

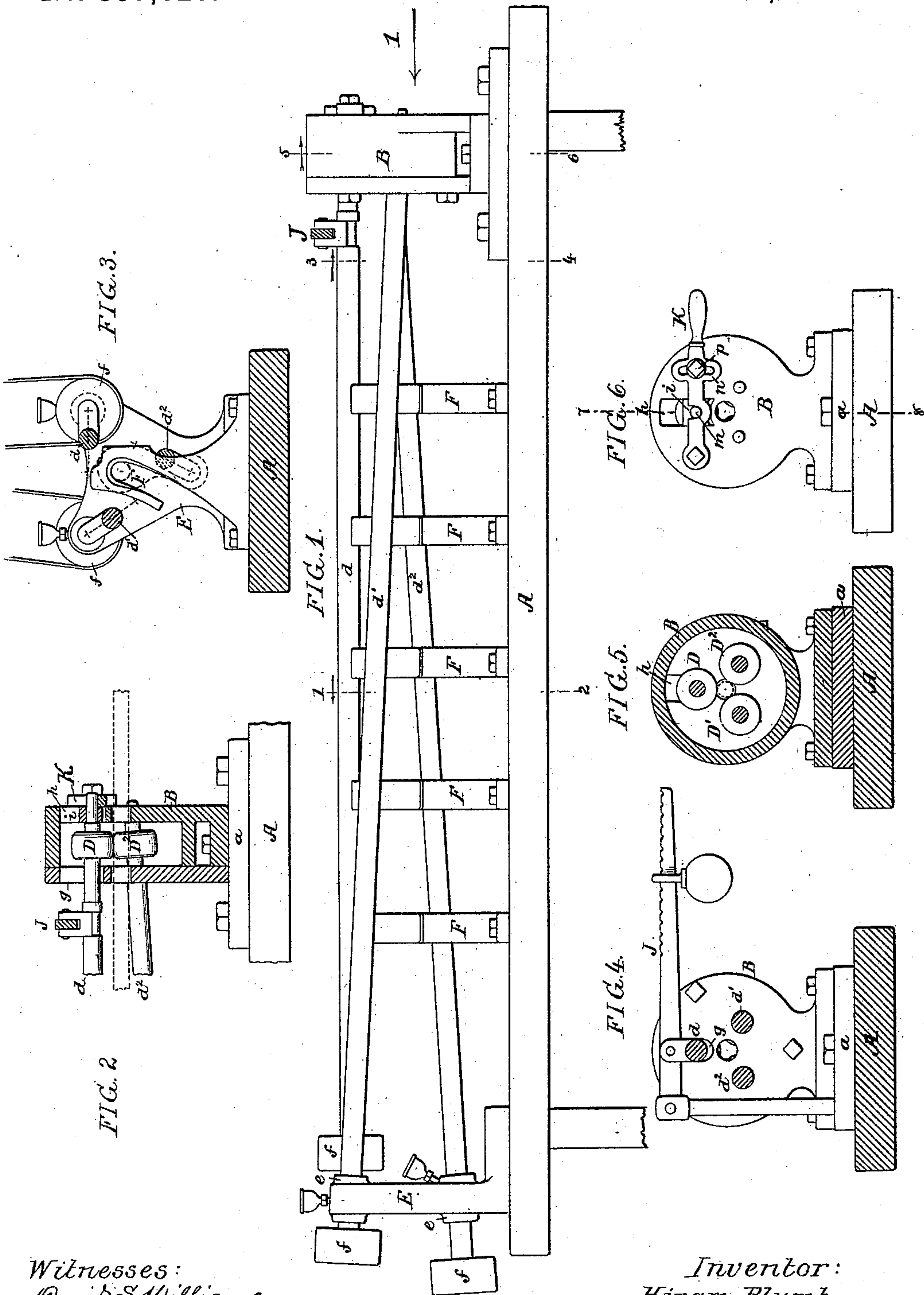
(No Model.)

H. PLUMB.

MACHINE FOR POLISHING WOODEN RODS OR STICKS.

No. 357,028.

Patented Feb. 1, 1887.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MACHINE FOR POLISHING WOODEN RODS OR STICKS.

SPECIFICATION forming part of Letters Patent No. 357,028, dated February 1, 1887

Application filed May 12, 1886. Serial No. 201,921. (No model.)

