

(No Model.)

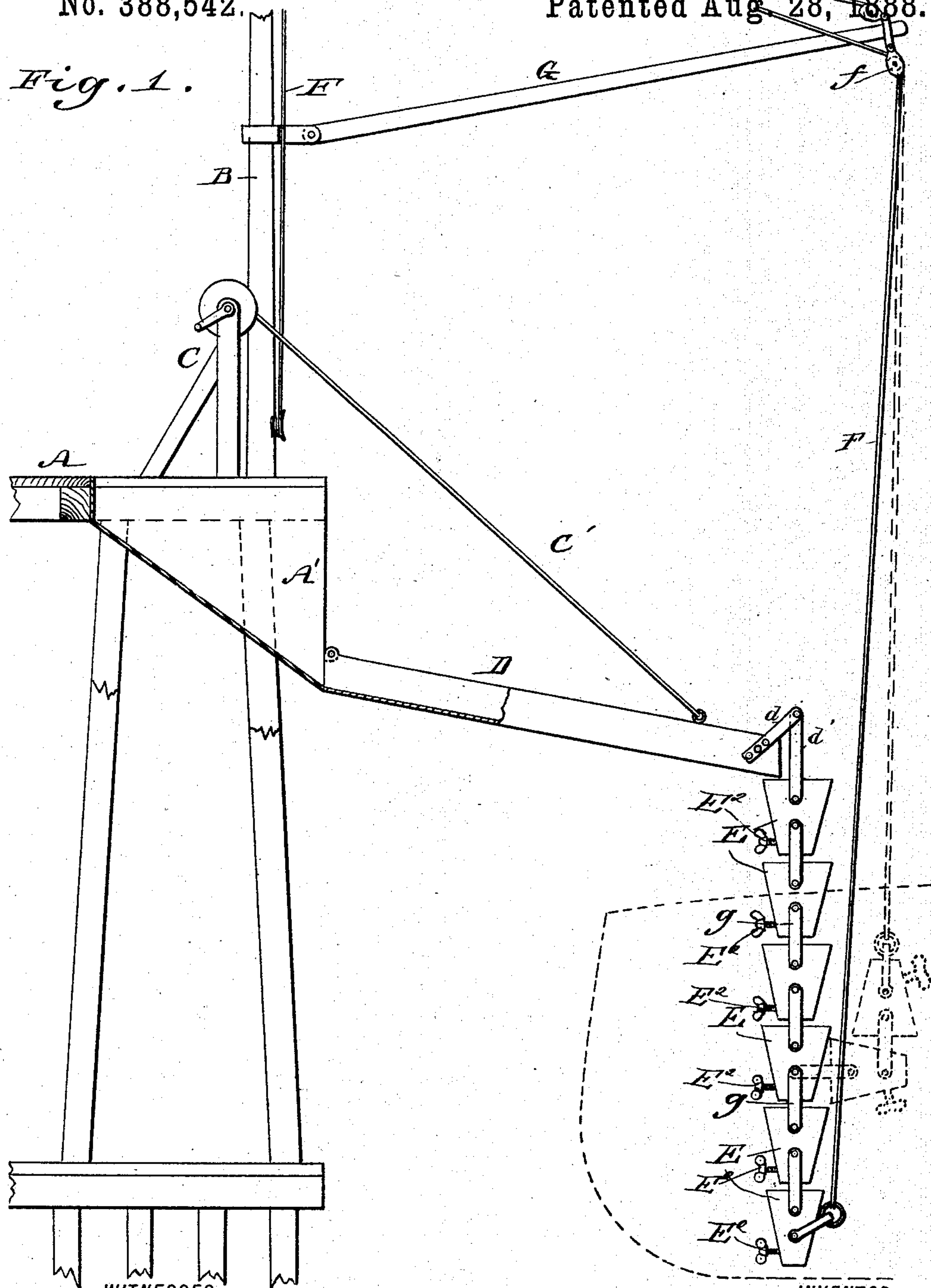
J. H. DU BOIS.
COAL CHUTE.

2 Sheets—Sheet 1.

No. 388,542.

Patented Aug. 28, 1888.

Fig. 1.



WITNESSES:

John H. Deemer
C. Sedgwick.

INVENTOR.

INVENTOR,
J. H. Du Bois.

BY

Munn & Co
ATTORNEYS,

(No Model.)

