

(No Model.)

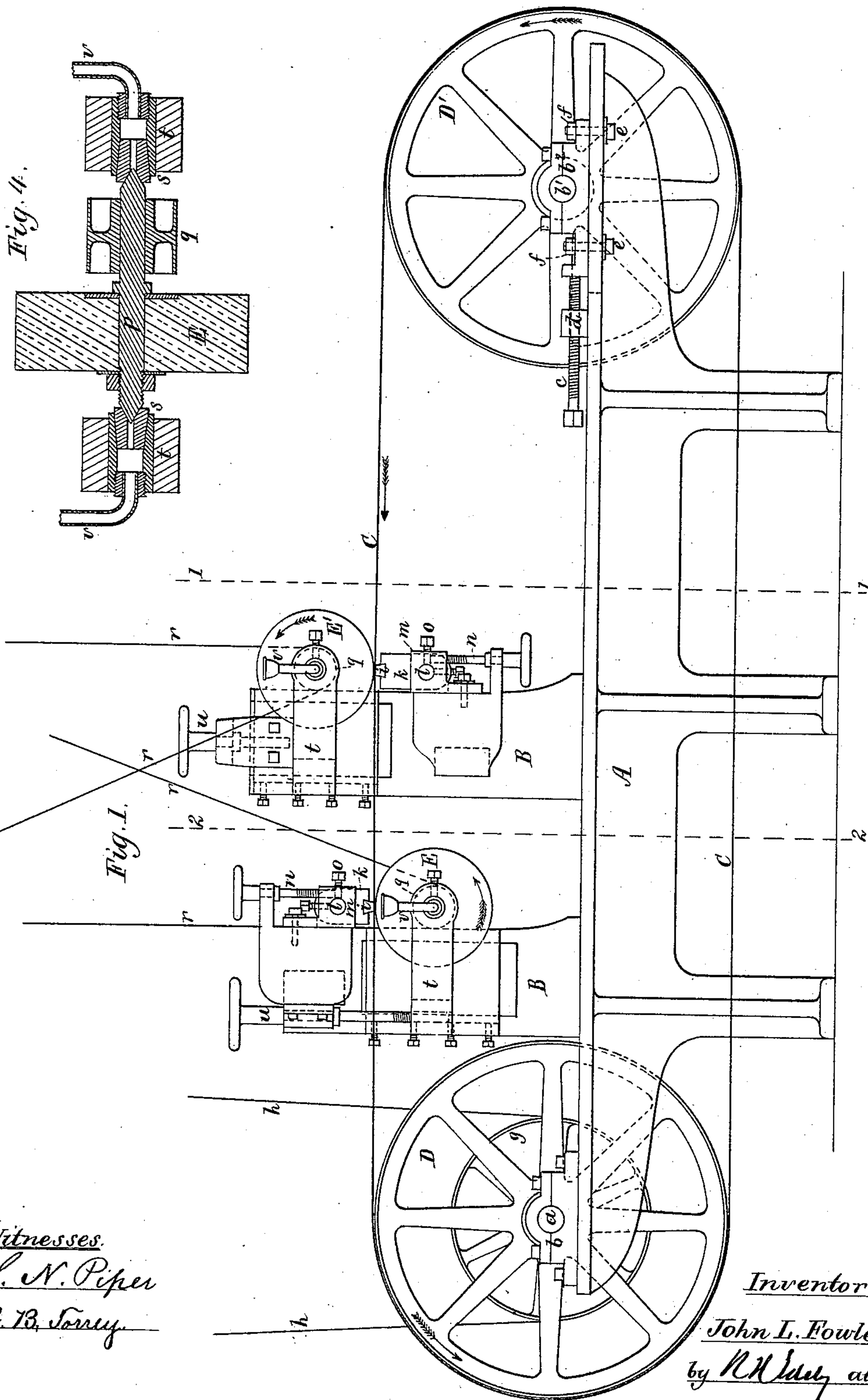
2 Sheets—Sheet 1.

J. L. FOWLE.

MACHINERY FOR GRINDING METALLIC BANDS.

No. 396,553.

Patented Jan. 22, 1889.



