(No Model.)

3 Sheets—Sheet 1.

T. L. MARVEL.

CONVEYER.

No. 483,232. Patented Sept. 27, 1892.

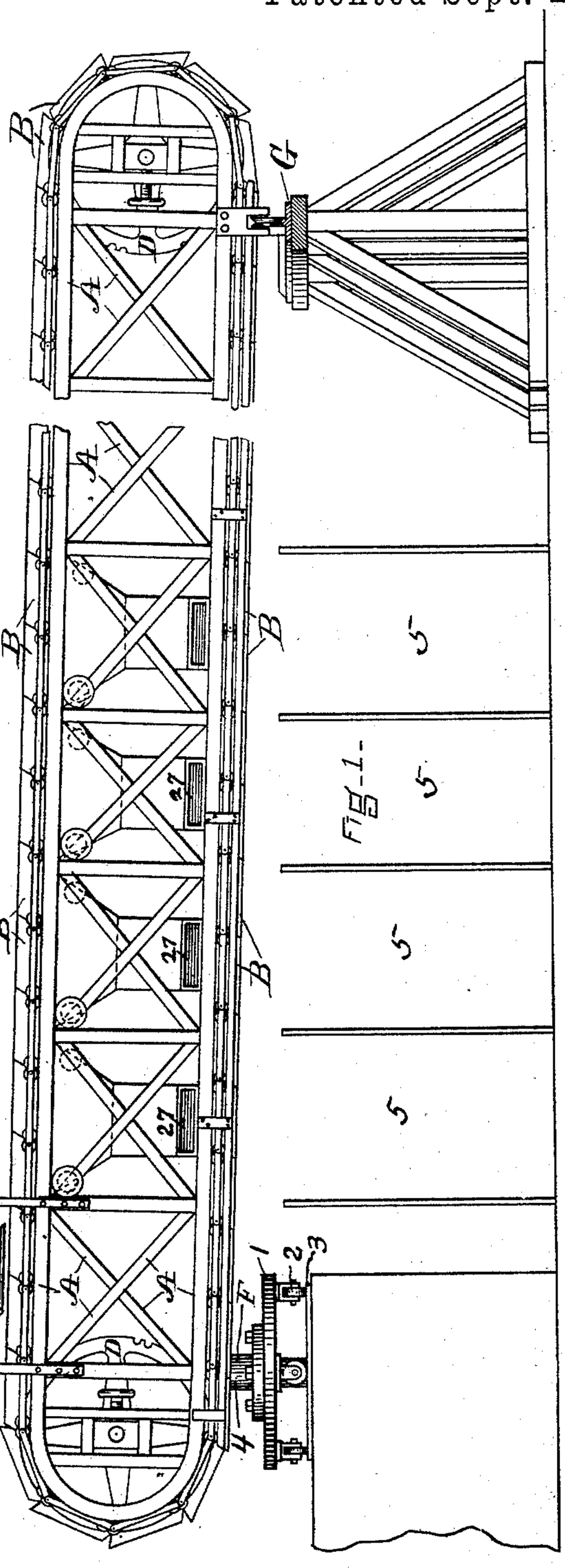

FIG. 1.

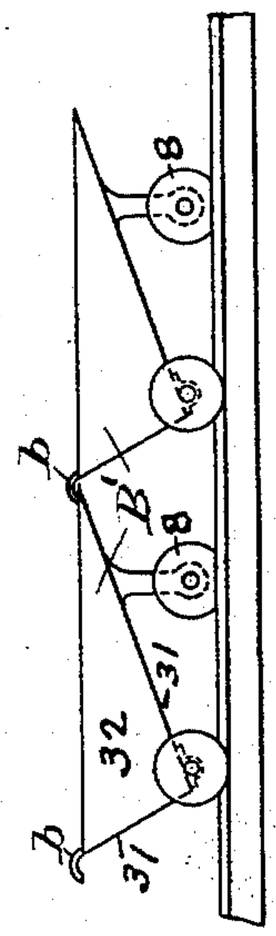

FIG. 7.

WITNESSES.
H. C. Young.
John R. Snow.

INVENTOR.
Theo. L. Marvel
by his attorney,
J. Edwards

(No Model.) 3 Sheets—Sheet 2.

T. L. MARVEL.

CONVEYER.

No. 483,232. Patented Sept. 27, 1892.

