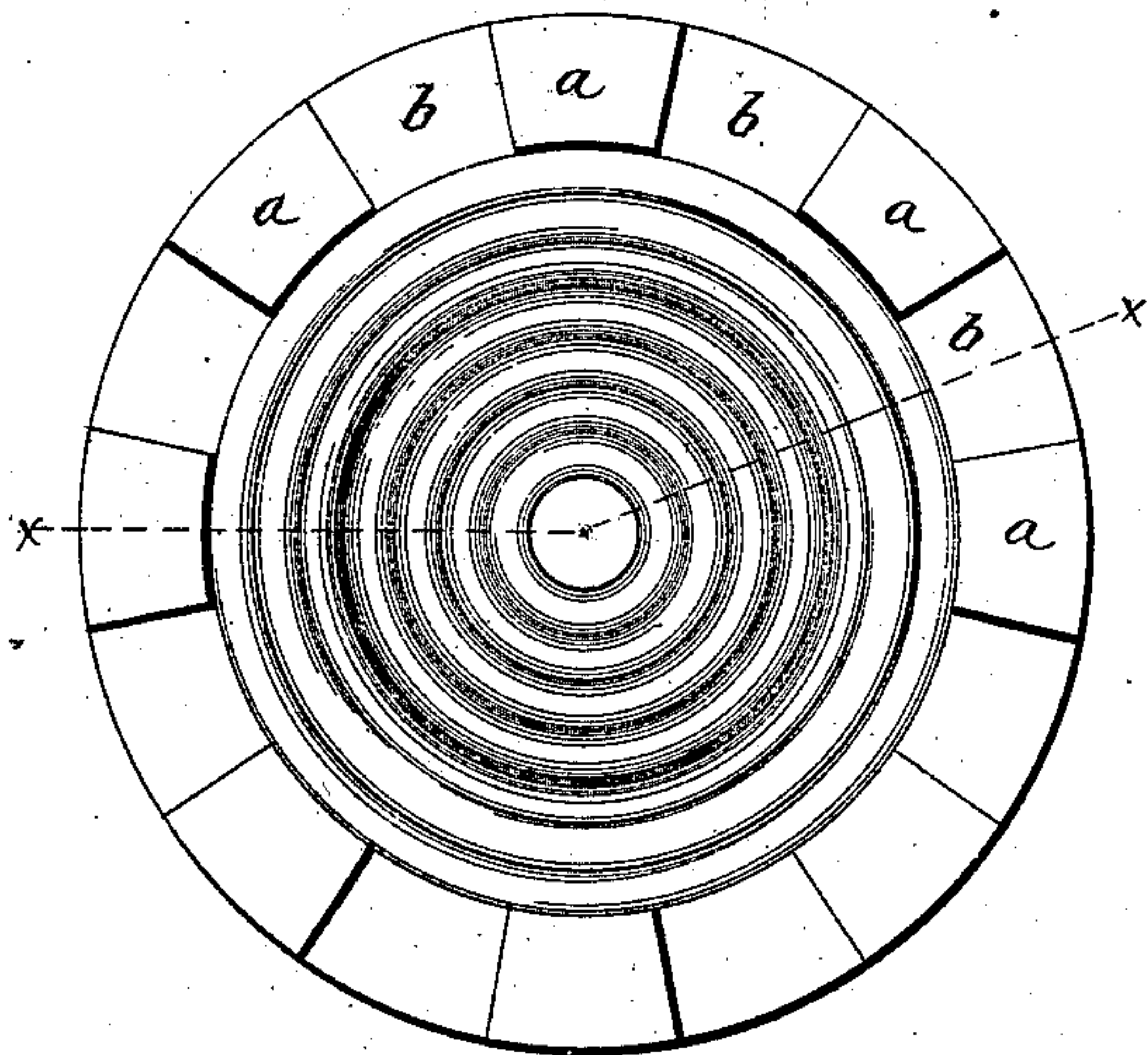


fig. 2

