

(No Model.)

M. ESPINOSA.
BAGASSE DRIER.

2 Sheets—Sheet 1.

No. 423,140.

Patented Mar. 11, 1890.

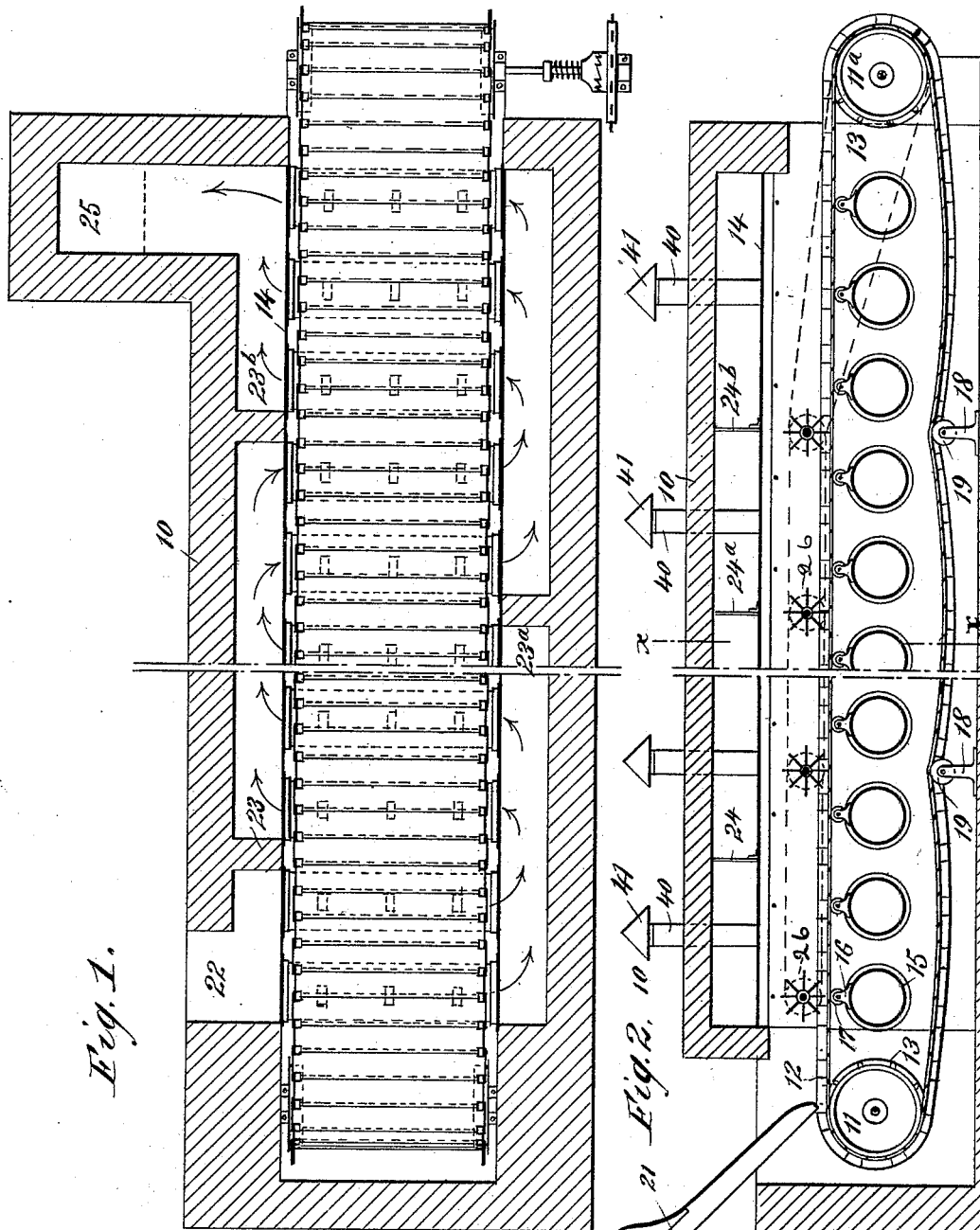


Fig. 1.

