April 21, 1959 O. E. MOYER 2,883,002

BUILDING MATERIALS ELEVATOR FOR SCAFFOLDS

Filed Nov. 14, 1957 4 Sheets-Sheet 1

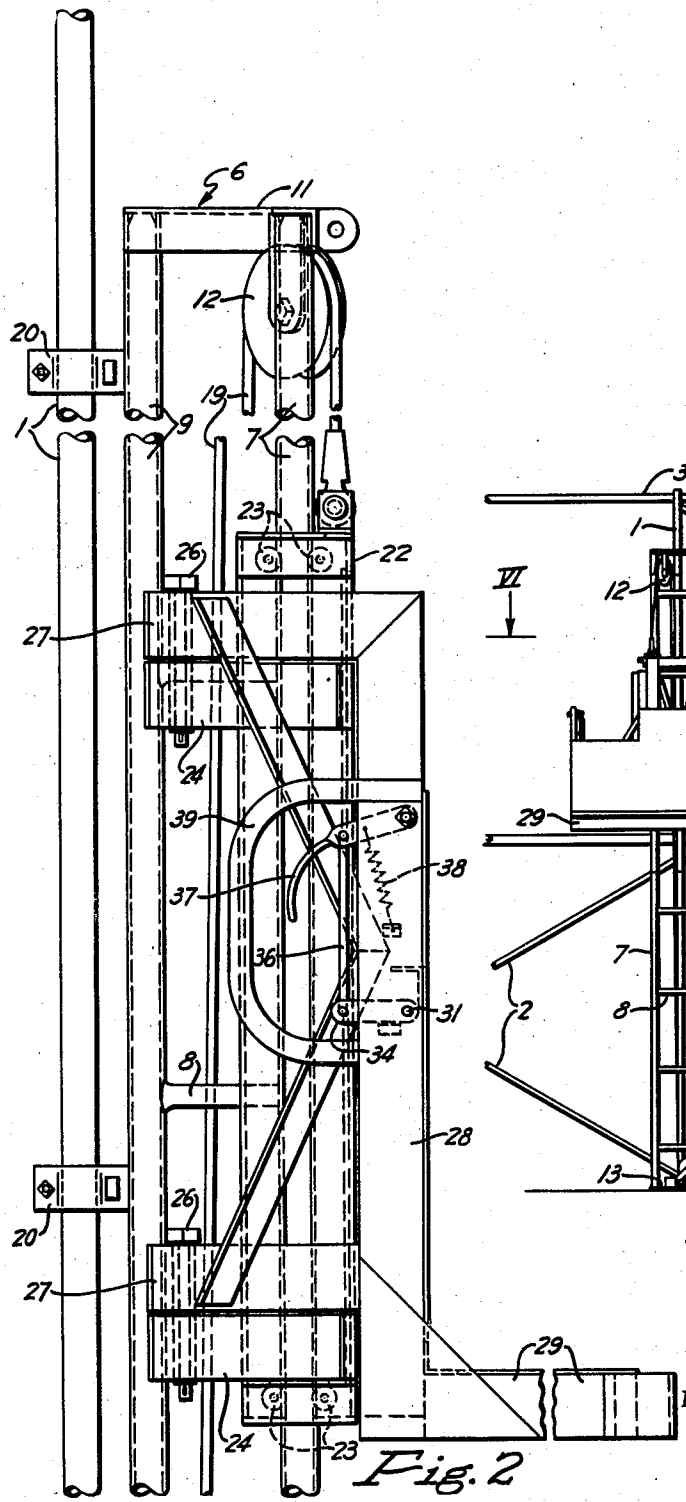


Fig. 2

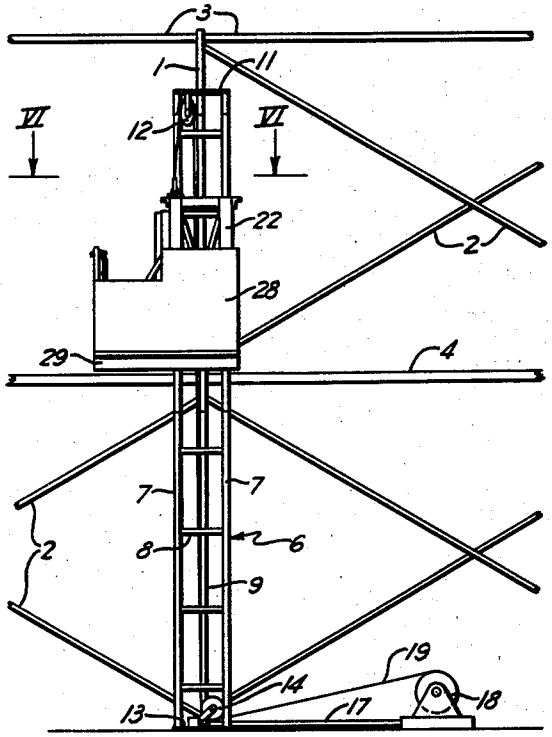


