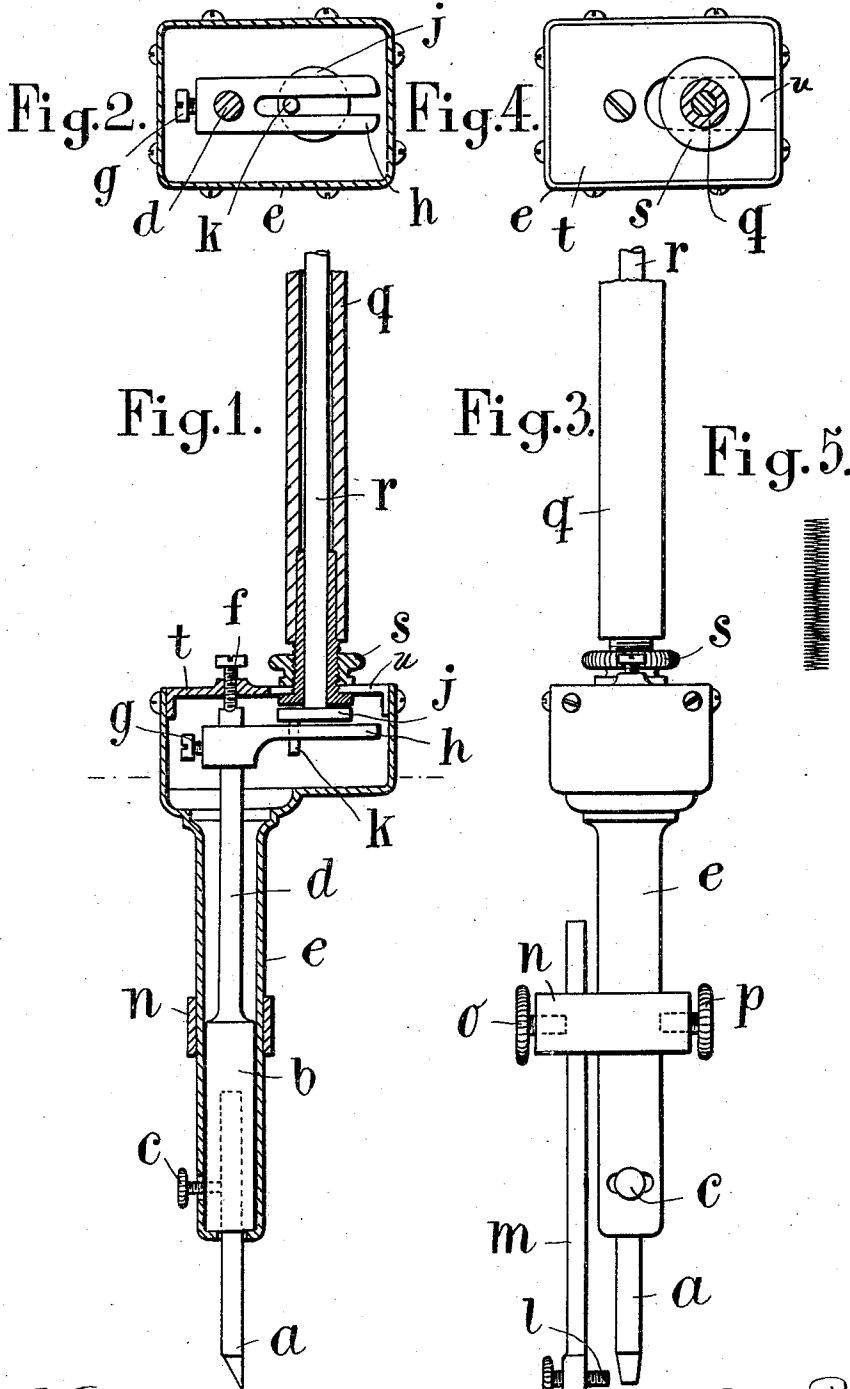


A. ROSTAD.
ENGRAVING MACHINE.
APPLICATION FILED DEC. 21, 1908.

934,216.

Patented Sept. 14, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

ARNT ROSTAD, OF DRONTHEIM, NORWAY, ASSIGNOR OF ONE-HALF TO ARTHUR DAVID-ANDERSON, OF CHRISTIANIA, NORWAY.

ENGRAVING-MACHINE.

934,216.

Specification of Letters Patent. Patented Sept. 14, 1909.

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To all whom it may concern:

Be it known that I, ARNT ROSTAD, a subject of the King of Norway, residing at Drontheim, Norway, have invented certain new and useful Improvements in Engraving-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to means for carrying out that kind of engraving or incision work performed by silversmiths for obtaining ornaments of a dull appearance on plane surfaces. This kind of work is at present, as far as I know, carried out by hand, the tool used being a small chisel (or engraving needle) with a flat point; this chisel is moved along the surface to be provided with ornaments and simultaneously therewith imparted a rocking movement, so that a continuous incision line is made consisting of an uninterrupted series of short fine lines running transversely to the direction, in which the tool is moved over the surface.

My invention consists in a device, whereby the chisel is imparted its rocking motion by mechanical means, for instance by way of an electric motor, connected by means of a flexible shaft with the toolholder.

In the annexed drawing I have shown a form of such device, as I prefer to carry it out.

Figure 1 is an axial sectional view and Fig. 2 a plan view of the device; Fig. 3 is a cross section Fig. 4 is a rear view of the back part of the device and Fig. 5 is a diagrammatic illustration of an incision line produced by the device.

a indicates the chisel which is held in the thick part *b* of the rockshaft *d* by the screw *c*. At the other end the rockshaft carries a bifurcated arm *h*, fixed to the shaft by a screw *g*. These parts are inclosed in a casing *e*, the latter serving as a bearing for the thick part *b* of the shaft, as shown; at the other end the shaft rests against a screw *f*, entering the casing through the head or cover *t* of the same.

r is a flexible shaft, surrounded in a usual way by a flexible tube *q*; the latter is adjust-

ably held in a slot *u* in the cover *t*. On the end of the shaft *r* is fixed a disk *j* with a crank pin *k* entering the bifurcation of the arm *h*. The rotation of the flexible shaft *r* will cause a rocking motion of the arm *h* and shaft *d* with the chisel, and it is obvious, that a regulation of the motion of the chisel will be effected by simply adjusting the shaft *r* in the slot *u*.

The casing serves as a handle for manipulating the tool, the operator having only to move the tool along the surface in order that the required incisions shall be obtained.

In some cases it is required that the incisions are made in a certain distance from and parallel with an edge of the object. To facilitate this kind of work, a rod *m* with a screw *l* is adjustably fixed by way of a screw *o* in a sleeve *n*, which latter is adjustably mounted on the casing *e* by way of a screw *p*. When doing such work the end of the screw *l* is held against the edge of the object, thereby steadying the tool.

I claim as my invention:

1. In an engraving machine, a chisel, a holder for the same, means whereby to the latter is imparted a rocking movement and a casing in which the parts are mounted and serving as a handle for manipulating the machine.

2. In an engraving machine, a chisel, a holder for the same, a bearing for the holder, an arm having a slot therein on the holder, a driving shaft, a crank on the latter, the pin of which enters the slot in the said arm, and a casing in which the parts are mounted and which serves as a handle for manipulating the machine.

3. In an engraving machine, a chisel, a holder for the same, means whereby to the latter is imparted a rocking movement, a casing in which the parts are mounted and which serves as a handle for manipulating the machine and a guide rod adjustably mounted on the said casing for the purpose specified.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

ARNT ROSTAD.

Witnesses:

SVIRRI BERG,
M. GRAM.