No. 798,791. PATENTED SEPT. 5, 1905.

L. H. HEWITT.

COAL STORING AND SCREENING APPARATUS.

APPLICATION FILED MAR. 17, 1905.

4 SHEETS—SHEET 1.

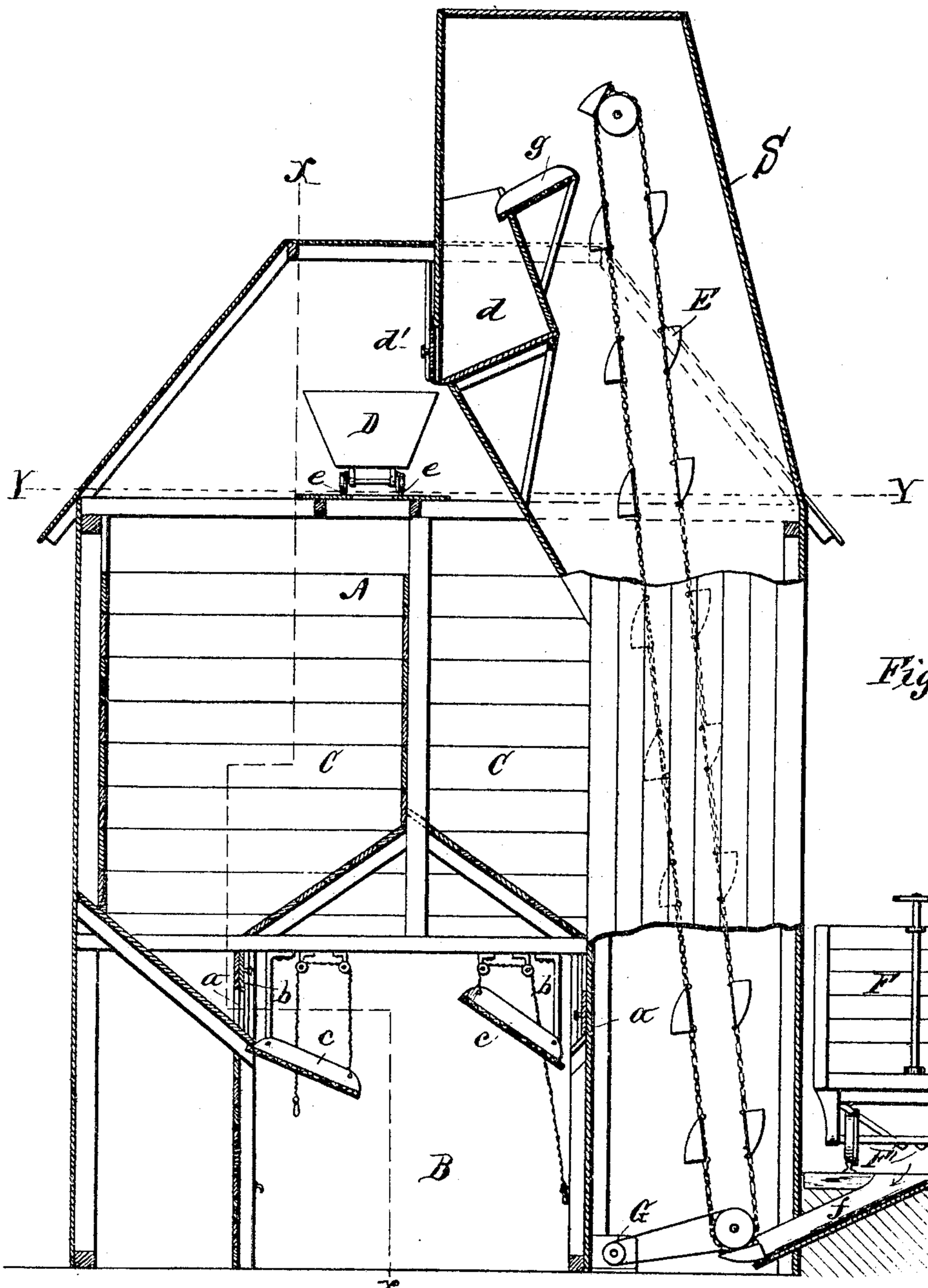

Fig. 1

WITNESSES:

G. H. Fulmer Jr.

F. J. Lass

INVENTOR.