Fig. 1

INVENTOR.
OSCAR E. MOYER
BY Brown, Critchlow, Flick and Peckham
His Attorneys

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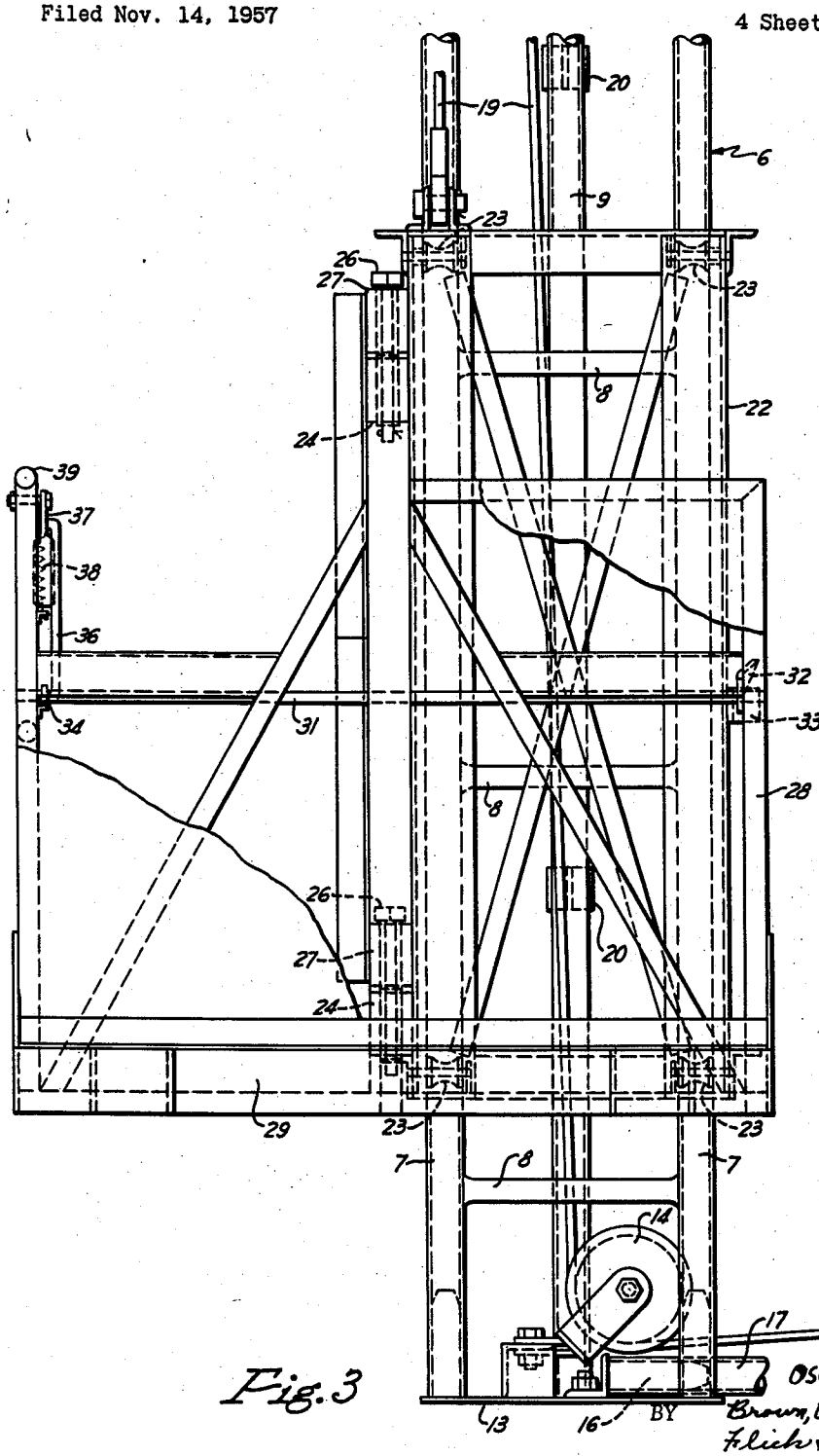