Witnesses.
S. N. Piper
R. B. Torrey

Inventor.
John L. Fowle.
by *R. H. Soley atty.*

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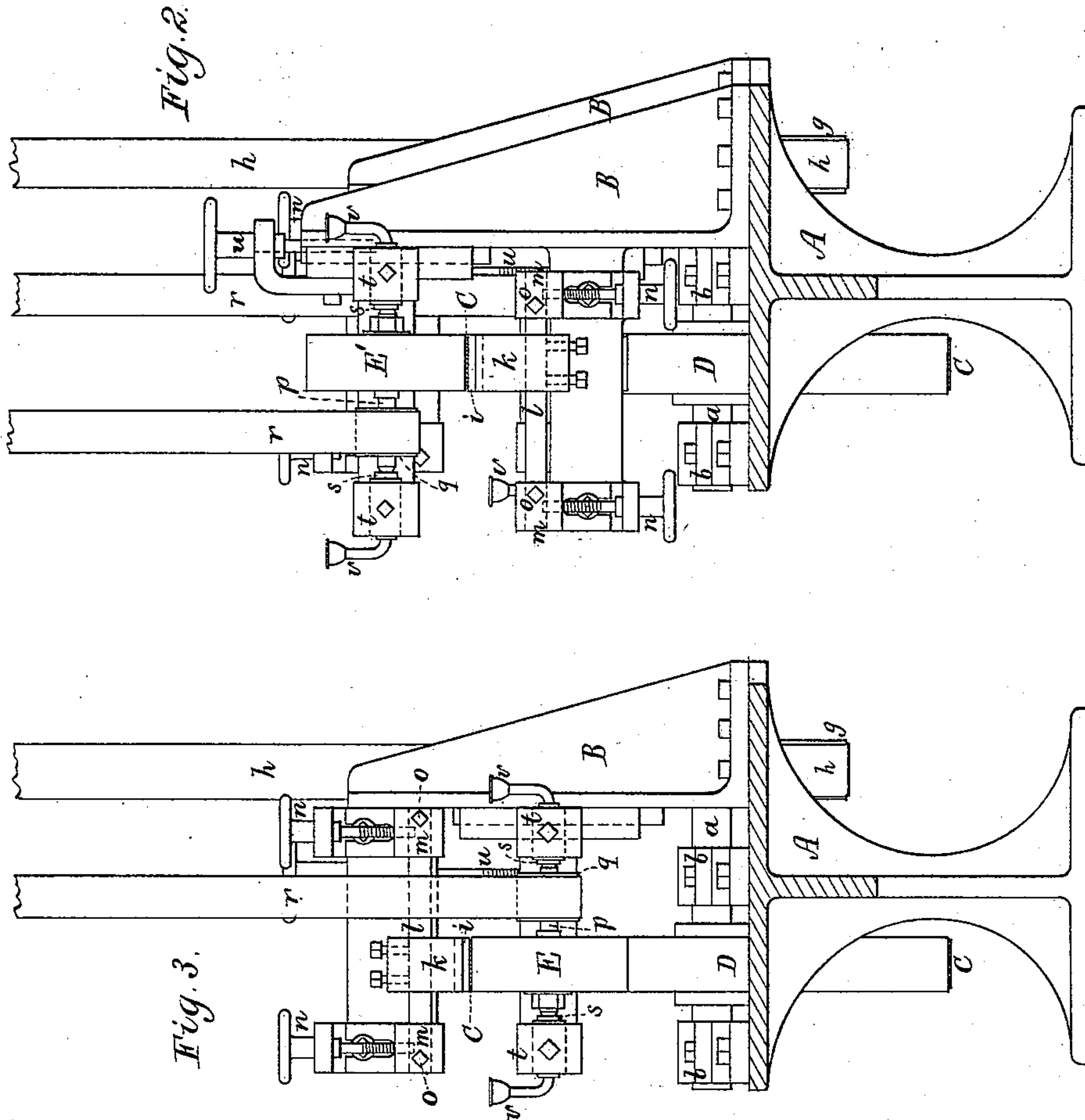
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UNITED STATES PATENT OFFICE.

JOHN LEONARD FOWLE, OF WOBURN, MASSACHUSETTS, ASSIGNOR TO
WALTER FRANKLIN FOWLE, OF SAME PLACE.

MACHINERY FOR GRINDING METALLIC BANDS.

SPECIFICATION forming part of Letters Patent No. 396,553, dated January 22, 1889.

Application filed February 14, 1887. Serial No. 227,599. (No model.)

To all whom it may concern:

Be it known that I, JOHN LEONARD FOWLE, of Woburn, in the county of Middlesex, of the Commonwealth of Massachusetts, have
5 invented a new and useful Improvement in Machinery for Grinding Metallic Endless Bands; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings,
10 of which—

Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a vertical and transverse section on line 1 1, and Fig. 3 is a similar section on line 2 2 of Fig.
15 1. Fig. 4 is a section of one of the grinding wheels or stones, its shaft and the bearings thereof to be described.