Lewis H. Hewitt.

By E. Lass

ATTORNEY.

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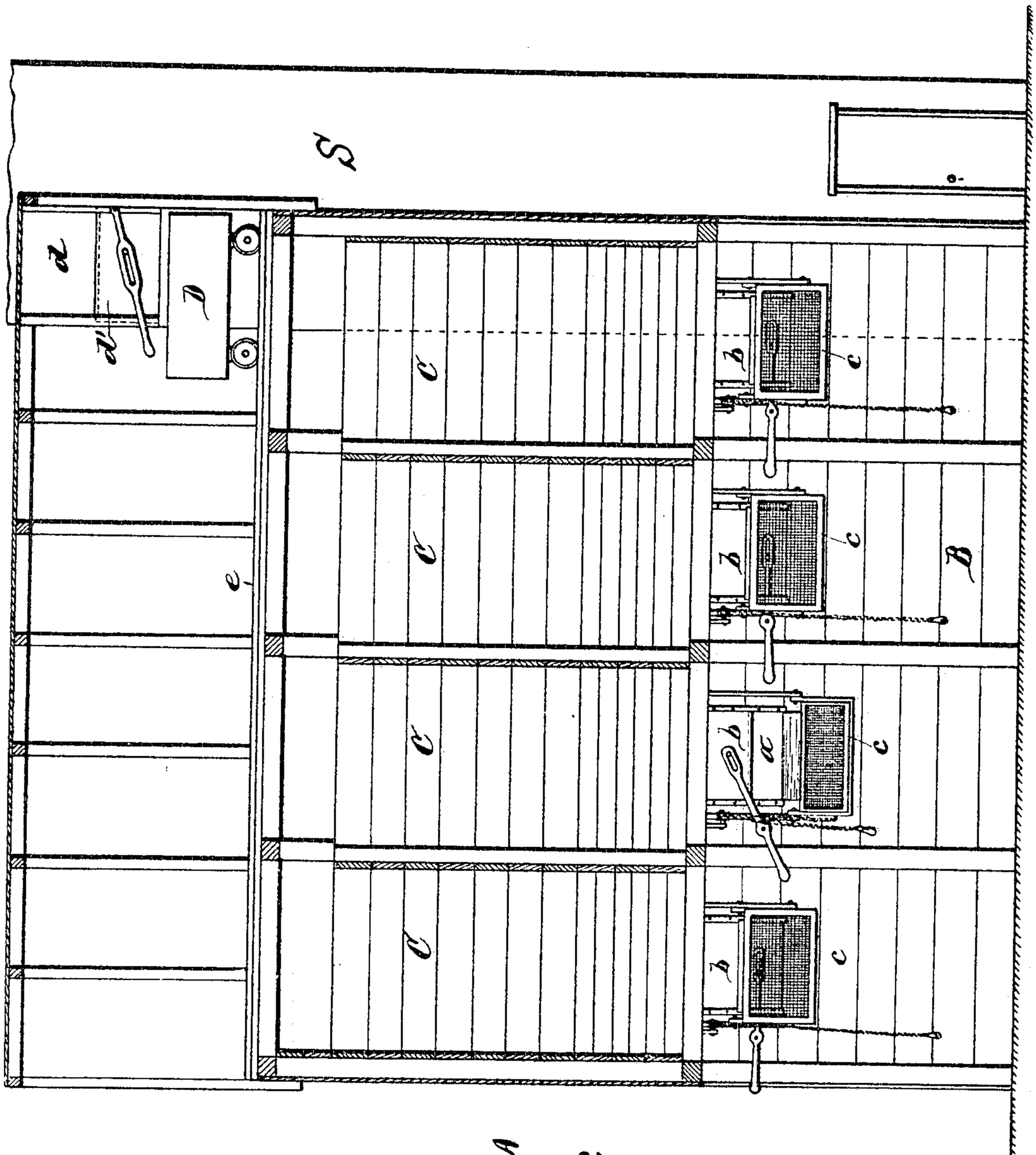

Fig. 2.

