

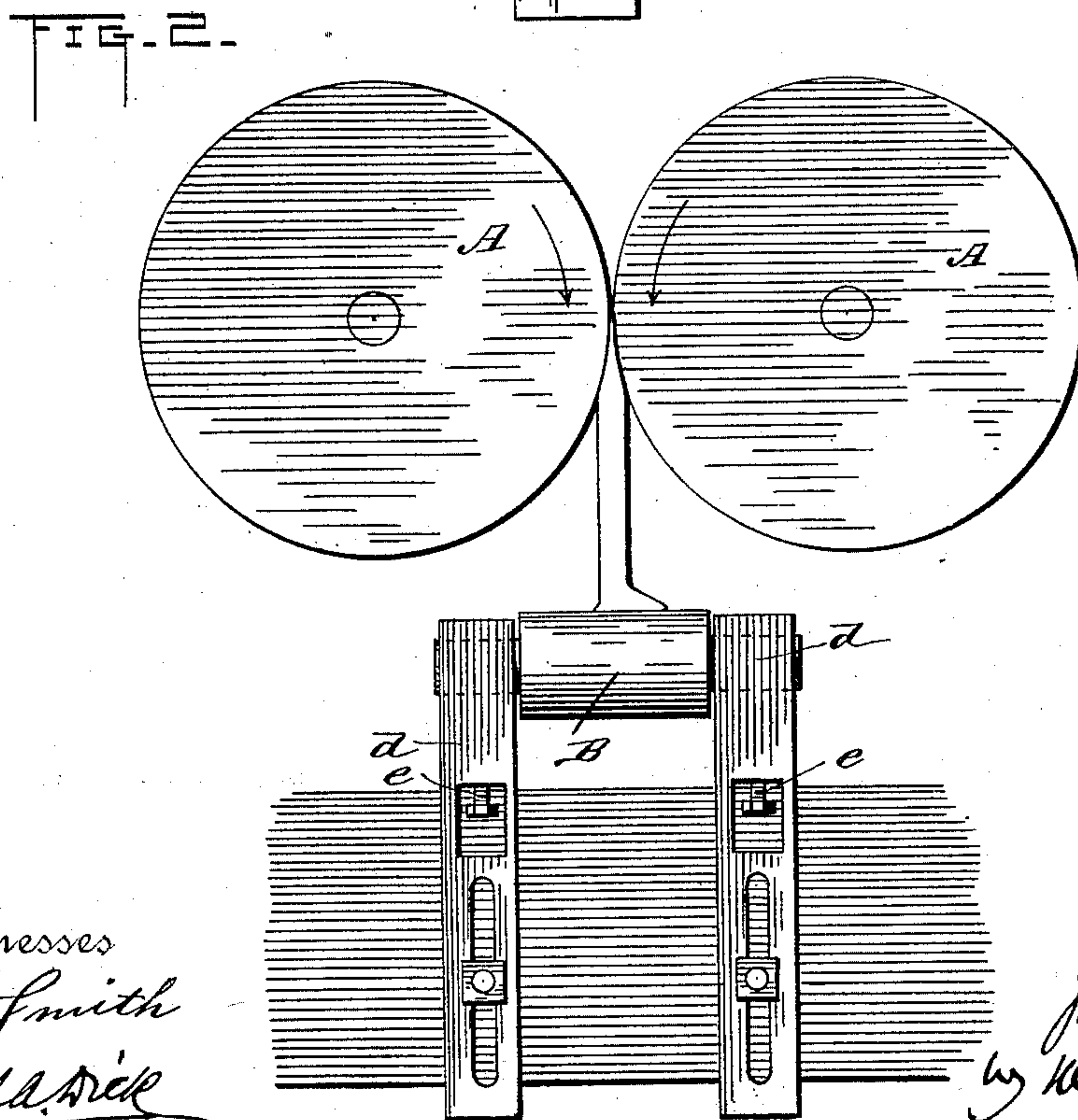
