M. U. WIKSTROM.

ANNEALING FURNACE.

APPLICATION FILED FEB. 1, 1918.

1,319,741.

Patented Oct. 28, 1919.

2 SHEETS—SHEET 1.

FIG. 1

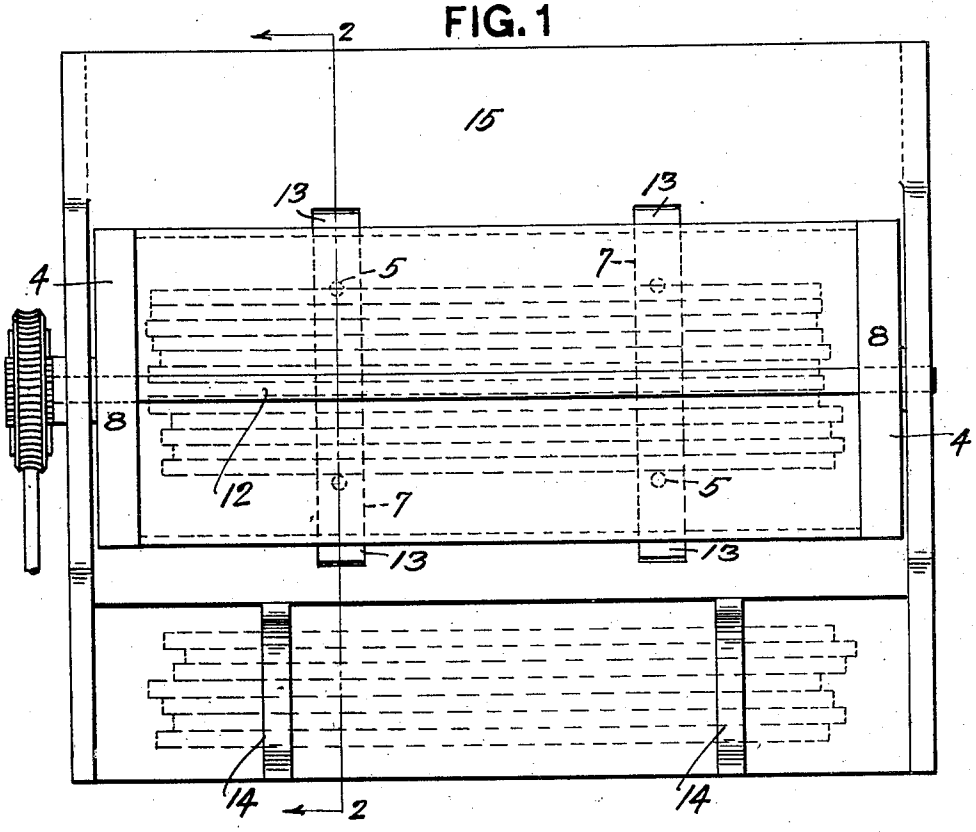
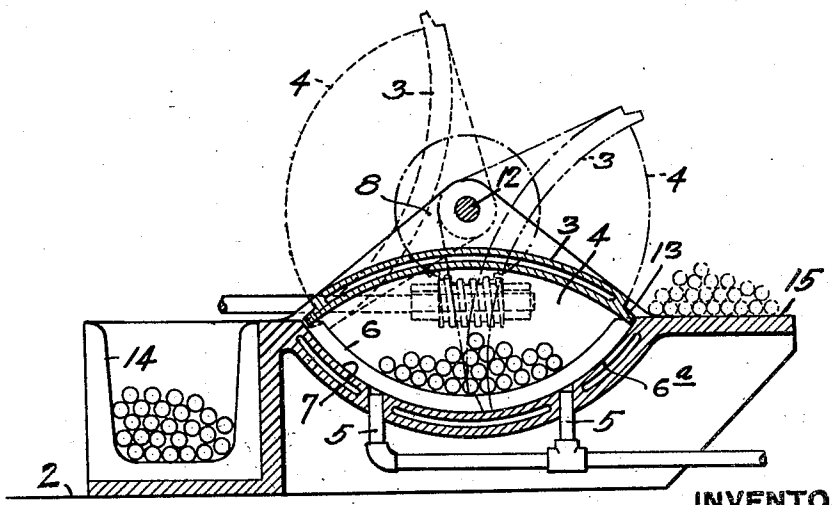


