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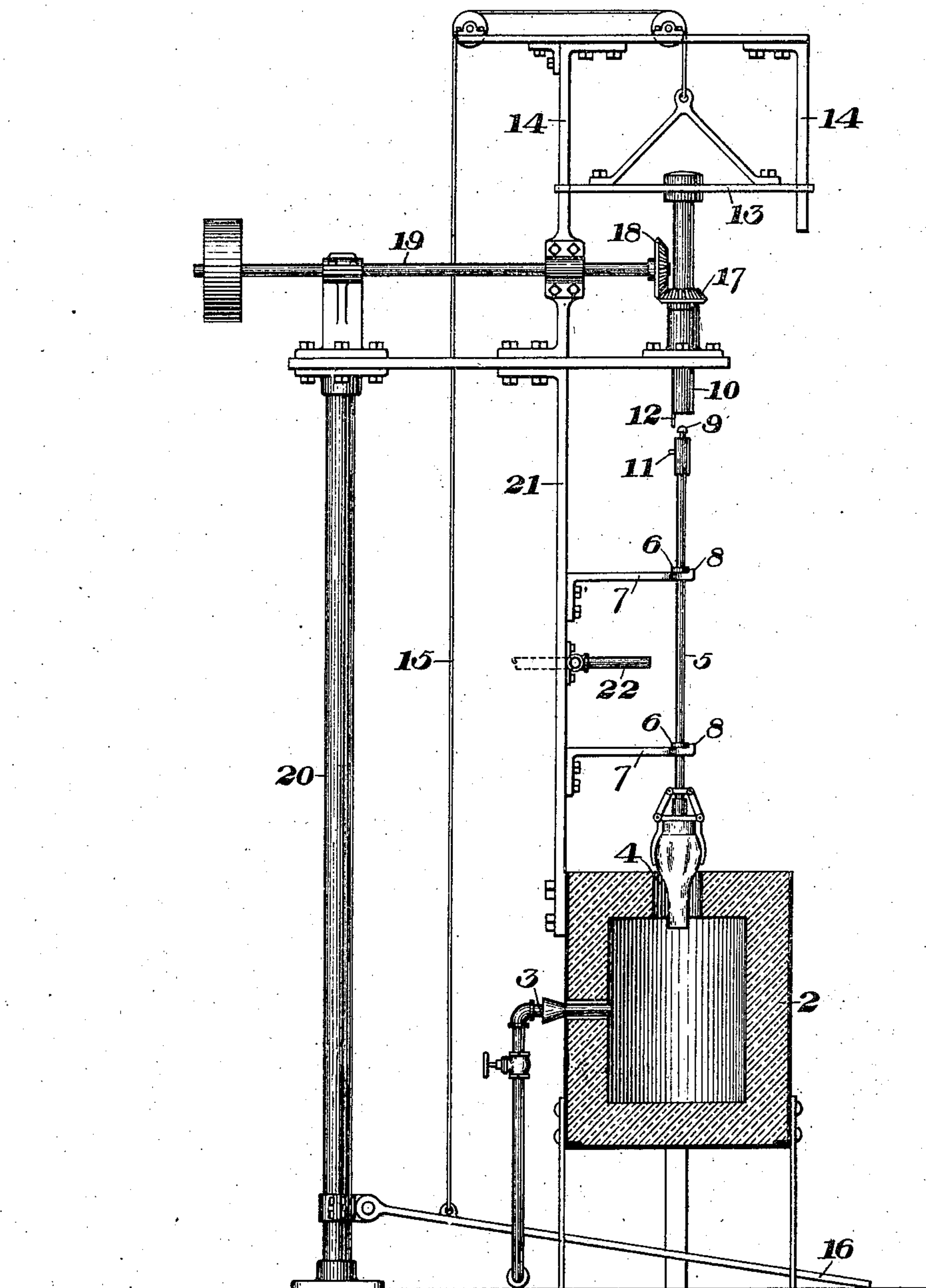
Patented Jan. 17, 1899.

W. BUTTLER.

METHOD OF AND APPARATUS FOR HEATING AND FLARING LAMP CHIMNEYS.

(Application filed Mar. 7, 1898.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM BUTTLER, OF REDKEY, INDIANA.

METHOD OF AND APPARATUS FOR HEATING AND FLARING LAMP-CHIMNEYS.

SPECIFICATION forming part of Letters Patent No. 617,922, dated January 17, 1899.

