

(No Model.)

G. L. BAILEY.
MACHINE FOR POINTING PENCILS.

No. 456,283.

Patented July 21, 1891.

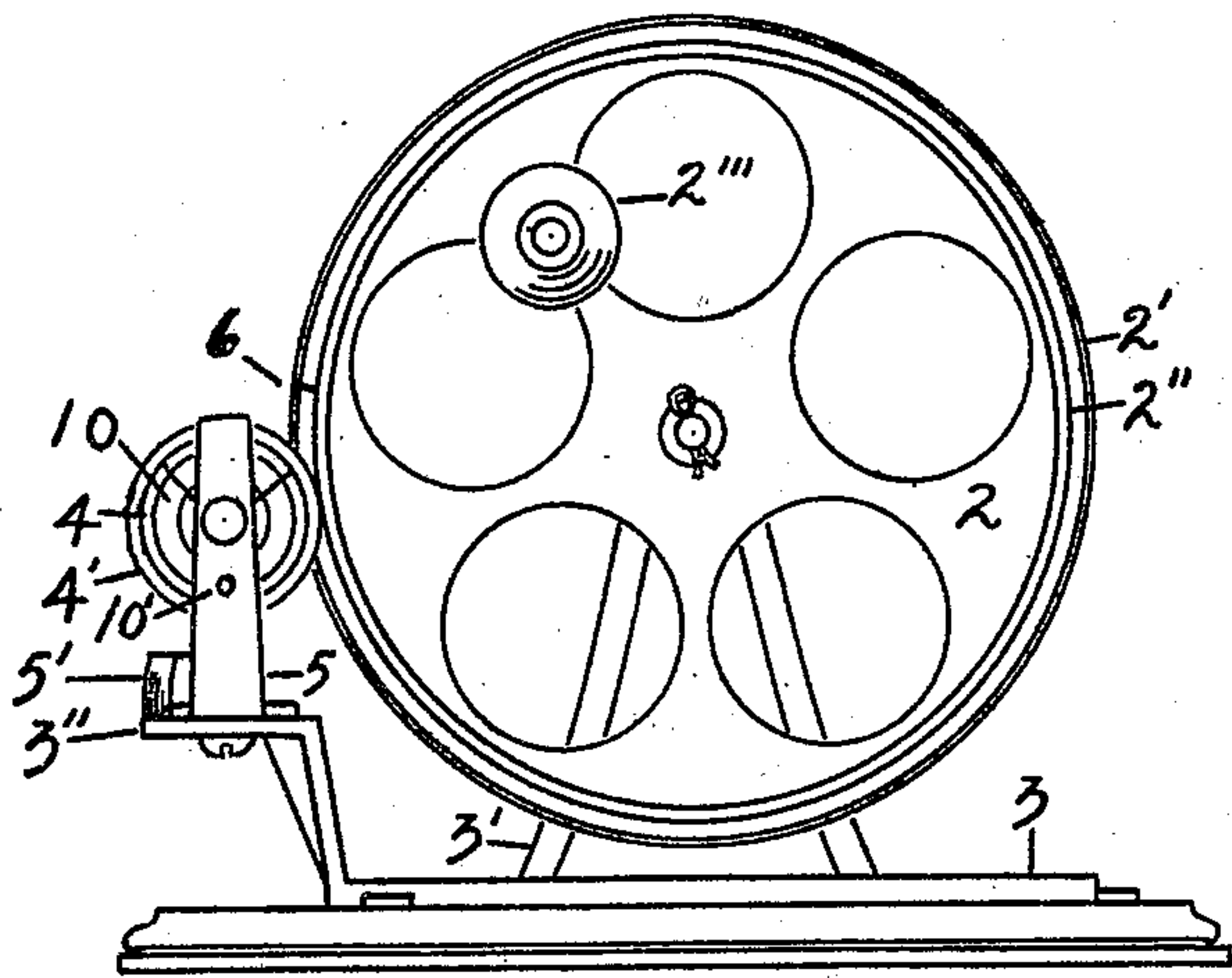


FIG. 1.

