

C. G. EVERITT.
MACHINE FOR CLOSING TIN OR SHEET METAL BOXES.
No. 11,962. Patented Nov. 21, 1854.

Fig. 1.

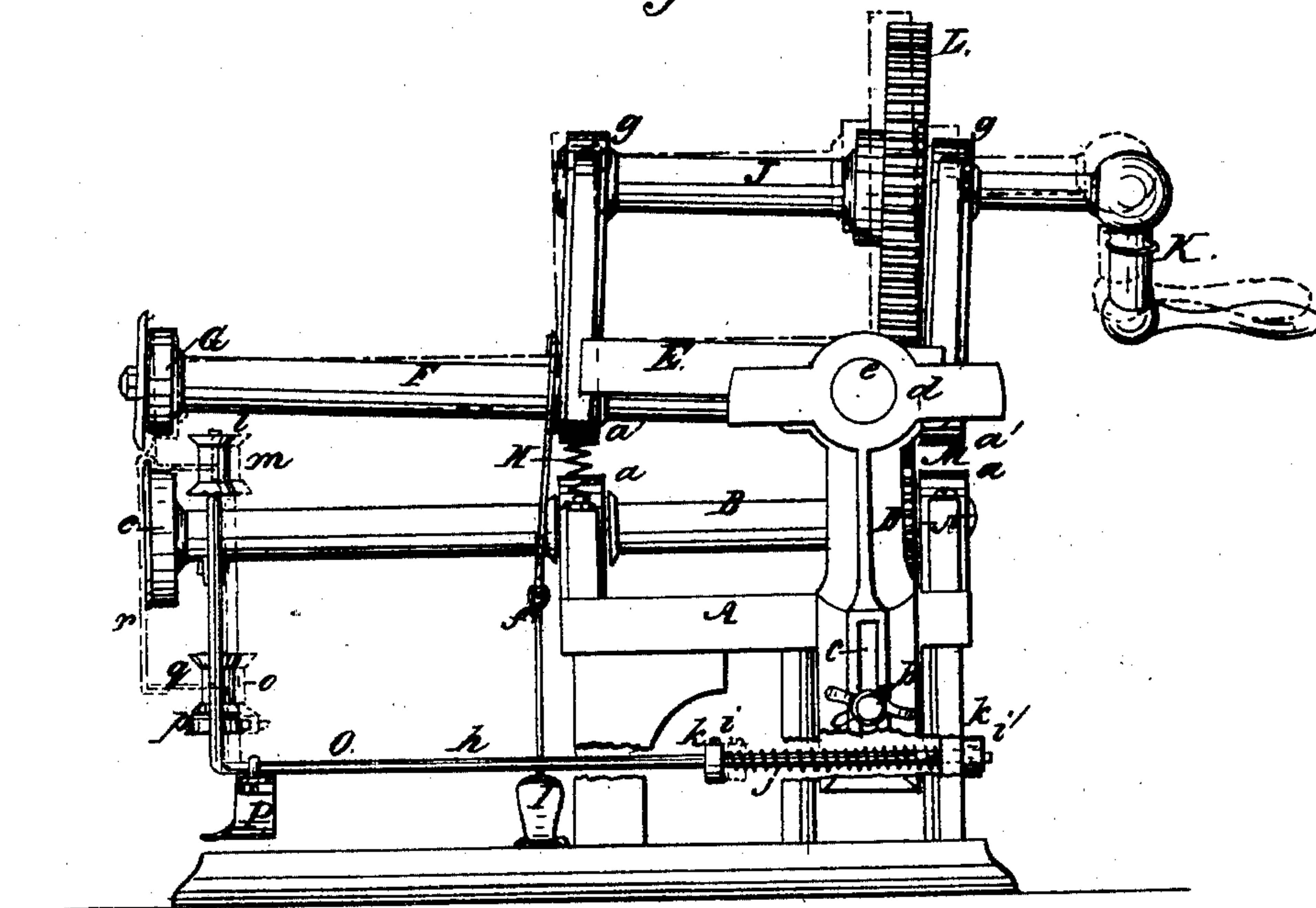
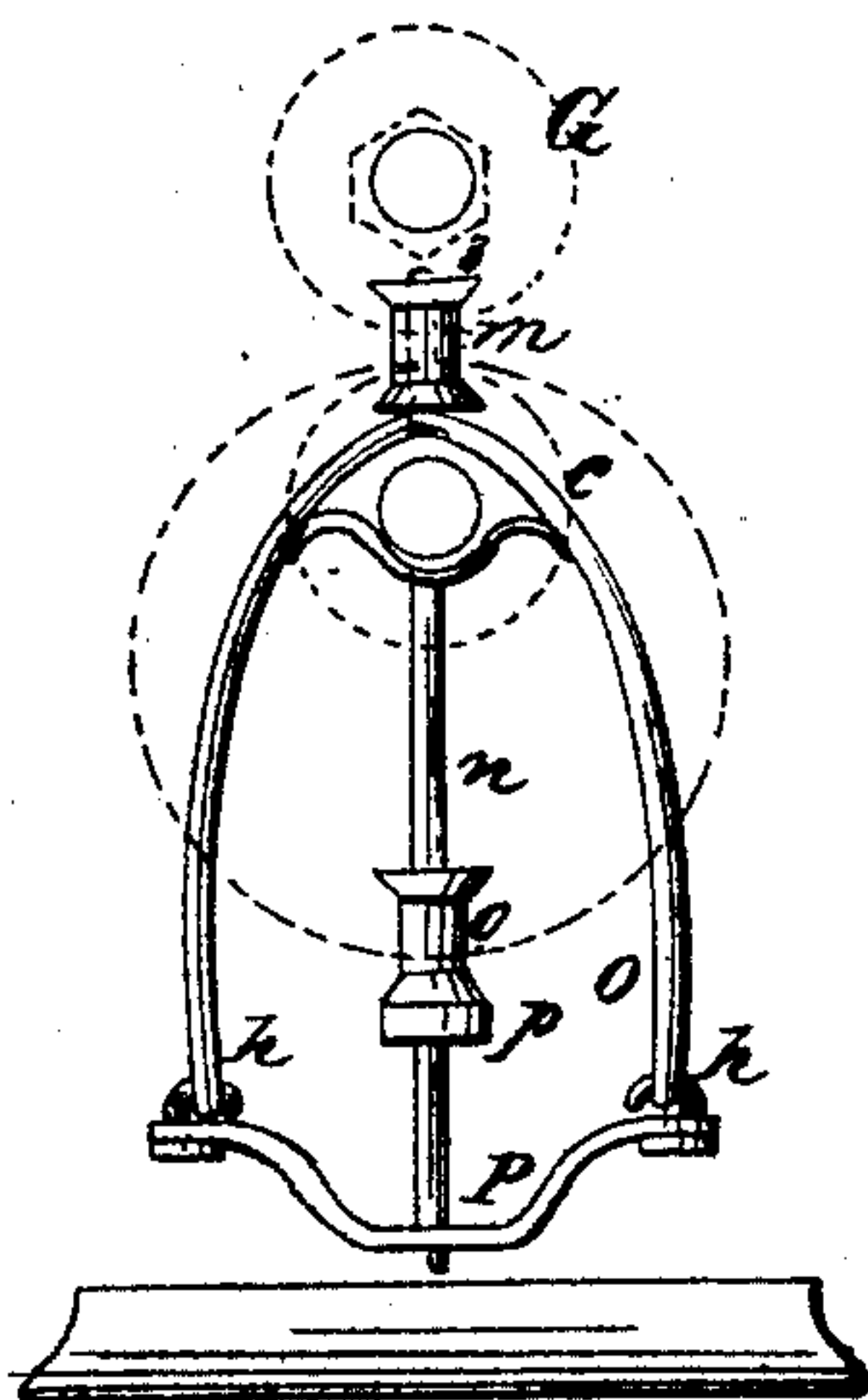


