

C. H. Raymond,
Edging Sheet Metal.

N^o 25,369.

Patented Sep 6, 1859.

Fig: 1.

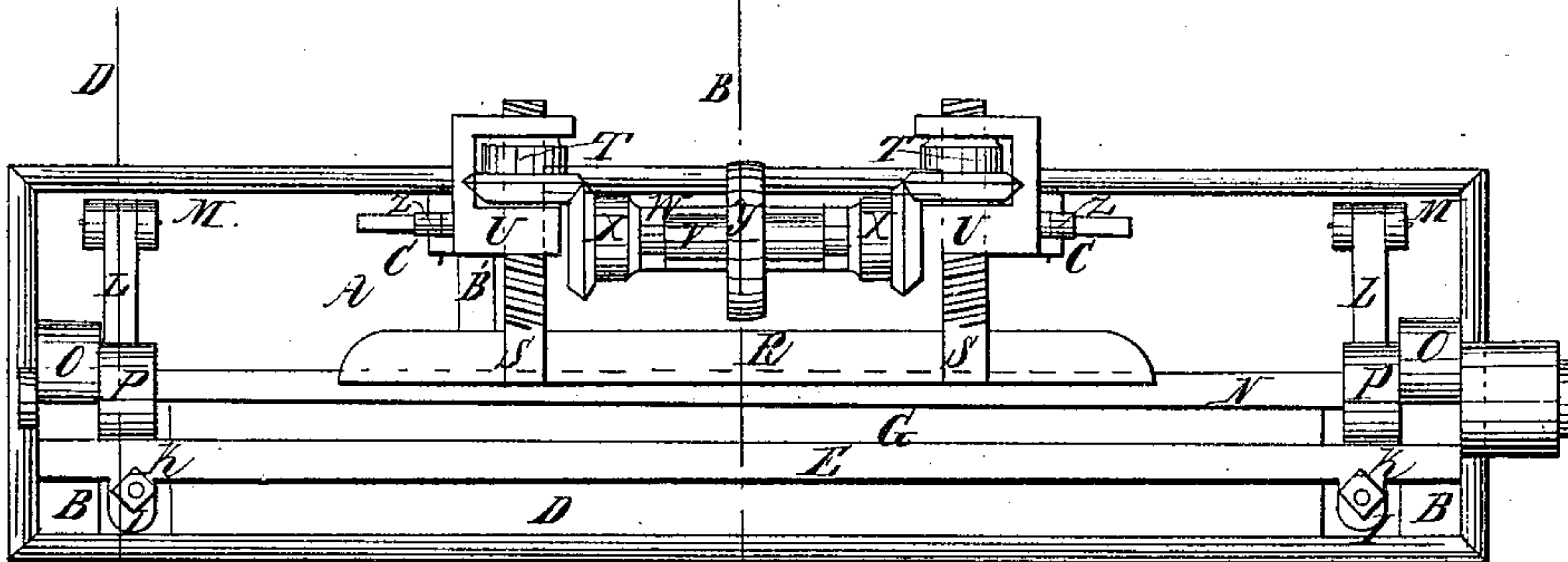


Fig: 2.

