L. C. TIMMERMAN.

LADDER FOR SILOS.

APPLICATION FILED NOV. 20, 1913.

1,118,385. Patented Nov. 24, 1914.

FIG. 1.

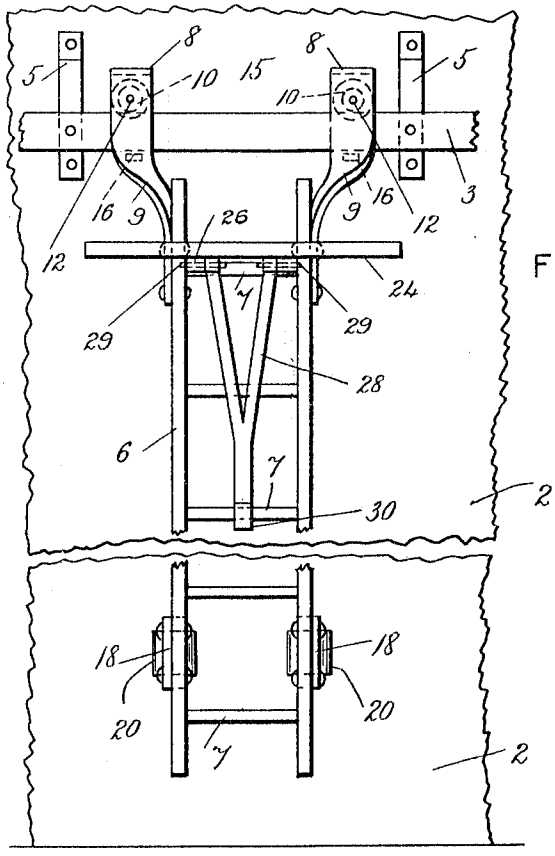


FIG. 3.

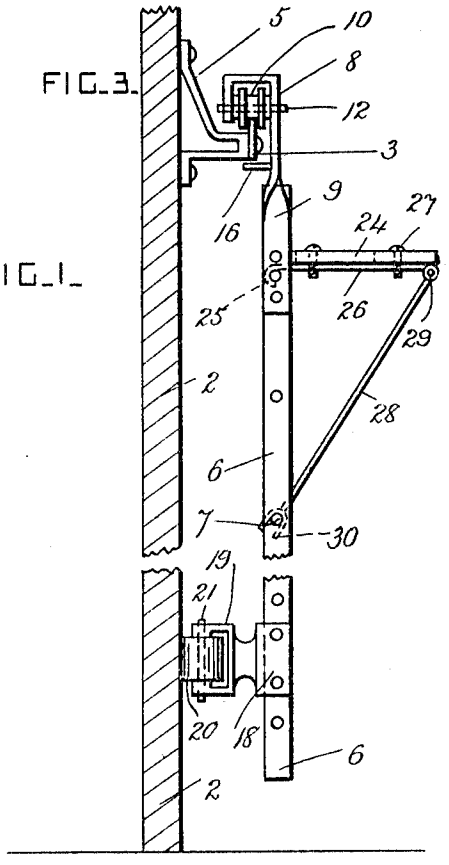
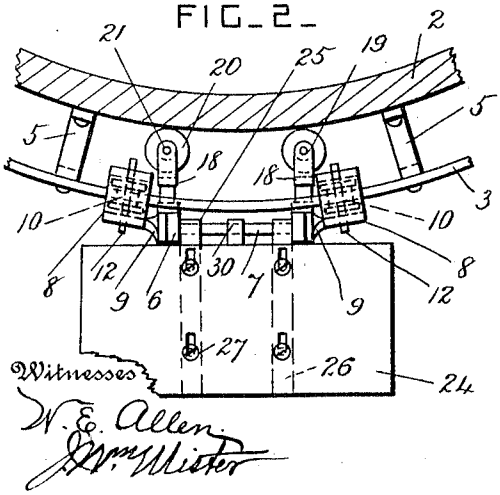


FIG. 2.



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LOUIS C. TIMMERMAN, OF VESPER, KANSAS.

LADDER FOR SILOS.

1,118,385. Specification of Letters Patent. Patented Nov. 24, 1914.

Application filed November 20, 1913. Serial No. 802,081.

To all whom it may concern:

Be it known that I, LOUIS C. TIMMERMAN, a citizen of the United States, residing at Vesper, in the county of Lincoln and State of Kansas, have invented certain new and useful Improvements in Ladders for Silos; 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.

This invention relates to ladders specially arranged for giving access to cylindrical silos and other similar structures; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a front view of a portion of a silo provided with a ladder according to this invention. Fig. 2 is a plan view; and Fig. 3 is a side view of the same.

The silo is preferably cylindrical, and 2 is a portion of its curved side wall. A curved track 3 is supported around the top portion of the silo, and is arranged concentric with it. The track is supported upon any suitable brackets 5 which are fastened to the vertical side wall of the silo.

The ladder 6 is provided with rungs 7 in the usual way, and 8 are two brackets which are secured one on each side of the top portion of the ladder. The brackets have flanged rollers 10 mounted on pins 12, and the brackets have offset and twisted arms 9 at their lower ends, which are secured to the sides of the ladder, so that the rollers are inclined with respect to each other and so that the pins 12 are radial of the center of the silo. This permits the rollers to run freely on the curved track, and a passageway or space 15 is formed between the brackets of greater width than the ladder, so that a free passage is afforded from the top of the ladder into the silo. Lugs 16 project from the brackets under the track to prevent the grooved rollers from running off the track. As the distance between the centers of the pins 12 is considerably greater than the width of the ladder, the ladder is rendered materially more stable and less liable to tip, than when the roller pins are arranged vertically over the side bars of the ladder. This increase in stability is particularly valuable in a ladder which runs on a curved track, as the ladder is more liable to run off the track when the track is a comparatively small circular track, and it also permits of the successful use of a scaffold bracket, as shown in the drawings, of considerably greater width than the ladder. Arms 18 are secured to the lower portion of the ladder, and are arranged one at each side thereof. These arms have forked end portions 19, and 20 are vertical rollers journaled in the forked end portions 19 on vertical pins 21. These rollers bear against the curved side wall of the silo and prevent the ladder from swinging inwardly toward the silo.

A platform 24 is provided and is supported from the rungs of the ladder at any desired height above the ground. This platform bears against the front of the sides of the ladder, and 25 are hooks which are secured to the platform and which engage with one of the rungs. The shanks 26 of the hooks extend horizontally under the platform, and the platform is secured to them by bolts 27 so that it and the hooks cannot slip after its position against the ladder has been adjusted. A forked brace 28 is pivoted by pins 29 to the front ends of the shanks 26, and is inclined downwardly and rearwardly under the platform. The stem of the brace has a jaw 30 at its lower end which engages with one of the rungs below the platform, so that the platform is supported in a substantially horizontal position. The platform is detachable and foldable, and it can be connected to the ladder at any desired height above the ground, and can be used in painting the silo, and for other purposes.

What I claim is:

The combination, with a stationary track, of a ladder, hook-shaped brackets having offset arms at their lower ends which are twisted to substantially a right angle to the brackets and secured to the sides of the

ladder, said brackets being arranged at a greater distance apart than the width of the ladder, rollers journaled in the hook-shaped brackets and running on the said track, and lugs secured to the lower parts of the said brackets and projecting under the track and preventing the rollers from running off it.

In testimony whereof I have affixed my signature in the presence of two witnesses.

LOUIS C. TIMMERMAN.

Witnesses:
J. C. JENSEN,
W. T. NIMMONS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."