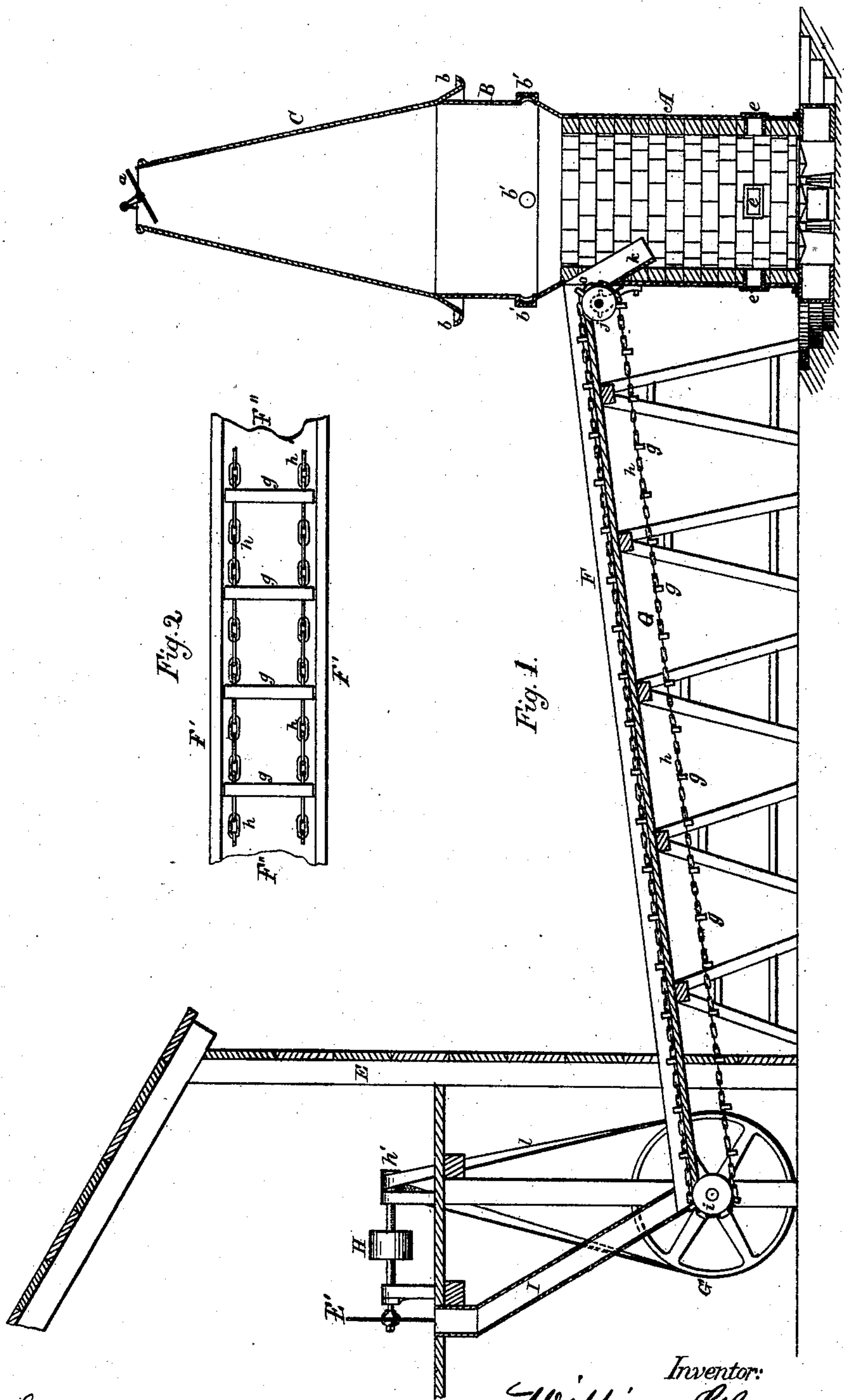


W. GLUE.

DEVICE FOR CONVEYING REFUSE FROM SAW-MILLS TO
FURNACES OR BURNERS.

No. 177,826.

Patented May 23, 1876.



Attest:
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UNITED STATES PATENT OFFICE.