Fig. 2.

WITNESSES:
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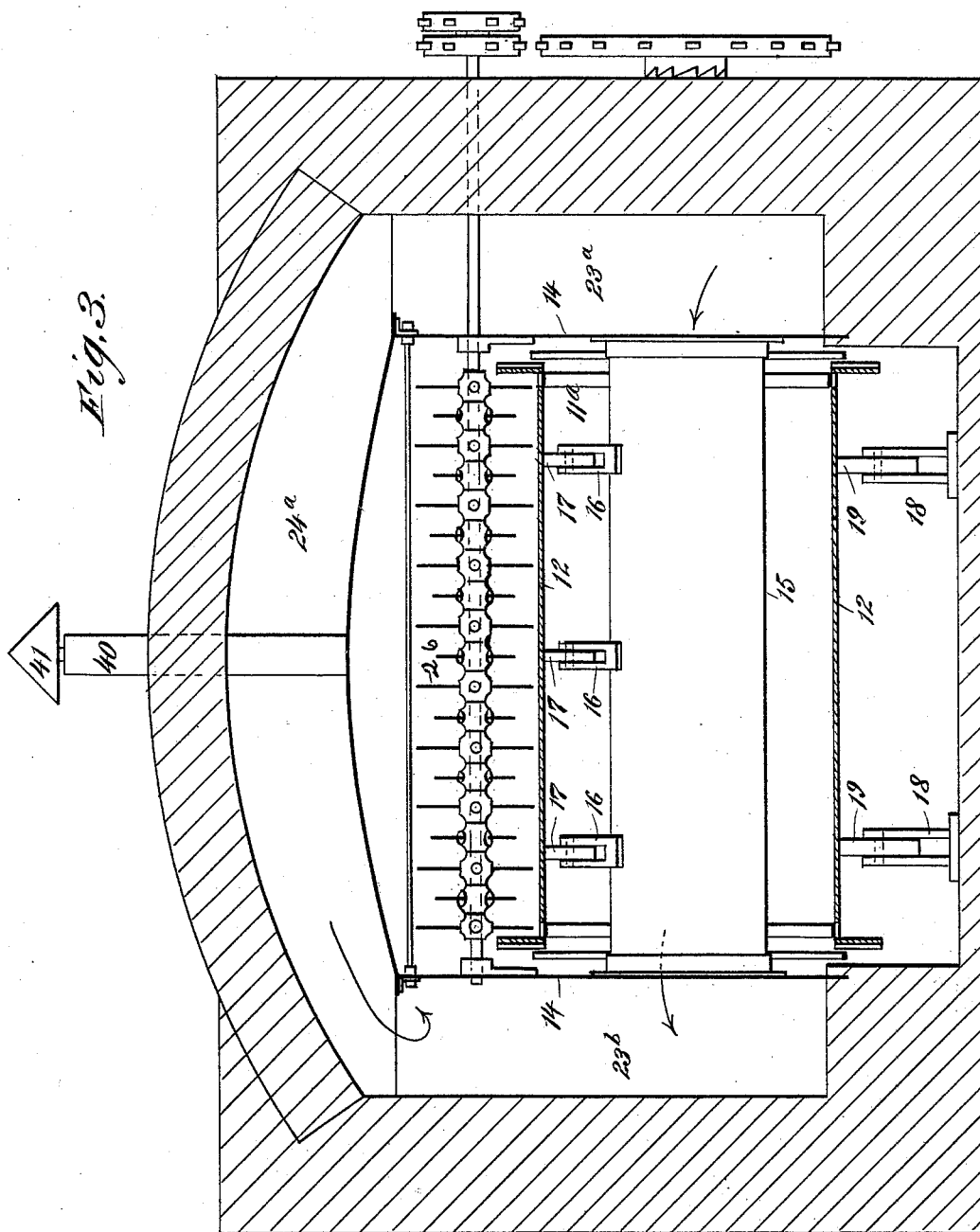
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BY

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UNITED STATES PATENT OFFICE.