WITNESSES:

L. H. Fulmer.

J. J. Lucas

INVENTOR

Lewis H. Hewitt

By E. Lucas

ATTORNEY.

No. 798,791. PATENTED SEPT. 5, 1905.

L. H. HEWITT.

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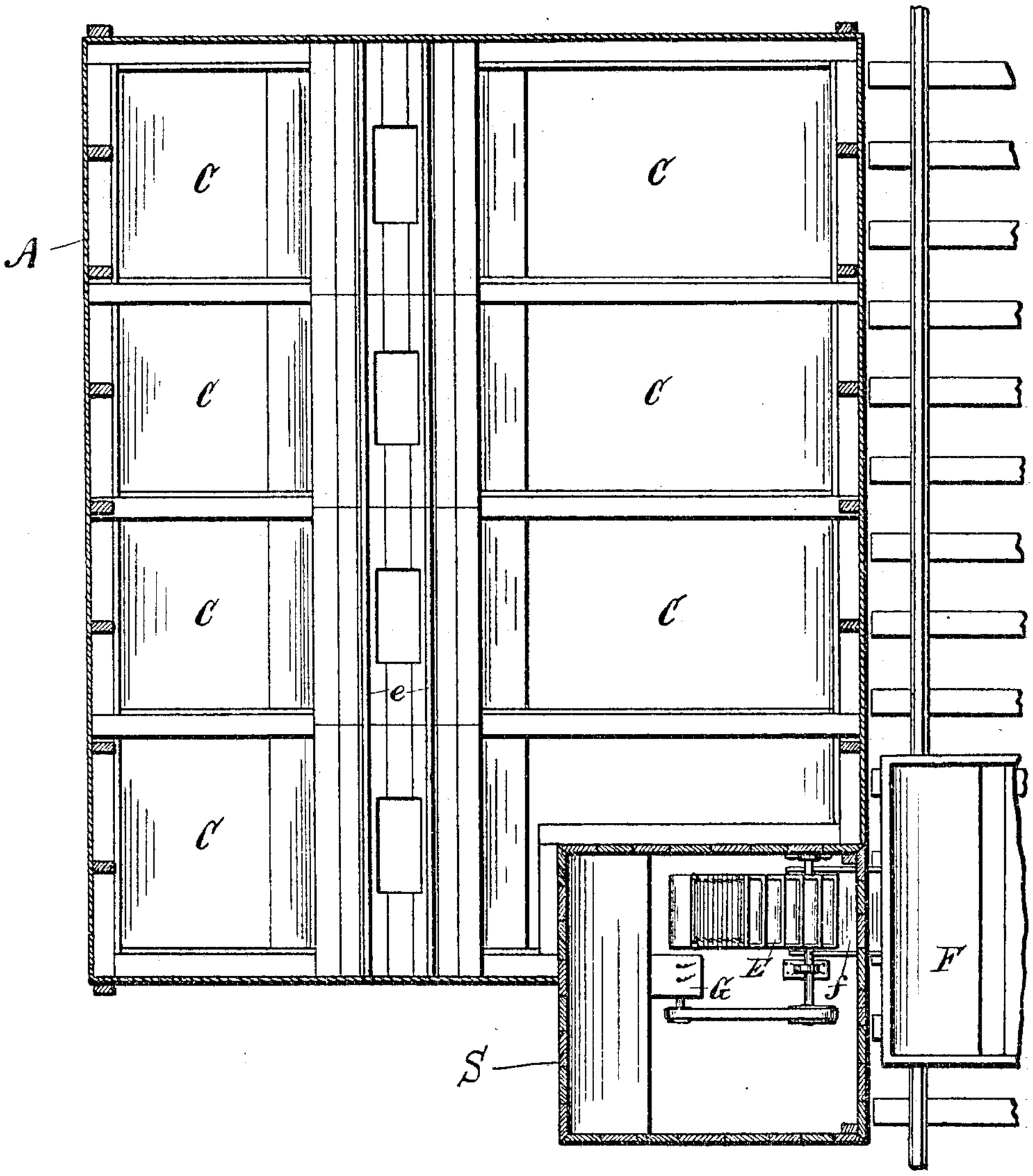
4 SHEETS—SHEET 3.

