(No Model.)

G. W. TURNER.

COAL CHUTE.

No. 591,364. Patented Oct. 5, 1897.

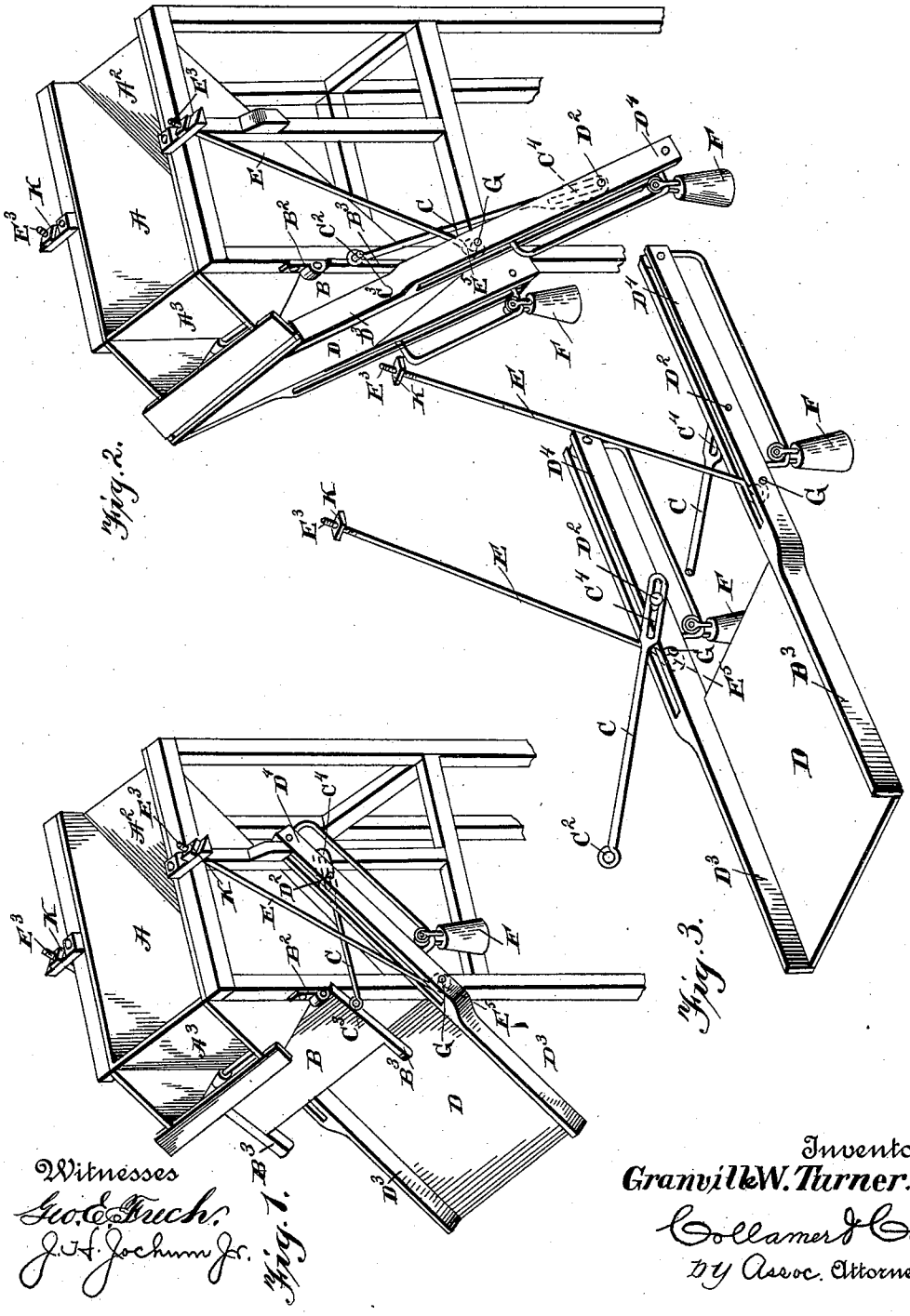

Fig. 2.

Fig. 1.

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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COAL-CHUTE.

SPECIFICATION forming part of Letters Patent No. 591,364, dated October 5, 1897.

Application filed July 19, 1897. Serial No. 645,181. (No model.)

To all whom it may concern:

Be it known that I, GRANVILLE W. TURNER, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Coal-Chutes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in coal-chutes, the object of which is to provide a chute with an automatic apron and gate for releasing the coal and conducting it into the tender of an engine. This object I attain by means of the invention hereinafter fully set forth, described, and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is an end perspective of the coal-chute, showing the gate open and the apron in position for conducting the coal into the tender. Fig. 2 is a similar view showing the gate closed and the apron up and out of the way for permitting the cars to pass. Fig. 3 is a detail view showing the apron detached.

In the drawings, A is the bin for holding the coal and may be any desired size, having an inclined bottom A^2 and a perpendicular front side A^3.

B is a swinging gate, being hinged at its upper edge preferably by means of bolt and eye-hinge B^2, as shown.

C is a rod having an eye C^2 for hinging to a bolt C^3 on the gate, the other end being provided with a slot C^4 for receiving a bolt D^2 on the lever of the apron for forcing the gate open as the apron D passes below the horizontal point.

B^3 is a piece secured to each end of the gate, extending below the lower edge of the gate to form a clutch or fastening with the apron when up to hold the gate firmly closed by coming in contact with the apron.

D is an apron or chute having projecting edges D^3 and long levers D^4 for balancing the apron on its swinging hinging-rods or suspension bars or chain E.

The levers D^4 are made of sufficient length and weight to balance the apron D and may be provided with a sliding or rolling weight F for holding the apron down until all the coal is out of the chute, as shown at F in Fig. 1, and to hold the apron up when tilted back for keeping the gate firmly closed, as shown in Fig. 2. Suspension-bars E are secured near the center of the upper sides of the chute by means of threads E^3 and nuts K for adjusting the length of the said rods E. At the lower ends said rods E are hinged to the apron side pieces, which extend back to form the levers D^4, each of said levers being made of two pieces to permit the rods E to pass between them and by means of an eye E^5 to receive the pin or bolt G. The apron is thus hinged in position by the long supporting-rods E, permitting it to give or swing out sufficiently to prevent breakage in case the coal gets into the joints. Pushing-rods C begin to operate upon the gate B at the time the levers and apron reach a horizontal position and throw the gate B fully open by the time the apron is down. The gate B is preferably made short for preventing all the coal from escaping at once and also prevent wasting over the sides of the apron.

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

1. The combination of a swinging apron for a coal-chute having levers, D^4, and suspension-bars, E, for hinging, substantially as shown and described.

2. A swinging apron D, having levers D^4, combined with slotted push-rods, C, for automatically opening the gate of a coal-chute, substantially as shown and described.

3. A swinging gate to a coal-chute having projecting pieces, B^3, combined with a swinging apron, D, having sides, D^3, for holding the gate shut substantially as shown and specified.

4. The combination of a swinging gate to a coal-chute, a swinging apron and adjustable swinging rods E, all substantially as shown and described.

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

GRANVILLE W. TURNER.

Witnesses:

J. H. KENNER,

F. B. KNIGHT.