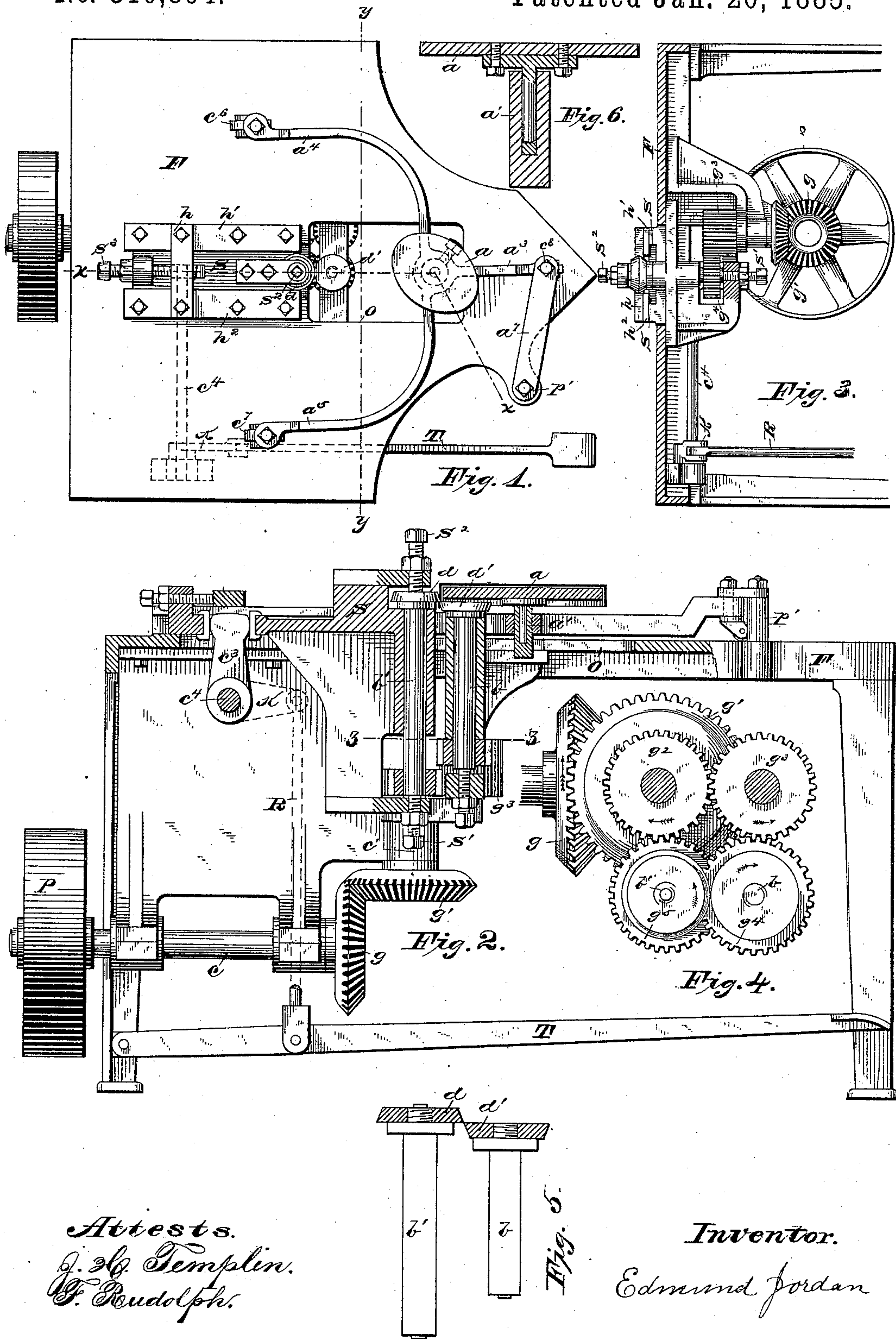


(No Model.)

E. JORDAN.  
TRIMMING MACHINE.

No. 310,894.

Patented Jan. 20, 1885.



Attests.  
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Inventor.  
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# UNITED STATES PATENT OFFICE.

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## TRIMMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 310,894, dated January 20, 1885.

Application filed May 2, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDMUND JORDAN, of the city of Brooklyn, in the State of New York, have invented an Improvement in Trimming-Machines for Trimming the Edges of Sheet-Metal Shells or other Articles, of which the following is a specification.

My invention relates to a class of machines employed to trim the edges of shells, cups, or other articles made of sheet metal, paper, and other material, as more particularly hereinafter described.

