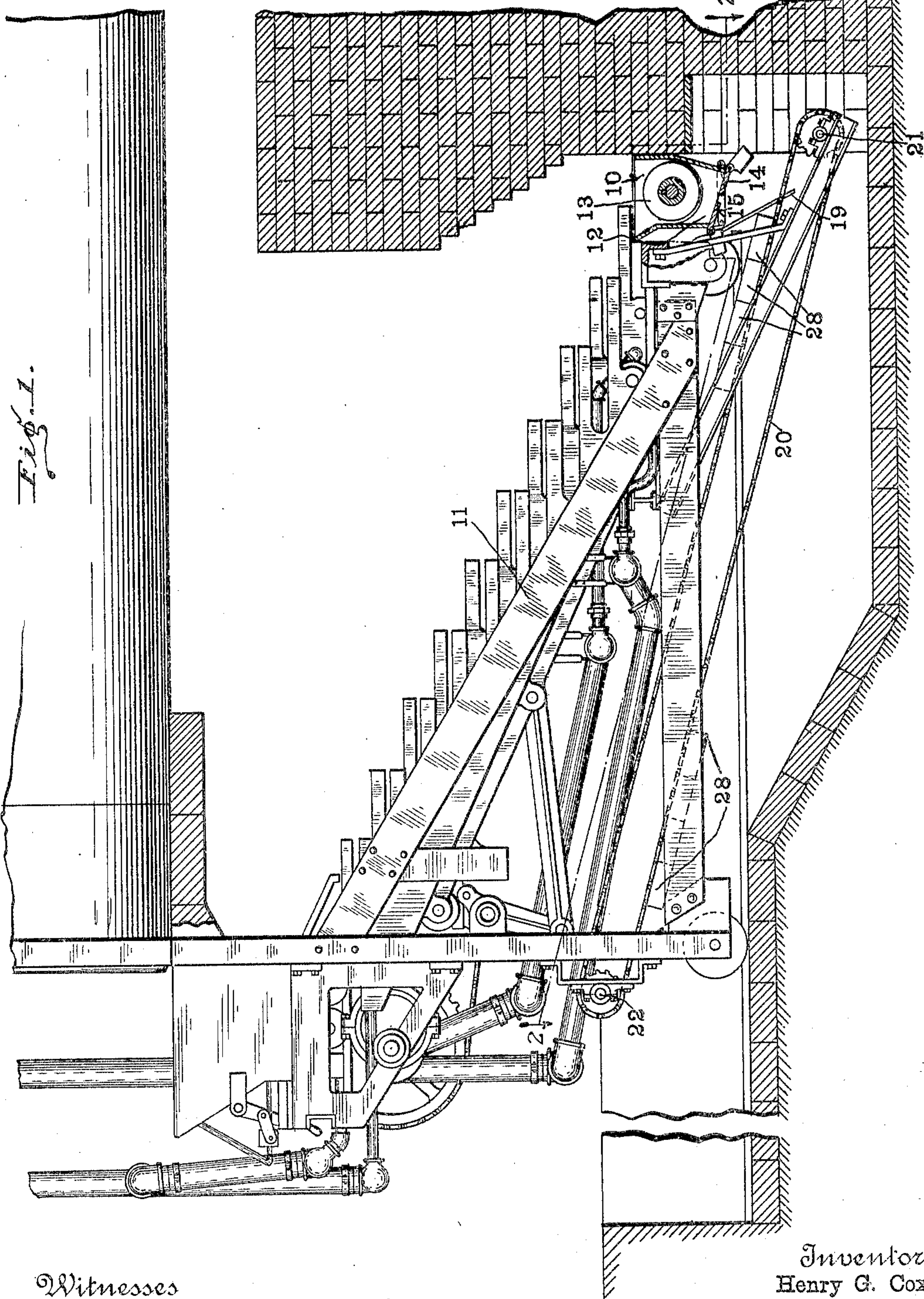


No. 804,457.

PATENTED NOV. 14, 1905.