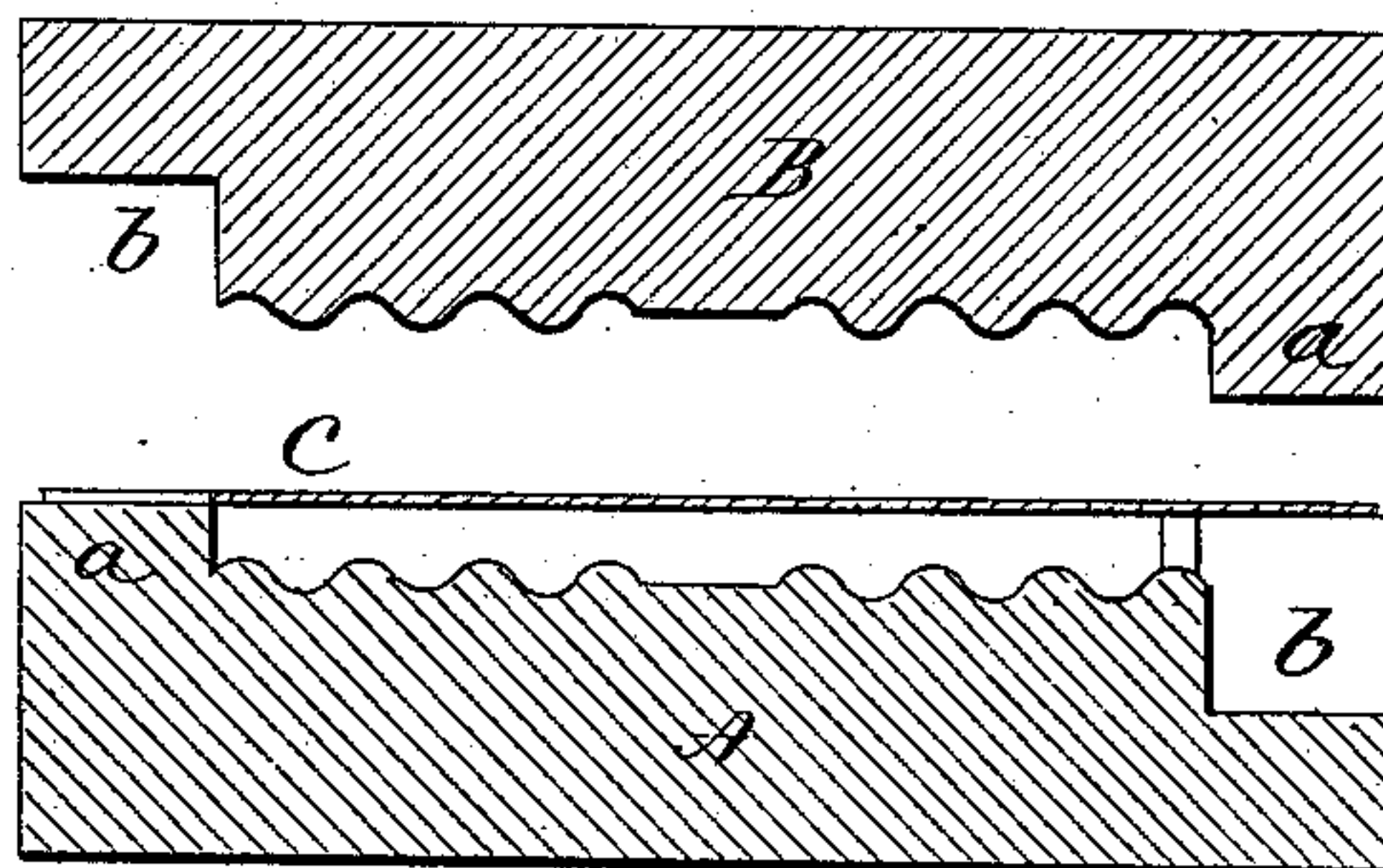


fig. 3