Fig. 3

INVENTOR.
OSCAR E. MOYER
Brown, Critchlow, Flick & Peckham
His Attorneys

April 21, 1959 O. E. MOYER 2,883,002

BUILDING MATERIALS ELEVATOR FOR SCAFFOLDS

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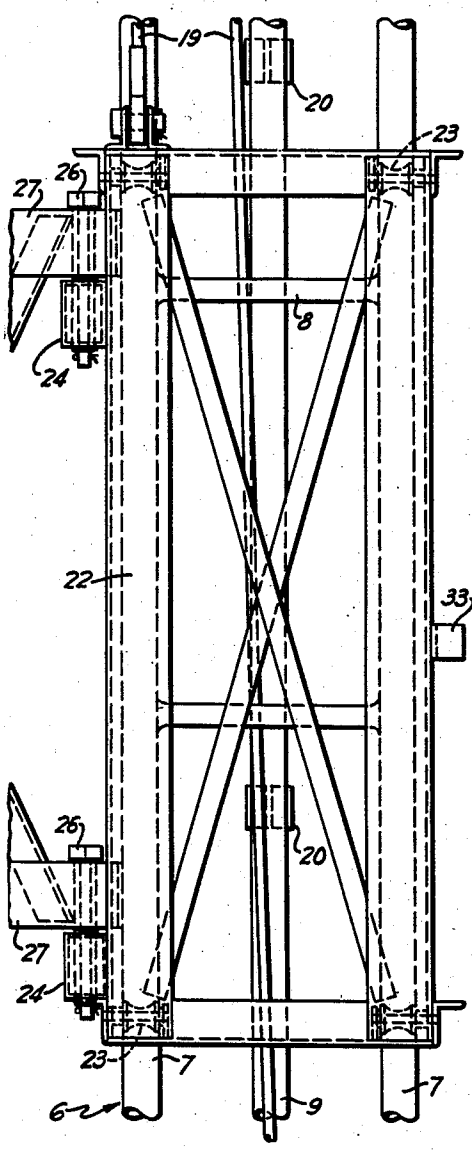


