

R. A. SMITH.

Machines for forming Sheet-Metal Window-Caps.

No. 147,184.

Patented Feb. 3, 1874.

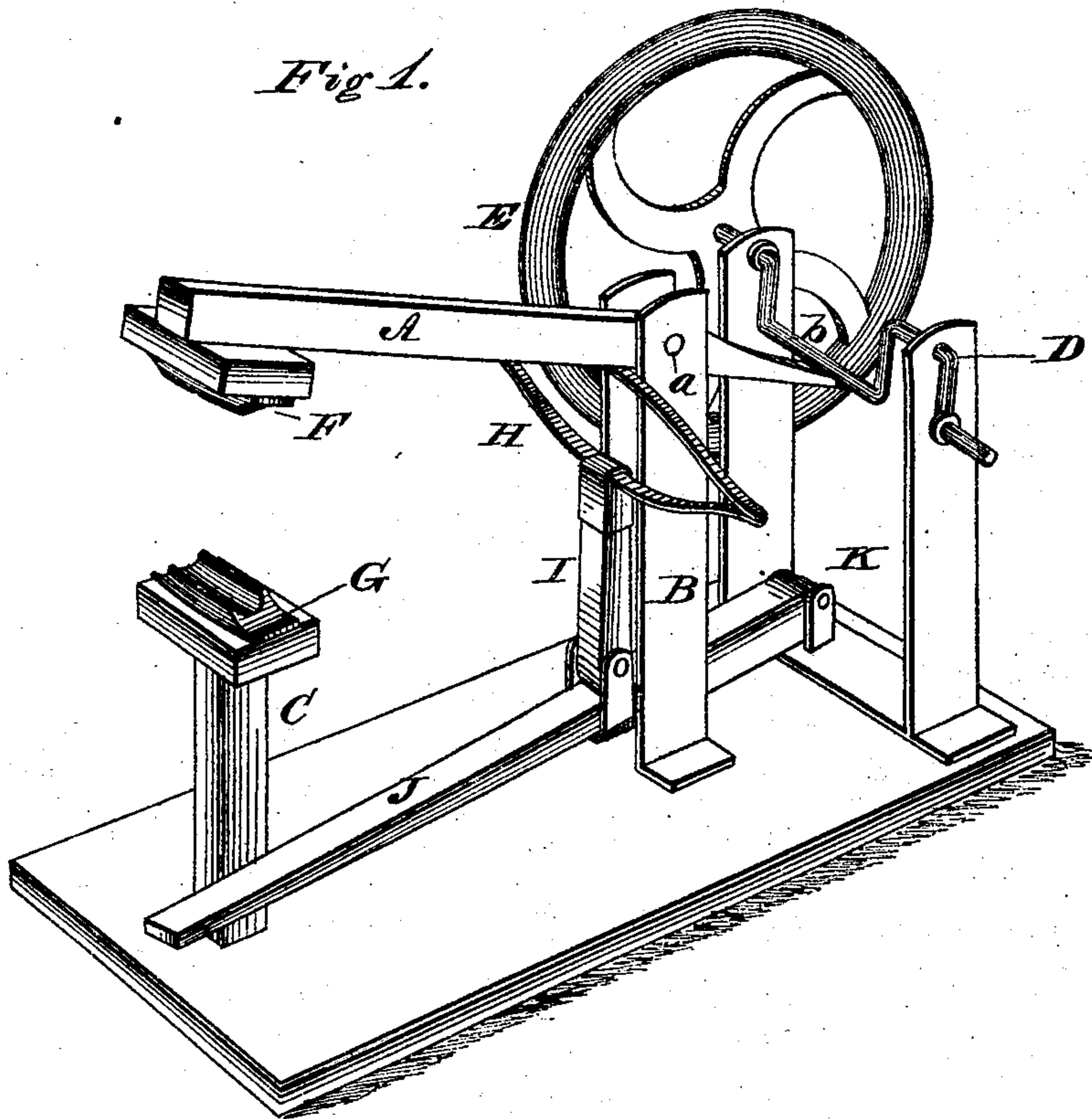
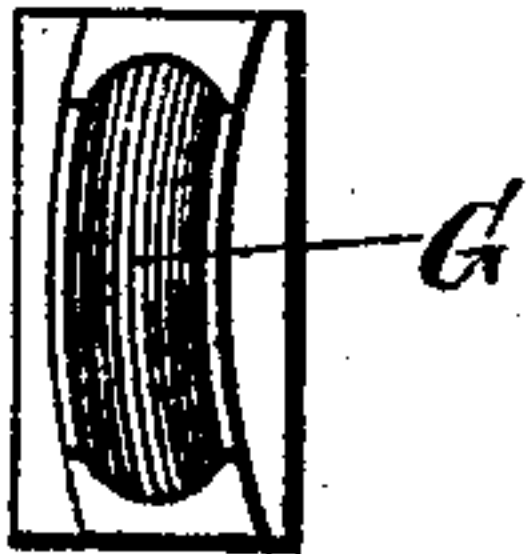


