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BURNER FOR LINOTYPE MACHINES.

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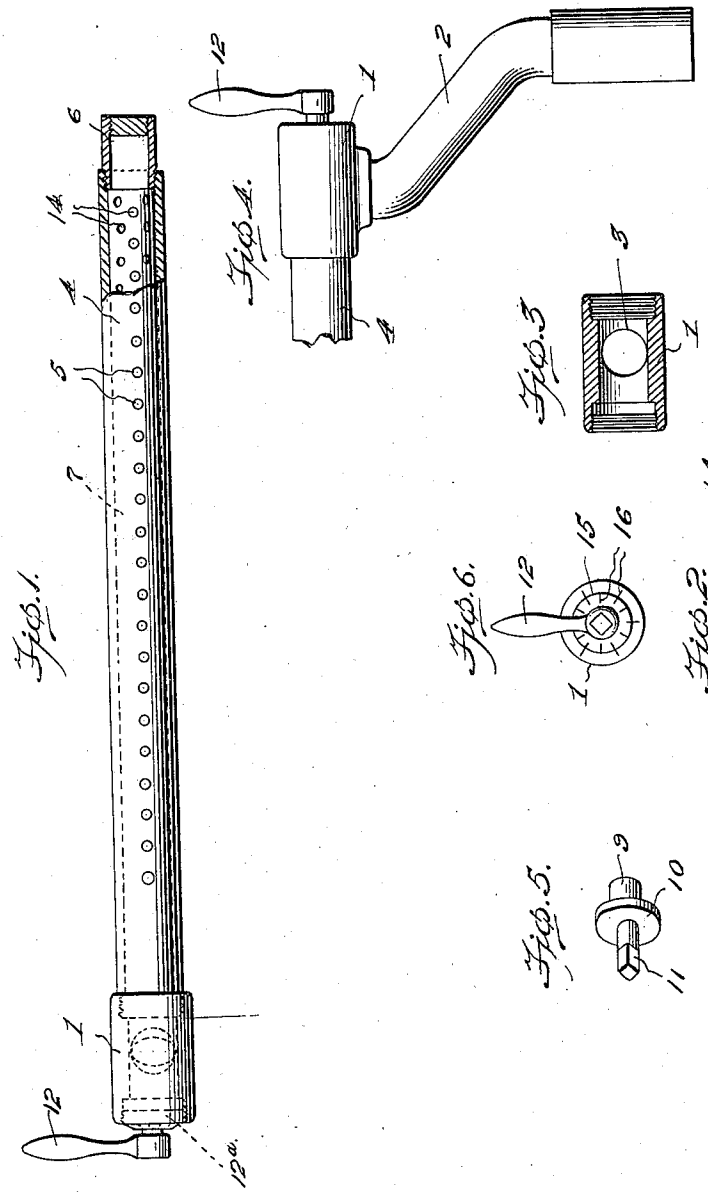

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BURNER FOR LINOTYPE-MACHINES.

1,172,295. Specification of Letters Patent. Patented Feb. 22, 1916.

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To all whom it may concern:

Be it known that I, JOHN H. LA MOY, a citizen of the United States, residing at Glens Falls, in the county of Warren and State of New York, have invented certain new and useful Improvements in Burners for Linotype-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to burners for use in connection with the mouthpieces or blowers of linotype machines, through which the molten metal is forced into the molds and against the matrices for forming the lines of type, and the primary object of the invention is to provide a burner, constructed for regulating the length of the heating flame which engages the mouthpiece for regulating the length of the slug cast and also to eliminate the formation of "squirts" which are often formed when casting a slug of shorter length than the capacity of the mold.

Another object of this invention is to provide a burner, which has a rotatable sleeve positioned therein, and to provide a plurality of serially arranged slots or openings arranged in rows of different lengths, for alinement with serially arranged openings formed in the burner or exterior tube, for regulating the length of the openings within the burner through which the heating flame passes, for regulating the amount of the mouthpiece which is heated.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters designate like or corresponding parts throughout the several views, and in which:—

Figure 1 is a plan view of the improved burner, Fig. 2 is an enlarged plan view of the tube which is rotatably mounted in the exterior or outer burner tube, Fig. 3 is a sectional view through the valve casing for controlling the passage of gas into the burner, Fig. 4 is a view showing the pipe or gas supply connection to the burner, Fig. 5 is a detail perspective view of a closure plug used in connection with the inner tube, Fig. 6 is an end view of the improved burner.

Referring more particularly to the drawings, 1 designates a valve casing, which has communication with a gas or other fuel supply pipe 2, through an opening 3 formed in the side thereof. The valve casing 1 has its opposite ends open, and a tube 4 detachably connected to one end thereof. The tube 4 is provided with a plurality of serially arranged perforations 5 extending in a line throughout a section of the length of the same, which openings are provided for the egressing of the heating flame from the burner, for engagement with the mouthpiece of the melting pot of a linotype machine, for heating the type metal and maintaining it in a molten state upon passage from the mouth-piece into the mold and against the matrices for the casting of the lines of type. The tube 4 has a hollow plug 6 detachably mounted in its outer end. A tube 7 is rotatably positioned within the tube 4 and it extends from the casing 1 into and through the tube 4, and terminates at the inner end of the plug 6.