MANUEL ESPINOSA, OF MATANZAS, CUBA.

BAGASSE-DRIER.

SPECIFICATION forming part of Letters Patent No. 423,140, dated March 11, 1890.

Application filed July 10, 1889. Serial No. 317,083. (No model.)

To all whom it may concern:

Be it known that I, MANUEL ESPINOSA, a citizen of the United States, residing at present in Matanzas, Cuba, have invented a new and Improved Bagasse-Drier, of which the following is a full, clear, and exact description.

This invention relates to an apparatus designed for use in the drying of bagasse or analogous material, the main objects of the invention being to so arrange the drier that heat will be delivered above and below an advancing stratum of bagasse, provision being made for the agitation of the bagasse and for the carrying off of the vapor produced by the heat; and to the ends named the invention consists of certain novel constructions, arrangements, and combinations of elements to be hereinafter fully described, and specifically pointed out in the claim.

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

Figure 1 is a sectional plan view of my improved bagasse-drier. Fig. 2 is a sectional elevation of the drier, and Fig. 3 is an enlarged cross-sectional view on line *xx* of Fig. 2.

In constructing the drier forming the subject-matter of this application I build a long housing 10, that is preferably of brick, and in this housing I mount drums 11 and 11^a, which serve as supports for an endless carrier-belt 12, said belt being preferably made of metallic sections having upturned flanges, which overlap and are riveted together, as shown in the drawings, spaces being left for the passage of the teeth of sprocket-wheels 13, that are carried by the drums.

The endless belt 12 is inclosed in a metallic casing 14, the walls of which casing are, however, pierced by flues 15, which extend between the two lengths of the belt 12. In order that the upper length of the belt may be supported in a substantially horizontal position, I mount brackets 16 upon the flues 15, which said brackets carry supporting-wheels 17, upon which the upper length of the belt rests, and in order that the lower length of the belt may be upheld I provide other brackets 18, which carry supporting-wheels 19, said brackets 18 being mounted, as best shown in Fig. 2. The bagasse or other material to be treated is delivered from the

mill to an endless carrier-belt 20, which in turn delivers the bagasse to a chute 21, that leads downward and delivers it to the belt 12, as shown in Fig. 2.

At one end of the housing 10, I arrange a furnace and carry the products of combustion from such furnace through a flue 22 to the first of the series of the flues 15, a barrier 23 acting to direct a portion of the products of combustion through said flues, another portion of the products passing upward over the top of the metallic casing which surrounds the belt, an upper barrier 24 directing such products of combustion over the top of the casing. Other barriers 23^a and 24^a, 23^b 24^b, &c., are arranged as illustrated, so that the products of combustion are forced to take the directions indicated by the arrows shown in Fig. 1 until they finally reach the stack 25.

During the process of drying the belt 12 is advanced by applying power to the shafts of either one of the drums, and as the belt advances the bagasse or other material carried thereby is beaten up by beaters 26, said beaters consisting of flexible arms that are mounted upon hubs carried by a transverse shaft, a rotary motion being imparted to said shaft by means of driving-chains that are not shown in the drawings.

In order that the vapor generated by the heat passing above and below the stratum of bagasse that is being dried may be carried off, I provide exit-tubes 40, which lead up through the roof of the housing 10 from the metallic casing 14, these tubes being by preference provided with caps 41, as will be readily understood.

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

The combination, with the housing, a casing within the same and spaced therefrom, and an endless carrier traveling in the casing, of flues extending through the casing and communicating at the ends with the space within the housing exterior to the casing, and barriers or deflectors in said intervening space for imparting a tortuous or serpentine draft, substantially as set forth.

MANUEL ESPINOSA.

Witnesses:

EMILIO ESPINOSA,
EDWARD KENT, Jr.