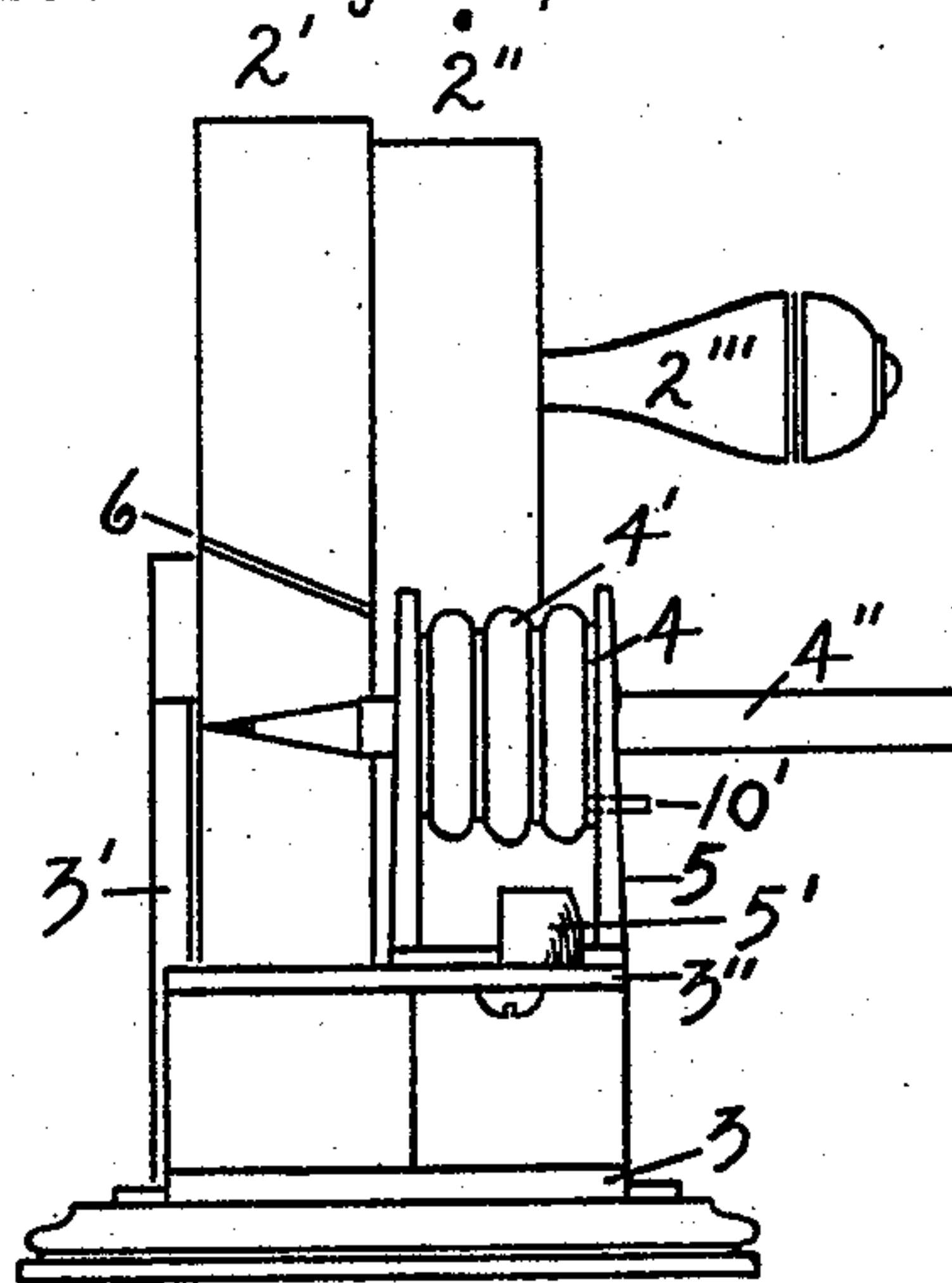


FIG. 2.

