L. B. BURT.

FLUE CUTTING DEVICE.

APPLICATION FILED SEPT. 12, 1910.

982,932. Patented Jan. 31, 1911.

FIG. 1.

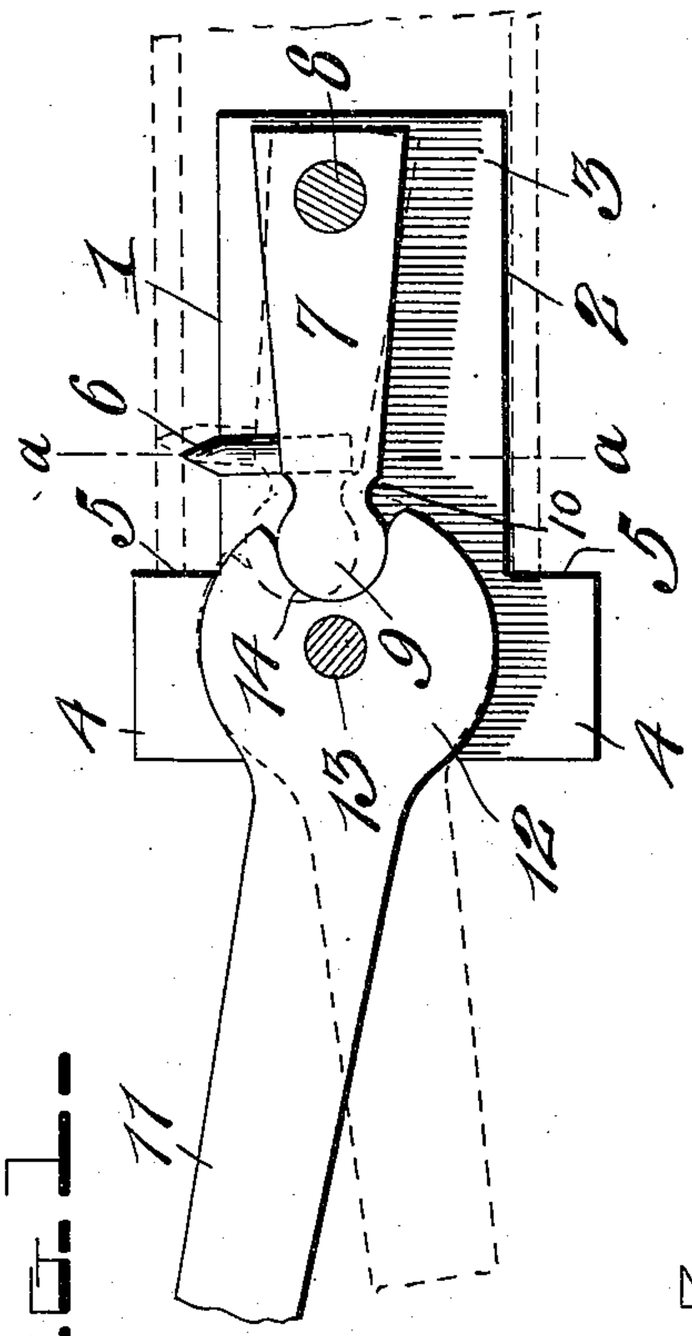


FIG. 2.

