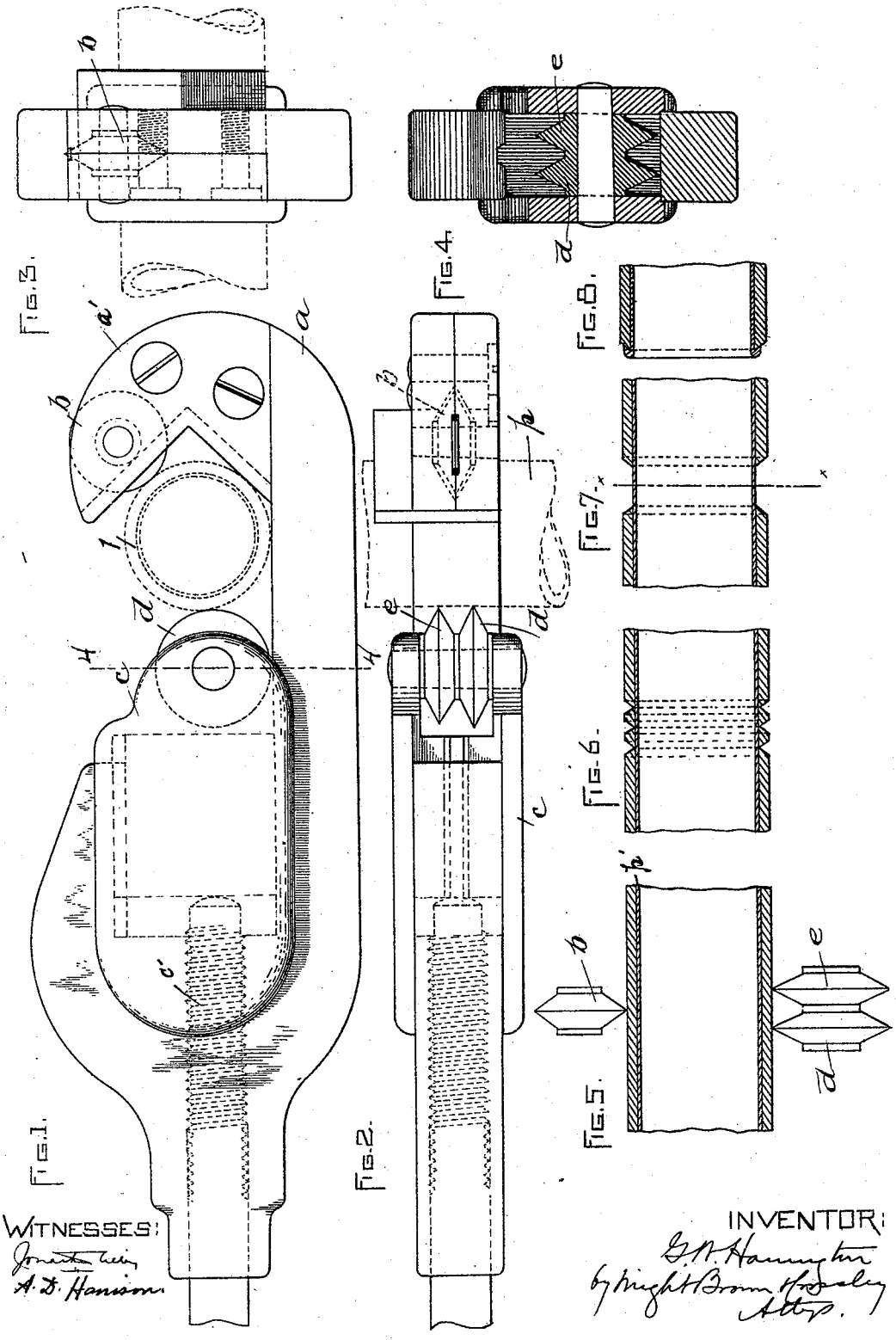
(No Model.)

G. W. HARRINGTON.

TOOL FOR CUTTING LEAD LINED IRON PIPE.

No. 492,158. Patented Feb. 21, 1893.



WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE W. HARRINGTON, OF WAKEFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO D. H. DARLING, OF SAME PLACE.

TOOL FOR CUTTING LEAD-LINED IRON PIPE.

SPECIFICATION forming part of Letters Patent No. 492,158, dated February 21, 1893.

Application filed April 8, 1892. Serial No. 428,308. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HARRINGTON, of Wakefield, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tools for Cutting Lead-Lined Iron Pipe, of which the following is a specification.

