

C. LETTERMAN.
Grooving Sheet-Metal Pipe.

No. 213,214

Patented Mar. 11, 1879.

Fig. 1.

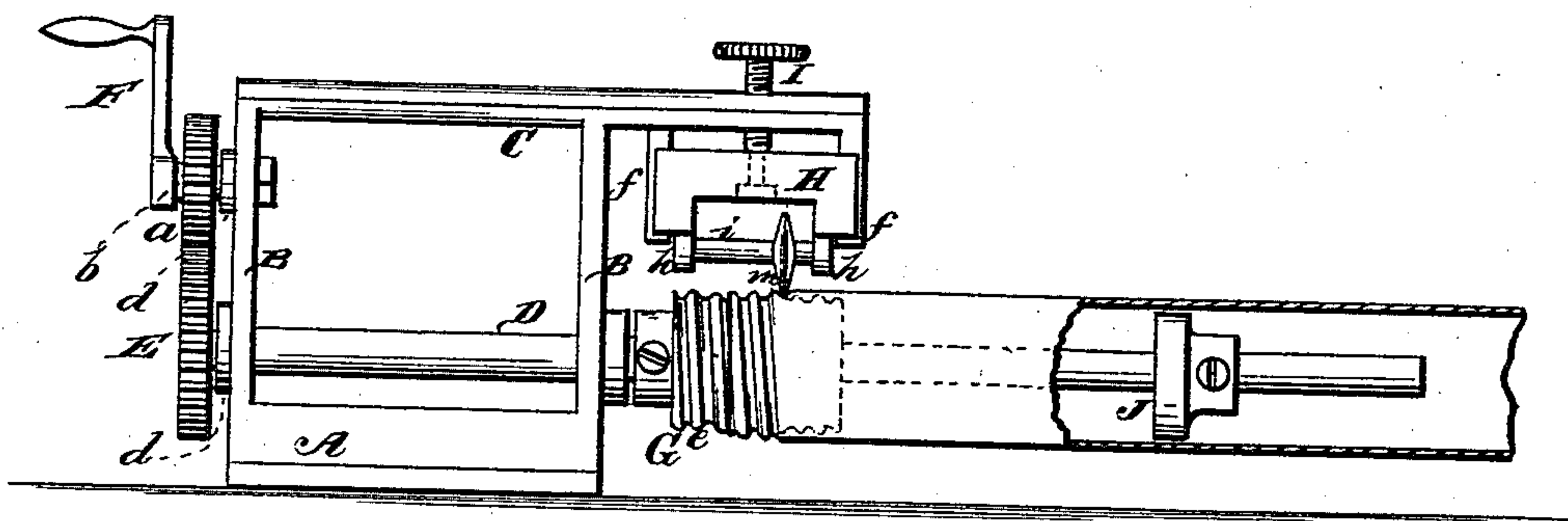
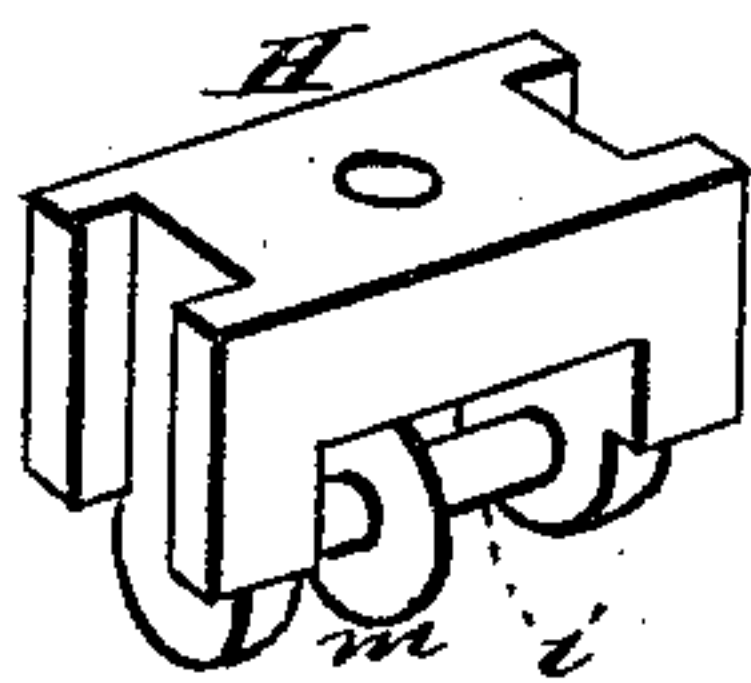