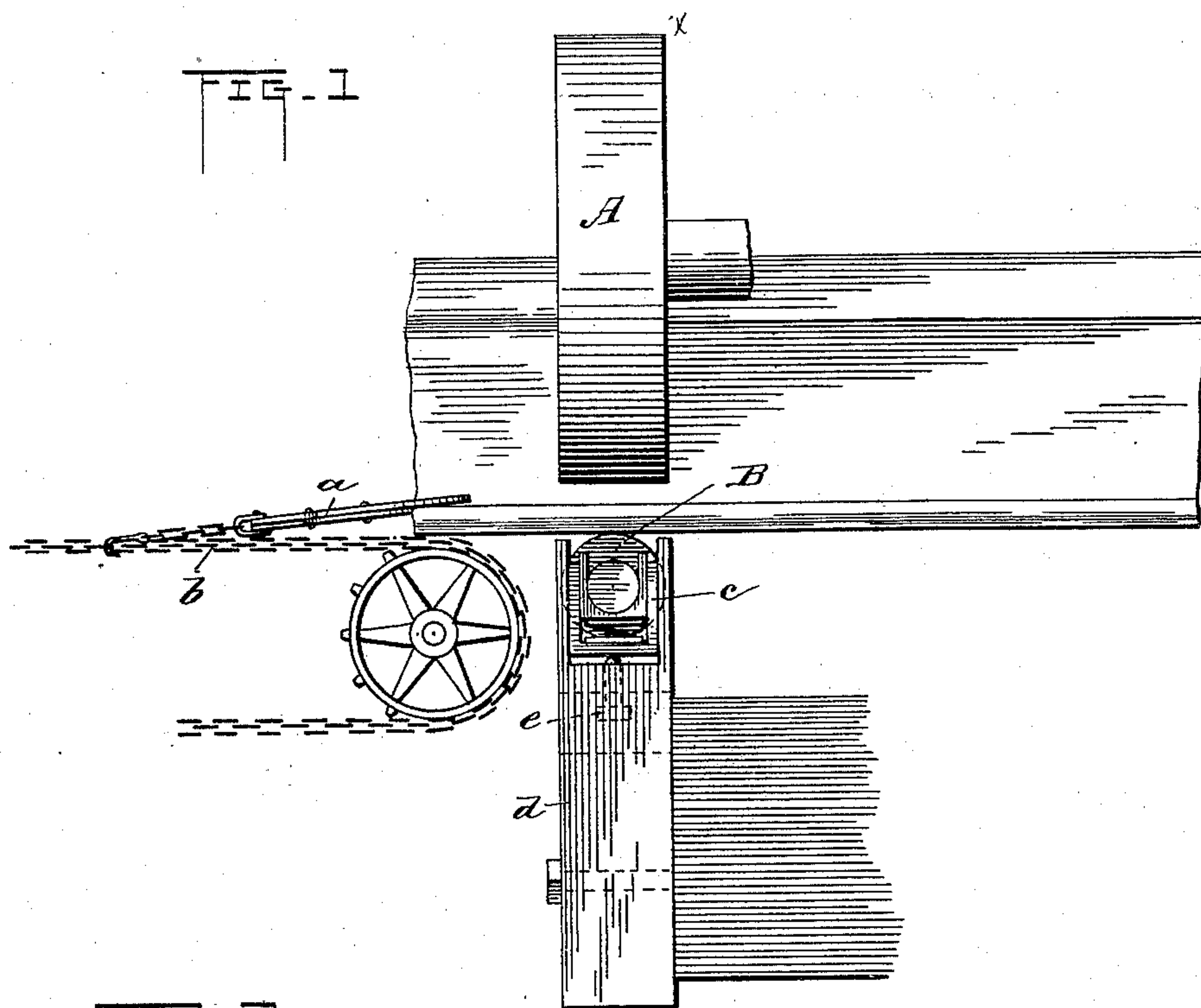
(No Model.)