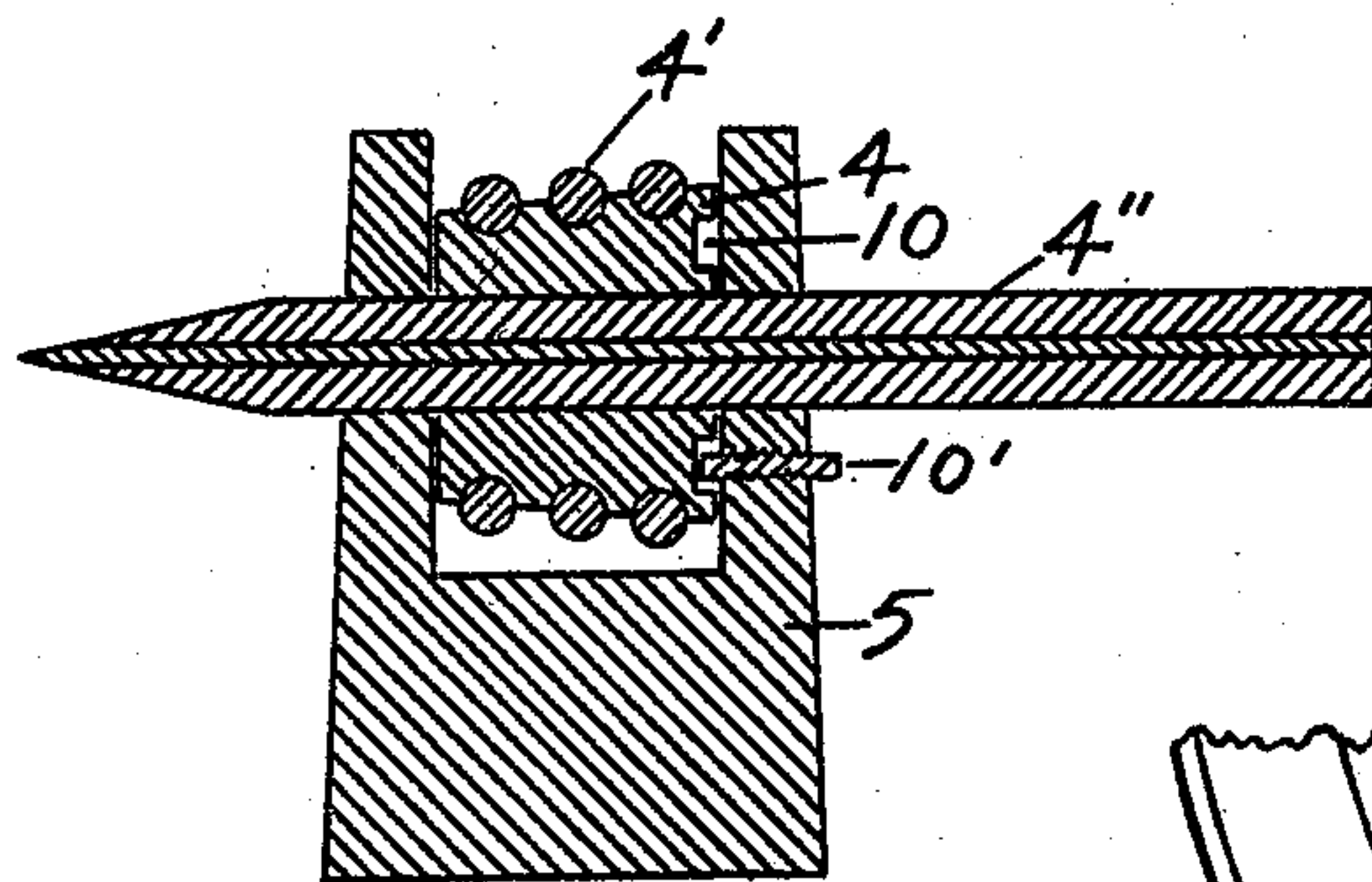


FIG. 3.

