

Nov. 4 , 1924.

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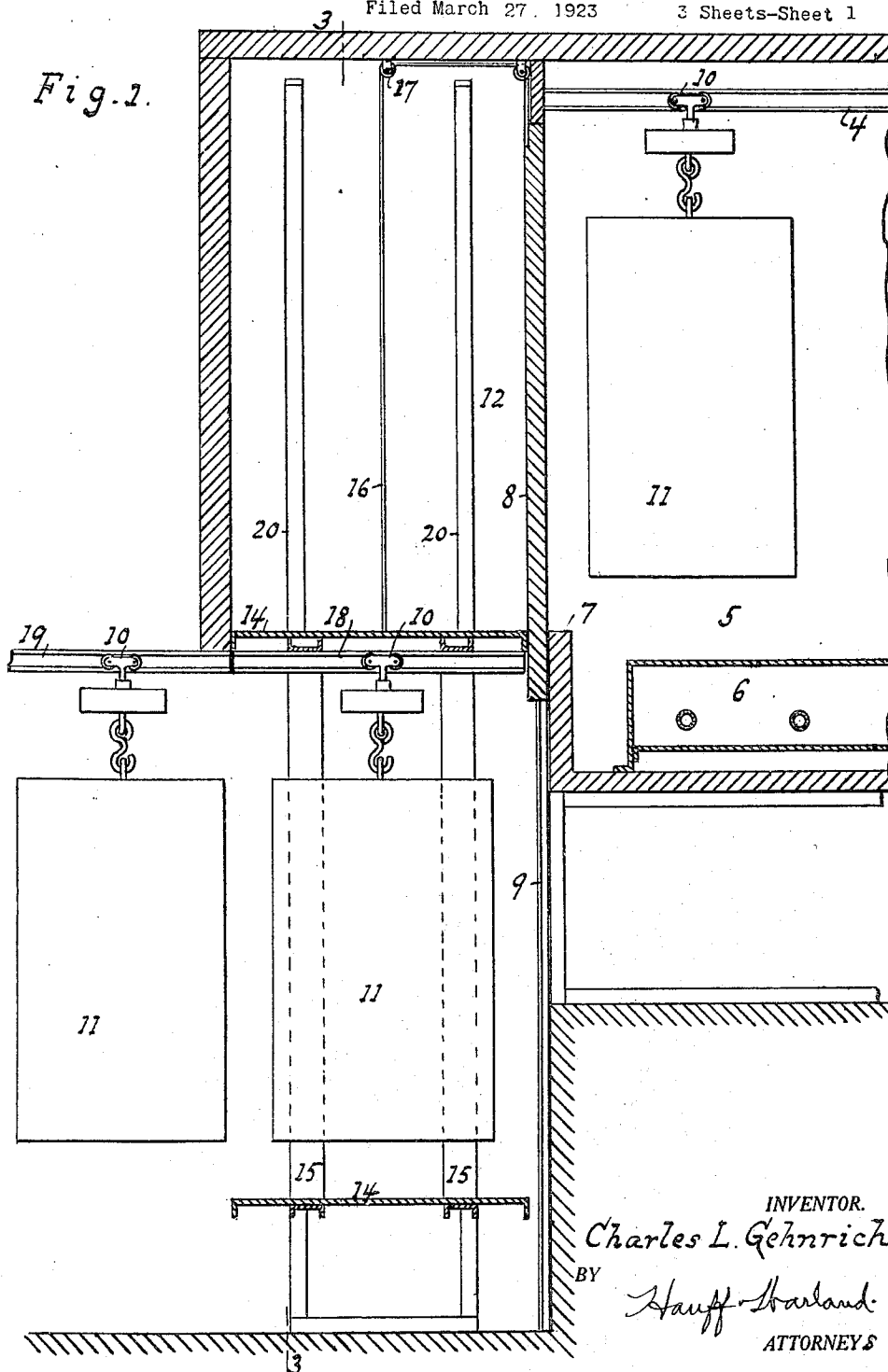
C. L. GEHRICH

DOOR OPERATING DEVICE

Filed March 27. 1923

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Fig. 2.



