No. 703,213. Patented June 24, 1902.

P. PARCELLS.

MACHINE FOR CUTTING BEVELED EDGES ON PLATE OR SHEET METAL.

(Application filed July 11, 1901.)

(No Model.)

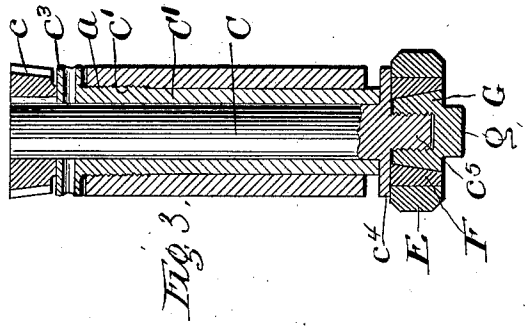


Fig. 3.

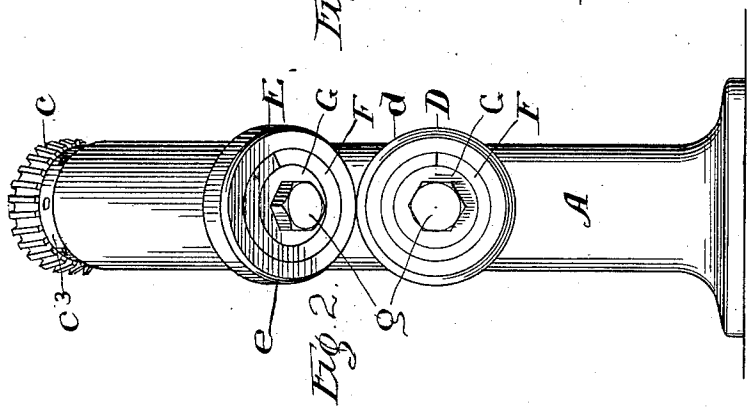


Fig. 2.

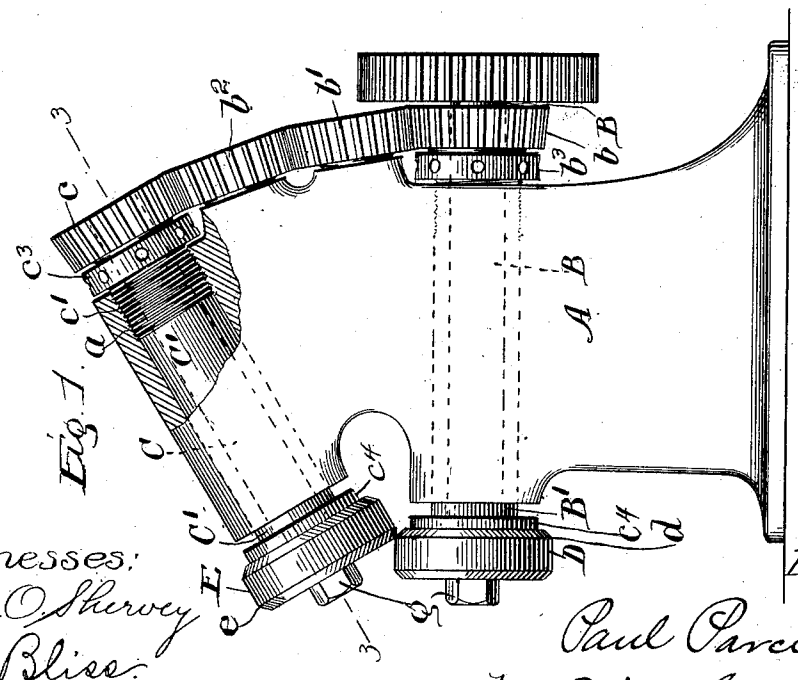


Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

PAUL PARCELLS, OF CHICAGO, ILLINOIS.

MACHINE FOR CUTTING BEVELED EDGES ON PLATE OR SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 703,213, dated June 24, 1902.

Application filed July 11, 1901. Serial No. 67,825. (No model.)

To all whom it may concern:

Be it known that I, PAUL PARCELLS, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Cutting Beveled Edges on Plate or Sheet Metal, of which the following is a specification.