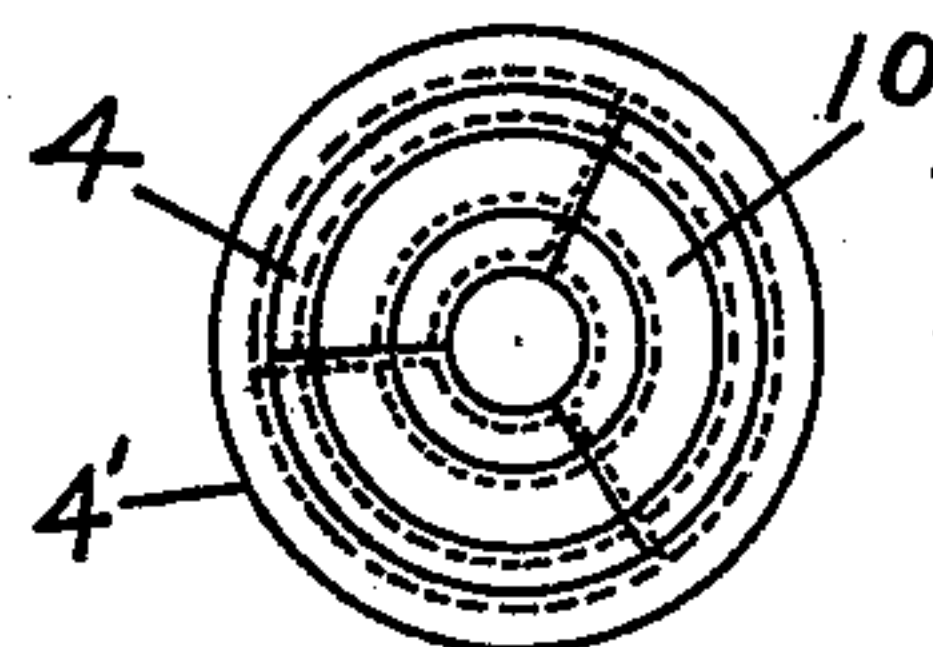


FIG. 4.