To all whom it may concern:

Be it known that I, HIRAM PLUMB, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Machines for Polishing Wooden Rods or Sticks, of which the following is a specification.

My invention consists of certain improvements in that class of machines for polishing round wooden rods or sticks in which the surface fibers of the rod or stick are compressed and condensed by means of revolving presser-rolls, the objects of my invention being to provide for the proper guidance of the stick through the machine and its proper delivery therefrom, to readily regulate the amount of pressure imparted, to adjust the machine for action upon sticks of different diameters, and to simplify the construction and facilitate the working of the machine.

In the accompanying drawings, Figure 1 is a side view, partly in section, of my improved rod or stick polishing machine; Fig. 2, a longitudinal section of the front end of the machine on the line 7 8, Fig. 6; Fig. 3, a transverse section on the line 1 2, Fig. 1; Fig. 4, a transverse section on the line 3 4, Fig. 1; Fig. 5, a transverse section on the line 5 6, Fig. 1; and Fig. 6, an end view looking in the direction of the arrow, Fig. 1.

A is a table or bench, to which is secured the base-plate *a* of a box, B, which contains three presser-rolls, D, D', and D², said rolls having long shafts *d*, *d'*, and *d*² extending rearward and adapted at their rear ends to boxes *e*, carried by a standard, E, secured to the bench A, each of these shafts having a suitable belt-pulley, *f*, by which it can be driven. The shafts have a peculiar relation to each other—that is to say, each shaft where it passes through the box B occupies one of the angles of an equilateral triangle, the shafts where they pass through the boxes *e* having a like relation to each other, but the angles of the rear triangle being out of line with those occupied by the shafts where they pass through the box B. In consequence of this disposal of the shafts the peripheral surfaces of the presser-rolls D, D', and D² occupy such relation to each other that if a round wooden rod or stick

is passed between the rolls the latter will serve not only to compress and condense the fibers on the surface of the stick, but will cause said stick to rotate rapidly, and at the same time will feed the stick forward through the box in the direction of the arrow.

The presser-rolls have but a limited longitudinal bearing upon the stick; hence, in order to prevent any gyrating movement of the ends of the stick, I provide hooked guides F for receiving the stick as it issues from the box B, these guides serving to retain the end of the stick and insure the passage of the same through the box in a straight course.

The hooked guides are open at the bottom, so that as soon as the stick has been freed from the influence of the rolls and passed beyond the limits of the box B it will roll from the guides into a box or receptacle suitably located. Guides having simple circular openings, as shown, for instance, by dotted lines in Fig. 3, may be used in place of the hooked guides when it is desired to discharge the stick at the end instead of at the side of the machine.

The shafts of the lower rolls, D' and D², are adapted to fixed bearings; but in order to vary the amount of pressure imparted to the stick the shaft of the upper roll, D, passes through a slot, *g*, in the inner plate of the box B and has a bearing-block, *i*, adapted to a slot, *h*, in the outer plate of the same, so that said roll D is free to rise and fall, a weighted lever, J, bearing upon the shaft *d* at a point adjacent to the box, so that by shifting the weight upon the said lever any desired degree of pressure may be imparted to the upper roll.

The bearing-block *i* of the upper roll has a pin, *m*, which in the present instance is formed by a continuation of the shaft *d*. This pin is adapted to a notch in a pivoted arm, K, hung to the box B and having a slotted segment, *n*, to which is adapted a set-screw, *p*, whereby said arm may be secured in any desired position, and the limit of descent of the upper roll thereby restricted in accordance with the diameter of the stick or rod to be polished.

I claim as my invention—

1. The combination of the presser-rolls, their inclined shafts, and bearings therefor, with guides which receive and direct the stick when

it issues from the rolls, all substantially as specified.

2. The combination of the presser-rolls, their inclined shafts, and bearings for the latter, 5 with stick-guides hooked, as described, so as to permit the lateral discharge of the stick, all substantially as specified.

3. The combination of the lower rolls having shafts with fixed bearings, the upper roll 10 having a shaft with movable bearing, a weighted lever acting upon said upper shaft,

and a stop whereby the descent of the upper shaft is arrested, said stop being adjustable vertically, all substantially as specified.

In testimony whereof I have signed my name 15 to this specification in the presence of two subscribing witnesses.

HIRAM PLUMB.

Witnesses:

WILLIAM F. DAVIS,
HARRY SMITH.