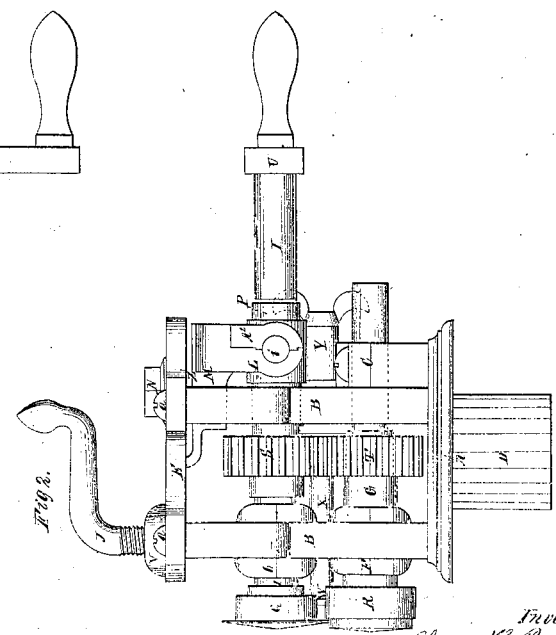
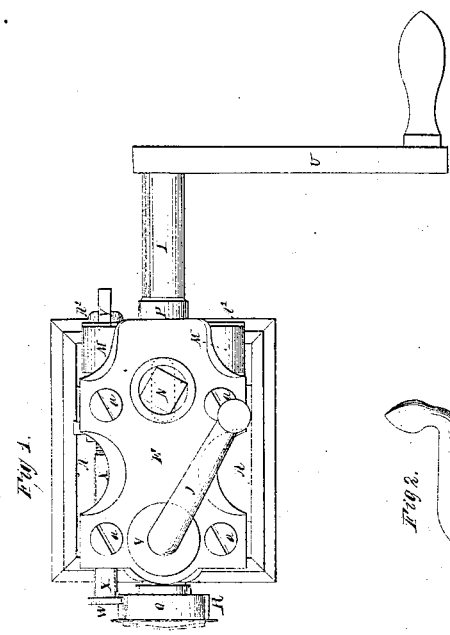
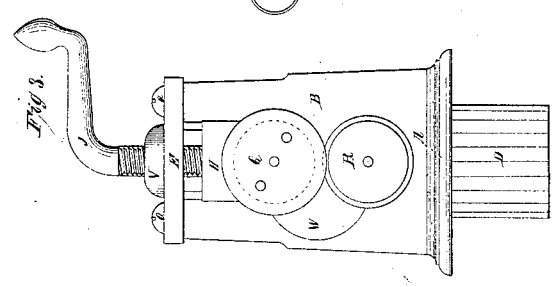
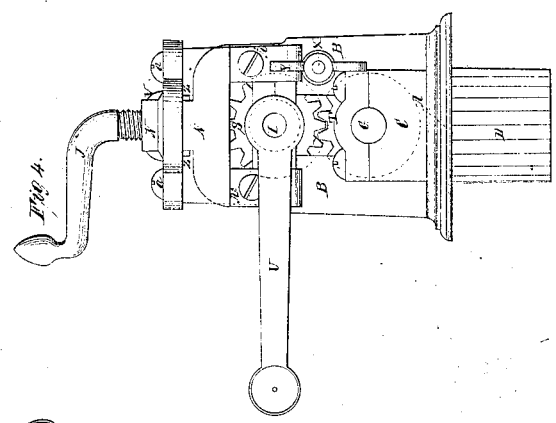
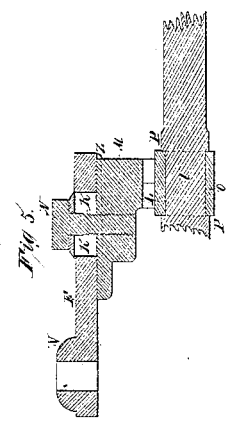


C. H. Raymond.

Making Sheet-Metal Vessels.

No 25,278.

Patented Aug. 30, 1859.



*Witnesses:
C. W. Scott
H. B. Smith*

*Inventor
Charles H. Raymond*

UNITED STATES PATENT OFFICE.