2 Sheets—Sheet 2.

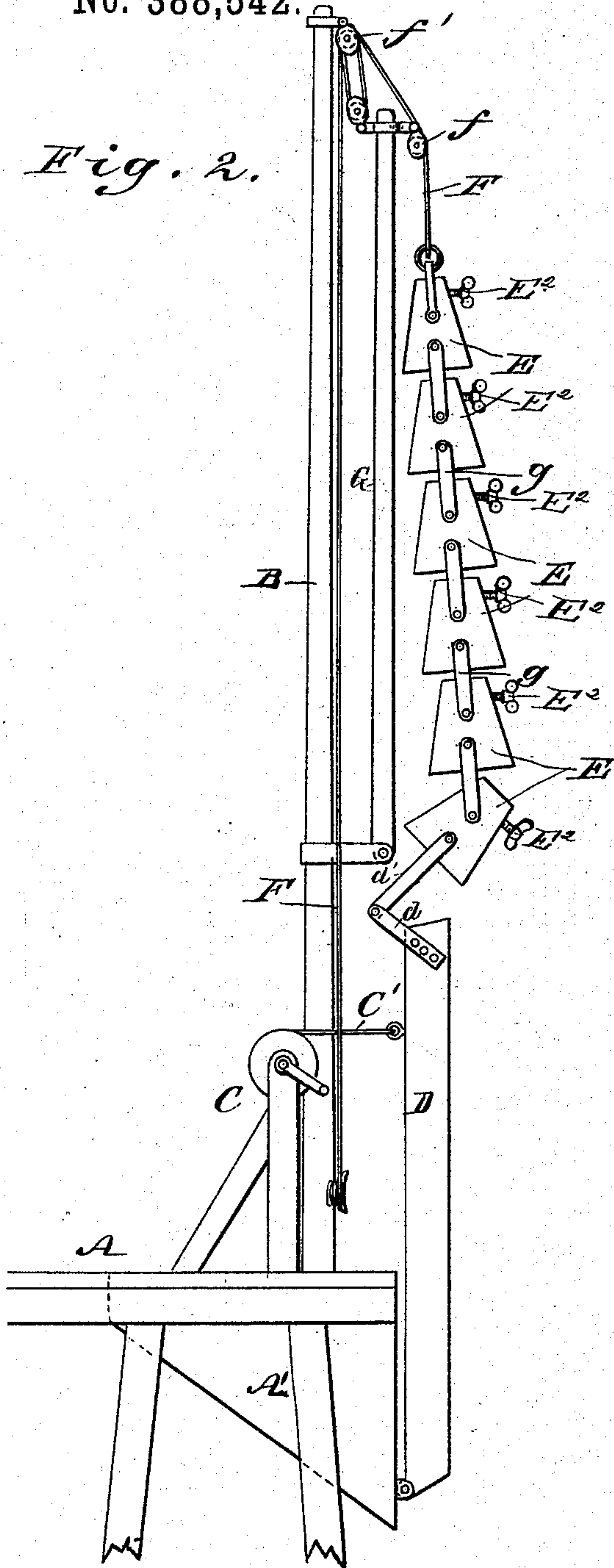
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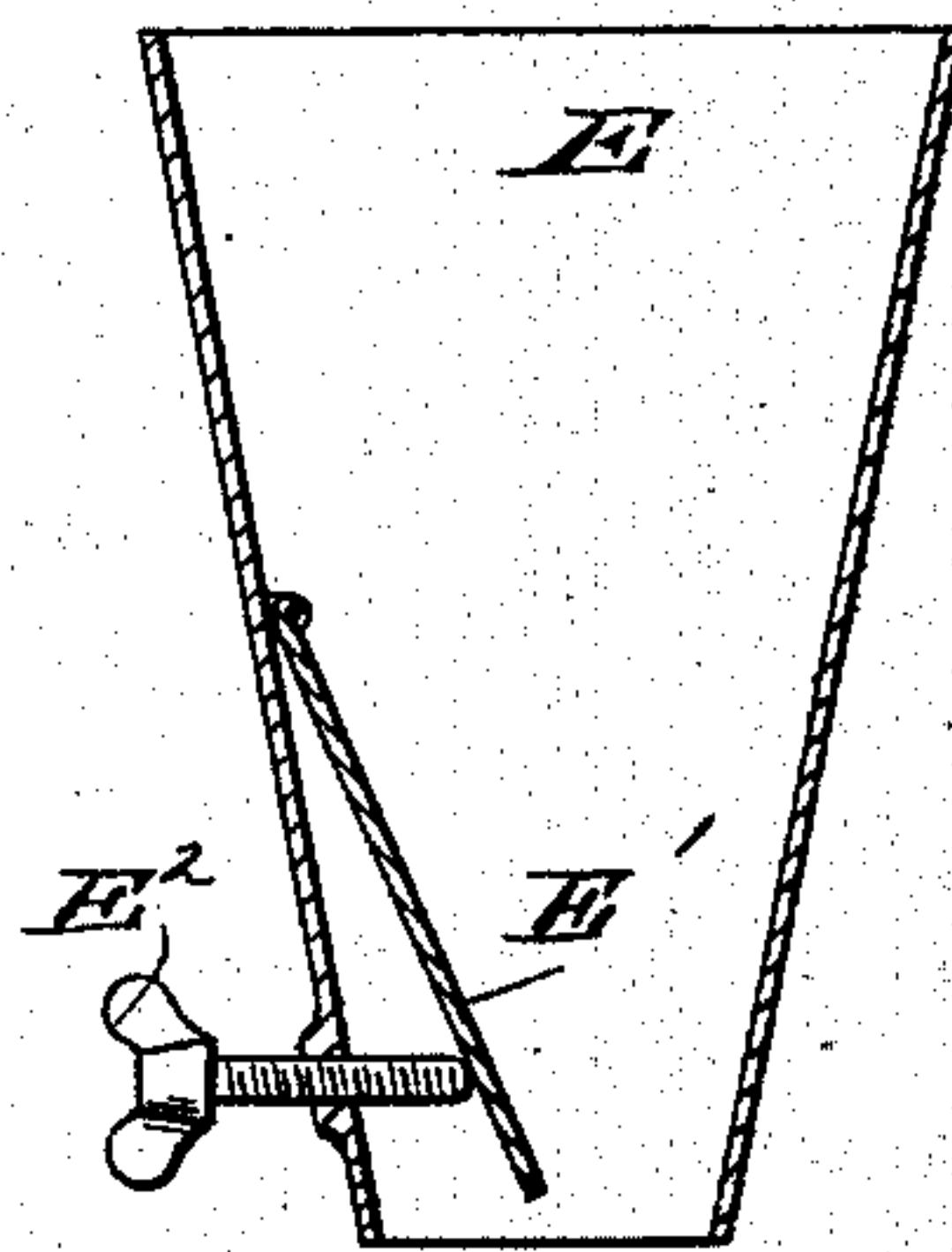
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Fig. 2.