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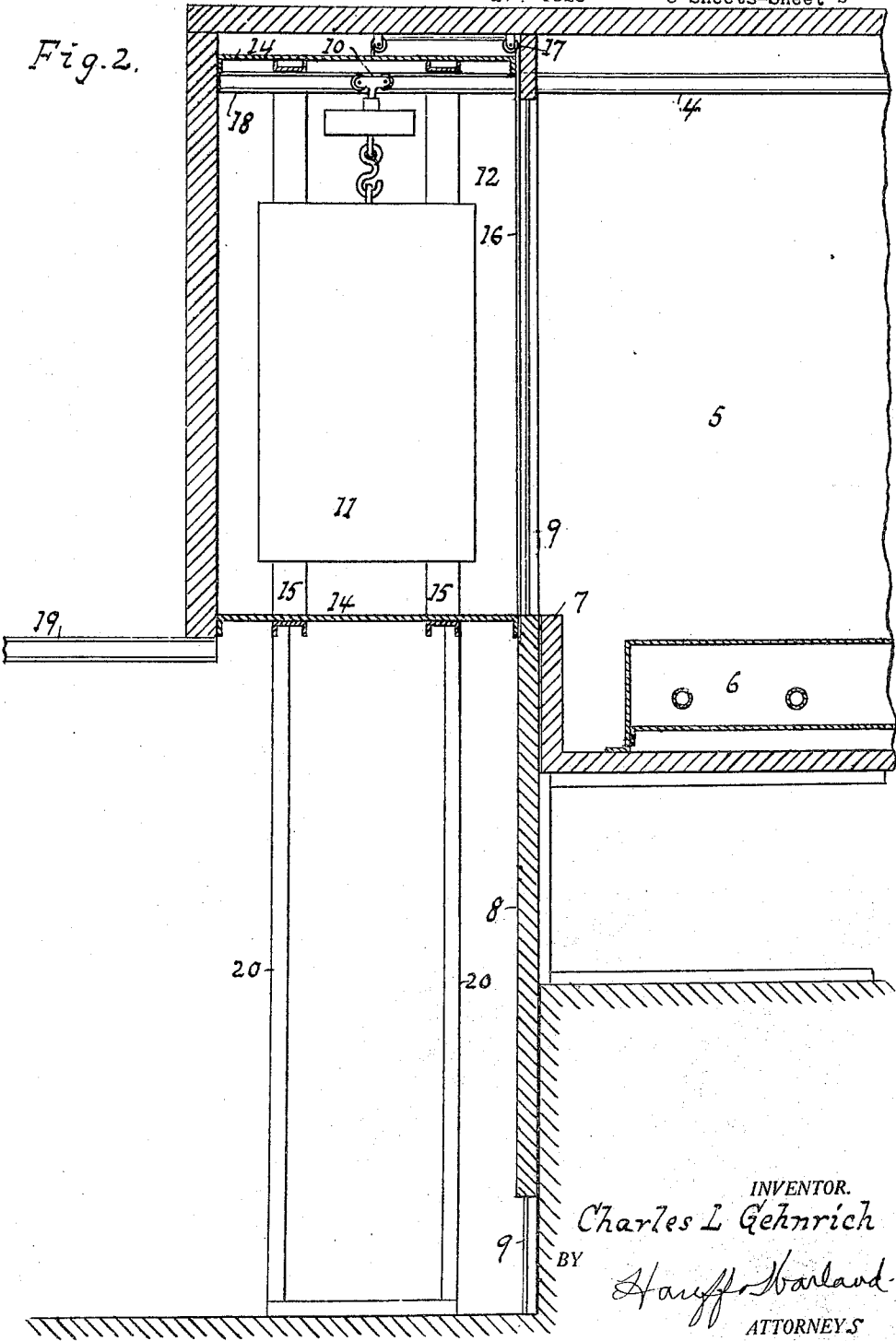
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