Fig. 5

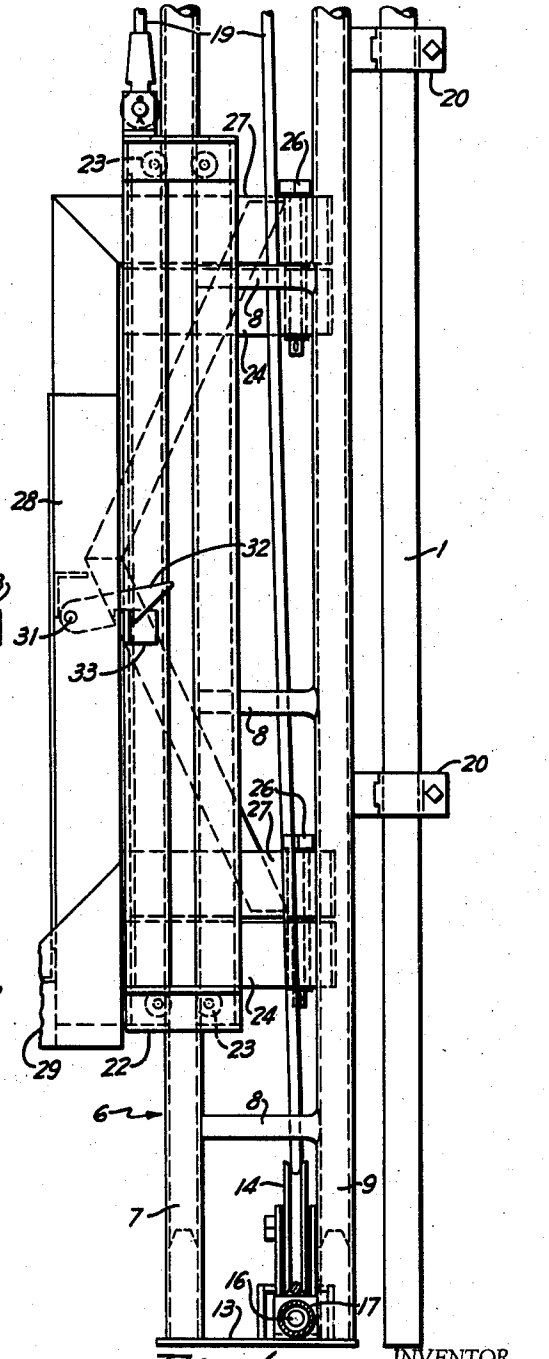


Fig. 4

INVENTOR.
OSCAR E. MOYER
BY Brown, Critchlow, Flick & Peckham
His Attorneys

April 21, 1959 O. E. MOYER 2,883,002

BUILDING MATERIALS ELEVATOR FOR SCAFFOLDS

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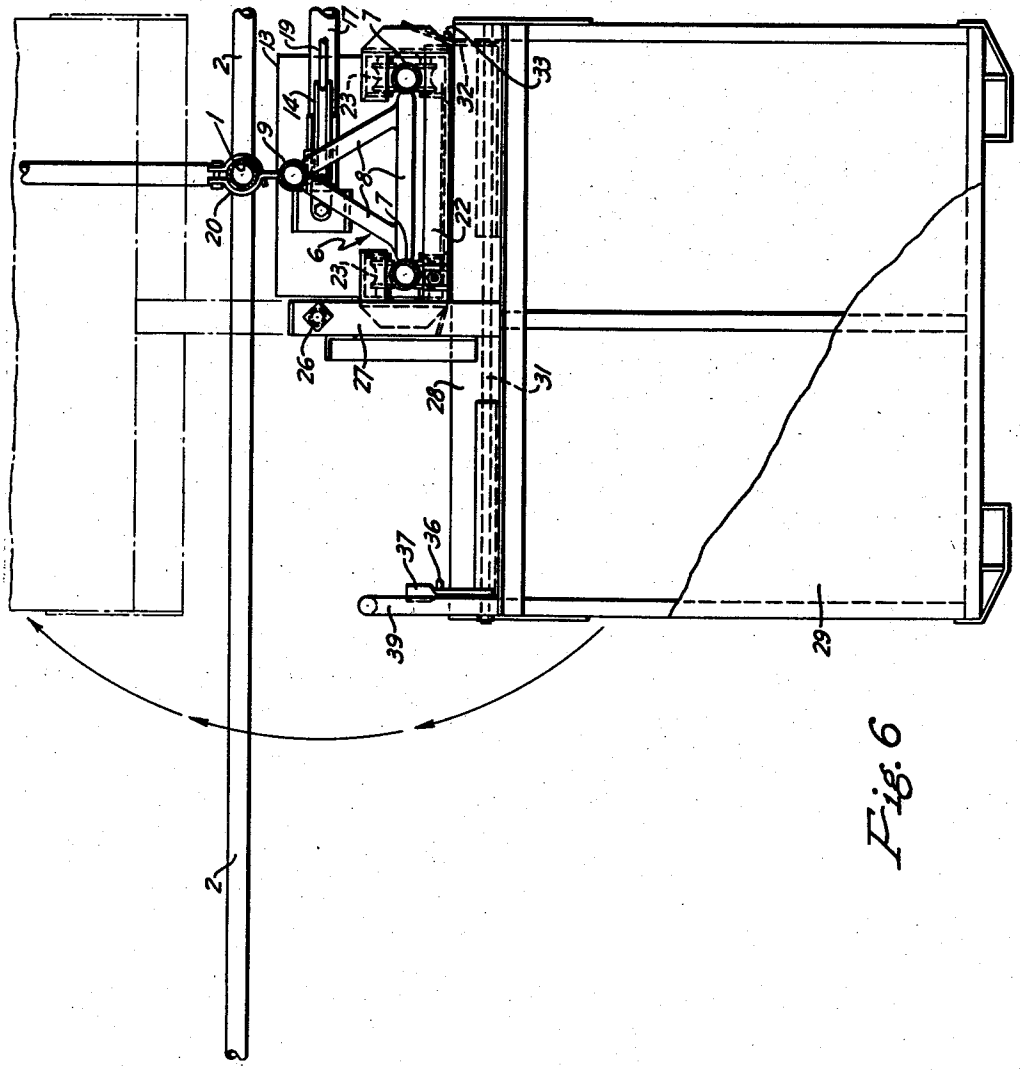


Fig. 6

INVENTOR.
OSCAR E. MOYER
BY Brown, Critchlow, Flick and Peckham
His Attorneys

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2,883,002

BUILDING MATERIALS ELEVATOR FOR SCAFFOLDS

Oscar E. Moyer, Zelienople, Pa., assignor to Universal Manufacturing Corporation, Zelienople, Pa., a corporation of Pennsylvania

Application November 14, 1957, Serial No. 696,346

2 Claims. (Cl. 187—2)

This invention relates to elevators that are used to raise building materials up onto scaffolds, and more particularly to an elevator that is connected directly to a scaffold.