Fig. 2.



UNITED STATES PATENT OFFICE.

CHARLES G. EVERITT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR CLOSING SHEET-METAL BOXES.

Specification forming part of Letters Patent No. 11,962, dated November 21, 1854.

To all whom it may concern:

Be it known that I, CHARLES G. EVERITT, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Machines for Closing Sheet-Metal Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a front view of the vibrating or movable frame on which the friction-rollers are placed.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists, first, in the arrangement of a driving-shaft, upper roller-shaft with adjustable sliding boxes and springs, as will be hereinafter shown, whereby various-sized roller-heads may be applied to the machine.

My invention consists, second, in the arrangement of an adjustable spring-frame with adjustable friction-rollers, and in relation to the roller-heads, as will be hereinafter shown, for the purpose of guiding and sustaining the sheet-metal pieces of various shapes and of different widths.

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

A, Fig. 1, represents a rectangular frame, on the upper part of which a shaft, B, works in suitable bearings, *a a*. On the end of this shaft B a roller-head, C, is attached. On each side of the frame A there is a sliding box, D, which is attached to the frame A by a set-screw, *b*, passing through a slot, *c*, in the lower end of the box and into the frame A, and at the upper ends of these boxes are bearings *d d*—one on each—in which journals *e e*, attached to the lower end of a frame, E, work.