My invention relates to certain new and useful improvements in machines for cutting beveled edges on plate or sheet metal, the object being to produce a strong, durable, and practical machine in which the cutting or beveling of the edges may be easily effected with less power and plates or sheets of various thickness may be operated upon. Besides these, other important novel features are embodied in the invention, a description of which will be found in the following specification and the essential features more definitely set forth in the claims.

The invention is illustrated by means of three figures, of which—

Figure 1 is a side view of the apparatus, partly broken away. Fig. 2 is a front view, and Fig. 3 is a horizontal cross-section through the line 3 3 of Fig. 1.

In the views, A represents the base or frame of the machine, which should be built in a strong and substantial manner, and said frame supports the devices operating upon the plate and the gearing for driving the same.

An approximately horizontal shaft B is journaled in the machine, which carries near one of its ends a beveled gear b, and said shaft is geared to a second shaft C, extending obliquely to the shaft B at an angle of approximately thirty degrees to rotate at or about the same speed. The gearing, as shown, consists of a beveled gear c upon the shaft C, a beveled gear b^2 in mesh therewith, and a beveled gear b', meshing with the gears b and b^2. The gears b^2 b' may be journaled upon the frame in any suitable manner, and the shafts B C are journaled in sleeves B′ C′, seated in the base or frame and longitudinally movable therein. As shown, said sleeves are made longitudinally adjustable in the base or frame by providing screw-threads c' upon a portion of their peripheries, threaded to internal screw-threads a in the frame, the sleeves being also formed with flanges b^3 c^3 upon one of their ends, by means of which they may be turned to adjust them. These flanges may be formed with radial holes for the insertion of a bar or other device to turn the sleeves, or the flanges may be made square or hexagonal-shaped for the application of a wrench or the like.

The cutter-rings are shown at D E and are secured upon the ends of the shafts B C, so as to rotate therewith, the particular form of connecting means being shown in Fig. 3, where the shaft will be seen to contain a flange c^4 and a screw-threaded end c^5. A wedge G is threaded upon the end c^5 of the shaft, said wedge being provided with a head g for the application of a wrench or the like for its rotation. The internal diameter of the ring is considerably larger than the wedge, and a split wedge-ring F is interposed between the wedge and the ring. By tightening up the wedge G the split wedge-ring F is forced outward against the inner surface of the cutter-ring, securely clamping it to the shaft. The inner face of the cutter-ring may, if desired, be roughened to enable the wedge-ring to take a more secure hold thereon.

The cutter-rings are set so that the cutting edge e of the obliquely-disposed ring E meets or almost meets the edge d of the ring D. The edge of the plate is beveled by cutting off a slight portion of the edge, the plate being laid upon the flat peripheral portion of the cutter-ring D, so that the edge to be cut projects slightly beyond the edge d, and by passing said plate between the cutting edges of the rollers the projecting edge will be cut off on the angle at which the radial face of cutter E is to the axis of the cutter D.

The cutters have been shown and described as beveled upon their edges; but this is not essential, as they may both have square edges or one beveled and the other square, the main feature being that one be set obliquely to the other, so as to make the oblique cut.

Other alterations of the different parts are possible, and I do not, therefore, desire to limit myself to their exact construction.

I claim as new and desire to secure by Letters Patent—

1. In a machine for cutting beveled edges, on plate or sheet metal, a shaft, a second shaft

set at a suitable angle to the first-named shaft, cutters mounted upon the adjacent ends of said shafts, gearing between them and suitable means for adjusting one of the cutters longitudinally of its axis of rotation; substantially as described.

2. In a machine for cutting beveled edges upon plate or sheet metal, a suitably-rotated cutter, a second cutter angularly disposed with reference to the first-named cutter, a longitudinally-adjustable sleeve and a suitably-rotated shaft carrying said second-named cutter and journaled in said sleeve; substantially as described.

3. In a machine for cutting beveled edges upon plate or sheet metal, a base or frame, an approximately horizontal shaft journaled in said base, means for its rotation, a cutter upon one of its ends, a second shaft angularly disposed with reference to the first-named shaft, a cutter upon its end adjacent to the first-named shaft, a sleeve seated in the base and having screw-threads upon its periphery threaded in the base, said second-named shaft being journaled in the sleeve and geared to the first-named shaft; substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 8th day of July, A. D. 1901.

PAUL PARCELLS.

Witnesses:
CHAS. O. SHERVEY,
S. BLISS.