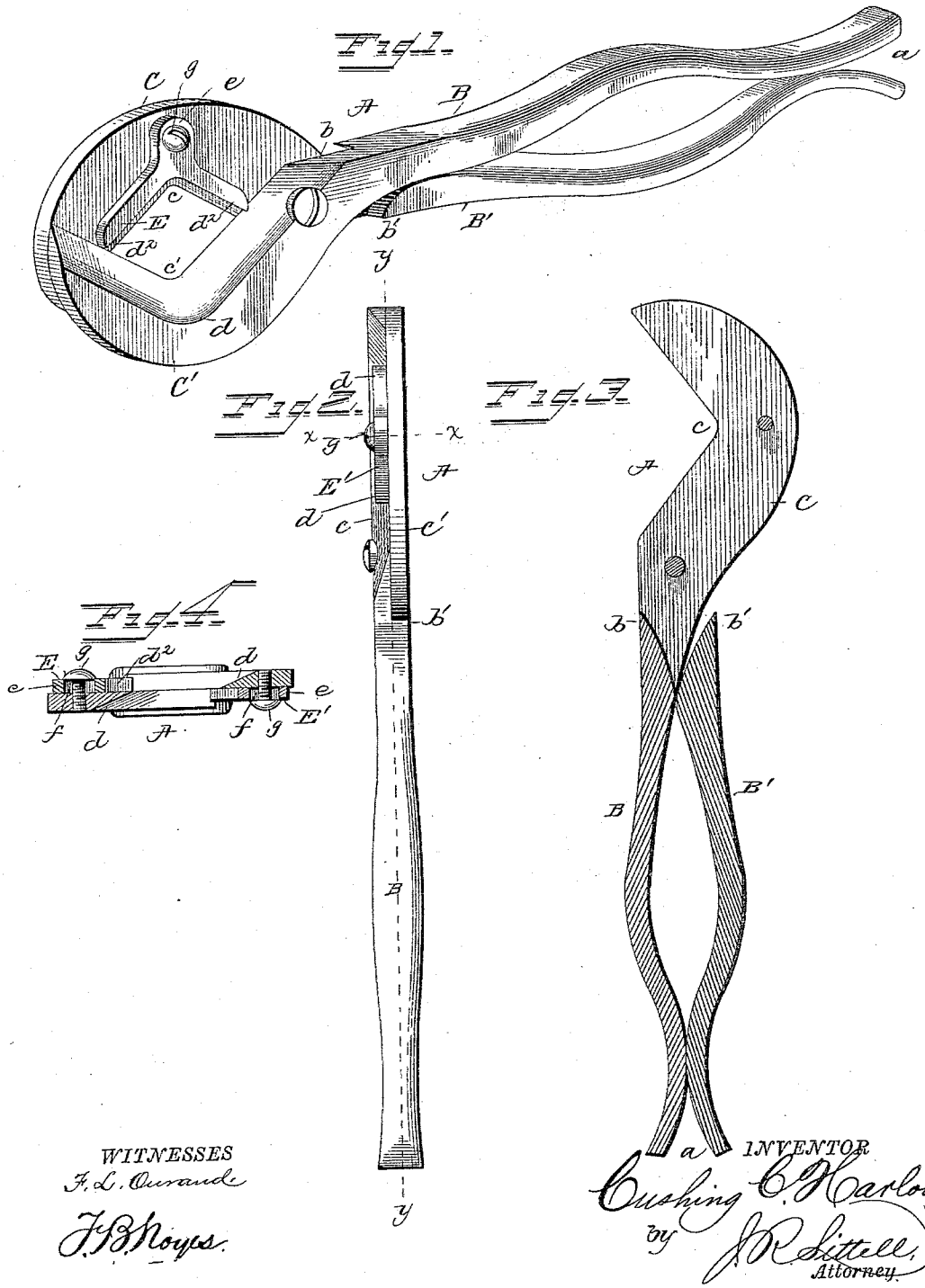
(No Model.)

C. C. HARLOW.

PIPE CUTTER.

No. 331,787. Patented Dec. 8, 1885.



WITNESSES
F. L. Durand
J. B. Noyes.

INVENTOR
Cushing C. Harlow,
by J. R. Littell,
Attorney.

N. PETERS. Photo Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

CUSHING C. HARLOW, OF BROCKTON, MASSACHUSETTS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 331,787, dated December 8, 1885.

Application filed December 15, 1884. Serial No. 150,438. (No model.)

To all whom it may concern:

Be it known that I, CUSHING C. HARLOW, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to pipe-cutters; and it has for its object to provide a device of this class which shall combine cheapness and simplicity of construction with ease and efficiency in operation and durability in use, and to provide a pipe-cutter which will make a smooth clean cut.

