B. DWOFSKY.

POLYGON INSCRIBER.

APPLICATION FILED DEC. 17, 1909.

979,449. Patented Dec. 27, 1910.

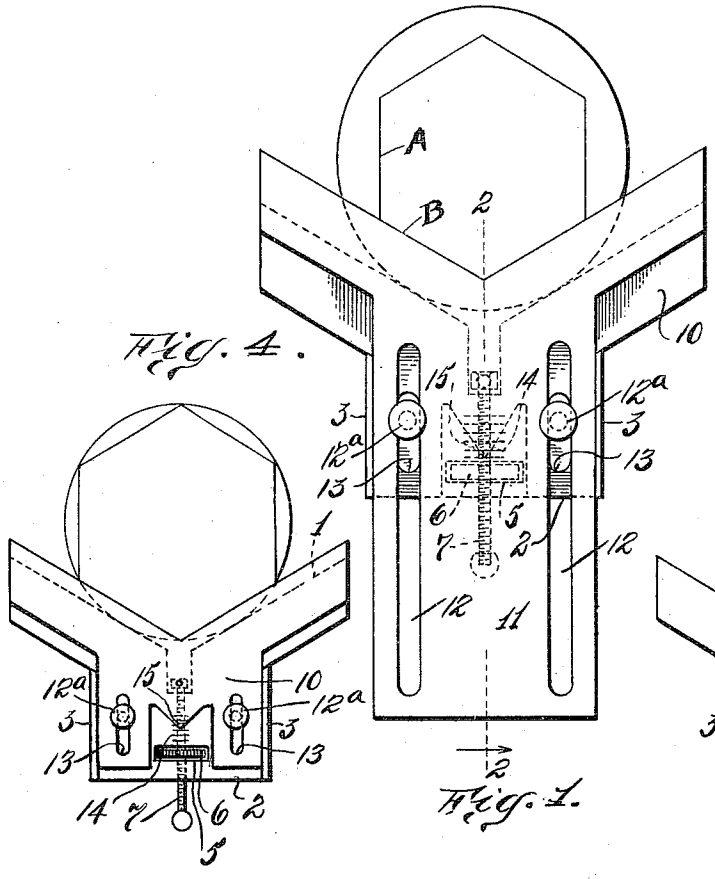

Fig. 4.

Fig. 1.

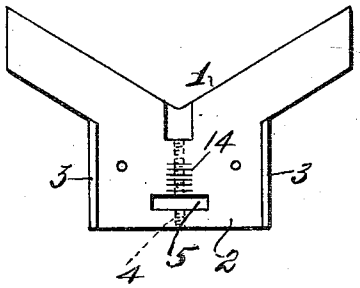

Fig. 5.

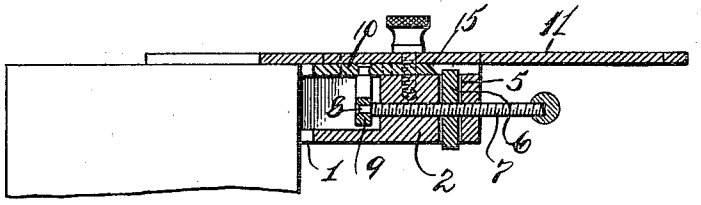

Fig. 2.

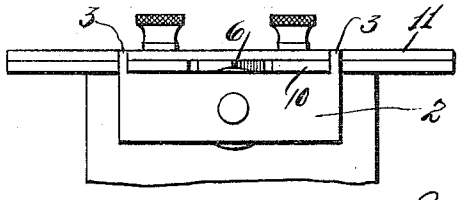

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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POLYGON-INSCRIBER.

979,449. Specification of Letters Patent. Patented Dec. 27, 1910.

Application filed December 17, 1909. Serial No. 533,542.

To all whom it may concern:

Be it known that I, BERNARD DWOFSKY, a subject of the Czar of Russia, who resides in the borough of Manhattan, city of New York, county and State of New York, and whose post-office address is care of Edward Newman, No. 160 Broadway, New York city, New York, have invented certain new and useful Improvements in Polygon-Inscribers, of which the following is a clear, full, and exact description.

This invention relates to an instrument for use by draftsmen, machinists, and the like, for the purpose of easily and quickly permitting the inscription of a polygon upon the end of a cylinder, concentric thereto.