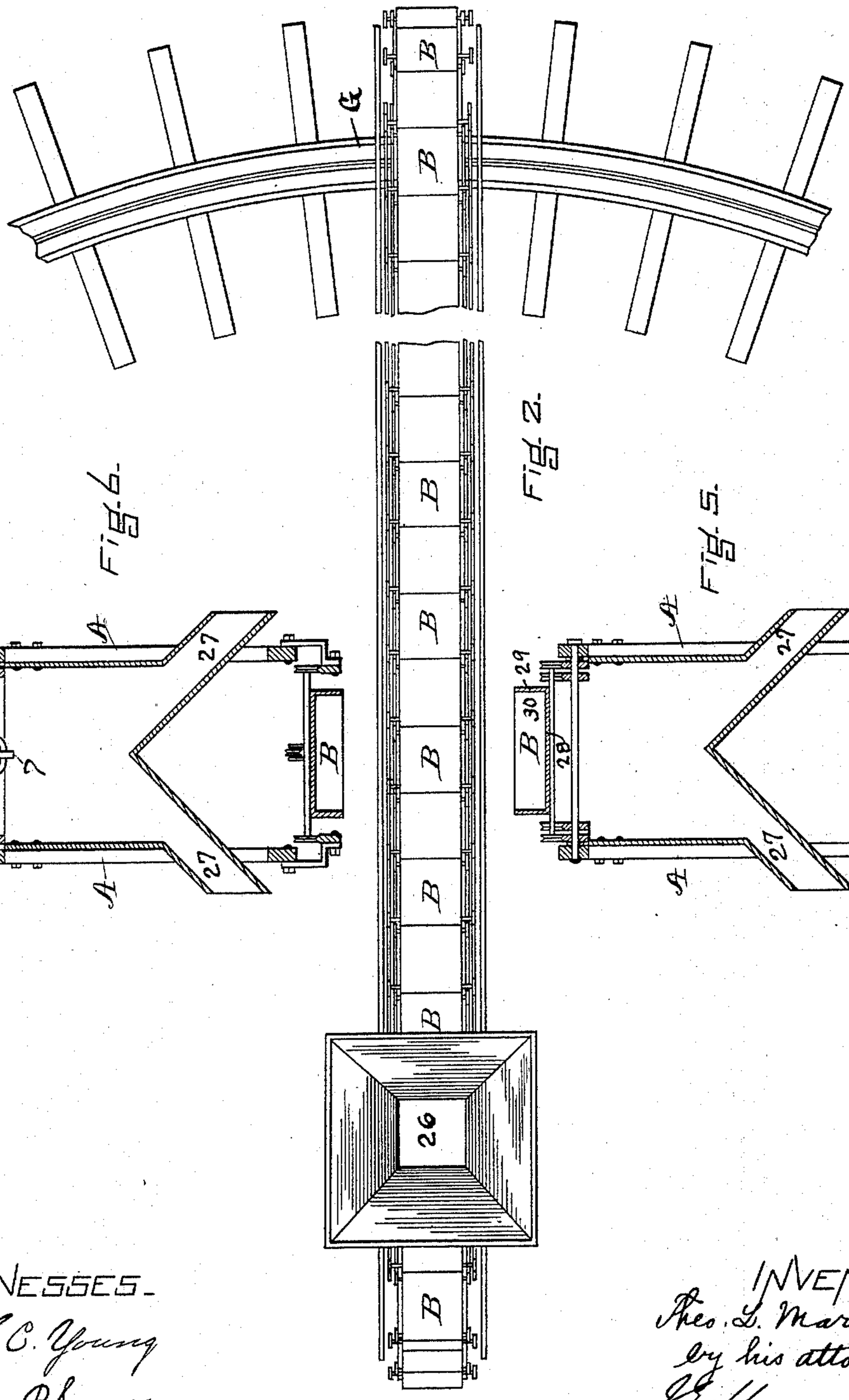

Fig. 2.

Fig. 5.

Fig. 6.

WITNESSES-
H. C. Young
John R. Snow.

INVENTOR-
Theo. L. Marvel.
by his attorney,
J. L. Ellsworth

(No Model.) 3 Sheets—Sheet 3.

T. L. MARVEL.

CONVEYER.

No. 483,232. Patented Sept. 27, 1892.