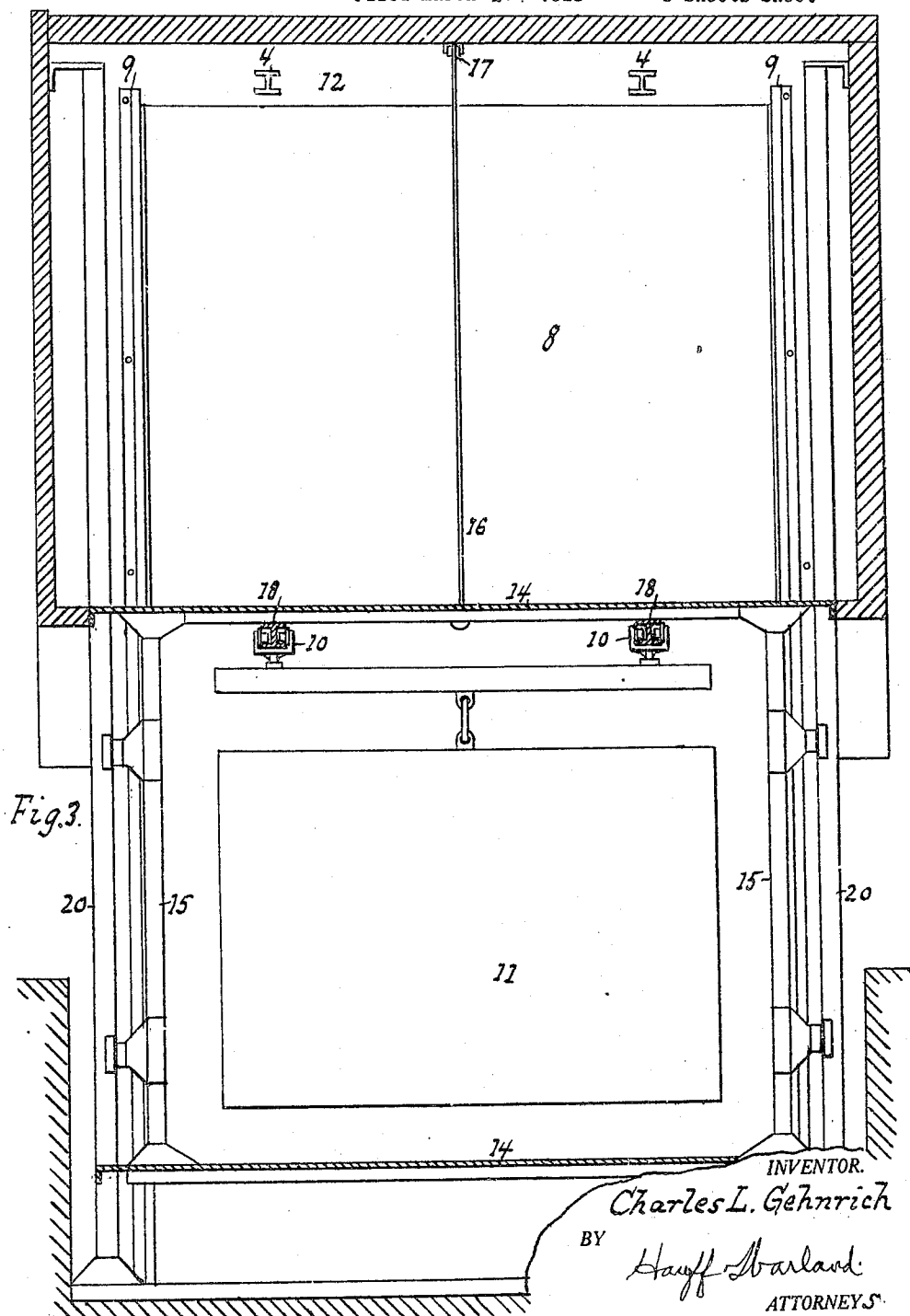
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DOOR OPERATING DEVICE

