

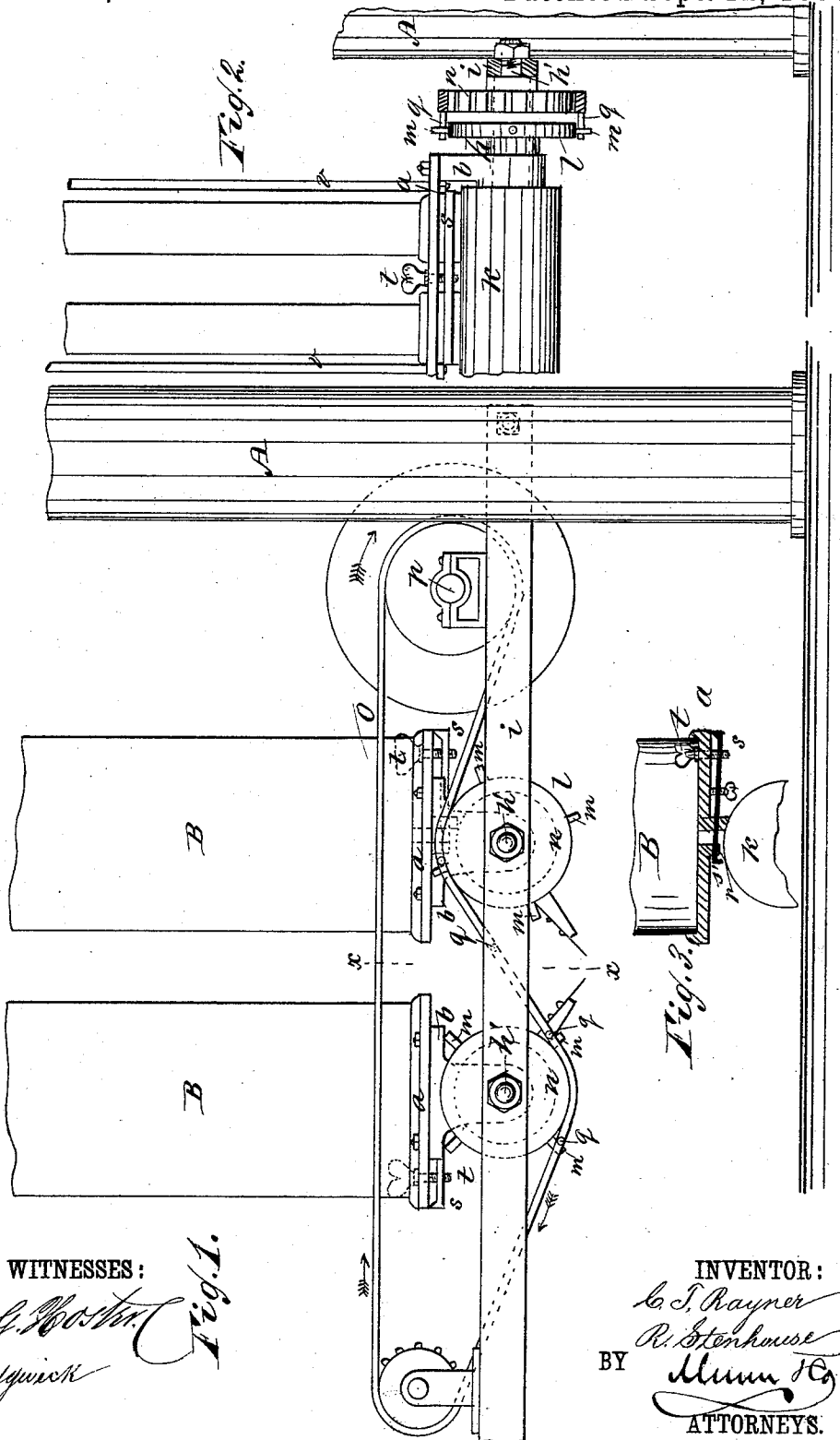
(No Model.)