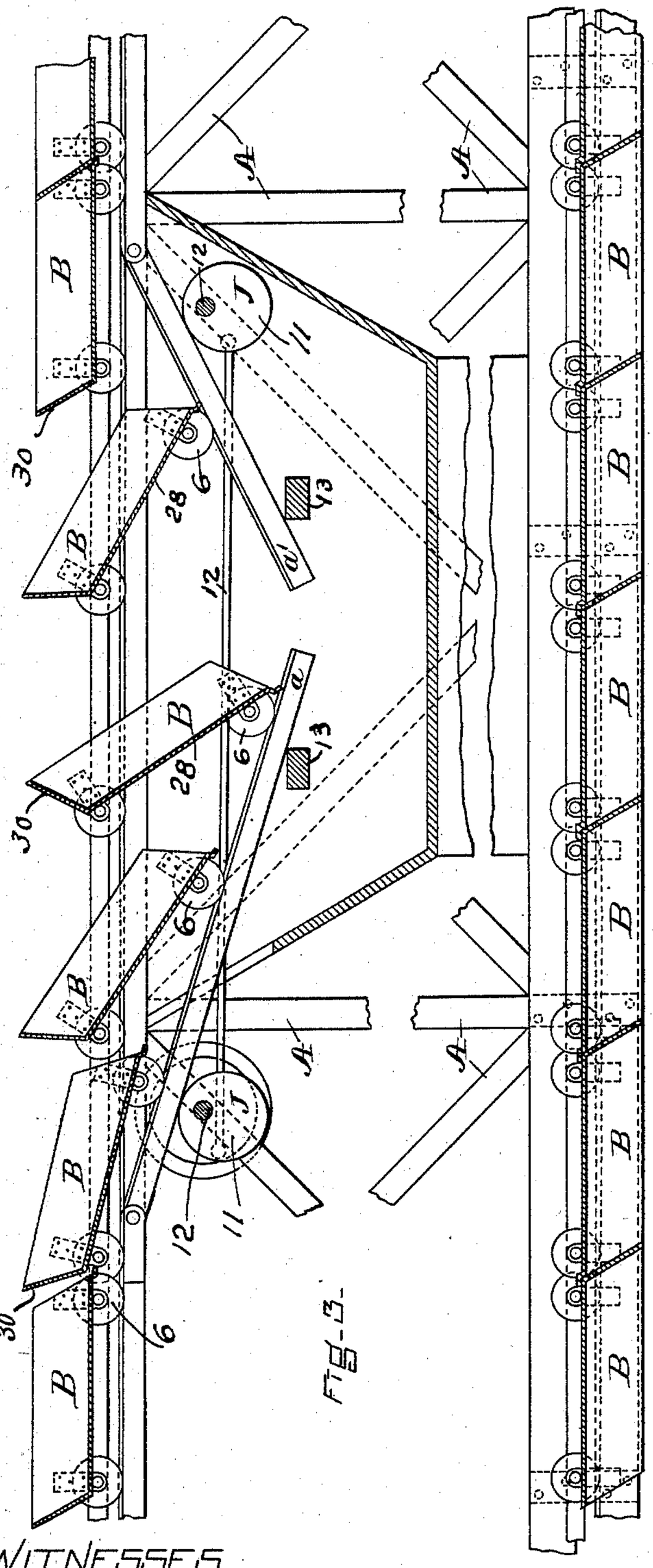

FIG. 3.

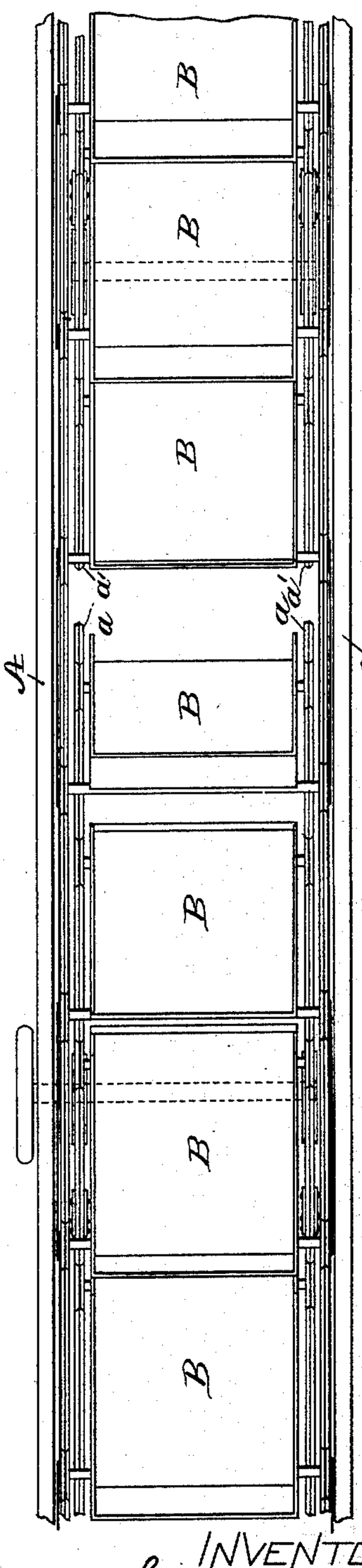

FIG. 4.