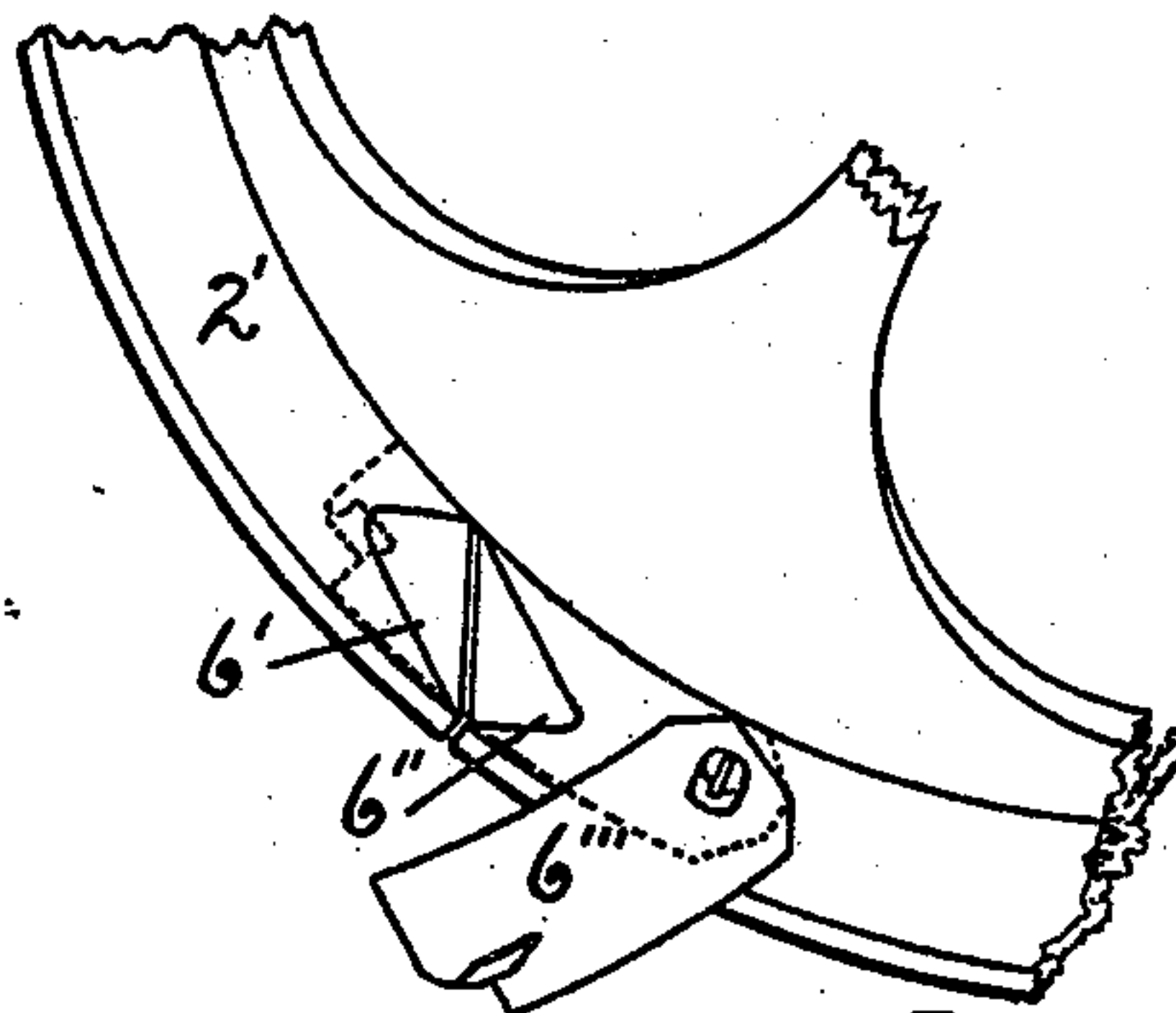


FIG. 5.

WITNESSES.

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GILBERT L. BAILEY, OF PORTLAND, MAINE.

MACHINE FOR POINTING PENCILS.

SPECIFICATION forming part of Letters Patent No. 456,283, dated July 21, 1891.

Application filed February 28, 1891. Serial No. 383,294. (No model.)

To all whom it may concern:

Be it known that I, GILBERT L. BAILEY, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented a new and useful Machine for Pointing Pencils, of which the following is a specification.

My invention relates to an improved machine for pointing lead or slate pencils.

Its objects are, first, to provide a self-adjusting pencil-holder, wherein the pencil constitutes the shaft of the holder; second, to provide a large abrading-surface and means for applying and readily replacing the same, and, third, to reduce the number of parts and simplify its construction. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front side elevation of the machine; Fig. 2, a front end elevation; Fig. 3, a longitudinal sectional view of the pencil-holder, pencil, and head-stock; Fig. 4, an end view of the pencil-holder; and Fig. 5, a section of the abrading wheel, showing the manner of securing the sand-paper strip.

Similar figures refer to similar parts throughout the several views.

Wheel 2 is made with a wide rim projecting from each side 2' 2'' of the spokes, one of said rims being about one-half inch smaller in diameter than the other, and both turned true on their faces, or two wheels of different diameters may be placed on one shaft, if desired; but I prefer the former method. The larger of the two faces 2' carries an abrading substance, as sand paper or cloth, while the smaller one 2'' acts as a driving-wheel for the pencil-holder, and is provided with a crank-handle 2''' with which to turn it by hand.

Metal base 3 has a standard 3' rising from one side about midway its length, in which is fixed a stud on which wheel 2 is mounted and revolves. One end of base 3 is turned upward and outward forming a rest 3'' in front of wheel 2.

The pencil-holder 4 is made in the form of a pulley having a groove or grooves around its circumference, a hole through its longitudinal center, and is divided longitudinally into sections, preferably three, which are held

together by one or more elastic rings 4' in said grooves which project above the surface of the pulley. Pencil 4'' is passed through the center hole, and is held in frictional contact therewith by the action of the elastic rings which are expanded in pushing the pencil through, the hole being of smaller diameter than the pencil. The holder also has an annular groove 10 in one end, into which screw-pin 10' projects through the head-stock 5, which prevents it from falling out when the pencil is removed.

Pencil 4'' constitutes the shaft of the holder and has its bearings at each end of the latter in head-stock 5, in which it revolves with the holder. Head-stock 5 is supported on rest 3'', to which it is connected by a bolt or screw passing up through a slot in said rest and has a slight reciprocating and swiveling motion, so that the holder can be brought into contact with the driving-wheel and the pencil with the abrading-surface.