CHARLES H. RAYMOND, OF SOUTHTON, CONNECTICUT.

IMPROVEMENT IN TINMEN'S MACHINES.

Specification forming part of Letters Patent No. 25,278, dated August 30, 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 Machines; and I hereby declare that the following specification, in connection with the accompanying drawings, constitutes 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 side elevation, Fig. 3 a front end elevation, Fig. 4 a back end elevation, and Fig. 5 a central, vertical, and longitudinal section, of the upper portion of my machine, showing the peculiar nature of my invention.

The nature of my invention consists in the construction, arrangement, and combination of cap-plate E, movable stand M, attached thereto, carrying its revolving box L, and the shaft I therein, and the screw J, relatively in the manner with each other, and for all the purposes 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 bed-piece or base A, uprights B, box C, and ring D are all cast in one piece for cheapness of construction, strength, solidity, and durability. The ring D fits a socket (not shown) in bench, block, or where desired, and the machine is secured to it for use by placing this ring D therein and securing it by a screw. The uprights B are projected upward from base A to receive the cap-plate E, which is fitted and firmly held thereto by the screws *a*. The front upright A receives and holds the stationary box F, which, in conjunction with the box C, receive and hold the lower roll-shaft, G. The front upright B also receives the box H, which, with the front end of upper roll shaft, I, are vertically adjustable by means of the crank-screw J, passing through plate E and bosh V, this shaft I turning freely in revolving box L. The back end of cap-plate E is slotted at center. (Seen at K, Fig. 5, and in dotted lines at Fig. 1.) I then construct a revolving box, L, with its cap O, for easy adjustment thereto and to fit the shaft I, revolving therein. This revolving box L is fitted so as to turn freely yet snugly by its

trunnions *i* in stand M; and this stand is secured to plate E by screw N, passing through slot K, and is guided by lips Z (cast on plate E) when moved or slid. This stand M is fitted with caps A², for holding box L.

To the revolving box L and the vertically-adjustable box H is fitted the upper roll-shaft, I, so as to turn freely therein, the collars P thereon being fitted snugly to revolving box L, preventing any lateral play of shaft I. The rolls for forming the tin are seen at Q and R, and two gears or cog-wheels, S and T, are firmly fitted and secured to the upper and lower roll-shafts, I and G, for revolving the lower shaft, G, when the upper shaft, I, is turned by the crank U. Now, by the arrangement of slotted cap-plate E, the stand M, and its revolving box L, the upper roll-shaft, I, will turn freely therein in all vertically or laterally adjusted positions, while and at the same time this shaft I and its roll Q may be laterally adjusted to allow the roll Q to be set readily and exactly in the desired position or relation to the roll R, which is of the utmost importance. In first constructing my machine, as well as in adjusting the rolls to each other when worn or out of place, this important feature will be readily seen.

The only method heretofore of fitting the rolls to each other in tinman's machines was to put on washers or turn or remove the shoulder on the shaft against which the roll fits, and which is attended with much labor each time that it is done; beside there is no adjustment to it. An adjustable guide for guiding the tin is constructed as seen at W, and is fitted to rod X, and this rod so fitted as to slide laterally in holes formed through uprights B. A revolving nut, Y, is fitted to one of the uprights, B, in such manner, as seen in the drawings, that the end of rod X, having a screw-thread cut thereon, will fit thereto, and by turning this nut Y the guide W is adjusted readily as desired.

One very useful feature of my invention is the application of the revolving box so that the vertically-adjusted roll-shaft will conjoin to this box in whatever position or angle the shaft may stand and run freely therein, it being easier to turn and less liable to wear, and consequently more durable.

In using my invention I will first mention that it applies to any tinman's machine which contain rolls susceptible and necessary of ad-

justment with each other, or one to the other, when the machine is in process of construction, as well as when the rolls afterward get worn, by setting the stand M until the rolls are exactly in the desired position with each other, then turn up the screw N until the stand M is secure.

I disclaim any of the parts when taken separately.

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

The movable and adjustable stand M and its revolving box L when combined with shaft I, cap-plate E, and screw J, in the manner described, and for the purposes fully set forth.

CHARLES H. RAYMOND.

Witnesses:

H. B. SMITH,
E. W. SCOTT.