

(No Model.)

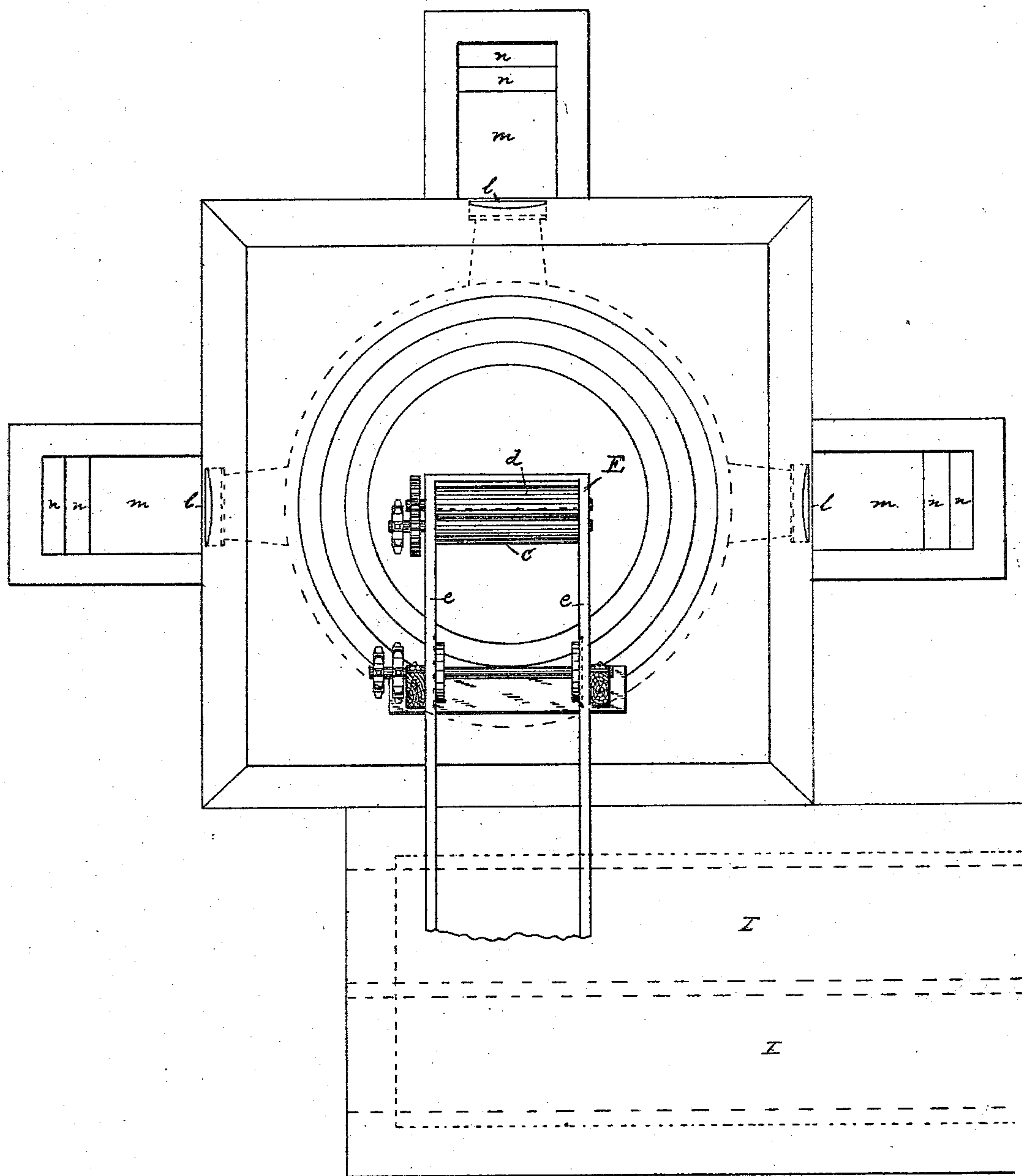
3 Sheets—Sheet 1.