Fig. 3



WITNESSES:

H. H. Fulmer

J. J. Laass

INVENTOR

Lewis H. Hewitt

By E. Laass

ATTORNEY.

No. 798,791. PATENTED SEPT. 5, 1905.

L. H. HEWITT.

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4 SHEETS—SHEET 4.

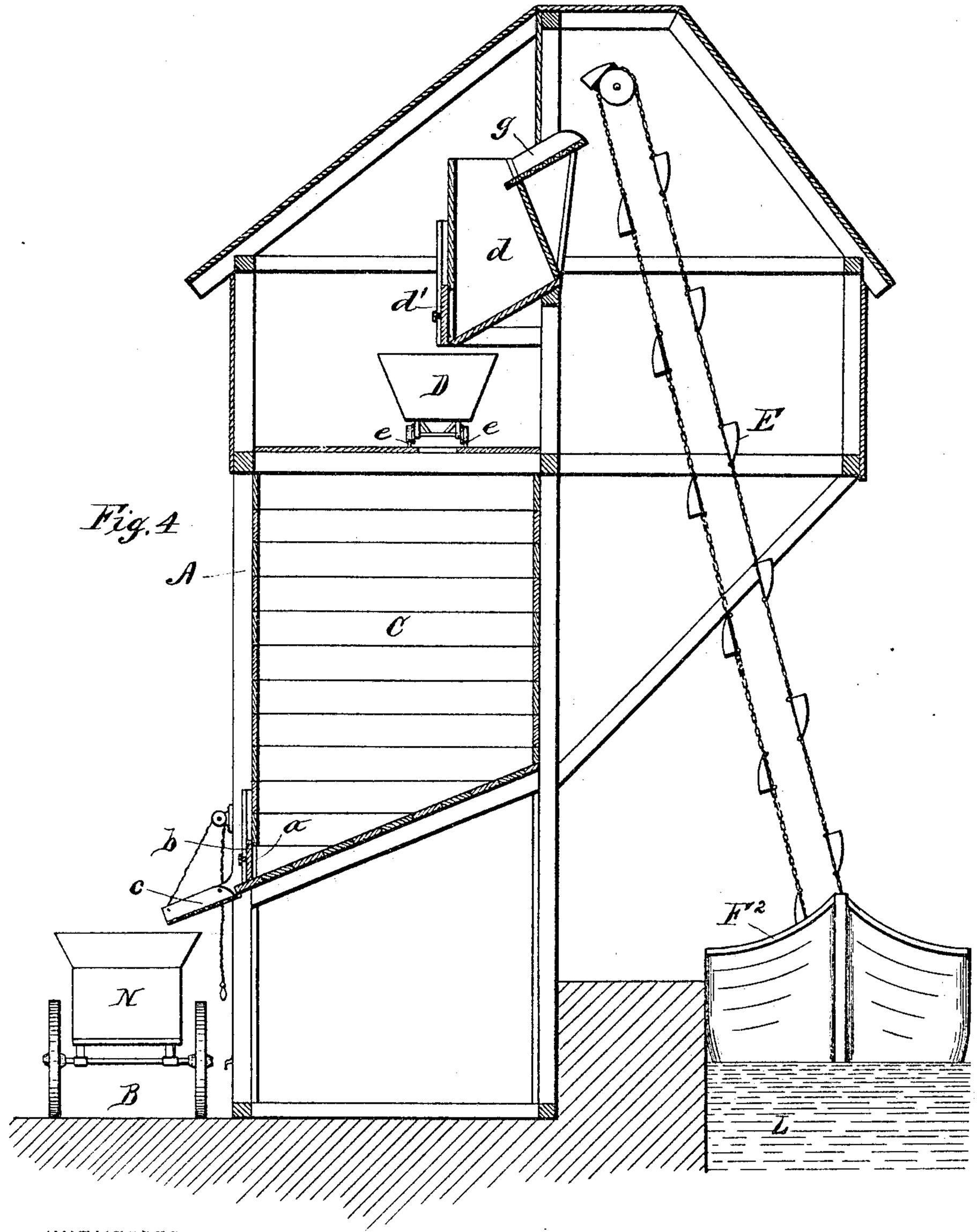

Fig. 4

WITNESSES:

G. H. Fulmer.

J. J. Laass.

INVENTOR

Lewis H. Hewitt

By Ed Laass

ATTORNEY.

UNITED STATES PATENT OFFICE.

LEWIS H. HEWITT, OF CORTLAND, NEW YORK.

COAL STORING AND SCREENING APPARATUS.

No. 798,791. Specification of Letters Patent. Patented Sept. 5, 1905.

Application filed March 17, 1905. Serial No. 250,552.

To all whom it may concern:

Be it known that I, LEWIS H. HEWITT, of Cortland, in the county of Cortland, in the State of New York, have invented new and useful Improvements in Coal Storing and Screening Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to an apparatus designed for use by retail dealers of coal.

The object of the invention is to provide simple, convenient, and inexpensive means for furnishing to the consumers cleaner coal than has hitherto been usually put in the market; and to that end the invention consists in the novel construction and combination of the component parts of the coal storing and screening apparatus hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a front elevation of an apparatus embodying my invention, the front wall of the storehouse and portions of the elevator-shaft being removed to illustrate the interior of the apparatus. Fig. 2 is a vertical longitudinal section on line X X in Fig. 1. Fig. 3 is a horizontal section on the line Y Y in Fig. 1, and Fig. 4 is a vertical transverse section of a modification of my invention.

Similar letters of reference indicate corresponding parts.

A represents a three-story storehouse or building in which the coal is stored for delivery to the consumers. The ground-story of this storehouse is provided with a suitable driveway B for the passage of the conveyances designed to receive coal from said storehouse. The second story of the storehouse is divided into compartments or bins C C for receiving coal of different grades. The bottoms of the bins are inclined to the driveway and lead to discharge-ports *a a*, which are provided with drop-doors *b b* for closing said ports. I preferably form the driveway through the center of the storehouse A and arrange the bins C C in rows along opposite sides of the driveway, as shown in Fig. 1 of the drawings. Each of the discharge-ports *a* is provided with a chute *c*, leading to the driveway and hinged to swing upward from its inclined delivering position. The bottom of the said chute I form of heavy wire-netting or other suitable open-work floor to screen the coal passing from the bin C to the vehicle designed to receive said coal. I prefer to employ suitably-arranged chains and pulleys for lowering the said chutes to and raising the same from delivering positions, as shown in Figs. 1 and 2 of the drawings.