The ordinary type of building materials elevator is a separate four legged tower that is constructed beside a scaffold and contains a platform or cage that can be raised and lowered inside the tower. To load and unload such an elevator, the workmen have to walk back and forth into the tower. After pulling a wheelbarrow load of material out of the tower, the wheelbarrow has to be turned around to head it in the desired direction. Such an elevator is large and expensive and requires a considerable amount of room.

It is among the objects of this invention to provide a scaffold elevator which is relatively small and compact, which is inexpensive, which is easy to assemble, which is supported by attaching it to the side of a scaffold, which does not require a large tower, in which the elevator platform is not surrounded by a tower, and in which the platform can be swung from a forwardly projecting position back around onto the working platform of the scaffold.

In accordance with this invention the back of a vertical track is fastened to one side of a scaffold. Mounted on the front of the track is a carriage that has a portion extending back across one side of the track. This carriage can be raised and lowered by a cable and winch. A vertical frame is normally disposed in front of the carriage and has a platform projecting from its front. The frame is pivotally connected on a vertical axis to the back of the backwardly extending portion of the carriage, so that after the platform has been raised to the desired level it can be swung around behind the track and onto the scaffold working platform at that level.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which

Fig. 1 is a front view of my elevator with the platform in a raised position;

Fig. 2 is a fragmentary enlarged side view of the elevator, with parts broken away, taken from the left-hand side of Fig. 1;

Fig. 3 is an enlarged fragmentary front view of the elevator;

Fig. 4 is an enlarged side view of the elevator, taken from the right-hand side of Fig. 1;

Fig. 5 is a fragmentary front view of the elevator with the platform swung away from in front of the carriage; and

Fig. 6 is a plan view taken on the line VI—VI of Fig. 1, indicating in broken lines how the elevator platform is swung around behind the track.

Referring to Fig. 1 of the drawings, a conventional metal scaffold is shown, which has superimposed upright members **1** connected by inclined braces **2** and, if desired, by horizontal braces **3**. Also, at suitable levels the scaffold is provided with working platforms, one of these being shown in the drawing at **4**. According to

this invention, after the scaffold has been erected the upright track **6** of a building materials elevator is fastened to it. This track preferably has two parallel tubular rails **7** that are circular in cross section and that are connected by short cross braces **8** to each other and with a post **9** behind them. The post may be made in the same way as the rails, and forms with them a triangular element as shown in Fig. 6. The track is formed in prefabricated lengths convenient to handle and designed for superimposing on one another so that the height of the track can be made to correspond with the height of the scaffold. As the scaffold is built higher, the height of the track can be increased by adding another section. Each section is light in weight and easy to handle and set in place.

At the upper end of the track there is a removable headpiece **11** that supports a sheave **12** near one rail. The lower end of the track rests on a base **13** that supports another sheave **14**. Also mounted on the base (Fig. 3) is a horizontal pin **16** that receives one end of a long strut **17**, at the opposite end of which there is a suitable power hoist **18** for a cable **19** that extends under the lower sheave and then up through the track and over the upper sheave. As shown in Figs. 2, 4 and 6, the track post **9** is clamped to the upright members **1** of the scaffold behind it by means of clamps **20** secured to the post and removably fastened to the scaffold. The track is thereby held upright at the side of the scaffold.

The upper or free end of cable **19** is secured to the top of a carriage mounted on the front of the track. The carriage is a vertical rectangular framework **22**, at the top and bottom of each side of which there are pairs of concave rollers **23** that fit against opposite sides of the adjoining rail to guide the carriage up and down the track. Secured to one side of the carriage framework, as shown in Figs. 2 and 6, is a pair of rearwardly projecting arms **24** that extend back across one side of the track. Pivotally connected to the rear ends of these arms by vertical pivot pins **26** are the superimposed rear ends of another pair of arms **27**. This second pair of arms normally extend forward along the carriage arms and support a vertical frame **28** in front of the carriage. Part of the frame is directly in front of the carriage, while the rest of it extends laterally in the opposite direction from the arms. Preferably, the arms are located midway between the two sides of the frame. A platform **29** projects forward from the bottom of the frame and serves as a support for building materials that are to be raised and lowered by the elevator.