E. WILLIAMS.  
BAGASSE FURNACE.

No. 281,218.

Patented July 10, 1883.

— FIG. 1. —



WITNESSES

*Wm. H. Row*  
*Jno. R. Young*

INVENTOR

*Elias Williams*  
*By H. H. Jenkins*

ATTORNEY

(No Model.)

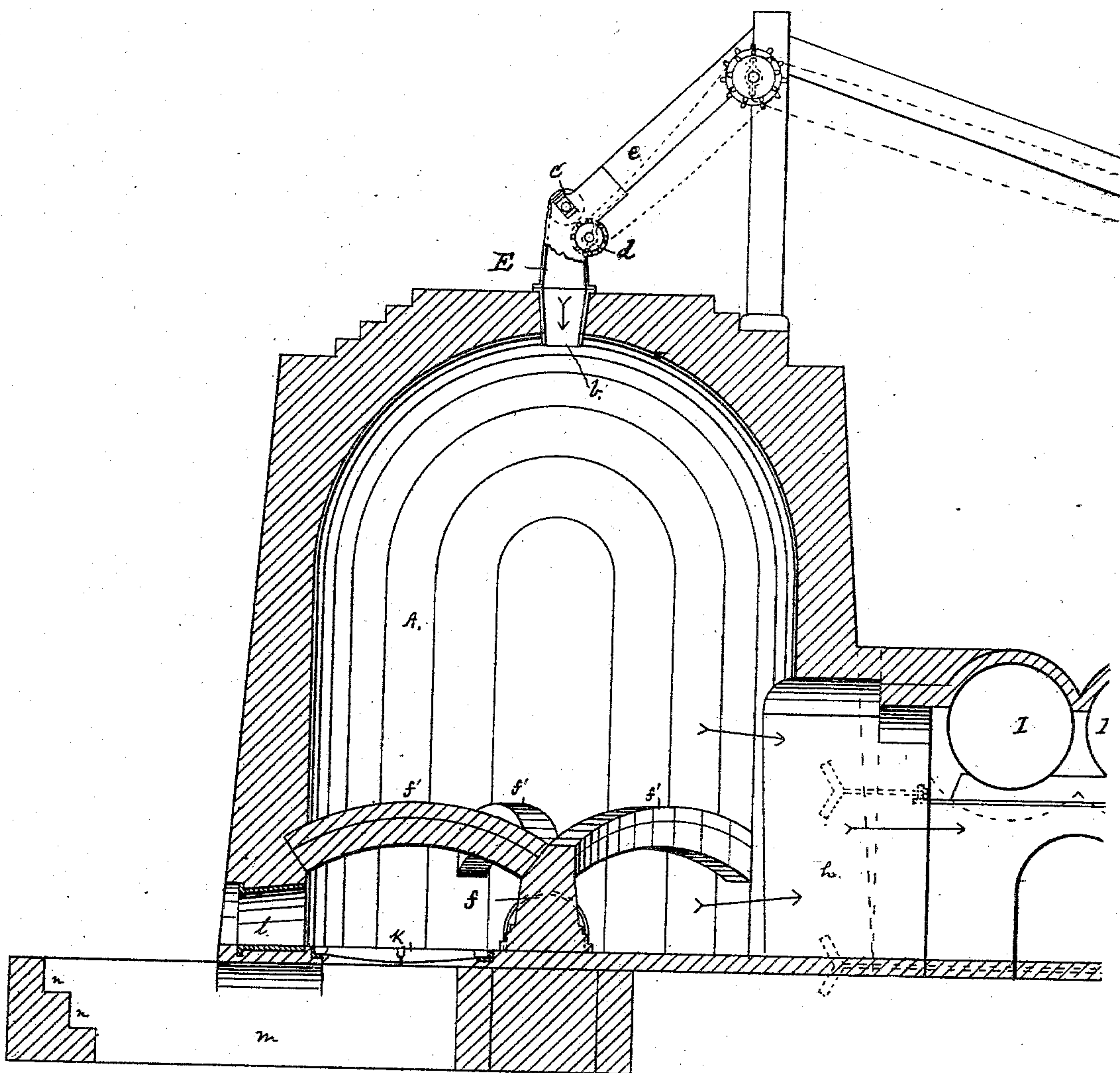
3 Sheets—Sheet 2.