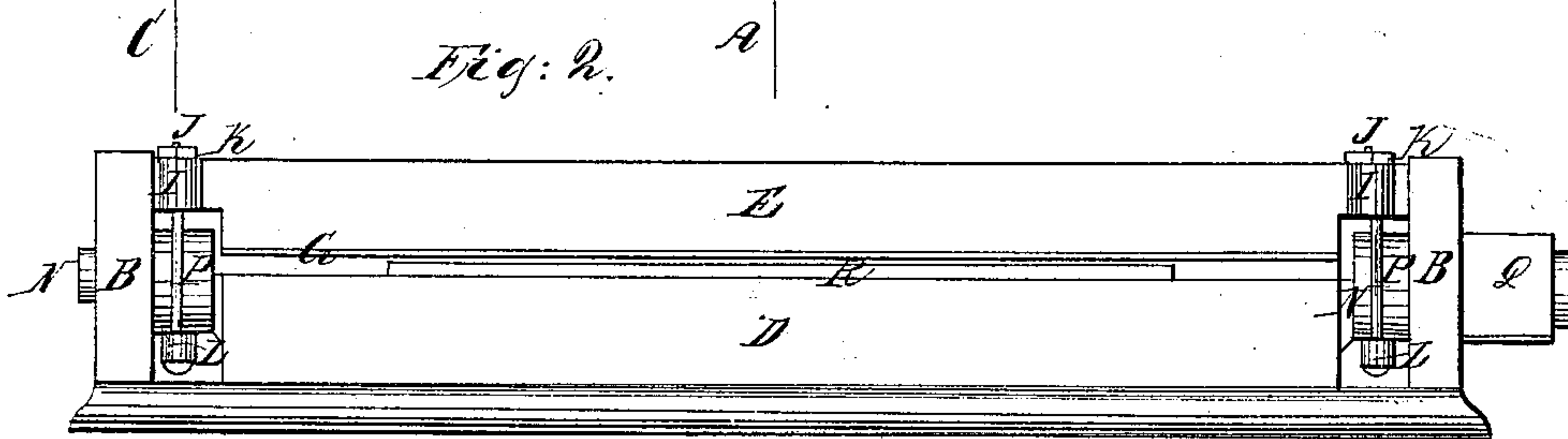


Fig: 3.

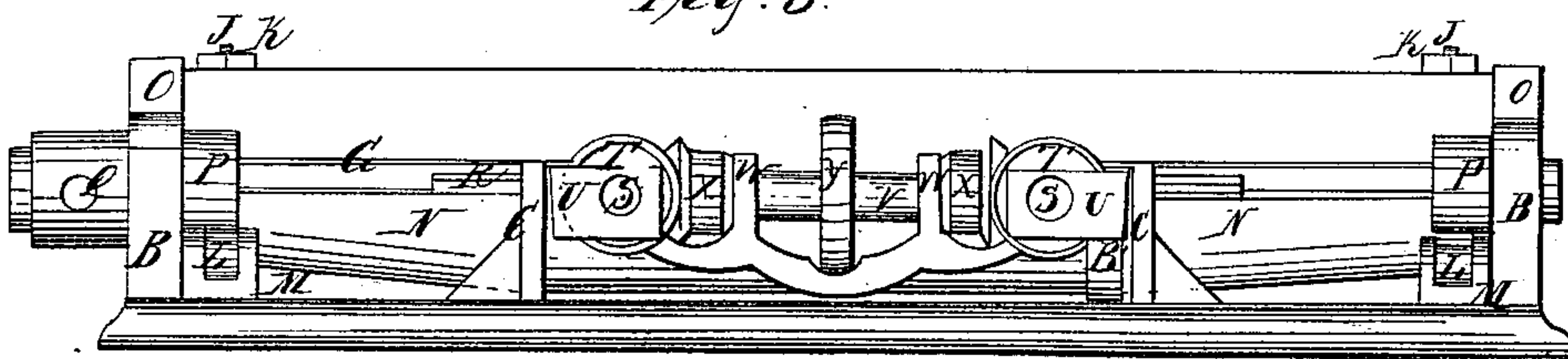


Fig: 4.