F is a shaft which works in suitable bearings *a' a'* at the lower part of the frame E. This shaft F is provided with a roller-head, G at its end, the roller-head G being over or above the head C, which is on the lower shaft, B.

H H are spiral springs (one only is shown in Fig. 1) placed between the two frames A E. The springs serve to keep the two roller-heads a certain distance apart when the upper

frame is not depressed, which is done by placing the foot upon a treadle, I, underneath the machine, the treadle I being connected to the frame E by a rod, *f*.

J is a shaft which works in suitable bearings, *g g*, upon the upper part of the frame E. A crank, K, is attached to the outer end of this shaft, and a toothed driving-wheel, L, is hung upon the shaft, which driving-wheel gears into a pinion, M, on the upper roller-shaft, F, the pinion M gearing into a pinion, N, on the lower roller-shaft, B.

O is a frame formed of metal rods *h h*, which run horizontally through the lower part of the frame A, as shown in Fig. 1. These rods have each two stops, *i i'*, upon them, the stop *i'* being on the outer side of the frame. A spiral spring, *j*, is placed on each rod, between the inner stop, *i*, and the end of the frame A, as clearly shown in Fig. 1. The stops *i i'* are rendered adjustable by set-screws *k*, by which they may be adjusted upon any part of the rods. The two rods *h h* are bent vertically and in a bow or elliptical form just back of the roller-heads C G, the rods being united at the top, and having an upright arbor, *l*, on which a friction-roller, *m*, is placed. (Shown more particularly in Fig. 2.) A vertical center rod, *n*, is also secured midway between the two curved rods forming the bow, and upon this center rod a friction-roller, *o*, is placed, and secured at any desired height by an adjustable stop, *p*. The lower end of the center rod, *n*, is stepped in a cross-bar, P, attached to the rods *h h* at points where they are bent upward.

By "closing" the boxes is simply meant securing the tops and bottoms to the sides or body of the box. This is done by bending or compressing the ledge on the top or bottom piece tightly around the body and side strip of the lid, and is performed by the revolutions of the roller-heads G C.

Operation: The top and bottom pieces of the box, as well as the body and side strip of the lid, are commonly termed "blanks." The blanks rest upon the lower head, C, the fingers being pressed against the top or bottom piece, and the edge of the blank presses against the friction-rollers *m o*, and the spring-frame O is forced back sufficiently to allow the ledge at the edges of the top and bottom pieces to be directly between the two roller-heads G C.

The foot is then applied to the treadle I and the upper frame, E, depressed, which brings the two roller-heads G C near together. The crank K being then turned, the roller-heads perform the closing or bend the ledge firmly against the blank. The spring-frame, it will be seen, exerts a pressure against the edge of the blank and the hand or fingers against the outer side of the top or bottom piece, and consequently the two parts are kept in proper position while being acted upon by the roller-heads, (see Fig. 1,) in which the blank represented in red by *q* and the top or bottom piece by *r* is being acted upon by the roller-heads. The position of the spring-frame O when forced back is shown by the red lines, and the upper frame, E, when depressed, is also shown by red lines.

By having the friction-roller *o* adjustable, or so arranged as to be raised or lowered, blanks of various sizes may be operated upon with the same machine, and also different-sized roller-heads may be used by elevating or depressing the upper frame, E, which may be done by means of two sliding boxes, D, larger pinions being in that case employed upon the roller-shafts B F.

Boxes of elliptical or oval form may be closed by having the friction-roller *o* made of sufficient length, so that the largest and smallest diameters of the blank will work against it.

By having the driving-wheel L placed direct-

ly over the pinions M N the machine is rendered more portable and convenient and much labor and expense saved in its construction.

The spring-frame O may be adjusted so that the friction rollers *m o* may be set farther back from the roller-heads by altering the position of the stops *i i'*. This is important, as both long and short boxes may be closed on the same machine.

I do not claim the roller-shafts B F, nor the roller-heads G C, for they have been previously used; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The arrangement, as herein shown, of the driving-shaft J and upper roller-shaft, F, with the adjustable sliding boxes D, springs H, and treadle I in relation to the lower shaft, B, and frame of the machine for the ready adjustment and adaptation of other roller-heads, and for the putting in and taking out of the sheet-metal articles being made.

2. The arrangement of the adjustable spring-frame O with its adjustable friction-rollers *m* and in relation to the roller-heads C G for the purpose of guiding and sustaining the sheet-metal pieces of various shapes and of different widths, as herein shown and described.

CHARLES G. EVERITT.

Witnesses:

JOS. GEO. MASON,

S. H. WALES.