Fig. 2.



WITNESSES
Robert Everett
H. Clay Smith

INVENTOR
Charles Letterman
By *Gilman Smith & Co* ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES LETTERMAN, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN GROOVING SHEET-METAL PIPES.

Specification forming part of Letters Patent No. **213,214**, dated March 11, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, CHARLES LETTERMAN, of Syracuse, in the county of Onondaga and State of New York, have invented a new and valuable Improvement in Grooving Sheet-Metal Pipes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation, partly in section, of my device, and Fig. 2 is a sectional detail view of the same.

The nature of my invention consists in the construction and arrangement of an apparatus for grooving the ends of stove-pipes or other sheet-metal pipes to form screw-threads, as will be hereinafter more fully set forth.

In the annexed drawings, A represents the base of the machine, from which rise two vertical standards, B B, connected at their upper ends by a cross-bar, C, forming the frame. This frame may be cast or otherwise made in one or more pieces, as may be deemed most convenient.

In the standards B B a shaft or mandrel, D, has its bearings; and one end of this shaft is provided with a cog-wheel, E, which meshes with a pinion, *a*, on a shaft, *b*, having its bearing in one of the standards, and provided with a crank, F, for rotating the same, and thus communicate motion to the shaft or mandrel D. At the points where the shafts D and *b* pass through the standards said standards are provided with projecting hubs, as shown at *d*, to form elongated bearings for the shafts.

Upon the mandrel D, on the outside of the other standard B, is attached a cylindrical die, G, formed with a coarse exterior screw-thread, *e*, said die being fastened by a set-screw or otherwise, as deemed most convenient, so as to be readily removed and another of different size substituted, according to the size of the pipe to be operated upon.

The cross-bar C of the frame is projected over the die G, and is provided with two downwardly-projecting bars, *f f*, between which is placed a slide, H, adjustable up and down by means of a set-screw, I. The slide H is, on its under side, provided with two ears or projections, *h h*, in which is fastened a rod or shaft, *i*. On this rod is loosely placed a wheel or roller, *m*, of such size as to correspond with the thread *e* in the die G.

Upon the projecting end of the mandrel D is placed an adjustable collar, J, fastened at any point by a set-screw or otherwise. This collar is simply intended to hold the pipe in proper position—that is, concentric with the shaft and die. The pipe being passed over the collar J, and its inner end fitting over the die G, the slide H is pressed down by the set-screw I until the roller *m* indents the pipe by pressing it down in the thread *e* on the die. By now turning the crank F, the mandrel D and die G, with the pipe, will be rotated, and the roller *m*, being loose on its shaft *i*, will follow the thread on the die G, and thus form a coarse thread on the pipe.

Stove-pipes or other pipes being thus formed at their ends with coarse threads can be easily joined together.

I claim—

1. The combination of a rotating cylindrical die provided with exterior screw-threads, and a roller placed loosely on a rod or shaft parallel with the axis of the die, substantially as and for the purposes herein set forth.

2. The slide H, carrying the rod or shaft *i*, with loose roller *m* thereon, and adjusted by means of a screw, I, in combination with the rotating die G, substantially as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES LETTERMAN.

Witnesses:

JOHN BANSINGER,
ORIN McCARTY.