The tube 7 extends through the casing 1, and is provided with a plurality of circumferentially spaced openings 8 formed therein, which openings or slots 8 are positioned for alinement with the opening 3 to permit of the passage of the gas or fuel into the tube 7. The tube 7 has a plug 9 inserted in its end which extends into the casing 1, which plug is provided with a disk 10 formed thereon for engagement with the end of the tube 7. The plug 9 has a shank 11 extending outwardly from the central axis of the same and the outer surface of the disk 10, which shank has its outer end rectangular in shape, for receiving a handle or wrench 12, for rotating the tube 7 within the tube 4. A nut 12^a is mounted on the shank 11 for holding the plug 9 in the tube 7.

The tube 7 is provided with circumferentially spaced alining rows of serially arranged openings 14, each of which rows are of different lengths than the other, they being arranged in stepped relation with respect to each other, each row being shorter than the row next thereto, as is clearly shown in Fig. 2 of the drawings.

A dial 15 is carried by the shank 11, and

is provided with graduations 16 formed thereupon which are designated correspondingly to the length of the rows of openings 14, so that the operator of the device may accurately position any one of the desired rows in alinement with the perforations or openings 5 which are formed in the tube 4.

In the casting of lines of type, it is often desirable to make slugs of different lengths, and with a burner constructed in accordance with the foregoing description, the amount of molten metal which is forced from the mouth-piece of the melting pot of a linotype machine, may be effectively regulated, eliminating the inconveniences of what are known in the trade as "squirts," and also creating a saving of gas or fuel as well as the type metal. When it is desired to cast a slug or line of type of any predetermined length, the tube 7 is rotated within the tube 4, to bring the line 14 of openings, which is of a corresponding length to the length of slugs to be cast, into alinement with the line of perforations 5 formed in the tube 4, which regulates the length of the heating flame egressing from the burner and engaging the mouth-piece of the linotype machine, consequently heating only a certain length of the mouth-piece, and permitting the molten metal retained in the remainder of the mouth-piece, other than that heated, to become chilled, and prevented from passing out of the mouth-piece into the mold or casting block. By the provision of the circumferentially spaced openings or slots 8 formed in the rotary tube 7, the fuel will be permitted to enter the tube at all positions of the same.

From the foregoing description taken in connection with the accompanying drawings the advantages of construction and of the method of operation of the improved burner for linotype machines will be readily apparent to those skilled in the art to which this invention appertains and, while in the foregoing description, the principle of the operation of this invention has been described together with various features of construction, it is to be understood that certain minor features of construction, combination and arrangement of parts may be altered to suit practical conditions provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

1. In a burner for use upon linotype machines, a stationary tube having outlet openings, a rotatable fuel feeding tube having a plurality of rows of serially arranged openings formed therein, positioned within said stationary tube, said rows of openings being of different lengths and adapted for registration with the outlet of said stationary tube at different times for regulating the quantity of fuel flowing therefrom.

2. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations formed in a line longitudinally thereof, a fuel inlet communicating with the open end of said tube, a rotary tube positioned within said first named tube and being provided with a plurality of perforations arranged in rows of different lengths, said perforations formed in said rotary tube being adapted for alineing with the perforations formed in said first named tube upon different positions of said rotary tube.

3. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations positioned in a line longitudinally of said tube, a second tube rotatably mounted within said first named tube, a valve casing connected to the open end of said first named tube, said second named tube extending into said valve casing and having communication with a fuel supply, said second named tube being provided with a plurality of serially arranged openings disposed in alining rows of different lengths, each row of openings formed in said rotary tube being adapted for alinement with the perforations formed in said first named tube upon various rotary positions of said rotary tube, and means for manually rotating said rotatable tube within said first named tube.

4. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations positioned in a line longitudinally thereof, a second tube rotatably mounted in said first named tube, a valve casing connected to the open end of said first named tube, said second named tube extending into said valve casing and having communication with a fuel supply, said second named tube being provided with a plurality of serially arranged openings disposed in alining rows of different lengths, each row of said openings being adapted for alinement with the perforations formed in said first named tube upon various rotary positions of the rotary tube, means for manually rotating said rotatable tube within the first named tube, a dial carried by the outer end of said rotary tube and having graduations formed thereon corresponding to the number and position of the rows of openings, and graduations formed upon said stationary or first named tube for co-action with said dial-carried graduations.

5. In a burner for use upon linotype machines, a stationary tube having outlet openings, a rotatable fuel feeding tube having a plurality of rows of serially arranged openings formed therein rotatably mounted within said stationary tube, said rows of open-

ings being of different lengths and adapted for registration with the outlet openings of said stationary tube at different times for regulating the quantity of fuel flowing therefrom, a dial carried by the outer end of said rotary tube and having graduations thereon corresponding to the number and position of the rows of openings, and graduations formed upon said stationary tube for co-action with said dial-carried graduations.

6. In a burner for use upon linotype machines, a stationary tube having outlet openings, a rotatable fuel feeding tube having a plurality of rows of serially arranged openings formed therein, said rotatable tube being rotatably mounted within said stationary tube, said rows of openings being of different lengths and adapted for registration with the outlet openings of said stationary tube at different times for regulating the quantity of fuel flowing therefrom, said rotary tube being provided with a plurality of circumferentially spaced fuel inlet openings formed therein remote from said rows of openings.

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

JOHN H. LA MOY.

Witnesses:
MABEL A. ROACH,
CHARLES H. CLARK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."