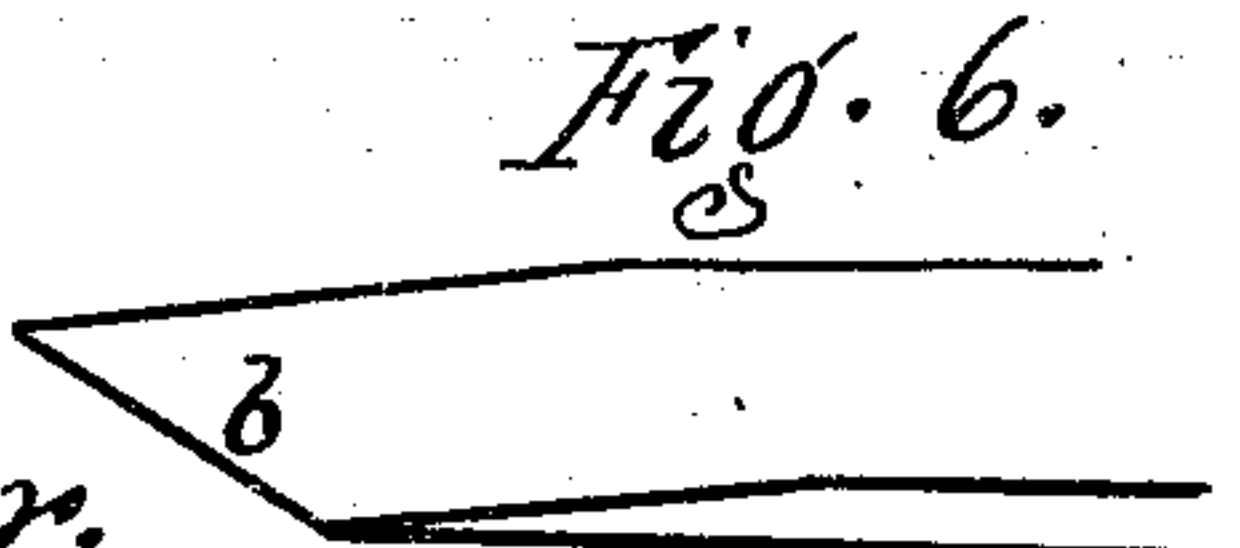
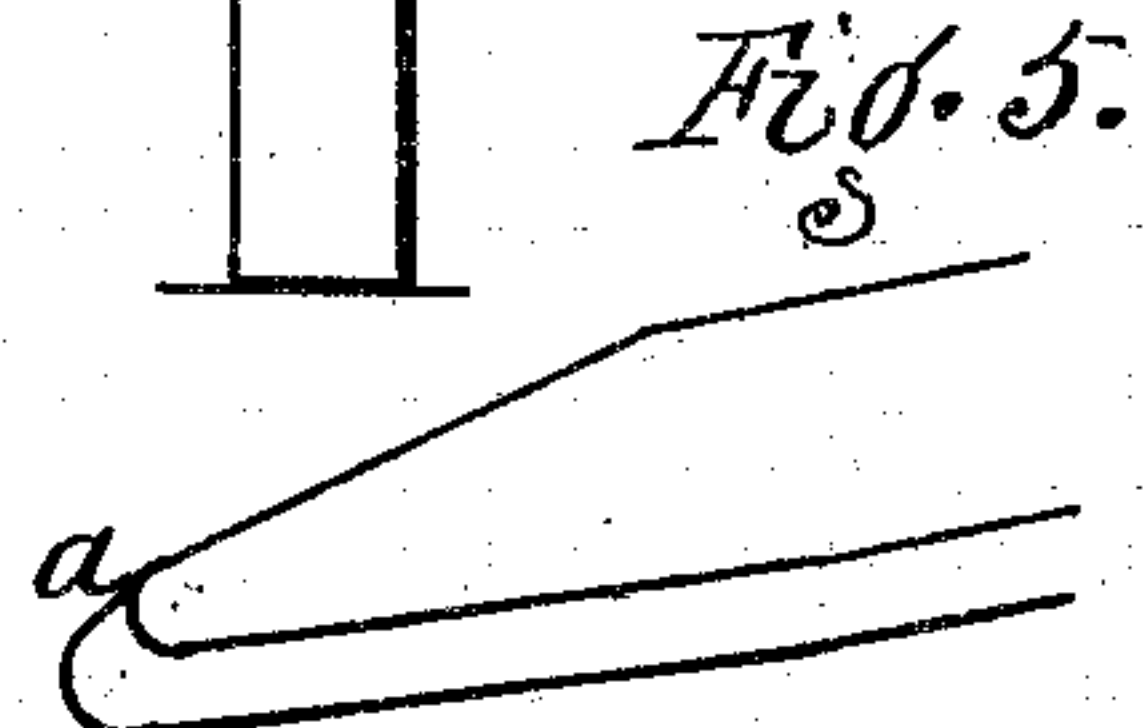