FIG. 2



INVENTOR

Malcolm U. Wikstrom

By Kay Tolman Powell

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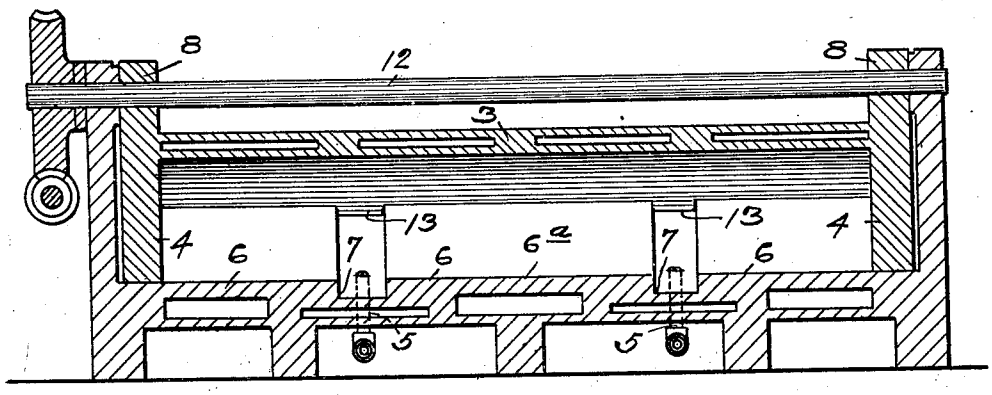
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FIG. 3



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UNITED STATES PATENT OFFICE.

MALCOLM U. WIKSTROM, OF CHARLEROI, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH STEEL PRODUCTS COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

ANNEALING-FURNACE.

1,319,741. Specification of Letters Patent. Patented Oct. 28, 1919.

Application filed February 1, 1918. Serial No. 214,857.

To all whom it may concern:

Be it known that I, MALCOLM U. WIKSTROM, a citizen of the United States, and resident of Charleroi, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Annealing-Furnaces; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to annealing furnaces and more especially to a furnace of this character adapted for the annealing of pipes or like articles.

The object of my invention is to provide a furnace of this character which is quickly charged and discharged of its contents, the construction being such as to provide for the self-discharging of the contents thereby greatly reducing the labor and time in the annealing of the tubes.

In the accompanying drawing, Figure 1 is a plan view of my improved furnace; Fig. 2 is a cross-section on the line 2—2, Fig. 1 showing in dotted lines the parts in charging and discharging positions, and Fig. 3 is a central longitudinal sectional view of the furnace chamber.

In the drawing, the numeral 2 designates a suitable base or foundation upon which the furnace is erected, the furnace consisting of the movable top portion 3 with end-segmental portions 4 forming the end walls of the furnace, and arrangements are made for heating the furnace by the introduction of the gas pipes 5.

The bottom 6^a of the furnace is curved or provided with curved supports or ribs 6 to receive the tubes to be annealed, and these supports are separated by grooves or depressions 7.

The ends 4 of the furnace have the upwardly extending bearing portions 8. This top 3 is pivotally mounted to swing or rotate and is connected to the bearings by means of the pivotal shaft 12.

The edges of the curved top 3 have the lugs or projections 13 which are adapted to engage and move in the grooves or depressions 7 in the furnace bottom. At one side of the furnace is the rack 14 to receive the tubes after they have been annealed, and at the opposite side of the furnace is the platform 15 upon which the tubes to be annealed are discharged and from which they are moved into the furnace. When my improved furnace is in use the tubes brought by an overhead crane in a bundle, are lowered onto the platform 15 and the bundling chains released. The cover meanwhile has been moved to the position shown in dotted lines to the right of Fig. 2, whereupon the tubes on the platform 15 are shoved into the furnace, the cover being moved to admit of the tubes, whereupon the cover is moved around into position indicated in full lines in Fig. 1. Heat is then applied for the annealing operation and after the tubes have been properly annealed the cover is moved into the position indicated in dotted lines to the left Fig. 2, and by this movement the tubes will be swept over the curved supports 6 by the edge of the cover moving over said supports, and the tubes will be swept out and discharged into the rack 14. The cover may make a complete revolution if desired. By having the lugs 13 moving in the grooves 7 there is no liability of any of the tubes failing to be discharged onto the rack as said lugs project beyond the edge of the top piece and give a wider sweep.

What I claim is:

1. An annealing furnace comprising a curved support for the articles to be annealed, and a movable cover whose edge sweeps over said curved support.

2. An annealing furnace comprising a curved support for the articles to be annealed, and a swinging cover whose edge sweeps over said curved support.

3. An annealing furnace comprising a curved support for the articles to be annealed, a pivotally mounted cover whose edge sweeps over said curved support.

4. An annealing furnace comprising a curved support for the articles to be annealed, a cover comprising a curved top portion and segmental ends mounted to ro-

tate, whereby the edge of the top portion sweeps over said curved support.

5. An annealing furnace comprising a curved support for the articles to be annealed with grooves between said supports, a swinging cover, and projections on said cover engaging said grooves.

In testimony whereof, I, the said MALCOLM U. WIKSTROM, have hereunto set my hand.

MALCOLM U. WIKSTROM.

Witnesses:
ROBT. D. TOTTEN,
JOHN F. WILL.

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