Endless-band knives, as well as endless-band saws, generally require to be of even
20 thickness throughout, which they generally do not have when first made, it being very difficult in practice to roll them in blank to an even thickness. The purpose of my machine is to dress or reduce the endless blank
25 to an even thickness, usually preparatory to it being sharpened on its edge or having teeth made on it.

The nature of my invention is duly defined in the claims hereinafter presented.

30 In the drawings, the frame of the machine is shown at A, it having extending upward from it two standards, B, for sustaining the two band-rests and the grinding-wheels and their operative mechanisms. The metallic
35 endless band for being ground to an even thickness is shown at C as extending around and supported on the peripheries of two wheels, D and D'. One of these wheels, D, has its shaft *a* sustained in stationary boxes,
40 one of which is shown at *b* in Fig. 1. The other wheel, D', has its shaft *b'* supported in boxes (one of which is shown at *b*²) movable on the frame A lengthwise thereof, each box being provided with a screw, *c*, for moving it.
45 The said screw screws into and through a stationary projection, *d*, and against the box. Furthermore, the boxes and frame are furnished with clamp-screws *e* and nuts *f* for clamping the box in place to the frame. By
50 means of its screw *c* its box may be forced in a direction away from the wheel D in

order to tighten the band upon the two wheels D and D'.

On the shaft *a* there is fixed a pulley, *g*, about which a belt, *h*, passes from a driving
55 pulley or drum for the purpose of revolving the endless band while being ground. For grinding the endless band two grinding stones or wheels, E and E', are used, one being above and the other below the upper straight part
60 of such band. One of such wheels is to reduce the outer and the other the inner surface of the band. The upper of these wheels is not directly over the lower one, but is arranged therewith in manner as represented,
65 there being to support the band directly opposite to where it is in contact with each grinding-wheel an adjustable rest or bearing, *i*, which projects from a block, *k*, fixed on a shaft, *l*. This shaft is sustained in boxes *m*
70 *m*, each of which is vertically adjustable on the standard carrying it and is provided with a screw, *n*, for depressing it (the said box.) Screws *o*, screwed into the boxes *m m*
75 and against the shaft-journals, serve to clamp the shaft or prevent it from turning in the boxes.

The object in mounting the block *k* upon the shaft *l*, which is made adjustable at the ends and also axially within the boxes *m m*,
80 is to adjust the bearing or rest *i* in said block *k* to any desirable horizontal line in the length of the shaft to suit the inclination of the band, and by the set-screws *o* to adjust the shaft so that the rest *i* can be accommo-
85 dated longitudinally of the movement of the band. The screws *n* are to fasten and adjust the boxes vertically.

Each grinding-wheel has fixed on its arbor *p* a driving-pulley, *q*, about which one of two
90 endless belts, *r r*, runs from a driving-drum. The opposite ends of the arbor are conical and enter bearings *s s* of a vertically-adjustable frame, *t*, supported by the next adjacent standard B, and provided with a screw, *u*,
95 for moving the frame *t* in order to cause its grinding-wheel to bear with sufficient force upon the surface to be ground by it.

Ducts for supplying oil to the bearings are shown at *v v*.

From the above it will be seen that the end-
less band, while in movement and being ground

on its opposite surfaces simultaneously passes over and against one and under and against the other of the two rests *i*. These support it and keep it from tipping laterally and
5 cause it to be ground evenly across it by the grinding-wheels.

The machine hereinbefore described is not only different in construction, but is for an entirely different purpose and differs in its
10 operation from that represented in the United States Patent No. 284,957, which is for grinding the back or rear edge of a band knife, and also for sharpening the opposite edge of such knife, whereas my machine is for reduc-
15 ing the blade or band to an even thickness, and in no respect for operating on either edge of the said knife. Therefore, I do not claim the machine set forth in the said Patent No. 284,957.

I claim—

1. The standard B on the frame A with extended arms and having adjustable boxes *m* attached thereto, in combination with the loose shaft *l*, having a longitudinal and trans-
verse adjustment and supporting the rest *i*, 25 as and for the purpose set forth.

2. The combination of the grinding-wheels E E', situated relatively to each other, as described, the rest *i* in an adjustable block, *k*, supported on the shaft *l*, with longitudinal 30 and transverse adjustments in the boxes *m*, as and for the purpose described.

JOHN LEONARD FOWLE.

Witnesses:

R. H. EDDY,
R. B. TORREY.