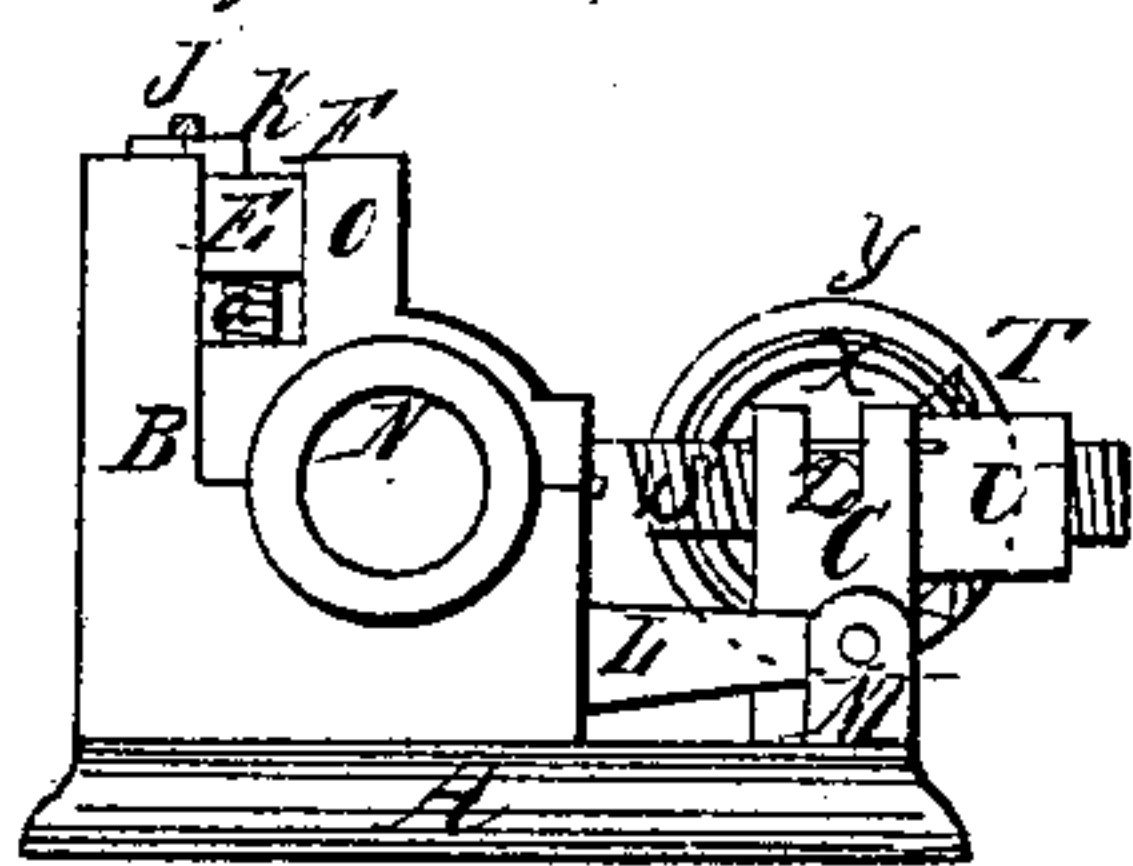


Fig: 5.