C. T. RAYNER & R. STENHOUSE.

AUTOMATIC CUT-OFF FOR BONE BLACK KILNS.

No. 264,337.

Patented Sept. 12, 1882.



WITNESSES :

Theo. G. Boston. Fig
to Burlington

INVENTOR:

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UNITED STATES PATENT OFFICE.

CYRUS T. RAYNER AND RICHARD STENHOUSE, OF NEW ORLEANS, LA.

AUTOMATIC CUT-OFF FOR BONE-BLACK KILNS.

SPECIFICATION forming part of Letters Patent No. 264,337, dated September 12, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that we, CYRUS T. RAYNER and RICHARD STENHOUSE, both of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Automatic Cut-Off for Bone-Black Kilns, of which the following is a full, clear, and exact description.

The object of our invention is to provide for operating the cut-off of bone-black kilns used in sugar-houses by mechanism requiring but little power for its operation, and which shall be reliable in its operation.

To that end our invention consists in a regulating-plate and a cut-off roller operated by an endless chain for drawing the coolers at intervals, as required, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a kiln provided with our automatic cut-off mechanism. Fig. 2 is a transverse section on line *xx* of Fig. 1; and Fig. 3 is a detail view.

A is one of the supporting-columns of the kiln.

B B are the coolers, which are placed in two rows, as usual, supported upon base-plates *a*, which are suspended by rods *v* from the kiln-bottom. On plates *a* are hangers *b*, supporting cross-shafts *h*. Upon the shafts *h* are the cut-off rollers K K, which rollers extend beneath the coolers B, and upon the shafts at the end of the rollers K are wheels *l l*, that are provided with pins *m* for giving rotation to the rollers K, as hereinafter described.

On studs *h'*, projecting from longitudinal side bars, *i*, attached to columns A, are loose chain or sprocket wheels *n*, which are rotated by an endless chain, *o*, the chain *o* being operated by a pulley on the driving-shaft *p*.

q q are side lugs or projections upon the chain *o*, placed at regular intervals and at any required distance apart, for giving rotation to the wheel *l*, by contact with the pins *m* thereon.

The coolers B are provided each with an aperture in the bottom above the roller K, and from this aperture extends a pipe having a side opening, *r*. Each cooler is also provided with a regulating-plate, *s*, formed with a lip or

flange, *s'*, and adjustable by set-screws *t*, so that the flange of the plate may be moved up or down to cover the discharge-opening *r* more or less, the object being to regulate the discharge, it being necessary to give the middle retorts of the kiln a more rapid discharge, as they will burn more matter than the outside retorts.

In operation the chain *o* is to be speeded so that it will travel its own length in a certain interval of time. If it is desired to give the roller K a full turn in each length of the chain, the chain will be provided with four pins, *q*, or for a half-turn with two pins, each pin acting to give to the roller K of each row of coolers a quarter-rotation. This arrangement provides for drawing the coolers at regular intervals of time, and by adjustment of the regulating-plate for drawing a given quantity, so that a given quantity can be drawn in a given time without varying the speed or power. As the rollers K turn they carry out a certain quantity of the bone-black, the amount being more or less according to the adjustment of the plate *s*.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In bone-black kilns, the rollers K, fitted beneath the coolers B, and the endless chain *o*, operating to give the rollers K a partial rotation at regular intervals, substantially as described, combined for operation, as set forth.

2. The combination of the rollers K, the wheels *l*, provided with pins *m*, and the endless chain *o*, provided with pins *q*, together and with the coolers B, having outlet-openings *r*, substantially as shown and described.

3. The adjustable regulating-plate *s*, in combination with the coolers B, having outlets *r*, and the rollers K, substantially as shown and described.

4. In bone-black kilns, two or more cut-off rollers, K K, combined with an endless traveling chain, *o*, substantially as described, whereby both rollers are operated by a single chain.

CYRUS T. RAYNER.

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Witnesses:

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