Fig 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROLLIN A. SMITH, OF FOND DU LAC, WISCONSIN.

IMPROVEMENT IN MACHINES FOR FORMING SHEET-METAL WINDOW-CAPS.

Specification forming part of Letters Patent No. **147,184**, dated February 3, 1874; application filed January 5, 1874.

To all whom it may concern:

Be it known that I, ROLLIN A. SMITH, of Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented certain Improvements in Machines for Forming Sheet-Metal Window-Caps, of which the following is a specification:

My invention relates to a machine for forming sheet-metal window-caps, &c.; and consists in a trip-hammer provided with dies to shape the metal, and with a spring and treadle, by which the force of the blows may be varied, as required.

Figure 1 is a perspective view of the machine; Fig. 2, a plan or face view of one of the dies.

A represents a horizontal hammer beam or handle, pivoted, at *a*, in a standard, B, with its end extending beyond or in rear of the pivot. C is an anvil to support the work, and receive the blows of the hammer. D is a horizontal shaft, having a crank, *b*, and fly-wheel E. The shaft is mounted in suitable bearings, and is so arranged that at each revolution its crank *b*, acting on the rear end of the beam A, tips the hammer up, and then, slipping off the end of the beam, allows the hammer to drop on the anvil. F and G are male and female dies, of the form of the required molding or cornice, secured, one to the hammer and the other to the anvil, so that when the hammer drops they fit into each other. H is a spring, having its upper side secured to the hammer-beam A near its fulcrum, and its lower side connected, by a bar or link, I, to a foot-lever or treadle, J, the rear end of which is pivoted to a stationary fulcrum, K, as shown in Fig. 1.

By depressing the foot-lever the spring may be caused to draw down on the hammer-beam and accelerate its descent, and thereby increase the force with which the hammer strikes. The hammer is made quite light, but, by depressing the foot-lever more or less, the force of its blow may be varied, as required.

It is intended to use the machine mainly for

forming curved window-caps. In such case the dies are made of a curvature corresponding to that of the caps, which should have their curvature regular or uniform from end to end.

In operating the machine, it is kept constantly in motion. The operator, standing by the side of the anvil, takes a piece of sheet metal, cut of the proper form or curvature, and, placing it on the anvil, slides it back and forth thereon, so that the die on the hammer will act upon its entire surface from one end to the other, and bend it to conform with the lower die. When the metal first commences to bend, the blows should be light; but as the operation progresses the operator should depress the treadle and increase the force of the blows, in order to form or shape the metal to all the minute details of the dies.

The dies will be attached to the hammer and anvil by bolts or other fastenings, which will permit them to be quickly and easily detached and replaced by others of a different form. I make the dies of any suitable metal, cast from patterns of plaster-of-paris. These patterns are made by taking a thin plate, which has its edge shaped to correspond with the sectional form of the molding, attaching said plate to the end of a pivoted bar or arm, and sweeping it over the plastic material.

By means of my machine, constructed and operating as above, I am enabled to form sheet-metal window-caps, cornices, &c., with great rapidity, cheapness, and neatness.

Having thus described my invention, what I claim is—

The herein-described improved machine for forming sheet-metal window-caps, consisting of the stationary die G, hammer-beam A, provided with the die F, spring H, and treadle J, constructed and arranged substantially as shown.

ROLLIN A. SMITH.

Witnesses:

F. D. JONES,

H. J. HOPKINS.