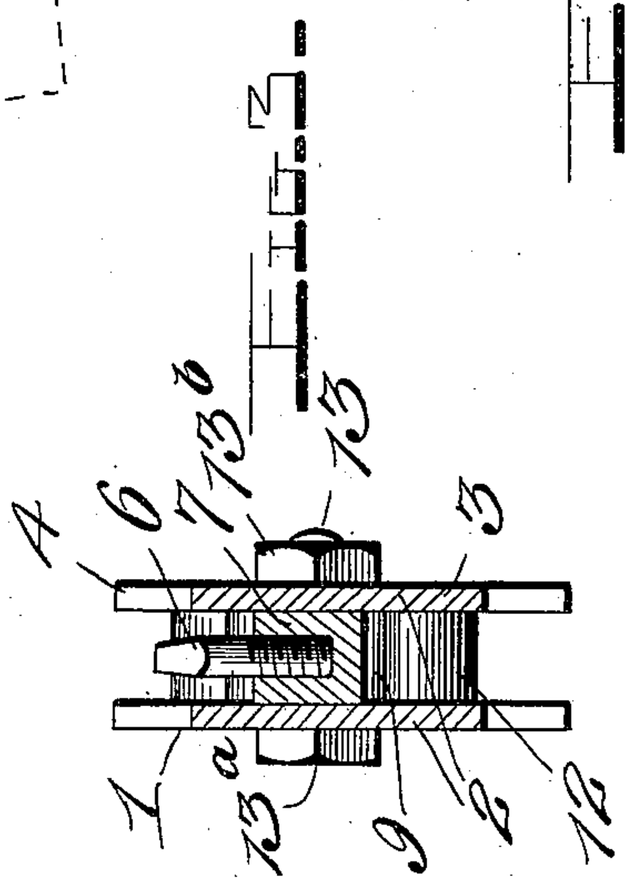


FIG. 3.

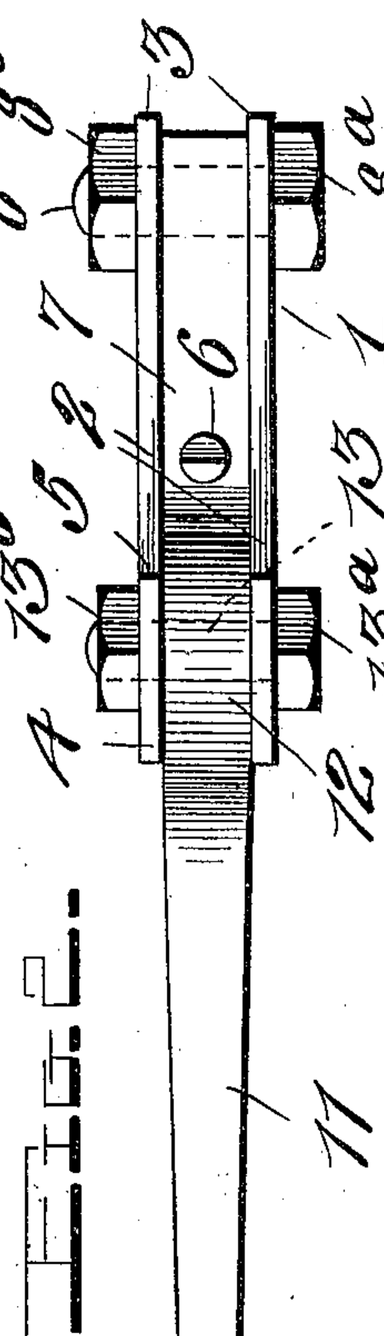
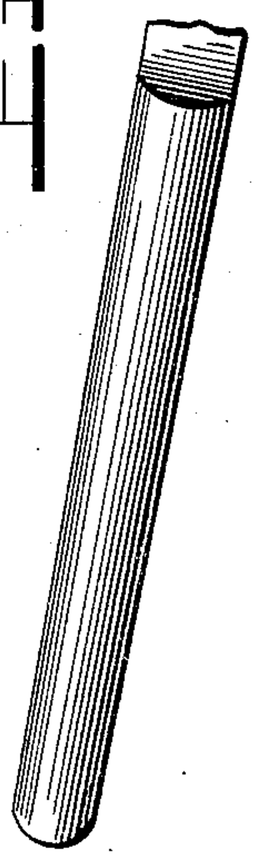


FIG. 4.



Witnesses

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FLUE-CUTTING DEVICE.

982,932. Specification of Letters Patent. Patented Jan. 31, 1911.

Application filed September 12, 1910. Serial No. 581,518.

To all whom it may concern:

Be it known that I, LANDER B. BURT, a citizen of the United States, residing at Hallock, in the county of Kittson and State of Minnesota, have invented certain new and useful Improvements in Flue-Cutting Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improved device for cutting boiler flues and other tubes, and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of the invention is to provide an improved device of this character which effects a material economy in the cost of its construction, which is extremely simple and compact, which admits of the ready disassembling of the parts, and which also admits of the reversal of the operating lever.