WILLIAM GLUE, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN DEVICES FOR CONVEYING REFUSE FROM SAW-MILLS TO FURNACES OR BURNERS.

Specification forming part of Letters Patent No. **177,826**, dated May 23, 1876; application filed August 25, 1875.

To all whom it may concern:

Be it known that I, WILLIAM GLUE, of the city of Muskegon, county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Devices for Conveying Refuse from Saw-Mills to Furnaces or Burners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a sectional view of the furnace-conveyer, and a part of a mill to which it is attached. Fig. 2 is a detail view of a portion of the conveyer.

This invention relates to an improvement in the method of conveying refuse from saw-mills to the furnace in which it is to be consumed, and has especial reference to an improvement upon the invention for which Letters Patent of the United States No. 145,861, bearing date December 23, 1873, were granted to me; and it consists in a novel arrangement of devices for carrying such refuse, as will be hereinafter fully described, and then pointed out in the claim.

In using furnaces of this construction it is necessary to place them at such a distance from the mill as to prevent danger of ignition from the radiation of the heat, and as in large mills the mass of refuse undergoing combustion at one time is of such dimensions as to evolve a large amount of heat, the distance at which the furnace is placed must be proportionally great. This necessitates the use of a conveying or feeding apparatus which shall be automatic in its operation, and capable of carrying the refuse for any desired distance with certainty.

A represents the furnace in which the refuse or saw-dust is consumed after being conveyed and properly fed therein; B and C, sections of the furnace A. F is the conveyer, receiver, and guideway, made in the form of a trough, having sides F' and bottom F'' of iron, or some other incombustible material.

This conveyer-guideway extends from a

convenient place in the mill E to receive the sawdust from the saw or saws E' by a proper constructed chute or chutes, I, (if more than one saw is used,) and of such size in width and depth as will receive all the dust or refuse to be conveyed from the mill.

G is the conveyer or carrier, composed of a series of transverse bars or scrapers, *g*, of such length as to freely slide within or between the sides F' of the conveyer-guideway, and of about the same width as the sides F' are above the bottom F''. These bars *g* are connected together at proper distances apart, and held so by the chains *h*, which chains are connected together at their ends to form an endless carrier within the trough F. The chains *h* pass over sprocket-wheels *i* and *j*, and are made to revolve by the wheel *i*, sprocket-wheel *i* being placed upon a revolving shaft within the mill E, which is driven by belt *l*, having its motion from pulley *h'* on the saw-arbor H; thence over a pulley, G', on the same shaft with the sprocket-wheel *i*. Sprocket-wheel *j* is fast upon a shaft near the opening *o* in the side of the furnace A, and is caused to revolve by the endless chains *h* and sprocket-wheel *i*.

k is a chute within the opening *o* and furnace-walls to receive and give direction to the sawdust or refuse that is conveyed to it by the carriers *g* of the conveyer, so that such refuse will be surely delivered upon the center of the grate or pile of burning refuse in the furnace.

The opening *o* in the furnace is not closed by a door, as it serves to supply air to the burning mass within the furnace, to affect complete combustion of the gases generated within the furnace.

The details of construction may be varied to suit changes in situation, or other circumstances, without departing from the principle or spirit of the invention.

The carrier may be operated in different ways—as either or both sprocket-wheels may be used to give motion to the carrier, and gear-wheels may be used instead of belts to give motion to the sprocket-wheels.

The construction of the carrier may also be varied to suit a change of circumstances or

different conditions under which it is to operate, and other wheels than the sprocket-wheels may be used to operate the carrier.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

1. The method of conveying refuse to a refuse-burning furnace by means of the devices herein shown and described.

2. The endless carrier G, composed of the chains *h* and transverse bars *g*, guideway-trough F, sprocket-wheels *i* and *j*, in combina-

tion with the chute I in the mill and chute *k* in the furnace, constructed to operate as described.

In testimony that I claim the foregoing I have hereunto affixed my signature this 7th day of July, 1875, in the presence of two witnesses.

WM. GLUE.

Witnesses:

CHARLES C. CHAMBERLAIN,
J. EMMET JAMISON.