This invention has for its object to provide means for cutting a lead lined iron pipe in such manner as to remove a short section of the pipe, and thus convert the pipe into two separated sections, without cutting the lining, leaving the lining exposed between the sections so that it may be subsequently severed midway between the ends of the sections, thus causing the lining of each section to project sufficiently to afford material for a lead flange or bead, which may be formed by turning back the projecting portion of the lining against the end of the iron pipe by means of a device such as that shown in my application for Letters Patent of the United States, filed February 19, 1892, Serial No. 422,083, said flange or bead constituting a lead packing or bearing adapted to abut against a lead shoulder or bearing in a coupling connecting two lengths of the lead lined pipe.

The present invention consists in a holder having a cutter in one end and a slide adapted to move on the holder toward and away from the cutter in the end of the tool, as is usual in die cutters. I provide the slide with two cutters or cutting edges which cut on lines on both sides of the line of cutting of the other cutter. I further form one of the two movable cutters of a less diameter than the other for the purpose of the better breaking up of the iron.

I have shown in the accompanying drawings the best mode of accomplishing my invention; but it is obvious that I am not limited to the precise construction shown and described.

Figure 1 is a view in side elevation of my improved tool. Fig. 2, a view looking at right angles to Fig. 1. Fig. 3, a bottom view. Fig. 4, a section on lines 4, 4 of Fig. 1. Fig. 5, a view showing the three cutters and their points of entrance into the pipe. Fig. 6 shows a portion of the pipe with the three cuts. Fig. 7 shows the section of pipe and the portion thereof that will be removed by the cutters. Fig. 8 shows an end of the severed pipe with the lead lining turned over to form the packing.

In the drawings—a represents a stock or holder having at its outer end an arm or jaw a', in which is journaled a rotary cutter b, the periphery of which projects from the inner side of the arm a'. c represents a slide which is fitted to move on the stock or holder a and is provided with two rotary cutters d e arranged relatively to the cutter b, as shown in Figs. 2 and 5, so that when a lead lined pipe p is placed in the space having the cutter b at one side and the cutters d e at the other side and the tool is properly manipulated, each cutter will make a peripheral cut or score in the pipe, the cut made by the cutter b being between the cuts made by the cutters d e. Said cuts may be deepened by adjusting the slide c by means of an adjusting screw c', until the iron pipe has been cut through to the lining p'. The cuts are sufficiently close together to cause the breaking up of the material of the pipe between the cuts, a short length of the iron pipe being thus removed, as shown in Fig. 7. The pipe is thus converted into two sections connected by the uncut exposed portion of the lead lining. After this the exposed portion of the lining is severed on the line x x, Fig. 7, and the ends thus formed are turned back on the ends of the iron sections, as shown in Fig. 8. I prefer to make the cutters d e integral with each other, so that they will rotate in unison. I do not limit myself to this construction however, and may make the two cutters independent of each other. I also prefer to make one cutter of slightly larger diameter that the other to facilitate the breaking up of the metal between the cuts.

It is obvious that the single cutter b may be placed on the slide and the cutters d e on the stock or holder, if preferred.

The cutters d e may be considered as a cutter having a plurality of cutting edges, and they are so referred to in the following claims.

I claim—

1. As an improvement in means for severing lengths of lead lined iron pipe into sections, the combination of a stock or holder

having a rotary cutter arranged to act on one side of the periphery of the pipe, a slide adapted to move upon said holder and provided with a rotary cutter arranged to act on the opposite side of the periphery of the pipe, and means for adjusting said slide and its cutter toward and from the other cutter, one of said cutters having a plurality of cutting edges arranged to act on the pipe at opposite sides of the cut made by the other cutter, whereby the section of pipe acted on by the cutters is subdivided or broken up into fragments, as set forth.

2. As an improvement in means for severing lengths of lead lined iron pipe into sections, the combination of a stock or holder having a rotary cutter arranged to act on one side of the periphery of the pipe, a slide adapted to move upon said holder and provided with a rotary cutter arranged to act on the opposite side of the periphery of the pipe, and means for adjusting said slide and its cutter toward and from the other cutter, one of said cutters having a single cutting edge and the other two cutting edges of different diameters arranged to act on the pipe at opposite sides of the point where the single cutter acts, the variation between the diameters of the two cutting edges of one cutter facilitating the operation of breaking up the section of pipe severed by the conjoint action of the cutters, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of April, A. D. 1892.

G. W. HARRINGTON.

Witnesses:
C. F. BROWN,
A. D. HARRISON.