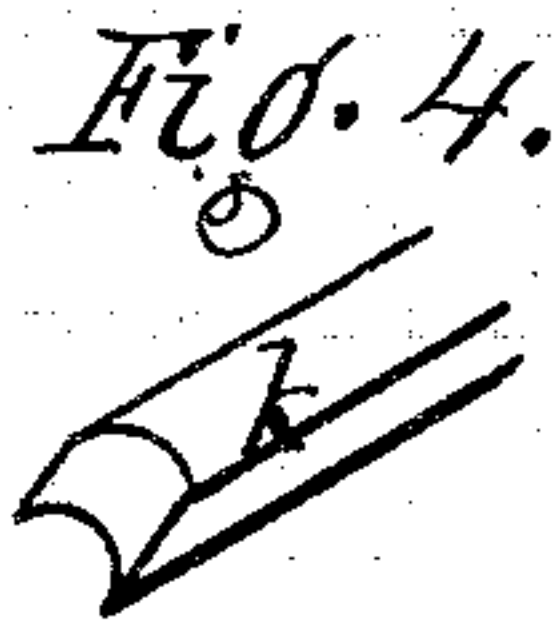
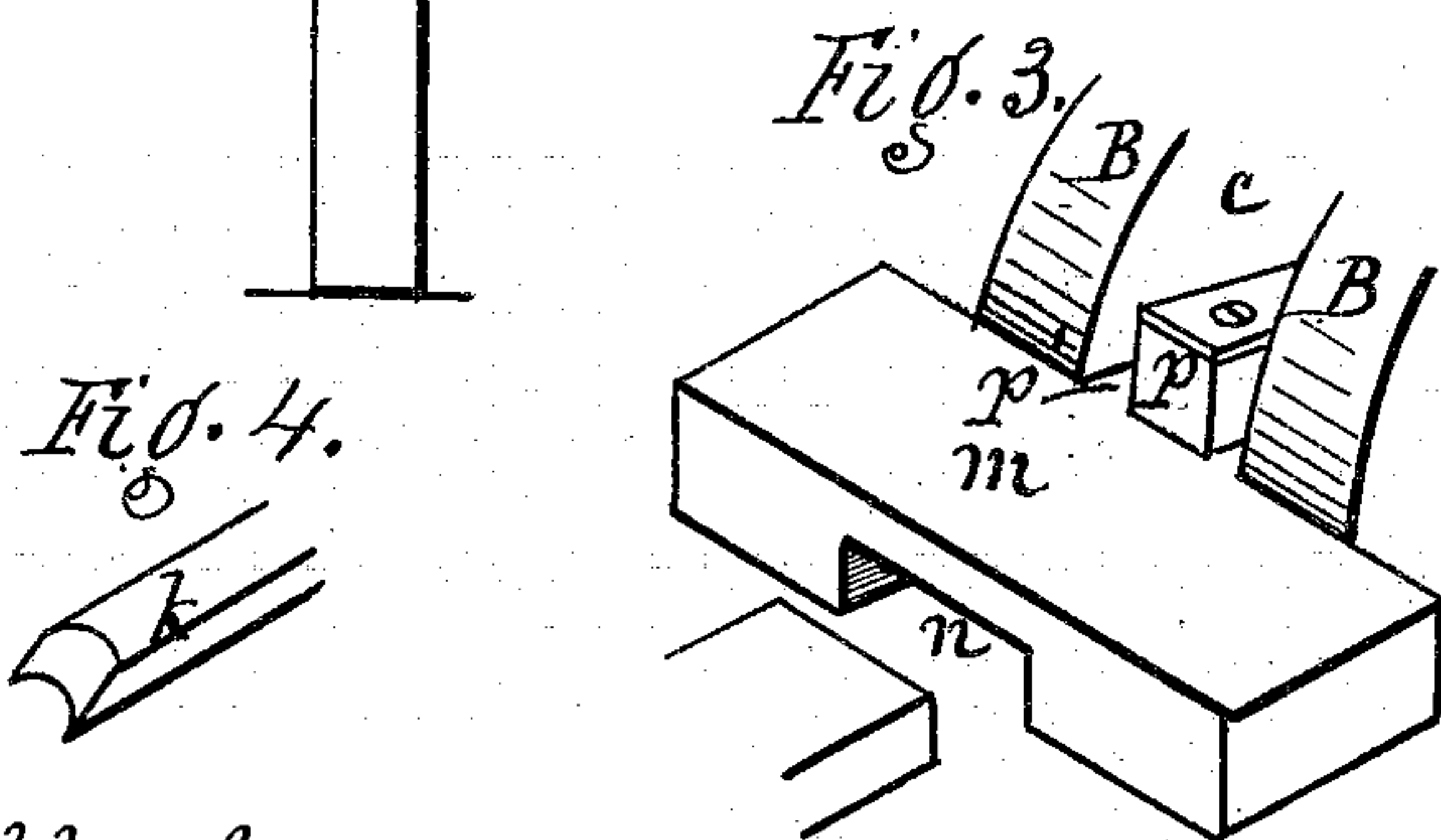
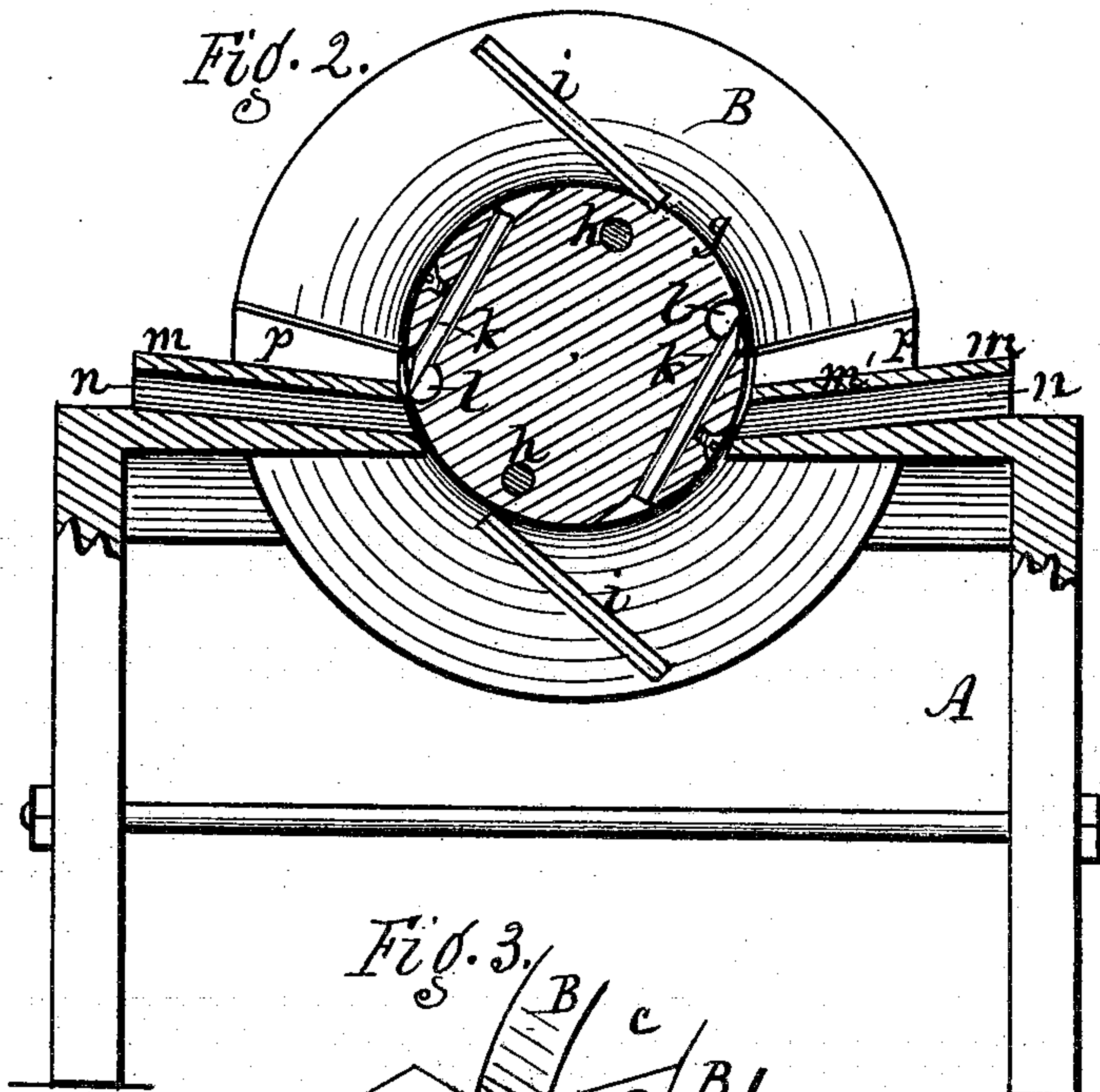