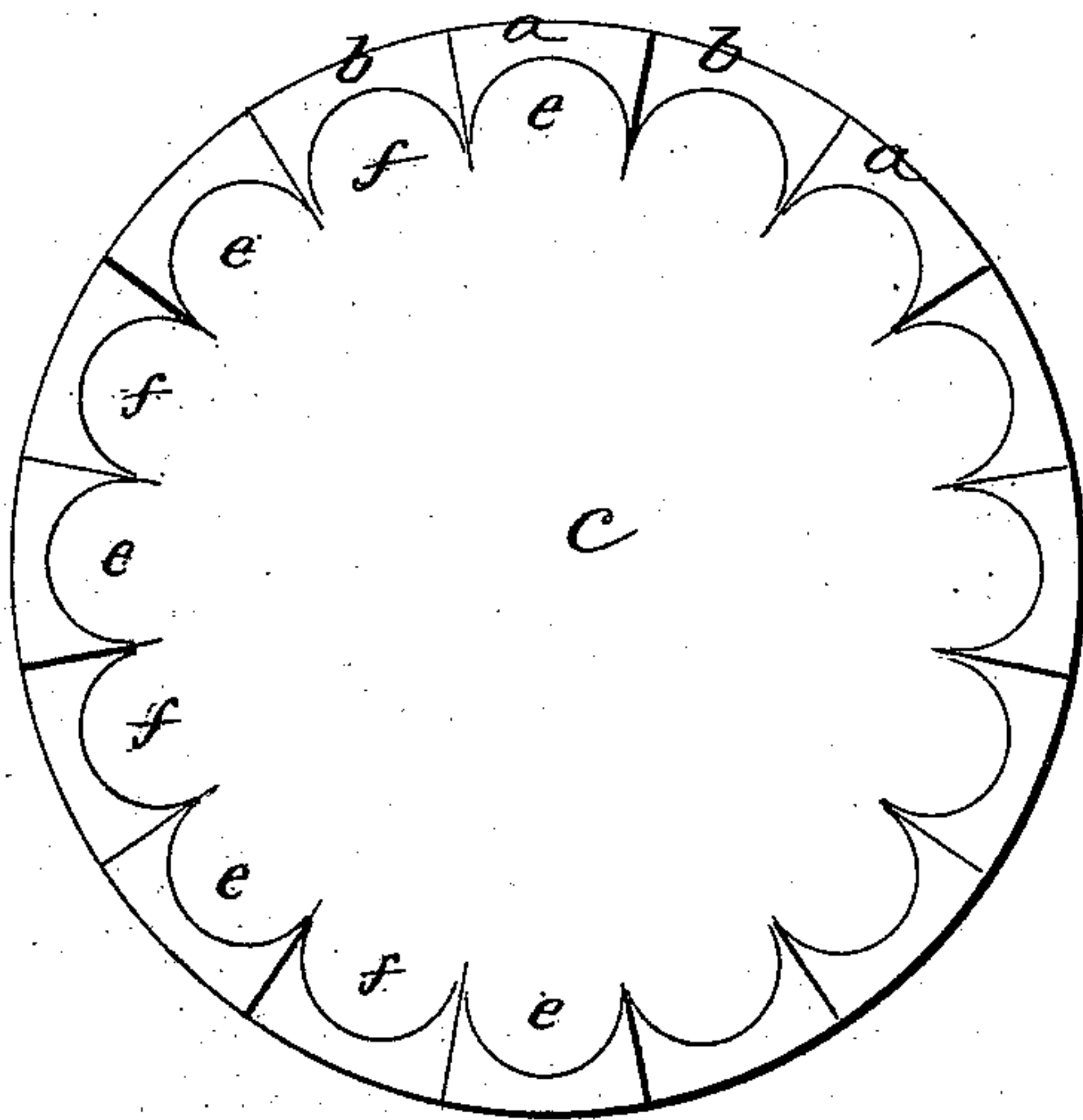


fig. 4

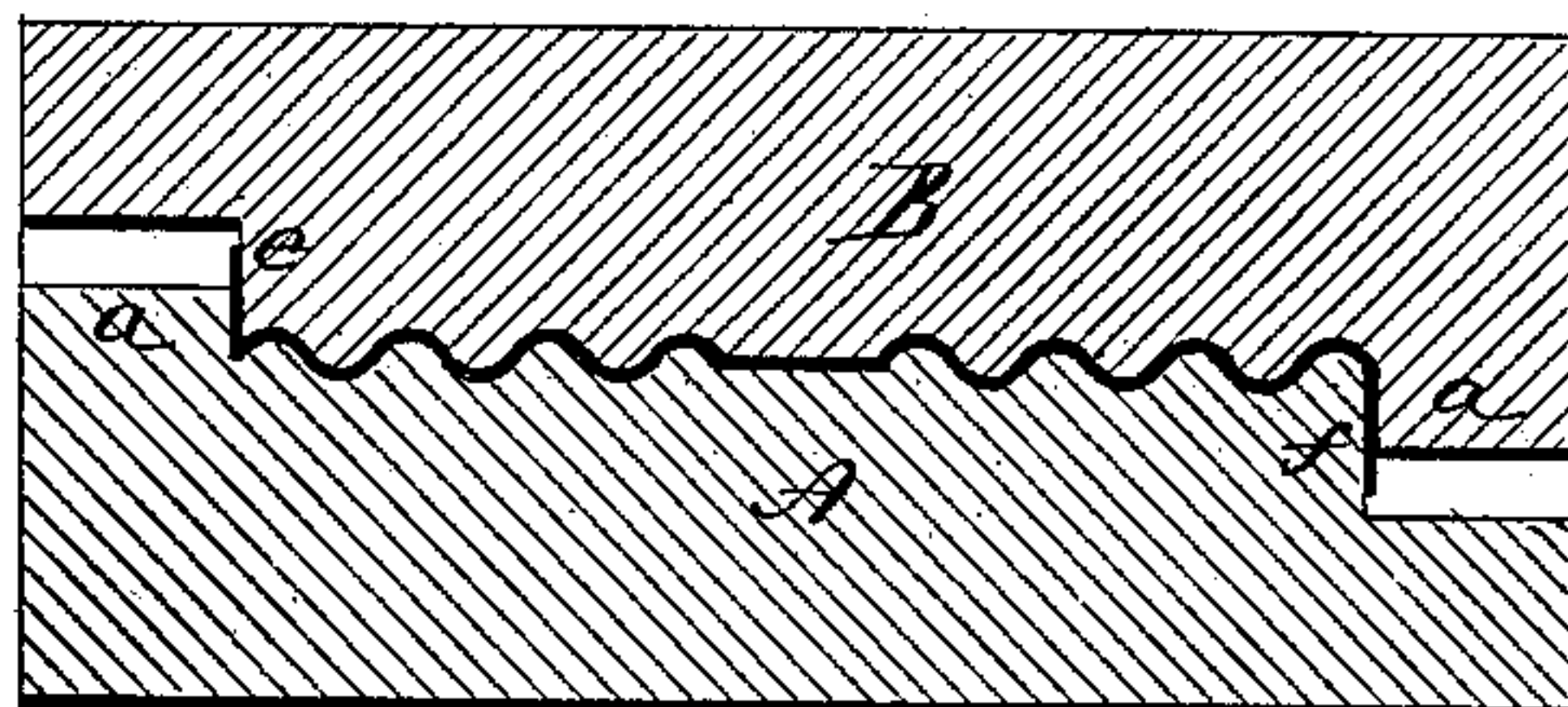