Driving-wheel 2'' is made smaller than the abrading-wheel, in order to allow of giving the desired taper to the pencil-point. Its operation is as follows: Pencil 4'' is passed through the bearings in head-stock 5 and holder 4, with the end to be pointed resting in front of abrading-wheel 2'. Pressure is applied to thumb-piece 5' on the head-stock, which puts elastic ring 4' in contact with the face of the driving-wheel 2'', and the pencil with abrading-wheel 2', when, the driving-wheel being revolved, the friction between the two causes the holder to revolve rapidly, carrying the pencil with it, while at the same time the latter is pressed against the abrading-surface of wheel 2', and is thus brought quickly to a point.

To secure a strip of sand-paper which constitutes the abrading-surface to wheel 2', a slit 6 is made obliquely across its face, through which, after passing around the wheel, the ends of strip 6' 6'' are tightly drawn and turned back on the inner surface of the rim and held in position by a spring-button 6''' pivoted to said rim, as shown in Fig. 5. By making slit 6 obliquely, as described, a continuous even surface is obtained on the face of wheel 2', whereby the pencil may be

brought to a fine point without breaking, which could hardly be accomplished if the slit was made at a right angle.

Having described my invention, what I claim is—

1. In a machine for pointing pencils and the like, a base having an elevated rest at one end, a wheel comprising an abrading-surface and a driving-surface, mounted on said base, a head-stock mounted on said rest, a pencil-holder and pencil mounted in said head-stock, said holder being adapted to frictional contact with said driving-surface and to be revolved thereby, substantially as herein described.

2. In a machine for pointing pencils and the like, a wheel suitably mounted having a rim projecting on each side of different diameters, and a slit cut obliquely across and through the face of one of said rims, in combination with a strip of sand-paper or similar material encircling said rim, having its ends passing through and secured in said slit by means of a spring-button pivoted on the inner surface of said rim, substantially as and for the purpose described.

3. In a machine for pointing pencils and the like, a wheel suitably mounted having two rims of different diameters and a slit cut obliquely across the face of one of said rims, in combination with a strip of sand-paper or similar material encircling said rim, having its ends passing into said slits, and means for securing the same therein, substantially as herein described.

4. In a machine for pointing pencils and the like, an abrading-wheel and a driving-wheel, the latter being less in diameter than the former, suitably mounted and turning together, in combination with a pencil-holder and a pencil having a suitable support, substantially as herein described.

5. In a machine for pointing pencils and the like, a pencil-holder consisting in a cylindri-

cal body having a circumferential groove or grooves and divided into longitudinal sections with an opening through its longitudinal center and surrounded by an elastic ring or rings held in said groove, in combination with a pencil passing through said opening and mounted in suitable bearings outside of said holder, substantially as and for the purpose herein set forth.

6. In a machine for pointing pencils and the like, a pencil-holder composed of longitudinal sections forming a cylindrical body, one or more circumferential grooves, a central opening in the direction of its length and surrounded by one or more elastic rings held in said grooves, in combination with a pencil passing through said central opening and through suitable bearings in a head-stock, said pencil constituting a shaft for said holder, and means for revolving said holder, substantially as herein set forth.

7. In combination with the abrading and driving parts of a machine for pointing pencils and the like, a pencil-holder and pencil therein, said pencil constituting the shaft for said holder and having bearings outside of said holder, substantially as herein described.

8. In combination, a pencil-holder and pencil therein, suitable bearings for said pencil outside and at either end of said holder, an abrading-surface, and means for revolving said holder, substantially as herein described.

9. A method, substantially as herein described, of obtaining a continuous even surface on a sand-paper wheel, consisting in cutting a slit or groove obliquely across the face of said wheel and securing the ends of the sand-paper therein, substantially as herein described.

GILBERT L. BAILEY.

Witnesses:

DANIEL H. DOLE,
FRANK. S. BEAL.

It is hereby certified that in Letters Patent No. 456,283, granted July 21, 1891, upon the application of Gilbert L. Bailey, of Portland, Maine, for an improvement in "Machines for Pointing Pencils," an error appears in the printed specification requiring correction, as follows: In line 32, page 2, the word "slits" should read *slit*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 11th day of August, A. D. 1891.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,
Commissioner of Patents.