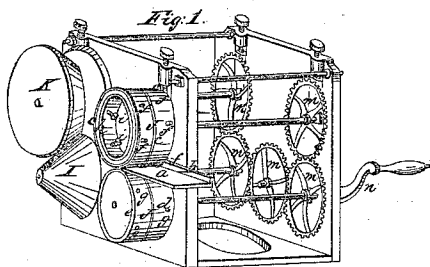
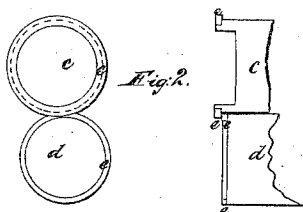
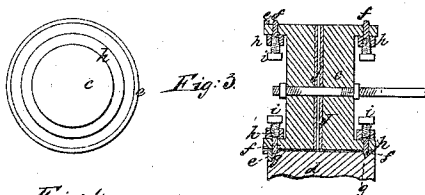
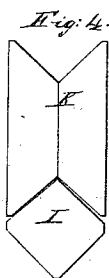
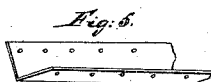


*C. Wright,*  
*Sheet-Metal-Working Machine.*  
*N<sup>o</sup> 42,325. Patented Apr. 12, 1864.*



*Witnesses:*  
*Daniel Cronin*  
*William H. Gooding*

*Inventor:*  
*Charles Wright*

# UNITED STATES PATENT OFFICE.

CHARLES WRIGHT, OF NEWARK, NEW JERSEY.

## IMPROVED CUTTING, PUNCHING, AND BENDING MACHINE.

Specification forming part of Letters Patent No. 42,325, dated April 12, 1864.

*To all whom it may concern:*

Be it known that I, CHARLES WRIGHT, of the city of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Machines for Cutting, Punching, and Bending Sheet Metal; and I do hereby declare the following to be a full and exact description of the same, reference being herein had to the drawings which accompany this specification, making part of the same.

The nature of my improvement consists in a peculiar manner of adjustment of punches, and in the arrangement and combination of the various parts of the machine.

In the drawings, Figure 1 is a perspective view of the complete machine; Fig. 2, the cutting parts; Fig. 3, the provision for punching; Fig. 4, the rollers for bending; and Fig. 5, a piece of metal cut, punched, and bended.

The same letters refer to the same parts in each figure.

A sheet of metal is placed on the table *a*, with its edge close to the guard *b*, and is passed between the rollers *C* and *D*. On the outer edge of these rollers a steel ring, or, if preferred, a plate of steel, is secured, which form cutters, cutting a strip from the edge of the sheet as it passes between the cutting-rings, being shown by the letter *e*.

At the required distance from the edges of the roller *c* a series of punches, *f*, are inserted at requisite distance apart, which enter a

series of holes, *g*, in the roller *d*, which roller answers the purpose of a die. The roller *c* is hollowed at the ends to admit the ring *h*, through which ring set-screws *i* are put for the ends of the punches to rest upon, and so admit of the proper adjustment of the punches. The rollers *c* and *d* are made in two parts, for the purpose of allowing alteration in the width of the strips of metal by the insertion of collars or rings on the shaft between the two parts of each roller, as shown by the letter *j*. The strips of metal when cut and punched by the rollers *c* and *d* pass to the angular rolls *k* and *l*, and are thereby bended to the required angle, as at Fig. 5. The requisite relative motion of each part is secured by the gearing *m*, and the whole is moved by a pulley and belt, or by a crank, as at *n*.

What I claim and desire to secure is—

1. The adjusting the punches by means of the loose ring and set-screws, substantially as shown.

2. The cutting and punching rollers when constructed, combined, and arranged substantially as hereinabove described.

3. The combination of the bending-rollers with the cutting and punching rollers, in the manner and for the purpose specified.

CHAS. WRIGHT.

Witnesses:

W. M. GOODING,  
DANIEL CRONIN.