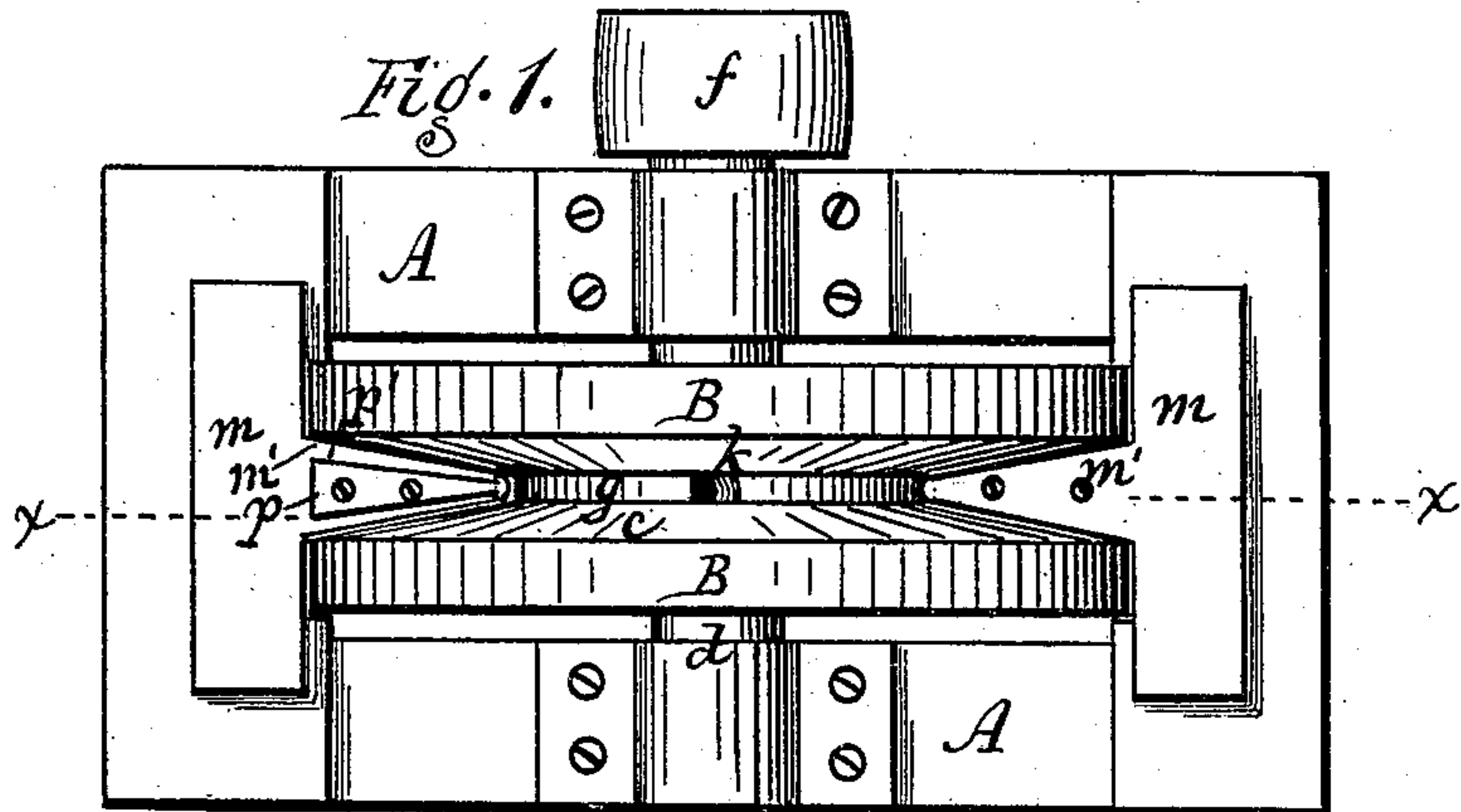