E represents a suitably-supported elevator, which is inclosed by a shaft S, disposed at a corner of the storehouse and extending from the bottom of the building to a point some distance above theroof thereof. In the upper portion of the said shaft is supported a hopper *d*, provided with a suitable opening through which the coal is discharged into the top story of the storehouse, which opening is provided with a gate *d'* to control the discharge. To the floor of this upper story is secured a track *e*, upon which is mounted a suitable dumping-car D for receiving the coal from the hopper and conveying it to the bins C C, disposed in the story below. In case the coal is delivered to the elevator by means of railroad-cars, as represented at F in Fig. 1 of the drawings, which cars are provided with hinged drop-bottoms, as shown at F', I provide a chute *f*, which leads from under the railroad-track to the bottom of the elevator E. The upper end of this elevator is extended some distance above the hopper *d* and casts the elevated coal onto a screen *g*, which is inclined to conduct said coal into the hopper *d*, from whence it is drawn when desired into the car D, by means of which it is conveyed to the bin designed to receive it. By arranging the screen *g* in this manner the dust, &c., from the coal is caused to be deposited in the shaft S, thus protecting the person employed in the upper story for operating the car.

G represents a suitable motor for operating the elevator.

It will be observed that the described apparatus screens and cleans the coal during the process of storing it and again screens said coal during its delivery from the storehouse to the consumer, who thus receives cleaner coal than is usually put in the market.

In Fig. 4 of the drawings I have shown my coal storing and screening apparatus located on the bank or dock of a canal or other navigable waterway (indicated at L) and arranged to receive the coal direct from a boat F^2. In this case the driveway B is at the exterior of the storehouse and extended along the side thereof farthest from the waterway L. The interior of the storehouse is divided into a single row of bins C, inclined toward the driveway and leading to the screens *c*, which conduct the coal to the vehicle N for delivering the coal to the consumer.

What I claim as my invention is—

1. A coal-storehouse consisting of a three-story structure and provided in the second story with a plurality of storing-bins, each having a discharge-port and a drop-door therefor, movable screening-chutes for delivering the coal therefrom, means for moving the chutes to and from operative positions, a hopper for receiving the coal to be stored and disposed at the upper story of the structure, a gate operative for controlling the discharge from the hopper, a screening-chute for conducting the coal into the hopper and disposed to deposit the screenings at the exterior of the storehouse, an elevator for conveying the coal from the bottom of the storehouse to the top thereof and casting the same onto the screening-chute, a motor for operating said elevator, a track in the upper story, a car mounted on said track below the hopper and serving to convey the coal therefrom to the aforesaid storing-bins as set forth.

2. A coal-storehouse consisting of a three-story structure and provided in the second story with storing-bins having discharge-ports and doors therefor, a driveway at the lower story, hinged delivery-chutes leading from the discharge-ports to the driveway and provided with screen-bottoms, means for raising said chutes from their delivering positions, a shaft extending from the ground-floor of the storehouse above the roof thereof and disposed at a corner of the structure, a hopper supported in the upper portion of the shaft and having a discharge-opening provided with a gate, a screening-chute in the shaft for conducting the coal into the hopper, an elevator supported in the shaft and conveying the coal from the bottom to the top thereof and casting the coal upon the said screening-chute, a motor in the shaft for operating the elevator, a track supported on the floor of the top story, and a dumping-car mounted on said track to receive the coal from the hopper and convey the same to the aforesaid storing-bins as set forth.

3. A coal-storehouse consisting of a three-story structure and provided in the second story with bins having ports and means for controlling the discharge therethrough, a shaft extending from the bottom of the structure to the top thereof and disposed at one corner, a chute leading into the bottom of the shaft, an elevator supported in the shaft and conveying the coal from the latter chute to the top of the shaft, a hopper supported in the upper portion of the shaft and provided with an opening for discharging the coal into the upper story of the structure and a gate for said opening, a screening-chute receiving the coal from the elevator and conducting the same into the hopper and arranged to exclude the screenings from said upper story, a track in the upper story, and a car mounted on said track to receive the coal from the hopper and convey it to the aforesaid bins as set forth.

LEWIS H. HEWITT. [L. S.]

Witnesses:
J. J. LAASS,
L. H. FULMER.