Filed March 27 1923

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UNITED STATES PATENT OFFICE.

CHARLES L. GEHNRIKH, OF ELMHURST, NEW YORK.

DOOR-OPERATING DEVICE.

Application filed March 27, 1923. Serial No. 628,152.

To all whom it may concern:

Be it known that I, CHARLES L. GEHNRIKH, a citizen of the United States, residing at Elmhurst, in the county of Queens and State of New York, have invented new and useful Improvements in Door-Operating Devices, of which the following is a specification.

This invention relates to a door operating device for a large sectional oven of the type in which an overhead trolley system is employed to load large articles into the oven.

An object of the invention is to provide a vestibule or passageway communicating with the oven and a door normally closing the entrance made to be automatically operated by the movement of an elevator designed to carry the articles to the oven entrance.

Another object of the invention is to provide the elevator with devices whereby the passageway is effectively sealed while the door is open to prevent any heat escaping from the oven.

The invention resides more particularly in the novel combinations hereinafter described and claimed, reference being made to the accompanying drawings in which:

Fig. 1 represents a vertical longitudinal section of an oven embodying this invention.

Fig. 2 is a similar view showing the elevator in its upper position.

Fig. 3 is a vertical transverse section taken along the line 3 3 of Fig. 1.

In the drawings the numeral 5 designates an oven having a burner chamber 6 in the bottom heated by a combustible such as gas burned in the chamber. At one end of the oven is located an opening 7 normally closed by a vertically slidable door 8 guided in vertical channel irons 9 fixed to the wall of the oven. The oven is equipped with overhead tracks 4 coacting with trolleys or carriages 10 employed for suspending the material or containers 11 for carrying the articles to be baked especially paint, japan or lacquer coating on metal. A passageway 12 outside of the door communicates with the entrance to the oven. The lower continuation of the passage forms a shaftway wherein the articles to be baked can be raised or lowered to or from the oven.

The means for elevating or lowering the material for baking in the oven consists of an elevator including upper and lower plunger 14 made to seal the passage when loading the oven. The plungers are connected

together by upright angle irons 15 thus forming a cage, while a cable 16 running over pulleys 17 is secured to the upper end of the door. The cage has an overhead track 18 whereby the material can be suspended by a trolley 10 as indicated in Fig. 1. The articles travel from a track 19 outside of the oven into the cage where they are suspended by the trolley from the track.

The cage is guided and kept in alignment by means of a frame 20 extending upwardly from the bottom of the shaftway. The cage can be actuated by hydraulic pressure or plunger type of mechanism as is well known.

It will be understood that the door leading to the oven is pulled upwardly by the downward movement of the elevator and the opening is closed thereby preventing any heat from escaping. Then when it is desired to load the oven the elevator with the articles ascends thereby permitting the door to slide downward as indicated in Fig. 2 thus permitting entrance to the oven. In order to prevent any leakage of heat from the oven to the shaftway while the door is open the entrance to the passageway is sealed by the lower plunger. In this type of large oven there is a similar opening 7 at the other end of the oven not shown, so that the articles travel into one end and out of the other end.

I claim:—

1. In a door operating device the combination with an oven having a passageway communicating with the oven, a door normally closing the passageway, an elevator arranged in the passageway for operating the door, and means actuated by the elevator for sealing the passage.

2. In a door operating device the combination with an oven having a passageway communicating with the oven, a door normally closing the passageway, an elevator arranged in the passageway connected to the door, and means actuated by the elevator for sealing the passage when the door is open.

3. In a door operating device the combination with an oven, of a passageway communicating with the oven, a vertically slidable door to normally close the oven, an elevator connected to the door, and means actuated by the elevator for sealing the passage when the door is open.

4. In a door operating device the combination with an oven, of a passageway communicating with the oven, a vertically slid-

able door to normally close the passageway to the oven, an elevator connected to the door, and means carried by the elevator for sealing the passage when the door is open.

5 5. In a door operating device the combination with an oven, of a passageway communicating with the oven, a vertically slidable door to normally close the passageway to the oven, an elevator having a cable connected to the door and plungers carried by
10 the elevator for sealing the passage when the door is open.

6. In a door operating device the combination with an oven, of a passageway com-

municating with the oven, a vertically slidable door to normally close the passageway to the oven, an elevator having a cable connected to the door and plungers forming the upper and lower part of the elevator for sealing the passage when the door is open. 15 20

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES L. GEHRICH.

Witnesses:

MARGUERITE ALTVATER,
WILLIAM MILLER.