J. T. JONES.

SHARPENER FOR NAIL OR SPIKE BLANKS.

No. 408,348.

Patented Aug. 6, 1889.



Witnesses
E. D. Smith
W. A. Dick

Inventor
J. T. Jones
by W. A. Dick
his Attorney

UNITED STATES PATENT OFFICE.

JOHN T. JONES, OF IRON MOUNTAIN, MICHIGAN.

SHARPENER FOR NAIL OR SPIKE BLANKS.

SPECIFICATION forming part of Letters Patent No. 408,348, dated August 6, 1889.

Application filed November 30, 1888. Serial No. 292,313. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. JONES, of Iron Mountain, in the county of Menominee, State of Michigan, have invented certain new and useful Improvements in Sharpeners for Blanks for Spikes, Nails, Staples, &c., of which the following is a specification.

My invention has reference to means for giving a sharp and finished chisel point or taper to the point-edge of a spike or nail blank, by "point-edge" intending that edge of the blank which forms the point of the finished spike or nail. It is my object to shear or shave the blank along this edge, so that there shall be formed a sharp and finished chisel edge. To perform this operation with ordinary cutting-dies or fixed knives is very detrimental to the cutting or shaving devices, which become incapacitated for use in a very short time, particularly when the blanks are of steel and in a heated state, as they must be when they are heavy or contain much metal at the point-edge. To remedy this difficulty, I make use of two sharpening or cutting disks, oppositely placed with their peripheries in contact, or nearly so, which disks are power-driven to revolve at a slow rate of speed. Thus above or below their point of contact I provide what is in effect a V cutting-die, the shaving or cutting edges of which are constantly renewed. In connection with these parts I employ one or more friction rolls or bearers for supporting the blank and holding it up to the action of the cutting-disks, the direction of rotation of said disks being such that they tend to press or force the blank toward its supporting roll or rolls.

In the accompanying drawings, Figure 1 is a side elevation of so much of the machine as is needed to illustrate my invention. Fig. 2 is an end elevation of the same.

A A are two oppositely-placed and revolving cutting-disks. They are supported in suitable bearings, and when in operation revolve continuously at a slow rate of speed, the object being to present constantly-renewed or fresh cutting-edges to the blank which is to be operated on. These disks are made, preferably, of steel or of chilled iron. Their sides and faces or peripheries are dressed and finished so as to furnish sharp

cutting-edges *x*. When they are put together, as shown in the drawings, and are in movement, they furnish above or below their meeting-point what is in effect a V cutting-die, the edges of which are constantly being changed or renewed. The dimensions of the disk may vary. Preferably they are, say, four inches thick, so as to allow their cutting-edges to be re-dressed when occasion requires, and they are usually from, say, twelve to thirty inches in diameter, according to the thickness of the blank to be operated on. The spread of the legs of the V-blank must vary as the thickness of the blank varies. For a thin blank—*e. g.*, a nail or staple blank—the disks should be of relatively larger diameter than those used for cutting the point-edges of thick blanks, such as spike-blanks.

Below the cutting disks I place one or more friction rolls or bearers B for supporting the blank. The blank is held between this support and the cutting-disk, and its upper or point edge entering the angular space or V cutting-die formed by the contiguous faces or cutting-edges of the disks A, the latter revolve in the direction of the arrows in Fig. 2, the effect being that they tend to press the blank down upon its support. The blank is pulled along between the disks, and in so moving a shaving is taken off from each of the beveled faces of the point-edge, the result being that their point-edge is in effect planed down on both sides smooth and to a point. The blank can be forced, drawn, or fed along by any suitable means. What I prefer now to employ for the purpose is a gripper *a* of the lazy-tongs type, which at one end grips the web of the blank and at the other end is hitched to an endless power-driven chain *b*. This is a mechanism well known to iron-workers and is not illustrated in detail, since it forms no part of my invention.

The supporting roll or bearer B is vertically adjustable, so that it may be set nearer to or farther from the cutting-disks in order to accommodate blanks of different widths. For this purpose it can be journaled in boxes *c*, which are vertically adjustable in their standards *d*, the set-screws for effecting the adjustment being indicated at *e*. The journal or boxes therefor should also be cushioned or

have an elastic backing, so that the support may yield and adjust itself automatically to slight irregularities in the blank.

Having described my invention, what I
5 claim herein as new is—

1. The combination, with the supporting roller or bearer for the blank, of the oppositely-placed power-driven cutting-disks revolving continuously in a direction which will
10 tend to press the blank toward the supporting-roller, substantially as and for the purpose set forth.

2. The combination, with the blank-supporting roller or bearer and adjustable bearings

or boxes in which the journals of said roller 15 are yieldingly supported, of the oppositely-placed power-driven cutting-disks revolving continuously in a direction which will tend to press the blank toward the roller or bearer, substantially as and for the purposes herein- 20 before set forth.

In testimony whereof I have hereunto set my hand this 19th day of November, 1888.

JOHN T. JONES.

Witnesses:

EWELL A. DICK,

WILL E. AUGHINBAUGH.