J. GREENWOOD.  
Barrel-Hoop Machine.

No. 199,058.

Patented Jan. 8, 1878.



Attest.  
Jesse Spuler  
R. E. White

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per R. F. Osgood,  
Atty.



# UNITED STATES PATENT OFFICE.

JOHN GREENWOOD, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN BARREL-HOOP MACHINES.

Specification forming part of Letters Patent No. **199,058**, dated January 8, 1878; application filed October 12, 1877.

*To all whom it may concern:*

Be it known that I, JOHN GREENWOOD, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Machines for Dressing the Ends of Barrel-Hoops; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of the machine. Fig. 2 is a vertical section in line *x x*. Fig. 3 is a perspective view of one end of the machine. Fig. 4 is a perspective view of one of the cutters for rounding and beveling the end of the hoops. Figs. 5 and 6 are perspective views of the opposite ends of one of the hoops after being dressed.

My improvement relates to machines for dressing the ends of those hoops which are secured by staples and nails when encircling the barrel. One end of the hoop is made pointed, having a rounded and beveled extremity, as shown at *a*, Fig. 5. The other end of the same hoop is made wedge-shaped at its extremity, as shown at *b*, Fig. 6. When the hoop is bent the end *a* overlaps the end *b*, and is secured by a staple embracing *a*, and also by nails passing through the two ends.

The invention consists of a machine for dressing the ends of the hoops in the form above shown and described, constructed and arranged as hereinafter more fully set forth.

*A* is a frame of any convenient construction. *B B* is a double-rimmed wheel, having a V-shaped cavity or groove, *c*, between the rims, which wheel is mounted on a horizontal shaft, *d*, driven by a pulley, *f*, or any other suitable means. The groove does not quite meet at an angle, but leaves a square inner bearing or shoulder, *g*.

The wheel is usually made of two parts, and secured together by bolts *h h* or other means, to enable the cutters to be inserted.

*i i* are shearing-cutters set on the inner angular sides of the rims, the object of which is to plane the edges of the hoops.

*k k* are concave or half-circular cutters set into the hub of the wheel, and projecting through the periphery of the square shoulder *g*, for the purpose of rounding and beveling

the end *a* of the hoop. The ends of the cutters only are concave, the shanks of the cutters passing through slots formed in the hub, as shown in Fig. 2. The cutters may be held by set-screws or other means. Throats *l l* at the ends of the cutters pass out through the sides of the wheel, to allow discharge of the chips and shavings.

*m m* are guides on opposite sides of the wheel, having tongues *m' m'*, which enter and fill the V-shaped groove down as far as the shoulder, but do not interfere with the rotation of the wheel. *n n* are throats within the guides, which extend down to the shoulder *g*. They are of such size as to receive the end of the hoop, and, preferably, incline somewhat downward, as shown in Fig. 2, so that when the hoop is entered its tangent with the shoulder *g* will cause the cutters *k k* to cut the end of the hoop in angular form, as well as to round it, as shown at *a*, Fig. 5. The side cutters *i i* cut the edge taper of this end of the hoop at the same time, so that when the hoop is withdrawn it is perfectly finished, ready for the staple.

*p* is a guide-block located on top the guide *m*, at one or both ends of the machine, and resting in the V-shaped groove of the wheel. It is made narrower than the groove, so as to leave on one or both of its sides a vertical throat, *p'*, between itself and the inner angular edge of the wheel. The other end of the hoop is placed edgewise in this throat and fed in, and the side cutters dress it to the thin wedge form shown at *b*, Fig. 6.

The machine is preferably arranged with the throat *n* on one side, and the guide-block *p* on the other, of the wheel, by which means, when the operator at one side has finished his end of the hoop, he can pass the hoop over to the operator on the other side without changing ends of the hoop, thus greatly facilitating the work; but, if desired, both devices may be used at each end of the machine, in which case one throat, *n*, must incline up and the other down to get the proper bevel to the end *a* of the hoop with the same curved cutters *k k*. This allows the work to be done at either end of the machine.

I do not claim, broadly, a wheel having a V-shaped groove, with side cutters for dress-

ing the ends of hoops to a tapering form; but I claim—

1. In a hoop-dressing machine, the wheel B B, having a V-shaped groove in its periphery, with side cutters *i i*, for forming the taper of the hoops, and with curved cutters *k k* at the angle, for rounding the ends of the hoops, as herein shown and described.

2. In a hoop-dressing machine, the combination, with the grooved wheel B B, provided with the side cutters *i i*, of the wedge-shaped guide-block *p*, fitting in the groove, and leaving a throat, *p'*, between itself and the side of the groove, for the purpose of dressing the end of the hoops to a wedge form, as herein described.

3. In a hoop-dressing machine, the combination, with the grooved wheel B B, provided with the cutters *i i k k*, of the guides *m m*, provided with angular tongues *m' m'*, located on opposite sides of the wheel, and resting in the groove thereof, and having angular throats *n n*, extending to the inner cutters *k k*, as shown and described, and for the purpose specified.

In testimony whereof I have hereunto set my hand this 8th day of October, 1877.

JOHN GREENWOOD.

Witnesses:

R. F. OSGOOD,  
JACOB SPAHN.