The machine may be either adapted for engraving a single work-piece or for engraving several work-pieces simultaneously, the drawings showing a gang-machine with three routing-tools or spindles. These spindles are mounted in bearings \( c' \) and are driven by a common belt \( e' \), running over guide-pulleys \( e' \), cone-pulleys \( e' \) on spindles \( e \), and tension-pulleys \( e' \).

The bearings \( e' \) are clamped to a rock-shaft \( f \), hung across the upper carriage \( c \) and oscillating on centers \( f' \). The rock-shaft \( f \) is provided with a rearward-extending arm \( f' \), influenced by a spring \( f'' \), which tends to rock the shaft \( f \) backward and to lift the routing-tools \( e \) off the work-pieces \( B \).

In order to rock the shaft \( f \) forward and lower the tools into operative engagement with the work-pieces, the shaft \( f \) is provided with a second arm \( f'' \), adapted to be engaged by a cam \( g \), formed on one end of a curved lever \( g' \), pivoted to frame \( a \) at \( g \). The other end of the lever \( g' \) is connected to a tremble \( h \) by rod \( N' \). Thus by depressing the tremble the arm \( g \) will, by engaging arm \( f' \), tilt the rock-shaft forward against action of spring \( f'' \) and thus force the routing-tool against and into the work-piece, according to the degree of pressure placed upon the tremble.

The depth to which the routing-tool may be introduced may be regulated by an adjustable stop \( i \), that limits the play of arm \( f'' \).

The operation of the machine will be readily understood. The pattern and work-pieces being adjusted, the routing-tools are lowered upon the latter by pressure upon the tremble \( h \). The handle \( d' \) is now manipulated to guide the tracing-tool \( d \) over the pattern and to impart a corresponding motion to the table \( c \) and consequently to the work-pieces \( B \).

Thus the latter are guided underneath the rotating-routing-tools \( e \), and the design of pattern \( A \) is reproduced upon the work-pieces. When the operation is completed, pressure upon the tremble is removed, so that the spring \( f'' \) is free to rock the shaft \( f \) backward and cause the routing-tools to clear the work-pieces.

It will be seen that in my improved machine routing-work may be quickly and accurately executed, that the machine may be...
readily driven and manipulated, and that the depth of the groove cut into the work-piece is under the constant control of the operator.

What I claim is—

5 In an engraving-machine, the combination of a freely movable table, with a tracer mov-able therewith, a rock-shaft extending across the table, a routing-tool having a bearing that is mounted upon the rock-shaft, a spring adapted to rock the shaft backward, an arm depending from the rock-shaft, a cam adapted to engage said arm and to rock the shaft forward, and a stop for limiting the movement of the rock-shaft, substantially as specified.

Signed by me at New York city, county and the State of New York, this 7th day of August, 1900.

WILLIAM S. EATON.

Witnesses:

BARNET JADLOVSKIN,
BECKIE J. GEIGER.