E. WILLIAMS.  
BAGASSE FURNACE.

No. 281,218.

Patented July 10, 1883.

— FIG. 2. —



WITNESSES

*W. H. Rows*  
*Jno. R. Young.*

INVENTOR

*Elias Williams*  
*By H. N. Jenkins*  
ATTORNEY



(No Model.)

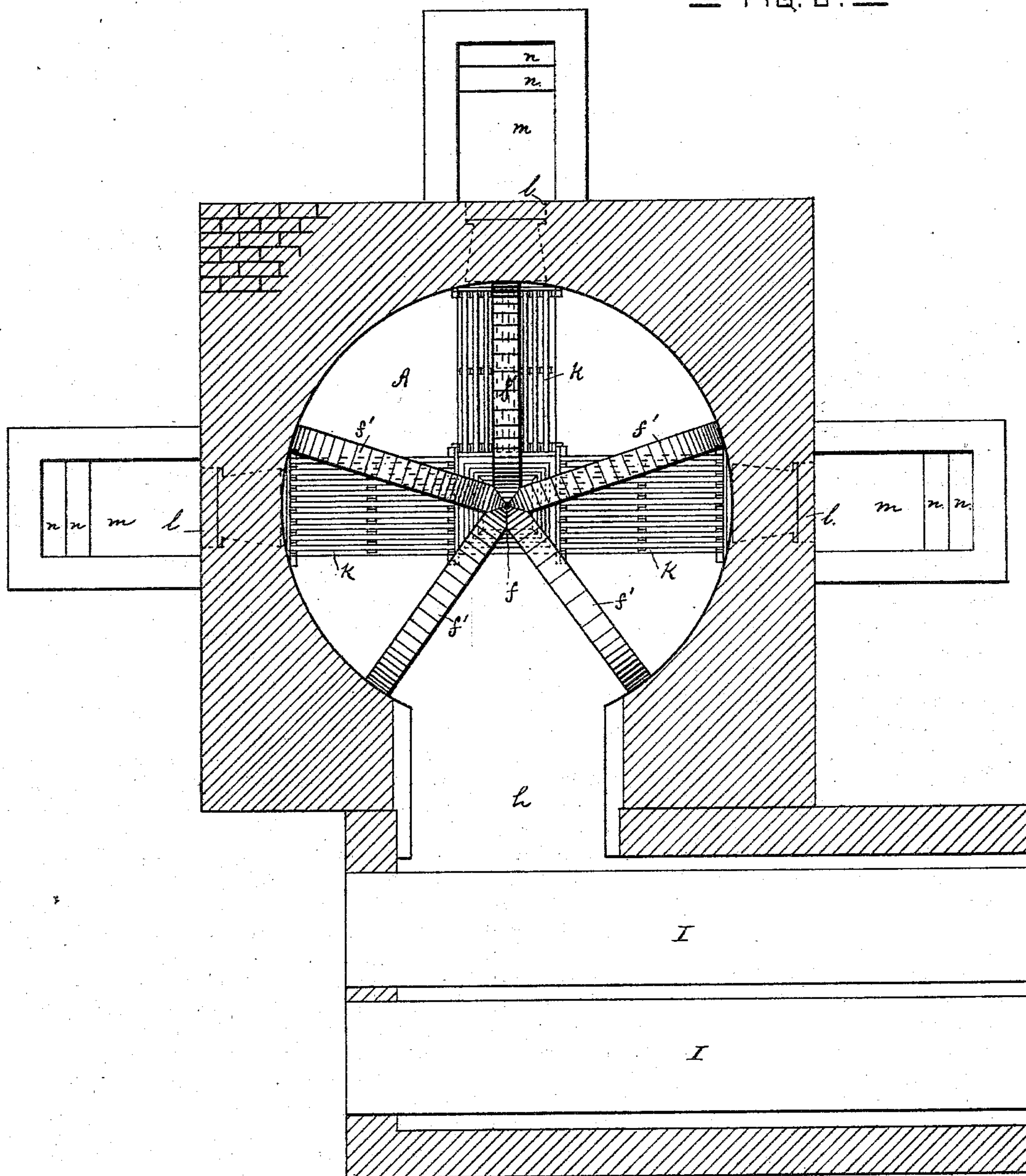
3 Sheets—Sheet 3.