A further object of the invention is to provide improved means whereby the cut will be uniform, and to provide means of this character which shall be adjustable to the thickness of the pipe to be cut.

In the drawings, Figure 1 is a perspective view of a pipe-cutter constructed in accordance with my invention. Fig. 2 is a bottom view of the same. Fig. 3 is a longitudinal vertical section. Fig. 4 is a transverse vertical section on the line *x x*, Fig. 2.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents a pipe-cutter constructed in accordance with my invention, as follows: B B′ represent two sections or arms, which are bent outwardly near their upper ends, as shown at *a*, to afford a firm hold or grip when the cutter is being operated, the ends of said arms or sections, when the cutter is closed, being in contact or bearing against one another. The arms or sections B B′ are formed with shoulders *b b′*, the shoulder on the section B being located on the upper side thereof, while the shoulder *b′* on the arm or section B′ is located on the under side thereof. The other ends of the sections B B′ are formed with knives or cutters C C′, having angular cutting faces or edges *c c′*, which approximate a V shape. The upper side of the knife C is beveled or cut off, as shown at *d*, to form the cutting-edges, while the knife C′ is beveled or cut off in a similar manner upon its under side. The arms or sections B B′ are pivoted together at or near their point of junction with the knives. It will thus be seen that when the knives are closed upon a pipe to cut the same an angular cutting-seat is provided which has been found to possess many advantages, among which are the ease and rapidity with which the pipe may be cut and the firm hold afforded, which prevents all possibility of the cutter slipping when a pipe is being operated upon. The particular advantages secured by the approximately V-shaped cutting-edges is that they present four points of contact with the pipe, and consequently four cutting-points, whereas in the segmental or concave cutting-edges heretofore used but two cutting-points are presented.

To adjust the knives to the thickness of metal of the pipe and to make the cut more uniform, I provide gages E E′, which are located on the upper and under sides of the knives C C′, the gage E being on the under side of the knife C, and the gage E′ on the upper side of the knife C′. The said gages each consists of two diverging arms, d^2, formed integral at their adjoining ends, and having formed therewith an ear or lug, *e*, having a slot, *f*. The said gages are secured to the knives by screws *g* passing through said slots, and through threaded openings in the knives. The gages are located in the angles of the knives, and may be adjusted to or from the cutting-edges by loosening the screws and moving said gages to the desired adjustment, which adjustment is determined by the thickness of the metal of the pipe, and then tightening said screws to hold the gages in place.

In operation the knives are opened by spreading the arms or sections apart, and the knives are then inserted over the pipe. The opening of the knives is limited by the shoulders on the sections, against which said knives strike with their outer edges. The gages are adjusted to the thickness of the metal of the pipe previous to placing the knives in position for use. The arms are closed at their upper ends, which causes the knives to grasp the pipe, and upon said arms being moved backward and forward, or, more properly, oscillated, the pipe is cut.

The pipe-cutter above described is simple in its construction, easy and effective in its

operation, may be manufactured and supplied at a comparatively slight cost, and is strong and durable.

It will be understood that my improved pipe-cutter is specially designed for cutting lead pipe, in which by the sawing and cutting processes heretofore employed considerable inconvenience has been encountered by reason of the shavings entering the pipe and interfering with the operation of the valves and cocks. These disadvantages are completely obviated by my invention, and the approximately V-shaped gages secure an even and uniform cut.

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

1. The combination, in a pipe-cutter, with knives or cutters, of gages attached to the face of said knives, substantially as set forth.

2. The combination, in a pipe-cutter, with knives or cutters, of gages adapted to be adjusted to or from the cutting-edges of said knives, substantially as set forth.

3. The combination, in a pipe-cutter, with knives or cutters having cutting-edges approximating a V shape, of gages adjustably secured to said knives, substantially as set forth.

4. The combination, in a pipe-cutter, with knives or cutters, of gages having the diverging arms and adjustably attached to said knives, substantially as set forth.

5. The combination, in a pipe-cutter, with knives or cutters having the V-shaped cutting-edges, of gages, each of which consists of two diverging arms having integral therewith an ear or lug provided with a slot, and screws for attaching said gages to the knives, substantially as set forth.

6. The herein-described pipe-cutter, consisting of two pivoted arms or sections having knives formed therewith, said knives having cutting-edges approximating a V shape, shoulders on said arms, and gages adapted to be adjusted to or from the cutting edges or faces of the knives, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CUSHING C. HARLOW.

Witnesses:

J. R. LITTELL,

C. A. NEALE.