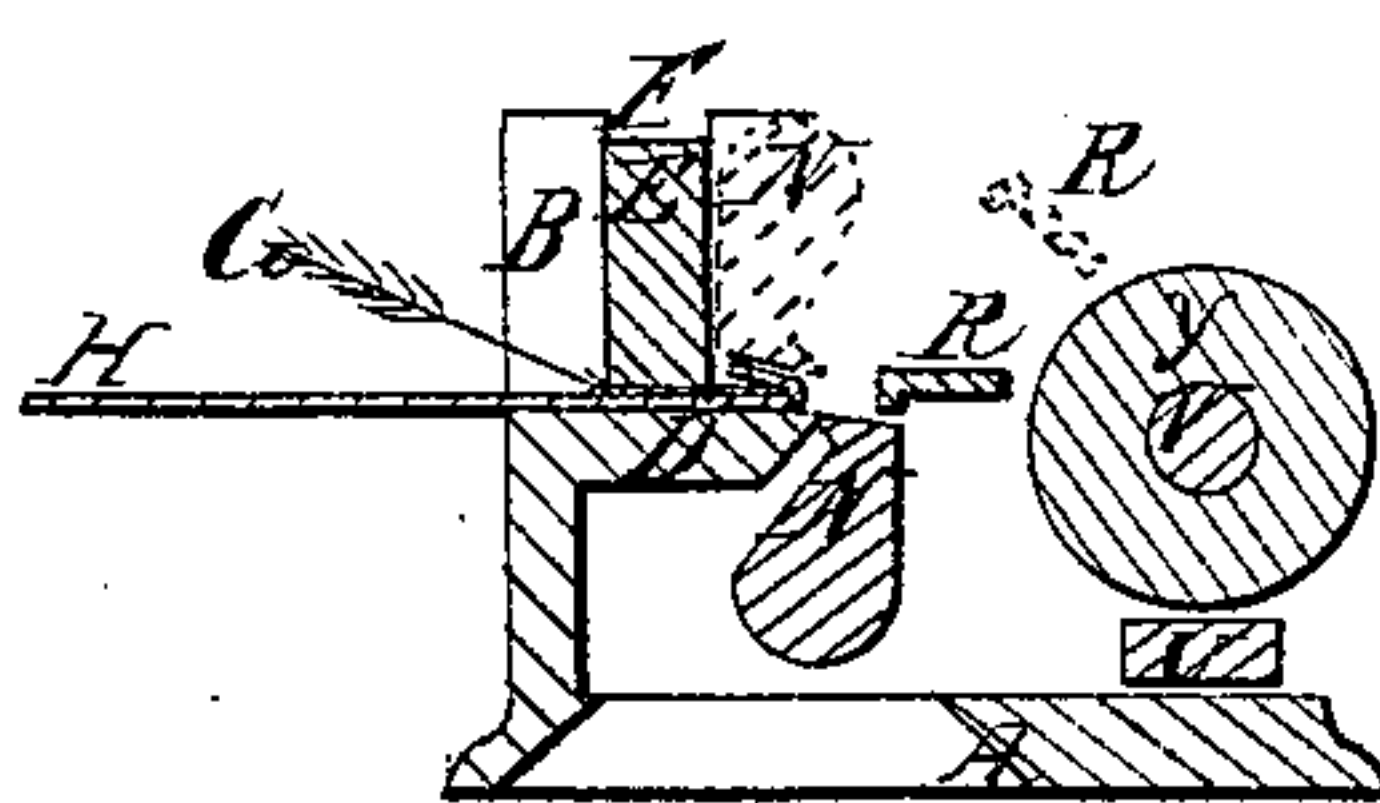
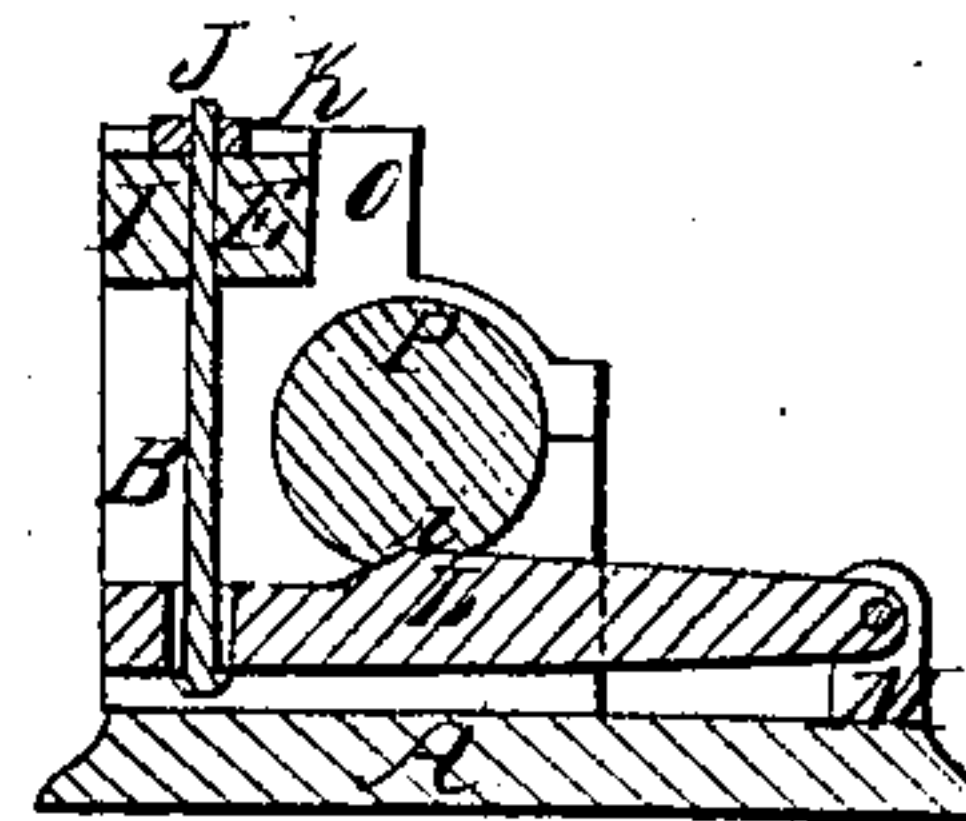


Fig: 6.



Witnesses:

E. W. Scott
H. B. Smith

Inventor:

Charles H. Raymond

UNITED STATES PATENT OFFICE.

CHARLES H. RAYMOND, OF SOUTHTINGTON, CONNECTICUT, ASSIGNOR TO
PECK SMITH MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN TIN-FOLDING MACHINES.

Specification forming part of Letters Patent No. 25,369, dated September 6, 1859.

To all whom it may concern:

Be it known that I, CHARLES H. RAYMOND, of Southington, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Tinmen's Folding-Machines; and I hereby declare that the following specification, in connection with the accompanying drawings and letters of reference thereon, constitute a lucid, clear, and exact description of the construction and use of the same in referring to the said drawings.

Figure 1 denotes a plan or top view; Fig. 2, a front side elevation; Fig. 3, a back side elevation; Fig. 4, an end elevation; Fig. 5, a transverse and vertical section on line A B of Fig. 1, and Fig. 6 a transverse and vertical section on line C D of Fig. 1.