Although frame **28** is pivotally supported by the carriage in the manner just described, it is normally held in its front traveling position by suitable latching means. For this purpose a horizontal rod **31** may have its opposite ends journaled in the opposite sides of the frame. At the carriage end of the rod a latch **32** is rigidly mounted on the rod and hooks over a keeper **33** secured to the adjoining side of the carriage. This holds the frame back against the carriage and thereby prevents it from swinging on pivot pins **26**. At the opposite end of the rod, as shown in Fig. 2, a short horizontal lever **34** has its front end secured to the rod, and its rear end pivotally connected to the lower end of a vertical link **36**. The upper end of the link is pivotally connected to the central portion of a latch-releasing lever **37**, the front end of which is pivotally connected to the adjoining side of the frame. Although gravity will generally hold lever **37** and the latch in their lower positions, a coil spring **38** may be connected between the lever and the side of the frame below it to aid gravity and insure that vibration will not unhook the latch from its keeper.

It will be seen that when the rear end of lever **37** is raised, it will lift short lever **34** and thereby swing the

latch out of engagement with the keeper. The frame then can be swung 180° around behind the track so that the elevator platform will be located entirely over the working platform of the scaffold, as shown in broken lines in Fig. 6. It is then an easy matter to unload the elevator platform directly onto the scaffold. A loaded wheelbarrow can be placed on the elevator platform at ground level in such position that the wheelbarrow will be headed in the right direction when it is run off the elevator onto the scaffold platform. No backing and turning are required.

To aid in swinging the elevator frame and platform, a handle **39** may be secured to the side of the frame adjacent the latch releasing lever. By locating the handle beside the lever so that both can be grasped in the hand at the same time, the latch can be released and then the elevator platform swung around into the scaffold without changing the position of the hand on the frame. When the platform and frame are returned to their traveling position in front of the carriage, the latch snaps into engagement with the carriage keeper **33** and holds the frame against the front of the carriage.

An elevator constructed in accordance with this invention can be set up or dismantled quickly. It is especially suitable for small contractors who cannot afford an expensive conventional elevator. This elevator is compact and requires but little space. It is never necessary for the man on the scaffold to lean out from the scaffold over the elevator platform or to step out onto it. All he has to do is to swing the platform around into the scaffold to deliver the load directly onto the scaffold platform.

I claim:

1. A building materials elevator for scaffolds, comprising a vertical track, means for fastening the back of the track to one side of a scaffold, a carriage mounted on the front of the track and having vertically spaced arms extending back across one side of the track, means for raising and lowering the carriage, a vertical frame normally disposed in front of the carriage and extending laterally

in one direction therefrom far enough to locate the center of the frame in front of said arms, a platform secured to the front of the frame, arms extending from the back of the center of the frame back along said carriage arms, and vertical pivots connecting the rear ends of the frame arms to the rear ends of the carriage arms, whereby the platform can be swung around behind the track to locate substantially half of said frame directly behind the track.

2. A building materials elevator for scaffolds, comprising a vertical track, means for fastening the back of the track to one side of a scaffold, a carriage mounted on the front of the track and having a portion extending back across one side of the track, means for raising and lowering the carriage, a vertical frame normally disposed in front of the carriage and extending laterally away from the track at said one side, a platform secured to the front of the frame, means pivotally connecting the frame on a vertical axis to the back of said backwardly extending portion of the carriage, whereby the platform can be swung around behind the track, a latch normally connecting the frame to the carriage to hold the frame in front of it, latch releasing means carried by the frame at the outer end of its laterally extending side, a horizontal extending across the frame and rotatably mounted thereon, said latch being rigidly mounted on one end of the rod, means operatively connecting said latch-releasing means to the opposite end of the rod to turn the rod when said releasing means is actuated manually, and a handle mounted on the frame close to said releasing means to permit the frame to be pulled back around the track as soon as said latch is released.

References Cited in the file of this patent

UNITED STATES PATENTS

1,136,604	L'Heureux	Apr. 20, 1915
2,569,653	Boedecker	Oct. 2, 1951

FOREIGN PATENTS

21,815	Great Britain	Sept. 25, 1913

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,883,002 April 21, 1959

Oscar E. Moyer

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 24, before "extending" insert — rod —.

Signed and sealed this 30th day of June 1959.

(SEAL)
Attest:
KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents