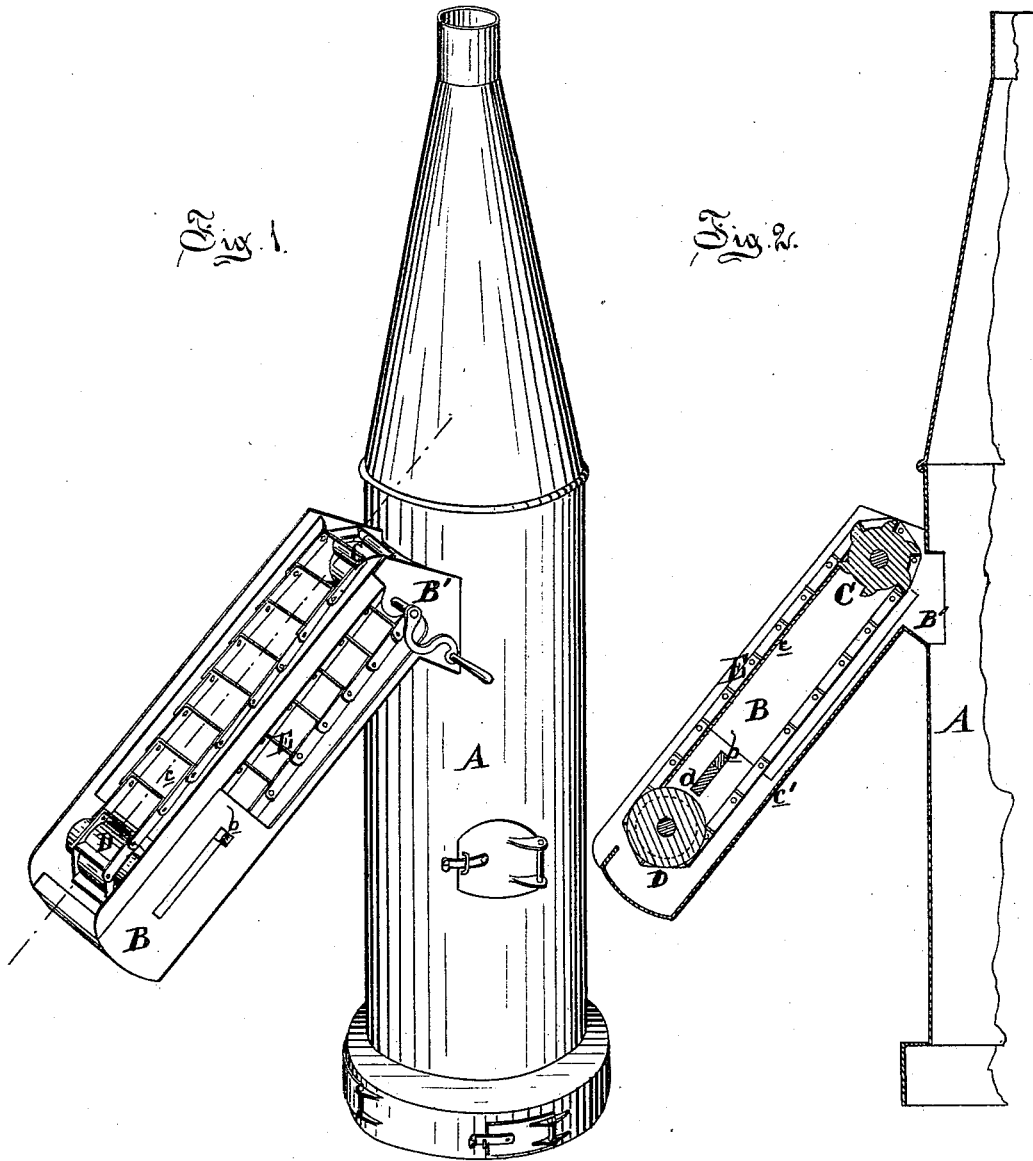


I. O. SMITH & P. WALKER.
Refuse-Burners.

No. 166,650.

Patented Aug. 10, 1875.



Attest:
Edward Barthel.
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UNITED STATES PATENT OFFICE.

IRA O. SMITH AND PETER WALKER, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN REFUSE-BURNERS.

Specification forming part of Letters Patent No. **166,650**, dated August 10, 1875; application filed June 3, 1875.

To all whom it may concern:

Be it known that we, IRA O. SMITH and PETER WALKER, of Muskegon, in the county of Muskegon and State of Michigan, have invented an Improvement in Refuse-Burners, of which the following is a specification:

The nature of our invention relates to an improvement in refuse-burners which are erected outside of, but in close proximity to, saw-mills, for the purpose of consuming saw-dust and other refuse, large quantities of which are made in the manufacture of lumber; and its object is to save the expense of handling and transferring the refuse material by manual labor.

The invention consists in the combination of an endless-chain elevator and carrier for conveying the refuse from the saw-pits into the burner, as more fully hereinafter set forth.

Figure 1 is a perspective view. Fig. 2 is a longitudinal vertical section.

In the drawing, A represents the furnace of a refuse-burner, the particular form of which is not an essential feature of our invention. B is the leg of an elevator and conveyer, preferably built of metal, extending from any point in the lower story of the mill, where the refuse is made or accumulates, to and through the side of the mill-structure to a point near the upper part of the furnace of the burner, into

which is led a metallic chute, B', from the upper end of said leg. C is a chain-wheel, journaled across the upper end of the leg. D is a drum, journaled in a frame, *a*, placed in a longitudinal slot in the lower end of the leg, and adjusted therein by a key, *b*. E is an endless chain composed of U-shaped iron links pivoted together, and which runs over the chain-wheel and drum. The tension of this chain is adjustable through the key and frame in the foot of the leg. The chain-wheel is rotated from any convenient source of power in the mill. The upper leg of the chain runs over a plate, *c*, extending from the chain-wheel to the drum, to prevent the refuse from falling through the chain. A similar plate, *c'*, forms the under side of the leg, and returns to the lower end any refuse that may fall on it.

What we claim as our invention is—

The combination, with a refuse-burning furnace, A, of the elevator-leg B B', extending from the said furnace to the mill where the refuse is accumulated, and provided with the wheels C D, endless chain E, and plate *c*, substantially as described and shown.

IRA O. SMITH.
P. WALKER.

Witnesses:

S. S. MORRIS,
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