The nature of my invention consists in my within-described device so constructed as to first firmly clamp that portion of the tin not to be folded, but contiguous to it, and without rubbing or marring it, and the device for folding after being so clamped, when these parts are combined with the revolving guide and all operated by one motion in the manner hereinafter seen.

To enable persons skilled in the art to which my invention appertains to construct and carry out the same, I will proceed to describe it as follows:

The platform A may be made of cast-iron, also the stands B, stands C, and bed-piece D, all cast in one piece; or the bed D may be made of steel, but in either case should be ground or planed or otherwise made straight and level on its upper surface. The clamp-bar E is made of cast-iron, and is guided in its vertical movement by being placed in slots F, formed in the upper end of stands B. To the under surface of the bar E, I secure a steel blade, G, which is faced true, straight, and level, to conjoin with the top surface of bed D or sheet of tin H, placed thereon and between. Two frontal projections, I, are formed on the bar E, through which bolts J pass, on the upper end of which is placed a nut, K, the head being underneath the beam-levers L, which are pivoted to stands M on back edge of platform A. I then construct a folder, N, fitted to revolve in bearings formed in stands B, and secured by caps O. This folder has two cams,

P, formed near to and of its ends. These cams are notched, as seen at *i*, Fig. 6, to allow the cam-levers L to instantly move upward therein when the folder is turned down by pressure of helical springs *a*, operating on the under side or edge of bar E at each of its ends, to also raise the blade G from the tin-sheet H. The turning-point of this folder is so positioned that when the sheet of tin is placed upon the bed D and under clamp-blade G, by turning up the folder N by crank placed in hole Q of hub to folder, the tin is first firmly clamped, and then the edge of it which projects inward by the blade G is bent or folded over and around it, as seen at Fig 5, by the continued turning of the folder N until in the position shown in red lines.

I construct a gage variable and adjustable, and against which the edge of the tin to be folded is to be placed. The gage is seen at R, it being connected near to its ends to two screw-shafts, S, which are threaded so as to pass through and be moved by two beveled gears T. These screw-shafts first pass through a portion of the swinging stand U, as seen in plan, Fig. 1, and slide freely therein.

Between the bevel-gears T, I place a shaft, V, so as to revolve in portions W of stand U. On each end of this shaft V, I secure a bevel-gear, X, which gear into and turn the bevel-gears T by turning the balance-wheel Y, secured to the center of shaft V, and by which the gage is instantly moved parallel to the clamp G and adjusted to the exact position required. This gage entire is suspended on two trunnions, Z, so as to freely turn in stands C, formed on the platform A. This allows the folder, as it is turned up, to move or swing this gage out of its way, as seen in red lines, Fig. 5, and when the folder is turned down the spring B', Figs. 1 and 3, will bring the gage down to its original position ready to again gage the tin, and so on indefinitely.

The advantages of this invention consist, in part, in more closely folding the tin than by the old method, and, after the fold is made, in removing the sheet H from the front, instead of drawing it off endwise, which facilitates the operation, a close fold being desirable for the more ready uniting of these folds for making tinware, and in not marring or scratching the

tin at the fold or other portion of its surface, as in all old machines.

The sheet of tin H is placed in from the front, as seen at Fig. 5, the edge being gaged by the gage R; then turn up the folder N by crank or lever placed in hole Q until the folder N is in position seen at Fig. 5, red lines, also bar E and clamp G, which is effected by the peripheries of cams P pressing down levers L and bar E. The tin being folded, then turn the folder N down as seen at Figs. 1 and 5, black lines, which will allow the levers L to be drawn up into notches i in cams P by springs a, Fig. 4, and the bar E to rise, and then the tin will readily slip off the blade G and be removed from the front of the machine, the same place at which it was entered, having a nice close crimp or fold formed thereon.

The nuts K can be turned up or down to ac-

commodate the pressure of clamp G to the different thicknesses of tin.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the clamp E and G with bed-piece D and folder N, when combined with revolving gage R, so that the width of crimp or fold may be first gaged, and then that portion of the tin contiguous to the part intended to be folded be first firmly clamped and held fast, and then the fold or crimp formed thereon in the manner described, all by one single movement of folder N and parts in connection, and without marring the tin, all in the manner fully set forth.

CHARLES H. RAYMOND.

Witnesses:

H. B. SMITH,

E. W. SCOTT.