H. ADLER & C. ROGERS.

Improvement in Machines for Making Metallic Moldings.

No. 131,239. Patented Sep. 10, 1872.

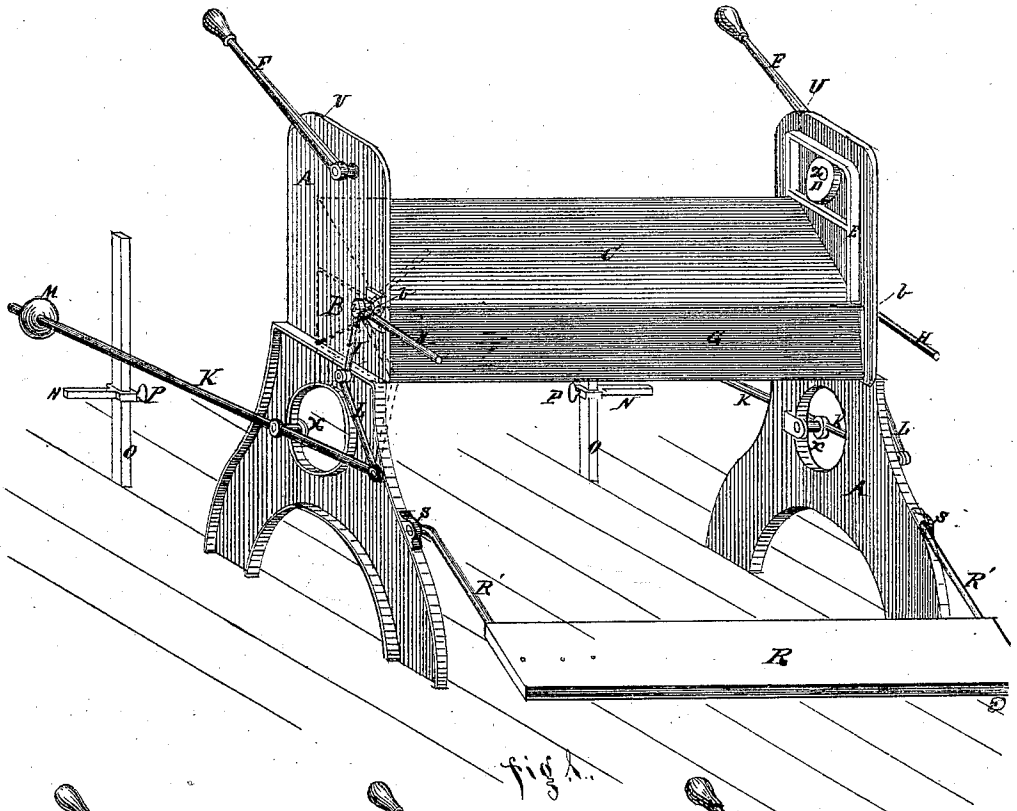


Fig 1.

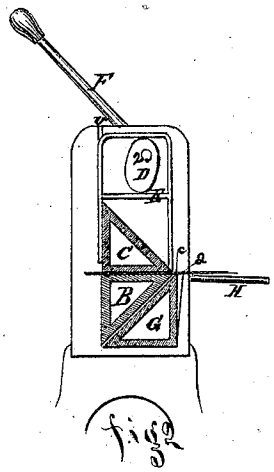


Fig 2

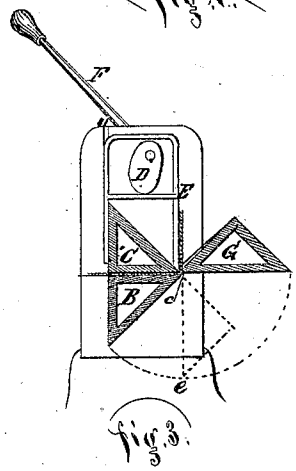


Fig 3.