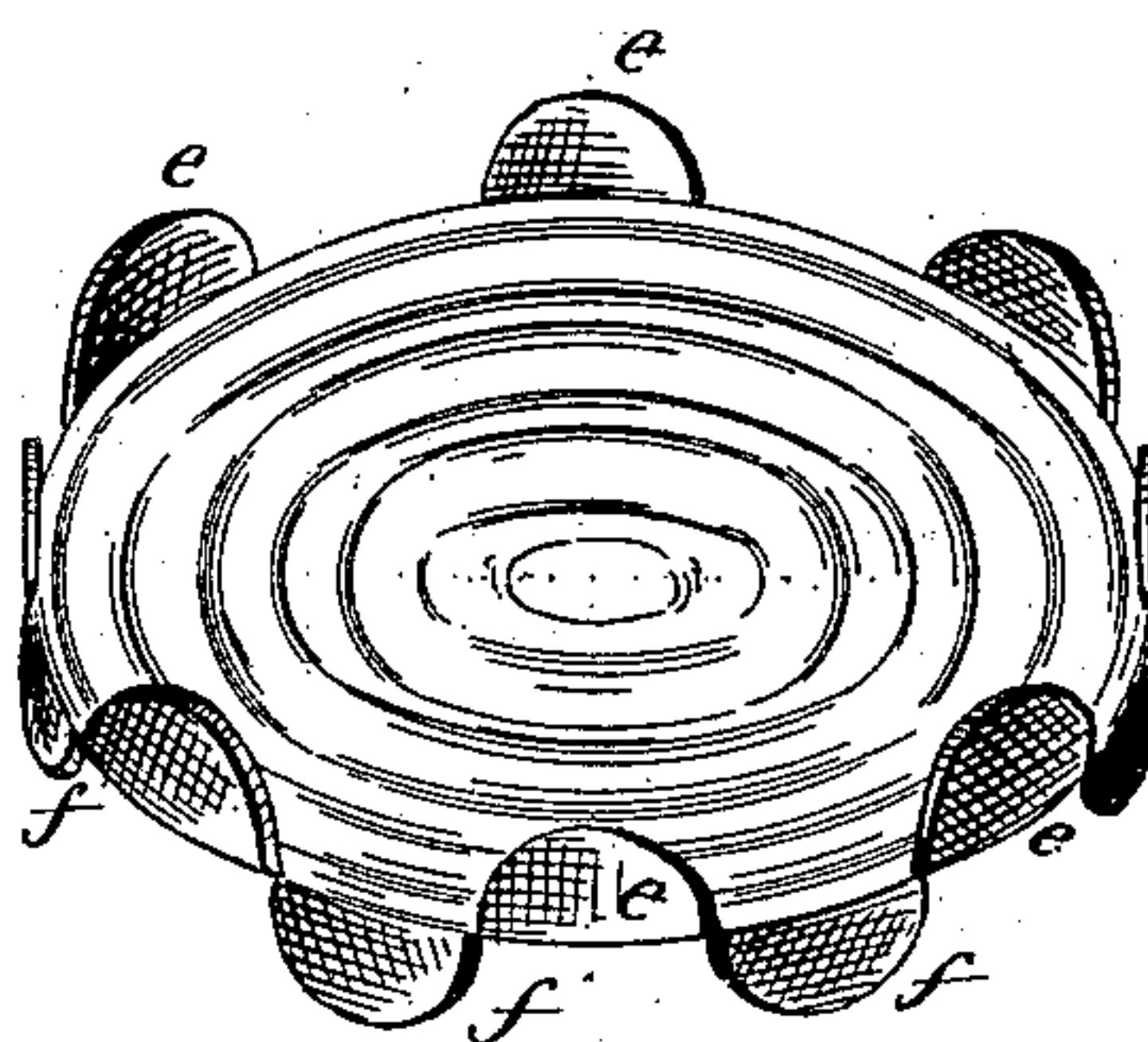