Application filed March 7, 1898. Serial No. 672,874. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BUTTLER, of Redkey, in the county of Jay and State of Indiana, have invented a new and useful Improvement in Methods of and Apparatus for Heating and Flaring Lamp-Chimneys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a sectional side elevation of apparatus constructed in accordance with my invention.

My invention relates to the finishing of lamp-chimneys, and is designed to provide an improved means for and method of heating the ends of the chimneys and also flaring them preparatory to the crimping operation when such crimping is carried out.

In the drawing, 2 represents a heating-furnace, which may be of square or any desired shape, and into which projects a gas-burner 3. The furnace is provided with a hole 4 in its top for the entrance of the chimney, and each chimney is secured in a suitable snap 5, having rings or collars 6, which rest upon brackets 7 and are held in place by guide-lugs 8 upon the brackets. The upper end of this snap is provided with a pin or button 9, arranged to enter a hollow shaft 10, and with a projecting lug 11, arranged to be engaged by a pin 12 upon the shaft 10 whenever this shaft is depressed. The upper end of the shaft 10 is secured to a sliding cross-head 13, guided between suitable standards 14 and supported upon a rope or flexible connection 15, extending to a foot-lever 16. A bevel-wheel 17 surrounds the shaft 10 and is provided with a spline connection with this shaft, this bevel-wheel intermeshing with another, 18, mounted upon a driven shaft 19.

20 is a vertical standard, upon which and the standard 21, extending from the furnace, the various parts are supported. In order to cool the snap-rod, so that it may be handled by the workmen, I provide a cooling means, such as the nozzle 22, which is connected to an air-pipe, by which a blast of air may be driven upon the rod. Any other suitable means for keeping the rod cool may be employed without departing from my invention.

In carrying out my improved method a chimney is clamped within a snap 5, and this

snap being placed upon the brackets 7, the operator having lifted the cross-head 13 removes his foot from the lever 16, and as the cross-head and shaft 10 descend the pin 12 of the shaft engages the lug 11 of the snap, and the snap will be rapidly rotated from the shaft 19. The chimney being thus rotated with its lower end in the slot, sufficient heat is generated to thoroughly soften the lower end of the chimney, and owing to the vertical position of the chimney and its rapid rotation it will be expanded or flared out evenly and uniformly. The operator then places his foot upon the lever 16, thus severing connection between the shaft 10 and the snap, and lifts the snap from its supports and immediately crimps the flared and heated chimney.

The advantages of my invention result from the rotating of the chimney in a vertical position during its heating. The rotation prevents the running down of the glass, which would otherwise occur on account of the heat necessary to soften it for crimping, and the vertical position gives a uniform distribution of the heat and prevents distortion of the shape of the chimney. The chimney may, if desired, be heated in this manner without flaring out, and I intend to cover its heating while being rotated in vertical position whether it is flared or not. A crimping-machine may be placed adjacent to the heater and the work thus carried on much faster and more easily than before.

The construction and arrangement of the apparatus employed may be varied widely without departing from my invention, since

What I claim is—

1. The combination with a furnace having a hole or slot in its top, of supports carrying holders above and in line with the hole, a snap removable from and arranged to be temporarily supported in the holders in a vertical position with its contained article having its lower end exposed to the heat within the slot, and detachable connections arranged to rotate the snap when placed in the holder; substantially as described.

2. The combination with a furnace having a hole or slot in its top, of supports carrying holders above and in line with the hole, a removable snap arranged to be temporarily supported in the holders in a vertical posi-

tion with its contained article having its lower end exposed to the heat within the slot, connections arranged to rotate the snap when placed in the holder, and means for cooling the snap-rod when in operative position; substantially as described.

3. The combination with a furnace having a hole or slot in its top, of a holder arranged to support a removable snap in a vertical position over the hole, mechanism for rotating the snap when in place, and a pipe arranged to direct a cooling blast against the snap-rod; substantially as described.

4. The method of heating and flaring chimneys and similar articles, consisting in supporting them in a depending position, rotating them, and heating the lower ends during rota-

tion sufficiently to cause flaring by centrifugal action; substantially as described.

5. The method of heating and flaring chimneys, consisting in supporting them in a depending position, rotating them in such position, heating the lower ends during rotation sufficiently to cause flaring by centrifugal action, and then removing and crimping their flared ends while still hot; substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM BUTTLER.

Witnesses:

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