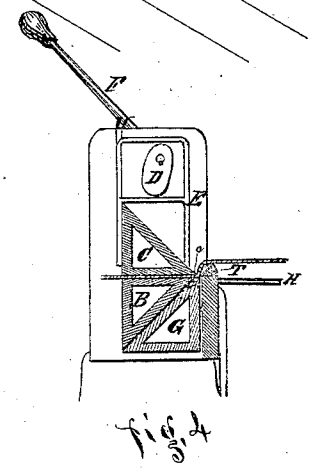


Fig 4

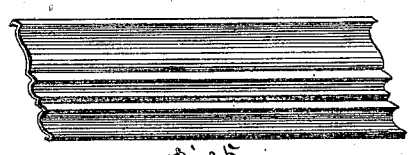


Fig 5

Witnesses { S Burford / Francis L Wait }

Inventors { Henry Adler / Chas Rogers }

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE

HENRY ADLER AND CHARLES ROGERS, OF PITTSBURG, PENNSYLVANIA; SAID ROGERS ASSIGNS HIS RIGHT TO SAID ADLER.

IMPROVEMENT IN MACHINES FOR MAKING METALLIC MOLDINGS.

Specification forming part of Letters Patent No. **131,239**, dated September 10, 1872.

To all whom it may concern:

Be it known that we, HENRY ADLER and CHARLES ROGERS, both of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Brakes for Bending Sheet Metal and forming it into cornices and ornamental work; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

In the accompanying drawing, which forms part of our specification, Figure 1 is a perspective view of our improvement in "brake" or machine for bending sheet metal for cornices or other ornamental work. Figs. 2, 3, and 4 are transverse sections of the upper portion of the same. Fig. 5 represents a portion of a cornice formed by our improved "brake."

The hollow triquetrous bar B is constructed of cast-iron and secured to the cast-iron end pieces A by means of bolts. To the ends of the hollow triquetrous bar C are attached cam-yokes E, which move in recesses U in the end pieces A. The cams D, which are used in combination with the yokes E, have their axes 2 in the end pieces A; and to the outer ends of the axes are attached levers F for the purpose of rotating the cams D, and thereby elevate the bar C to admit between it and the bar B the sheet which is to be bent. The hollow triquetrous bar G is pivoted or hinged to the end pieces A at *b*. On the axis of this bar G are arranged levers H and I; and to the levers I are pivoted levers L, the lower ends of which are pivoted to levers K, which are pivoted at *x* to the end pieces A. On the outer ends of the levers K are arranged adjustable weights M, which are used for the purpose of compensating for the difference in weight of the sheets of metal to be bent. The advantage of the adjustable weights M on the levers K will be very apparent when it is understood that the pieces of sheet metal vary greatly in weight on account of the various sizes used in the construction of cornice and other ornamental work for buildings, some pieces being very small and others very large; and as it is often necessary to bend five hundred of the large sheets into a given form, the operator can be relieved from lifting the weight of the sheets by simply adjusting the weights M on the levers K. The weight of the bar G is also compensated for through the medium of the weights M on the levers K, which, combined with the levers L, I, and H, as hereinbefore described, will hold the bar G down in position, as represented in Figs. 1, 2, and 4. The bar is elevated, as shown in Fig. 3, by the operator lifting the levers H. To the end pieces A at *s* is hinged a former, R. By thus hinging the former R the operator can, with great facility, adjust it with relation to the bars B and C, as shown in Fig. 4, for giving the desired curve to the piece or pieces of sheet metal held between the bars B and C. On the upright pieces O are arranged adjustable stops N, which are held in a fixed position by set-screws P. The stops N are used for the purpose of preventing the levers K, with their weights M, from falling below the point desired.

In the operation of bending the sheet metal for the purposes hereinbefore stated, the operator, through the medium of the levers F and cams D, lifts the bar C up off the bar B, and places between them the sheet metal, as shown at *a*. The bar C is then lowered down upon the sheet, which is firmly held between the bars C and B during the operation of bending it, through the medium of the bar G, which is raised, as indicated by the dotted lines *e*. The sheet *a*, being bent at *c*, as shown in Fig. 3, may be curved by raising up the former R, and then bending the sheet over the round T, as indicated in Fig. 4. The former R is then

allowed to drop down into the position shown in Fig. 1. The bar C is then lifted and the sheet removed to give place to another.

The manner of giving the various angles and curves to the sheet metal, for the purposes hereinbefore stated, will be readily understood by the skillful mechanic without further description of the operation of the bending-machine hereinbefore described.

Having thus described my improvement, what I claim as of my invention is—

1. The combination of the bar G, levers H I L K, and weights M, all constructed, arranged, and operating, with relation to each other, substantially as herein described, and for the purpose set forth.

2. The hinged former R, in combination with the hollow triquetrous bars B, C, and G, substantially as herein described, and for the purpose set forth.

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Witnesses:
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