A. B. Nimbs,

Elevator.

No. 45,851 Patented Jan. 10, 1865.

Fig. 1.

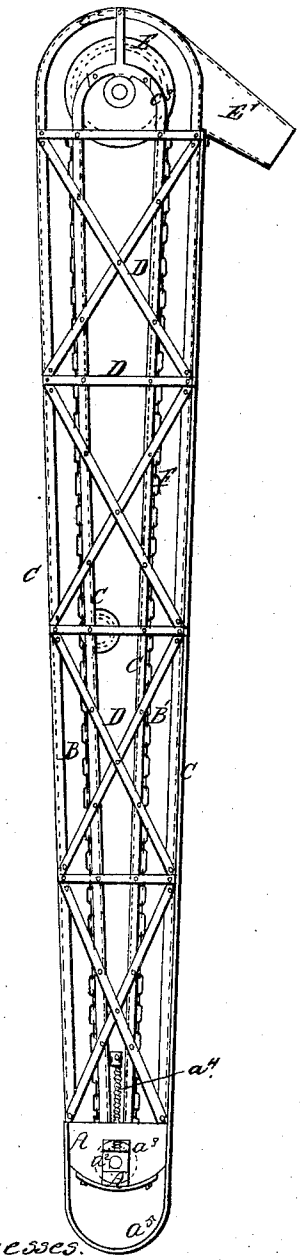


Fig. 2.

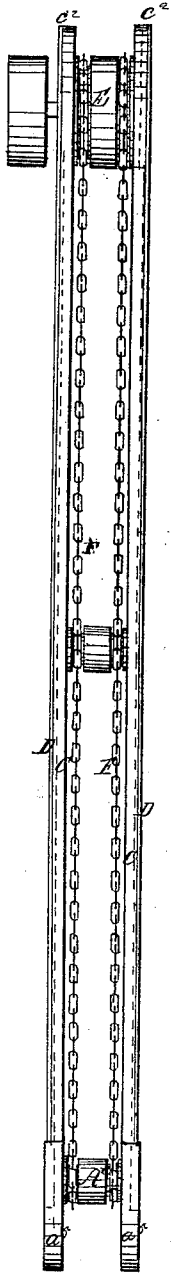


Fig. 4

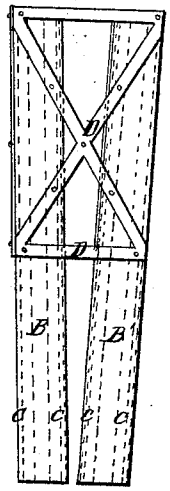


Fig. 6.



Fig. 7.



Fig. 5.

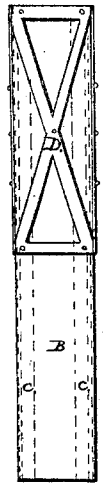
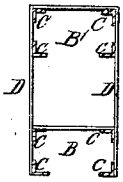


Fig. 3.



Witnesses.
W. H. Forbush
Geo. Wallace

Inventor.
A. B. Nimbs

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

ARHEUNA B. NIMBS, OF BUFFALO, NEW YORK.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. **45,851**, dated January 10, 1865.

To all whom it may concern:

Be it known that I, ARHEUNA B. NIMBS, of the city of Buffalo, county of Erie, and State of New York, have invented a certain new and Improved Wrought-Iron Elevator-Leg for Grain or Coal; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, making a part of this specification.

The nature of this invention relates to the construction of an elevator-leg of wrought-iron, the skeleton of the leg being formed of eight angle-bars, placed one at each corner of the back and front trunks, said angle-bars being connected together by diagonal braces of flat bar-iron or by continuous plates of sheet-iron, or both, riveted or bolted thereto in a manner to give great strength and stiffness to the leg.

Figure I is a side elevation of my improved leg, showing the diagonal bracing. Fig. II is a front elevation of same, and Fig. III is a transverse or cross-section. Figs. IV, V, VI, VII are sectional views showing the combination of the diagonal bracing and sheet-iron covering, and also the single application of the sheet-iron covering.

Letters of like name and kind refer to like parts in each of the figures.

A represents the elevator foot or box, which contains the foot-pulley A′, over which the bucket belts or chains run. It is made of cast-iron and is open at the top and bottom. The foot pulley runs in journaled boxes a^2, placed in slots a^3, formed in the sides of the box.

a^4 are adjusting-screws bearing upon the journal-boxes a^2, by means of which the boxes may be moved downward in the slots in a manner to take up the slack in chains or belt carrying the elevator-buckets. The elevator-buckets dip below the bottom of the box, and are protected by the guards a^5, bolted to the box.

B B′ represent the front and back trunks of the leg, through which the elevator-buckets work, ascending through the front trunk, B, and descending through the back trunk, B′. They are rectangular in cross-section, as shown in Fig. III.

C C represent wrought-iron angle-bars, forming the corners of the trunks B B′. (See Figs. III and VI and VII.) These are strongly secured by bolts to the foot-box A and extend upward the required length of the leg and connected together at the top by the semicircular bars or arches c^2 c^3, which may also be formed of angle-iron or of flat bar-iron. The arches c^2 connect the outside angle-bars or those forming the outside corners of the trunks B B′, and the arches c^3 connect the inside angle-bars or those forming the inside corners of the trunks. A skeleton of the required form of the leg is thus formed, which for a grain-leg may be covered by plates, L of light sheet-iron, riveted to the angle-bars, (see Figs. IV and V,) but which for a coal-leg may be left open, the angle-bars being held together by the diagonal braces D D, riveted or bolted to them, as represented. On the sides of the leg these diagonal braces extend across from the front to the rear trunk and tie them together.

The sheet-iron covering may be used in connection with the diagonal braces or they may be used separately. When used separately, the covering requires to be of heavier iron, to give the required strength to the leg. This construction gives great strength and stiffness to the leg, which may be made much lighter than the ordinary wooden leg in use. As a coal-leg it is also much superior, since it is less liable to be injured by lumps of coal catching between the buckets and the trunks in which they move. When built for a coal-leg, the entire front may be left open, as represented in the drawings, (see Fig. II,) thereby removing any possibility of the buckets being jammed or caught by lumps of coal spilling out, but for a grain-leg the trunks are necessarily entirely closed.

E represents the head-pulley, over which the bucket belt or chain runs, and E′ a spout, made of sheet-iron, into which the buckets discharge their load of coal or grain.

F represents endless chains, running over the head and foot-pulley, which have proper grooves or channels formed in them to receive the chains. The elevator-buckets are connected to these chains.

The chains are designed to be used only in the coal-leg, a belt being better adapted to carrying the buckets in a grain-leg.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

A wrought-iron elevator-leg constructed of wrought-iron angle-bars C, and connected and strengthened by wrought iron diagonal braces D, or by sheet-iron plates L, the two trunks of the leg being connected at the top by the semi-circular arches c^2 c^3 and at the bottom by the cast-iron foot-box A, substantially as described.

A. B. NIMBS.

Witnesses:
GEO. W. WALLACE,
W. H. FORBUSH.