fig. 5



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DIE FOR FORMING PULLEY-CENTERS.

SPECIFICATION forming part of Letters Patent No. 294,692, dated March 4, 1884.

Application filed June 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. STILES, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Dies for Forming Pulley-Centers; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a face view of one part of the die; Fig. 2, a vertical section through the two parts, showing in the disk in place for operation; Fig. 3, a top view of the one part, showing the disk in place for operation; Fig. 4, a vertical section after the dies are closed and the ears turned up and down; Fig. 5, a perspective view of the center complete.

This invention relates to an improvement in dies for shaping the centers of that class of pulleys which are made with a wrought-metal center having the rim secured thereto. This center consists of a corrugated disk having right-angular projections at its periphery, the projections alternating the one projection from one side and the other upon the opposite, and as seen in perspective, Fig. 5, the object of the invention being the construction of dies whereby the disk may be shaped and the ears or projections turned in their respective directions; and in such dies my invention consists.

The two parts, A B, of the die are substantially alike. They are circular in form, and each constructed with alternate projections and recesses, *a b*, around the edge, the space within these projections corresponding to the circumference of the center to be formed. The surface of the die within these projections is concentrically corrugated, as seen in Figs. 1 and 2. The recesses *b* are slightly larger than the projections, and so that the projections on the one part will correspond to the recesses on the other part, and so that the two will set together, as seen in Fig. 4, the projections on one passing down into the recesses on the other until the surfaces of the two parts may

substantially meet. The face of the one part within the projections is the reverse of the other—that is, the concentric ribs on the one correspond to the concentric depressions on the other, as seen in Figs. 2 and 4.

The blank C is cut from sheet metal, so as to form projections *e f* around its periphery, corresponding in number to the recesses and projections on the dies. The blank thus cut, as seen in Fig. 3, is laid upon the die—say with the projections *e* resting on the projections *a* of the part A of the die, the projections *f* lying over the recesses *b*, and so that the blank C will be supported, as seen in Fig. 2, in a concentric position on the die. Then the part B is forced down onto the blank, the projections *a* on the part A turn the projections or ears *e* upward, and the projections *e* on the other part B turn the ears *f* down into the recesses in the lower part, thus turning alternate ears, one in one direction and the next in the opposite direction, and at substantially right angles to the plane of the disk, and as seen in Fig. 5. At the same time the disk is concentrically corrugated, and the pulley-center is complete, ready to receive its rim. While the concentric corrugation is desirable, as giving strength to the center, it may be left plain or be otherwise corrugated, the essential feature of my invention being the pair of dies, each having projections *a* alternating with recesses, the projections on the one corresponding to the recesses in the other, whereby the ears on the disk may be alternately turned the one to the right and the other to the left of the plane of the disk.

I claim—

1. The herein-described dies for forming wrought-metal pulley-centers, consisting of the two parts A B, each having a series of projections, *a*, alternating with recesses *b* around its edge, leaving a circular space within them corresponding substantially to the diameter of the center to be produced, the projections *a* on the one corresponding to the recesses *b* on the other part, and whereby the ears on the edge of the center or disk may be turned alternately to the right and left of the plane of the disk, substantially as described.

2. The herein-described dies for forming wrought-metal pulley-centers, consisting of the two parts A B, each having a series of projections, *a*, alternating with recesses *b* around its edge, leaving a circular space within them corresponding substantially to the diameter of the center to be produced, the projections *a* on the one corresponding to the recesses *b* on the other part, and whereby the ears on the edge of the center or disk may be turned alternately to the right and left of the plane of the disk, the circular space within the said projections concentrically corrugated, substantially as described.

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Witnesses:

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