H. G. COX.  
ASH CONVEYER FOR FURNACES.  
APPLICATION FILED JUNE 4, 1904.

3 SHEETS—SHEET 1.



Witnesses  
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*Ruth Northington*

Inventor  
Henry G. Cox.  
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Attorneys



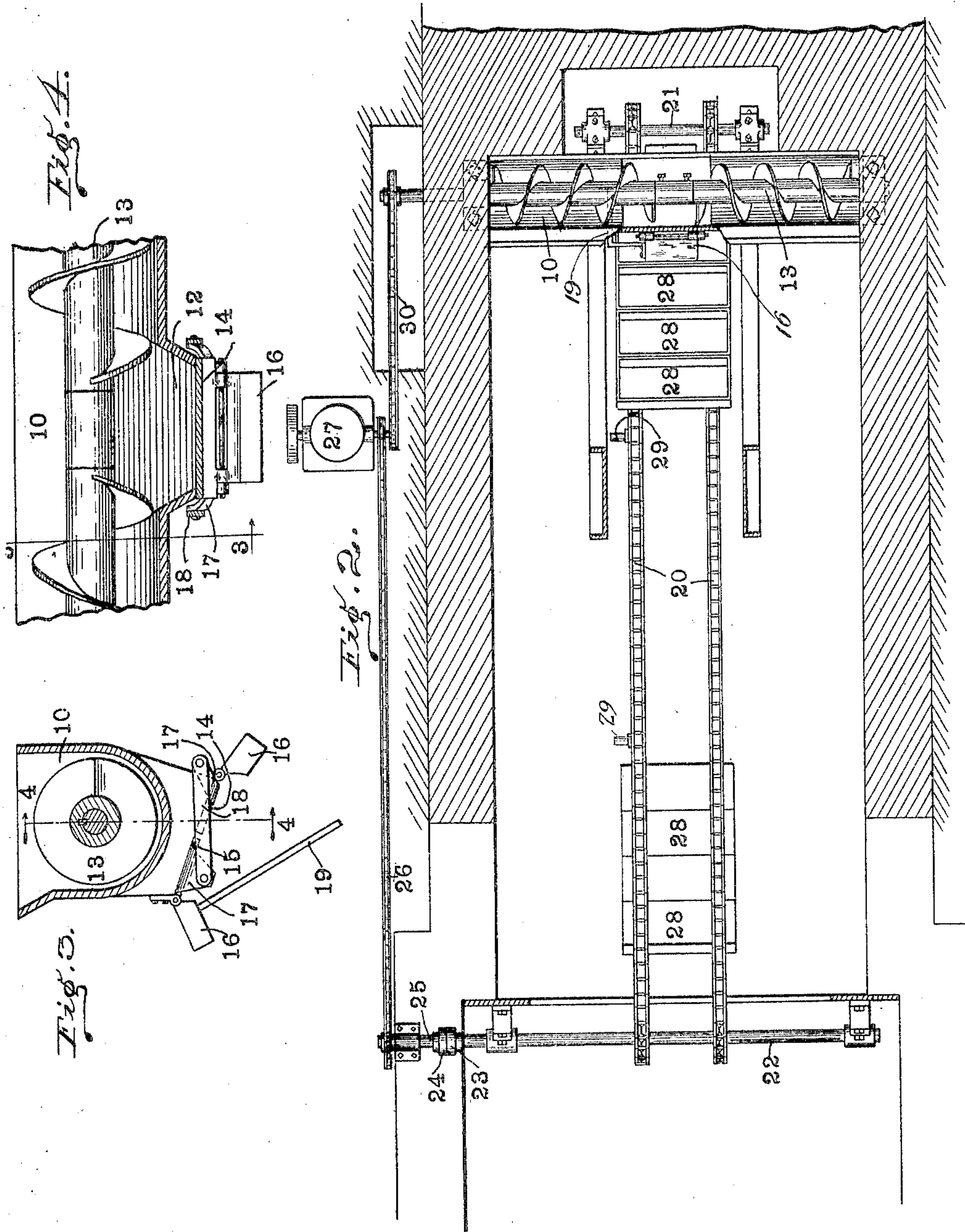
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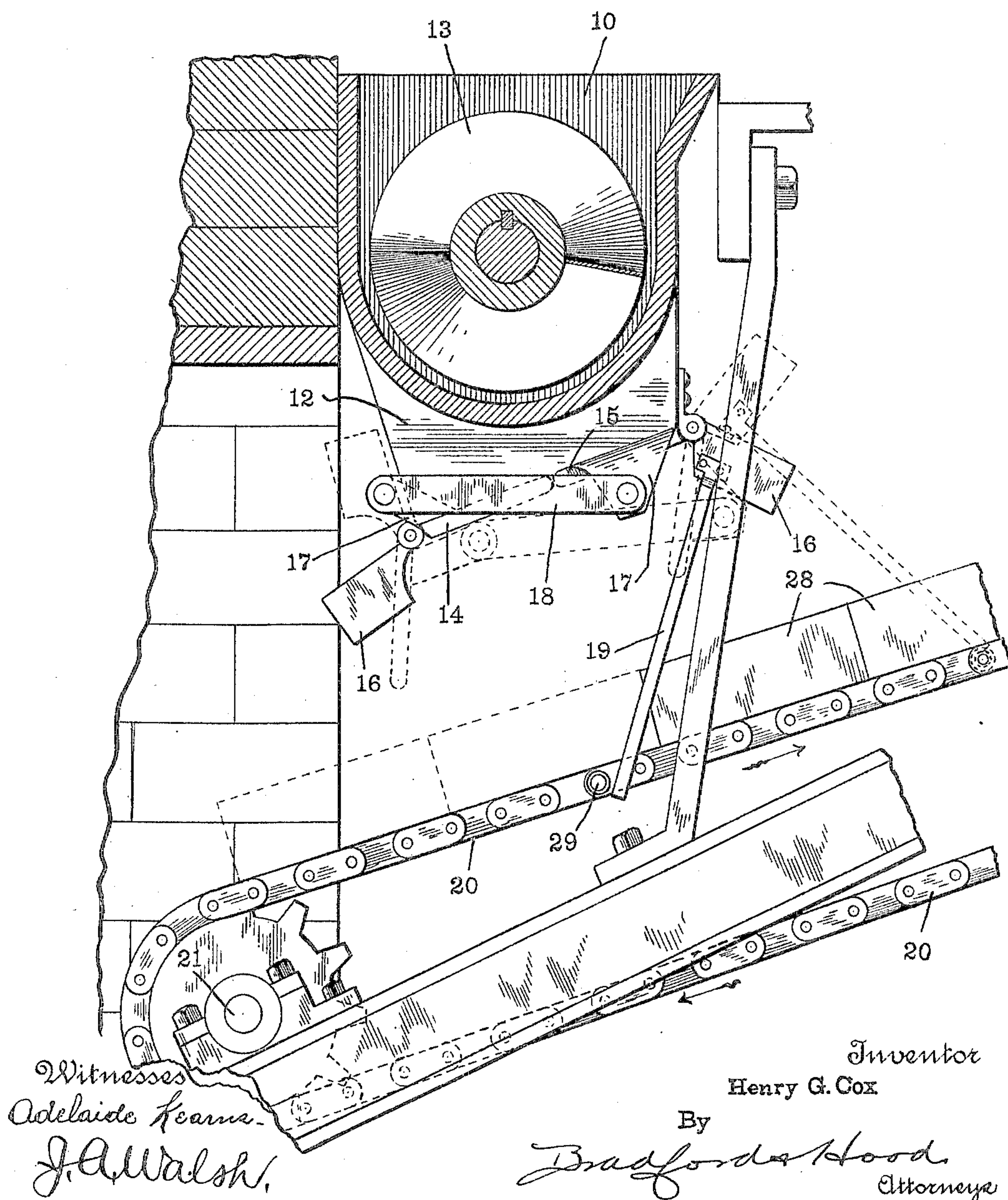
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3 SHEETS—SHEET 3.

*Fig 5.*





# UNITED STATES PATENT OFFICE

HENRY G. COX, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO JOHN T. BRUSH, OF INDIANAPOLIS, INDIANA.

## ASH-CONVEYER FOR FURNACES.

No. 804,457.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed June 4, 1904. Serial No. 211,140.

*To all whom it may concern:*

Be it known that I, HENRY G. COX, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Ash-Conveyers for Furnaces, of which the following is a specification.

The object of my invention is to provide a device for automatically carrying the ashes from stokers to a point from which they may be easily removed.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation of an apparatus embodying my invention, a portion being shown in section; Fig. 2, a sectional plan on line 2 2 of Fig. 1, all of the stoker mechanism being omitted; Fig. 3, a section on line 3 3 of Fig. 4; Fig. 4, a section on line 4 4 of Fig. 3 with the conveyer shown in full lines; and Fig. 5, an enlarged sectional detail of the transverse conveyer, the doors, and the adjacent end of the endless carrier.

In the drawings I have shown the endless carrier of my improved apparatus attached to the main removable frame of an improved stoker which forms the subject-matter of the companion application Serial No. 211,141, so that this portion of my present apparatus will be withdrawn from the furnace when the stoker is withdrawn. It is to be understood that this is shown merely for convenience of illustration and that I do not desire to be limited to any particular type of stoker, as my improvement may be applied to any form.

In the drawings, 10 indicates an ash-receiving trough which is arranged transversely at the rear of the combustion-chamber and immediately below the lowest or inner fuel supporting and feeding portion of the stoker 11, in which position all ash from the stoker will be discharged into the trough. Trough 10 is provided at any desired point with a discharge-opening 12, and arranged in the trough is any suitable form of conveyer 13 which will serve to move the ashes to the discharge-opening 12.

Opening 12 is normally closed by a pair of doors 14 and 15, preferably hinged at opposite edges of the opening 12 and swinging toward each other to close the opening, as clearly shown in Fig. 3. These doors are preferably provided each with a counterweight 16, which tends normally to hold the door closed.

Each of the doors is provided at each end with arms 17, which arms are connected by a suitable link 18, the arrangement being such that the movement of the doors will be simultaneous in either direction. Secured to one of the doors is an operating-lever 19, the purpose and operation of which will appear.

Arranged beneath opening 12 and running from thence forward to the front of the setting is an endless carrier 20, supported at its ends by suitable shafts 21 and 22, the shaft 22 being provided at one end with a clutch member 23, adapted to cooperate with a clutch member 24, carried by a shaft 25, driven, through any suitable connections 26, by a suitable motor 27. The carrier 20 is provided at various points in its length with ash-receptacles 28, which are adapted to receive the ashes discharged through opening 12. Carried by the carrier 20 at a suitable point adjacent each set of receptacles 28 is a pin 29, adapted to engage lever 19. The conveyer 13 is driven from the motor 27 through any suitable connections 30.

The operation is as follows: The ashes which are discharged into the trough 10 from the stoker are carried through said trough by the conveyer 13 and brought to the opening 12. As the endless carrier 20 moves, one of pins 29 is brought into engagement with lever 19, so as to open doors 14 and 15 and allow the ashes to drop into the receptacles 28. Continued movement of the carrier moves pin 29 beyond lever 19, whereupon the doors 14 and 15 automatically close until the next pin 29 comes into coaction with lever 19. The ashes in the receptacles 28 are carried forward to the front of the setting and there discharged as the receptacles pass to the under side of the carrier.

I claim as my invention—

1. The combination, with an automatic stoker, of an ash-receiver arranged at the inner end thereof and provided with a discharge-opening, a conveyer arranged in said receiver and adapted to shift the ashes toward said discharge-opening, a closure for said opening, an ash-conveyer arranged below said opening and adapted to receive ashes therefrom, and means carried by said conveyer for successively operating said closure.

2. The combination, with an automatic stoker, of a transverse ash-receiving trough arranged at the inner end thereof and having



a discharge-opening, an ash-conveyer arranged in said trough, a pair of counter-weighted doors normally closing said opening, intermediate connections between said  
5 doors to cause simultaneous movement, an operating-lever for said doors, an ash-carrier, means for bringing said ash-carrier beneath the discharge-opening of the trough, and means operated by said carrier for operating  
10 said lever at intervals.

3. The combination, with an automatic stoker, of a transverse ash-receiving trough arranged at the inner end thereof and having a discharge-opening, an ash-conveyer ar-  
15 ranged in said trough, a pair of counter-weighted doors normally closing said open-

ing, intermediate connections between said doors to cause simultaneous movement, an operating-lever for said doors, an endless ash-conveyer arranged beneath said discharge- 20 opening, and means carried by said conveyer for engaging said lever to open said doors at intervals, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my 25 hand and seal, at Indianapolis, Indiana, this 24th day of May, A. D. 1904.

HENRY G. COX. [L. s.]

Witnesses:

ARTHUR M. HOOD,  
JAMES A. WALSH.