It further consists in a machine and mechanism whereby one of the circular cutters attached to a shaft and carried by a reciprocating slide receives an outward and an inward motion, and also in a universal carrier holding a plate or disk for the receipt of the article to be trimmed, and other mechanism more particularly described. The outward and inward motion of the slide allows the article which is to be trimmed to be placed in the machine, and brings the cutters in the proper position for engaging the blanks when the work is performed.

It further consists in mechanism whereby one of the circular cutters, which revolve in opposite directions, is adjusted to its proper position for performing the operation of trimming, and also in a universal movable carrier holding a plate or disk for the reception of the article to be trimmed, and other apparatus more fully described hereinafter.

In the accompanying drawings, Figure 1 represents a top plan of my improved machine. Fig. 2 represents a side view of a section of my machine, taken at  $x x$ , Fig. 1. Fig. 3 represents an end section view of my machine, taken at  $y y$ , Fig. 1, with the universal carrier omitted. Fig. 4 represents a top view of a section of my machine, taken at  $z z$ , Fig. 2. Fig. 5 represents a side elevation of the circular cutters. Fig. 6 represents a plate or disk which can be revolved in socket  $a'$ , and on which the article to be trimmed is placed.

Similar letters of reference indicate corresponding parts throughout the several views.

F represents the base-plate of the machine, supported by leg frame-work of any suitable construction.

C is a driving-shaft journaled horizontally in the frame-bearings, and provided with driving-pulley P, by which motion is imparted to it.

$g$  is a bevel-gear meshed with similar gear,  $g'$ , whereby motion is transmitted to a vertical shaft,  $c'$ , having a spur-wheel,  $g^2$ , on the upper part of the same, meshing with and imparting motion to  $g^3$ , a broad-faced spur-wheel on a stud in the frame.

$g^4$  is a spur-wheel on the lower end of the cutter-shaft  $b$ , engaging in the top of and taking motion from gear  $g^2$ , which also gives motion to a narrow spur-wheel,  $g^5$ , on the lower end of cutter-shaft  $b'$ . This cutter-shaft is carried by and revolves in slide S, operated by lever  $c^3$ , rigidly fixed on rock-shaft  $c^4$ , and regulated in its movement by set-screw  $S^3$ , which strikes against cross-bar  $h$ , secured to the upper surface of guides  $h'$  and  $h^2$ .

K represents an arm rigidly attached to rock-shaft  $c^4$ , operated by treadle T and connecting-rod R.

$S'$  and  $S^2$  are screws provided as a means of adjusting cutter-shaft  $b'$  vertically. When the treadle is depressed, the slide S moves forward, carrying the cutter  $d$  on shaft  $b'$ , until the cutter  $d$  is brought over the upper surface of cutter  $d'$  on shaft  $b$ , as represented in Figs. 2 and 5, and when reversed the parts mentioned as being operated by the treadle are carried backward.

$a^3$  is a universal carrier, having extension-arms  $a^4$  and  $a^5$  and jointed arm  $a^7$ , with casters  $c^6$ ,  $c^7$ , and  $c^8$  under the same to move on the surface of the base-plate F, and holding by set-screw or other device a socket,  $a'$ , in which the stem of plate  $a$  revolves when in position.

$p'$  is a stationary pivot, by which the jointed arm  $a^7$  is attached to the base-plate.

O represents an opening in the surface of the base-plate, and can be enlarged or diminished without interfering with the usefulness of my invention.

The article to be trimmed is placed on the plate  $a$  on the carrier  $a^3$  and moved up into contact with the revolving cutters  $d$  and  $d'$ , which engage and draw the edge of the article being trimmed, causing it to revolve, and being steadied in its revolution by the hand of the operator.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a machine for trimming the edges of shells, cups, or other articles made of sheet metal, pasteboard, paper, or other material, the following combination: first, two reciprocating cutters revolving in opposite directions; second, mechanism whereby one of the cutters receives an outward and an inward motion while rotating, for placing the article to be trimmed in the machine and performing the work of trimming; third, a movable carrier holding a plate or disk on which the article to be trimmed is placed.

2. In a machine for trimming the edges of shells, cups, or other articles made of sheet metal, pasteboard, paper, or other material, a circular cutter, *d*, on shaft *b'*, carried and rotated in movable slide *S*, cutter *d'* on shaft *b*, suitable means for rotating the cutters in opposite directions, and means for actuating the disk *S*, combined with a carrier, *a*<sup>3</sup>, and a plate or disk, *a*, upon which to place the article to be trimmed, as and for the purposes stated.

EDMUND JORDAN.

Witnesses:

C. WILLIAMS,  
WM. G. WELLS.