

E. O. HIGGINS.
 Machines for Punching Sheet-Metal Tubing.
 No. 200,454. Patented Feb. 19, 1878.

Fig. 1.

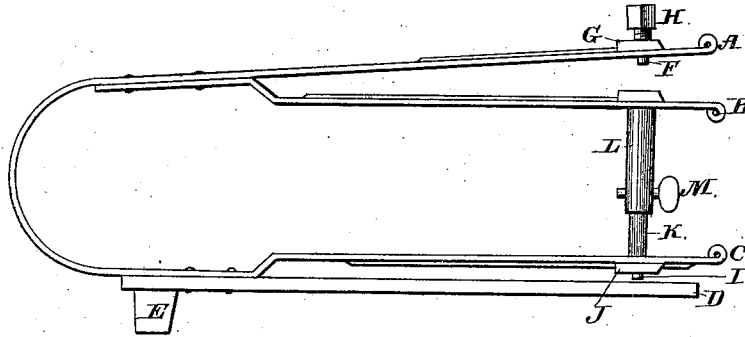
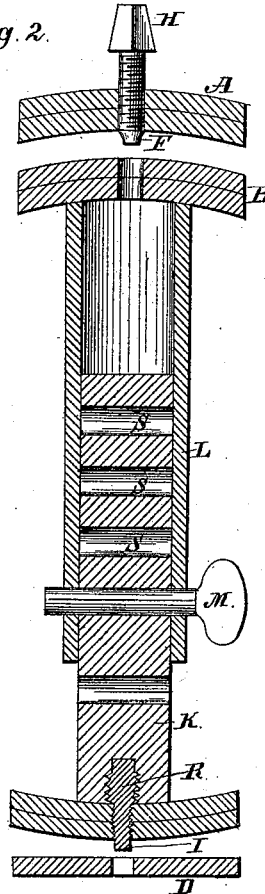


Fig. 2.



Attest.

Albert Collins
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Inventor.

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UNITED STATES PATENT OFFICE.

EDWARD O. HIGGINS, OF FAIRHAVEN, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PUNCHING SHEET-METAL TUBING.

Specification forming part of Letters Patent No. **200,454**, dated February 19, 1878; application filed October 22, 1877.

To all whom it may concern:

Be it known that I, EDWARD O. HIGGINS, of Fairhaven, in the county of Bristol, State of Massachusetts, have invented a new and useful device for punching with one movement stove-piping and cylinders of sheet metal, so as to receive dampers, stop-cocks, &c., which device is fully described in the following specification and illustrated in the accompanying drawing.

Figure I is a general view. Fig. II is a sectional view of the working part.

The device consists of arms A, B, and C (see Fig. I) and standard D, secured laterally to the work-bench by shoulder E. The cutter or upper punch F is secured to the upper arm A by plate G and screw-bolt H. The cutter or lower punch I is secured to the lower arm C by the plate J, and is secured to standard K by a screw marked R. (See Fig. 2.) Standard K moves freely in cylindrical socket L, and is temporarily secured by pin M, fitting in holes marked *s s* in Fig. II. The adjustment of standard K in socket L increases or diminishes the distance between arms B and C, and

adapts the device to cylinders and piping of various dimensions.

The arms A, B, and C are of steel, and when not in use the arm A rests upon arm B.

The cylinder or piping is placed over arms B and C, the upper portion being between arms A and B, and the lower portion between arms C and D, the punch F being on the outside, and the punch I on the inside, of the cylinder or piping.

The punches are operated by a stroke of the hammer upon bolt H.

I claim—

For the purpose of punching with one movement both sides of a cylinder or piping of sheet metal at points diametrically opposite each other, the combination of arms A, B, and C and arm or standard D, secured to the work-bench by shoulder E, as set forth, together with punches F and I.

EDWARD O. HIGGINS.

Witnesses:

ALBERT B. COLLINS,
SARAH L. KENNISON.