Broadly considered, the invention consists of a pair of angular jaws movable relatively to each other, the right hand side of one jaw being always parallel with the right hand side of the other, and the left hand side of one being always parallel with the left hand side of the other, the apex of each angular jaw always being on a line which bisects the angle of each jaw, and the angle formed by each jaw being a factor of 360 degrees. For example, if a hexagon is to be produced, the jaw is of an angle of 120 degrees. By placing one of the two angular jaws against the periphery of the cylinder, and tangential to it, and permitting the other angular jaw to come within the circumferential line, a pencil may be readily drawn along the second jaw to enable one to inscribe two sides of the given polygon, and by successively shifting the jaws around the cylinder the other sides may be produced.

The scope of my invention will be set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved device as applied to a cylinder. Fig. 2 is a section on line 2—2, Fig. 1. Fig. 3 is an end view of Fig. 1. Fig. 4 is a view similar to Fig. 1, but with the supplementary guiding jaw omitted. Fig. 5 is a view of the gaging jaw with the sliding jaw removed.

In carrying out this invention, a gaging jaw 1 is provided of material thickness. In the present instance, for the formation of a hexagon, the angle of this jaw is 120 degrees. Extending from the jaw is a base 2, on each side of which are vertical guides 3. A hole 4 with an opening 5 for a thumb-nut 6 is provided, which thumb-nut surrounds a threaded screw 7 attached at 8 to a dependent bracket 9 fast to the movable jaw 10. A scale 14 may be provided with which a pointer 15 registers. Such is the simplest form of my improved device, as shown in Fig. 4. It will be noted however, that in Fig. 4, due to the short length of base, only slight motion can take place between the two 120 degree jaws, thus limiting the distance from the circumference, at which the inscription may take place. To broaden the range of my device for unusually large cylinders, I provide an additional movable jaw 11, provided with slots 12, movable as was the jaw 10, and clamped in its position by thumb-screws 12^a passing through the said slots 12, and slots 13 in the jaw 10, engaging the base 2, and thus enabling one to clamp the device in position.

In order to inscribe a hexagon with the instrument of this invention where it is desired to inscribe the same on the end of a cylinder, the device is placed against the end of the cylinder, (see Figs. 2 and 4) so that the gaging jaw 1 will be tangential to the sides of the cylinder. The movable jaw is then moved up by the thumb-screw until the apex of that jaw coincides with the circumference of the cylinder. Then two lines are drawn along the movable jaw as chords of two arcs. The instrument is then moved so that the apex of the movable jaw will again register with the circumference, and with the free end of one of the chords, and a line again drawn, and such method continued throughout the circumference.

In inscribing a polygon such as shown in Fig. 1, one proceeds as before described, and draws two lines A and B forming an angle of 120 degrees; he then moves his instrument until one of the legs of the angle coincides with the line B drawn. A line then drawn from the other end of the jaw or angle will meet the line B at the proper point. It will be noticed that the lines bisecting the two angles coincide.

In carrying out this invention, details of construction may be varied from those shown, and yet the essence of the invention be retained; some parts might be employed without others, and new features thereof might be combined with elements old in the art in diverse ways, although the herein de-

scribed type is regarded as embodying substantial improvements over such modifications.

As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense. It is furthermore desired to be understood that the language used in the following claims is intended to cover all the generic and specific features of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim as my invention:

1. The herein described instrument for inscribing polygons on the end of a cylinder consisting of a gaging jaw, a sliding jaw, each jaw having two sides at a definite angle to each other, the left hand side of one jaw being parallel with the left hand side of the other jaw, the right hand side of one being parallel with the right hand side of the other, and means for guiding and sliding the same so that the apices of the angles of the two jaws will always be on a line bisecting the angle of the two jaws.

2. The herein described instrument for inscribing polygons on the end of a cylinder consisting of a gaging jaw, a sliding jaw, each jaw having two sides at a definite angle to each other, the left hand side of one jaw being parallel with the left hand side of the other jaw, the right hand side of one being parallel with the right hand side of the other, and means for guiding and sliding the same so that the apices of the angles of the two jaws will always be on a line bisecting the angle of the two jaws, and mechanical means for holding such movable jaw in the adjusted position.

3. The herein described instrument for inscribing polygons on the end of a cylinder consisting of a gaging jaw, a sliding jaw, each jaw having two sides at a definite angle to each other, the left hand side of one jaw being parallel with the left hand side of the other jaw, the right hand side of one being parallel with the right hand side of the other, and means for guiding and sliding the same so that the apices of the angles of the two jaws will be always on a line bisecting the angle of the two jaws, and a scale being provided on one jaw and a cooperating pointer on the other jaw.

Signed at New York city, N. Y. this 9th day of December 1909.

BERNARD DWOFSKY.

Witnesses:

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SAUL NEWMAN.