E. WILLIAMS.  
BAGASSE FURNACE.

No. 281,218.

Patented July 10, 1883.

= FIG. 3. =



WITNESSES

*Wm. K. Row*  
*Jno. R. Young.*

INVENTOR

*Elihu Williams*  
By *H. A. Jenkins*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

ELIAS WILLIAMS, OF PARISH OF ST. JOHN BAPTIST, LOUISIANA.

## BAGASSE-FURNACE.

SPECIFICATION forming part of Letters Patent No. 281,218, dated July 10, 1883.

Application filed May 19, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS WILLIAMS, a resident of the parish of St. John Baptist and State of Louisiana, have invented a certain new and useful Improvement in Bagasse-Furnaces; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawings, making a part of this specification.

My invention relates to that class of furnaces employed in sugar-cane districts for purposes of burning crushed canes or bagasse, in order to economize in the use of wood, coal, or other more or less expensive fuel now necessarily employed for heating the steam-boilers and sugar-making apparatus of sugar-houses.

In the accompanying drawings, Figure 1 represents a plan or top view of my burner, in connection with a steam-boiler. Fig. 2 is a vertical longitudinal section of same, and Fig. 3 a horizontal cross-section thereof.

My invention consists in an internally-arched circular furnace, A, having an opening, b, in the top thereof, through which the bagasse is dropped from between a pair of rollers, c d, the shafts of which operate in the upper portions of a close frame erected over the said opening, as shown at E. These rollers are fed from a chute, e, upon which the crushed canes or bagasse is dropped from a carrier, such as is usually employed for removing the said material from the mill as rapidly as it is discharged from the rollers thereof.

The combustion-chamber of the burner is provided with a central column, f, which forms a support for the inner ends of a series of arches, f', the outer ends of which are built into and supported by the walls of the furnace, as shown.

The burner is preferably made with rectangular outer surfaces or walls, and is connected at one side with the walls of the steam-boilers

I, to which the heat is conveyed through a flue, h. The floor or bottom of the burner is made level and provided at the three remaining sides with fire-grates, as shown at k, each having a furnace-mouth, l, and an ash-pit, m, to which access is had by means of steps n.

In the operation of my invention small fires are built on the grates k, so as to heat the furnace, and thereby dry the bagasse as it is dropped therein, causing it to ignite and be consumed shortly after it has reached the arches f', which serve to prevent heavy accumulations or packing of the said material within the furnace. The arrangement of the arches in relation to the fire-grates and flue are such as to prevent the scattering of the fires by the falling bagasse, as well as to give an uninterrupted exit to the flame and heat.

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

1. A bagasse-burner provided with a central column and radiating arches having grates located under the same, substantially as and for the purpose set forth.

2. The herein-described bagasse-burner, having a central column and radiating arches, and a series of grates, each provided with a separate furnace-mouth and ash-pit, substantially as set forth.

3. The combination, in a bagasse-burner, of the central column, f, arches f', furnace-mouths l, grates k, ash-pits m, and a casing, E, adapted to fit over an opening, b, in the top of the furnace, the said casing provided with a pair of rollers, c d, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

ELIAS WILLIAMS.

Witnesses:

J. Y. B. HASKELL,  
T. J. KEANE.