WITNESSES
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Fig. 3.



INVENTOR,
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UNITED STATES PATENT OFFICE.

JOHN H. DU BOIS, OF HOBOKEN, NEW JERSEY.

COAL-CHUTE.

SPECIFICATION forming part of Letters Patent No. 388,542, dated August 28, 1888.

Application filed April 25, 1888. Serial No. 271,760. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. DU BOIS, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Coal-Chute for Loading Vessels, of which the following is a full, clear, and exact description.

The object of my invention is to provide a chute whereby coal may be loaded from a high coal-dock into a vessel below without pulverizing or breaking the coal; and the invention consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

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

Figure 1 shows my invention lowered by the boom in position for use, a portion of the coal dock and chute being broken away. Fig. 2 shows the boom and chutes in elevated position; and Fig. 3 is an enlarged detailed sectional view of one of the hoppers, showing the same provided with an adjustable plate and adjusting-screw, which may be used or not, as desired.

The dock A with its fixed chute A' may be of the usual or of any approved construction. Mounted upon the dock A is the mast B and the windlass C, the latter for elevating and lowering by rope C' the chute D, hinged to the lower edge of the fixed chute A'. Connected to the outer end of the chute D by means of the arms d d and links d' are the series of connected hoppers E E. The lowermost hopper is connected by rope F to the boom G and mast B, said rope passing over the pulleys f f', attached to the boom and mast, respectively, so that by drawing upon the said rope F the whole series of hoppers E may be inverted, or one or more in succession, as indicated in dot-

ted lines, as the filling up of the vessel proceeds. The hoppers are all connected together by pivoted links g, and their lower open ends are of gradually-diminishing area, so that the discharge from the lower hopper will be slower than that of the hopper discharging into it, and the discharge of the next to the lower hopper will be slower than that of the hopper discharging into it, and so on throughout the whole series. In this manner the drop of the coal from the chute D to the hold of the vessel is retarded at each hopper, or from one hopper to the other and from the last to the hold, so that all breaking of the coal is obviated. As the filling of the vessel proceeds, the hoppers E will be lifted out of the line by drawing upon the rope F, as indicated in dotted lines in Fig. 1, the links g permitting the hoppers to be inverted, as shown in Figs. 1 and 2.

In each of the hoppers is placed a plate, E', acted upon by an adjusting-screw, E'', so that by turning said screw the discharge from the hopper may be regulated according to the size of the coal to be loaded.

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

1. The combination, with the chute D, of the series of tapering hoppers E, connected together by the links g, of sufficient length to hold the lower end of each hopper above the upper end of the adjacent hopper, whereby the series of hoppers may be swung out of action one at a time, substantially as described.

2. The hinged chute D, having the connected series of hoppers E, in combination with the boom G, mast B, rope F, and pulleys f f', substantially as described.

JOHN H. DU BOIS.

Witnesses:

H. A. WEST,
EDGAR TATE.