In the accompanying drawings—Figure 1 is partly a side elevation and partly a sectional view of a flue cutter constructed in accordance with my invention. Fig. 2 is a plan of the same. Fig. 3 is a section of the same on the plane indicated by the line *a*—*a* of Fig. 1.

The body or frame 1 of my improved flue cutter comprises a pair of plates 2, which are T-shaped so that each has an arm 3, and a head 4 at the outer end thereof, and at right angles thereto, the ends of said head providing shoulders 5 to bear against the end of a tube or flue into which the arms 3 of the plates are inserted.

The cutter 6 is screwed into and is hence detachable from an oscillating arm 7 which is pivotally mounted between the arms 3 of the plates 2 by a bolt 8 which also serves to connect said arms of the plates together. The said arm 7 has at its front end a head 9 which forms nearly a complete cylinder, there being a neck or reduced portion 10 on the side thereof next the arm 7. The operating lever 11 is provided with a circular head 12 presenting flat sides and corresponding in thickness with the arm 7, disposed between the heads 4 of the plates 2, and pivotally mounted upon a bolt 13 which is eccentric to said head 12 and which also serves to connect and secure the plates 2 together.

The head 12 of the operating lever, as well as the arm 7 which carries the cutter, bears directly against and operates between the opposing sides of the plates 2, as will be apparent from an inspection of the drawings. The head 12 of the operating lever has on the inner side thereof, a substantially semi-circular socket or notch 14 which receives and fits the head 9 of the arm 7, and it will be understood that by moving the lever on its pivot first in one direction, and then in the reverse direction, oscillating motion will be communicated to the arm 7 so that the point of the cutter 6 carried by the said arm will be caused to operate in and cut through a tube or flue in which the arms 3 of the plates 2 are inserted.

The bolts 8, 13 have heads 8^a, 13^a, to bear on the outer side of one of the plates 2, and nuts 8^b, 13^b, to bear on the outer side of the opposite plate 2, and it will be understood that by first removing the nut, the bolts can be then withdrawn, and the lever and cutter arm removed from between the plates 2, and hence the device may very readily be disassembled at any time. The lever 11 may be mounted between the plates 2 with either side of its head 12 uppermost, or in other words the lever may be reversed, and hence it may be operated in one position in a space which would not admit of its operation in another position.

It will be understood that my improved flue cutter is extremely cheap and simple, that it comprises but very few parts, which may be readily assembled, or disassembled, and that it may be readily manufactured at minimum cost.

I claim:

1. The herein described flue cutter comprising a pair of disconnected T-shaped plates, an arm between them provided with a cutter, and also having a head at its free end, an operating lever having a head between said plates and provided with a notch engaged by the head of the said arm, the said arm and the head of the said lever being both of the same thickness, and the said plates bearing directly against opposite sides of said arm, and said lever head, and bolts forming pivots for the said arm, and the said lever, and passing directly through said arm and said lever, and also through the said plates, said bolts performing the double function of providing pivots for the said arm and the said lever, and connecting devices for the said T-shaped plates, the said bolts being each provided at one end with a head bearing against the outer side of one plate, and at the other end with a nut bear-

ing against the outer side of the other plate, said bolts being thereby detachable from said plates and arm and lever head and permitting the ready disassembling of the parts of the flue cutter.

2. The herein described flue cutter comprising a pair of disconnected T-shaped plates, an arm between them provided with a cutter, and also having a head at its free end, an operating lever having a head between said plates and provided with a notch engaged by the head of the said arm, the said arm and the head of the said lever being both of the same thickness, and the said plates bearing directly against opposite sides of said arm, and said lever head, and bolts forming pivots for the said arm, and the said lever, and passing directly through said arm and said lever, and also through the said plates, said bolts performing the double function of providing pivots for the said arm and the said lever, and connecting devices for the said T-shaped plates, the said bolts being each provided at one end with a head bearing against the outer side of one plate, and at the other end with a nut bearing against the outer side of the other plate, said bolts being thereby detachable from said plates and arm and lever head and permitting the ready disassembling of the parts of the flue cutter, the pivot bolt opening in the head of the said lever, being eccentric to the said head and thereby enabling the lever to be reversed for the purpose set forth.

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

LANDER B. BURT.

Witnesses:
JAMES P. LYNCH,
P. H. KONZEN.