WITNESSES.
H. C. Young.
John A. Snow.

INVENTOR.
Theo. L. Marvel
by his attorney,
J. E. Maynadier

UNITED STATES PATENT OFFICE.

THEODORE L. MARVEL, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO WILLIAM H. PHILLIPS, OF SAME PLACE.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 483,232, dated September 27, 1892.

Application filed March 23, 1888. Serial No. 268,219. (No model.)

To all whom it may concern:

Be it known that I, THEODORE LEONARD MARVEL, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Conveyer, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation partly in section. Fig. 2 is a partial plan of one form of my conveyer. Fig. 3 is a sectional elevation on a larger scale. Fig. 4 is a plan of what is shown in section in Fig. 3. Fig. 5 is a cross-section illustrating the discharging devices when the double tilting track is used; Fig. 6, a like cross-section when the single tilting track is used, this section being the same as the section on which Fig. 5 is taken, except as regards the tilting track and the wheels at that end of the pan which is lowered by the movement of the tilting track. Fig. 7 is a partial elevation illustrating the modification of the cars or carriers.

My invention is a conveyer consisting of a frame, a double set of tracks, and an endless chain of pans mounted on wheels, one set of which runs on one set of tracks and the other set on the other set of tracks, the frame having at each end a suitable wheel or its equivalent, the chain of pans traveling about these wheels much as a chain belt travels about its pulleys, but the pans, nevertheless, being supported by their wheels on the tracks.

In the drawings, A is a frame or support for the endless chain of pans or cars B, the frame A serving as ways for the pans B and having at each end a wheel D, so that the endless chain of pans may be caused to travel about the frame.

The frame A, with its chain of pans B, is supported at one end by a turn-table F, as indicated in the left of Fig. 1, (turn-table F being of any proper construction, as will be plain to all skilled in the art, and made up, say, of a carrier 1, provided with wheels 2, moving on a circular track 3, the frame A being connected to the turn-table by a support 4,) and at the other end by the track G; but where the frame A is of considerable length (and in practice it may be several hundred feet or more) an intermediate track or tracks will be used. By this contrivance a number of bins or receptacles can be arranged along the track and the material carried from the elevator H (indicated in Fig. 1) or from another supply to either one of the bins 5 at pleasure. In order to more completely cover the dumping-ground, I have devised means for dumping the pans before they arrive at the discharging end of the conveyer. Where the pans or cars are supported on wheels, the dumping is readily done between the tracks, as shown in Figs. 1 to 3.

In Figs. 1, 2, 3, 4, and 5 one end of the pan is supported upon two wheels 6, which run upon tracks *a a'*, adapted to be lowered to let that end of the pan which is provided with the wheels 6 down to discharge its load. The pan is supported at the other end by wheels which run on tracks. It will be obvious that a single central track 7 may be used, as indicated in Fig. 6, the pans in that case having a wheel 8 near the middle of its discharging end, as indicated in Fig. 6. These dumping devices are arranged at intervals along the frame, and suitable mechanical devices are employed, as at J in Fig. 3, by which the tracks *a a'* can be lowered or raised without stopping the conveyer. The device J J shown in the drawings for raising and lowering the tracks is made up of cams 11 11, connected by a rod 12, the cams being mounted on a portion of the frame A. When the cams are in one position, they keep the tilting tracks *a a'* in line by bearing on the under edge of the tracks, and when the cams are in their other position the tracks fall out of line and downwardly, so that the ends of the pans which are supported by the tracks *a a'* are lowered and their contents dumped downward into the bins. The tracks *a a'* are shown as supported in their lowest position by the cams 11 11 and stops 13 13, all of which will be readily understood by all skilled in the art on reference to Fig. 3. Thus a train of railroad-cars can be arranged upon a railroad-track alongside of my conveyer and each car loaded in turn, for when one is nearly loaded the next dumping-tracks are lowered (or the next dumping devices brought into operation) and the first dumping devices raised, (or the first dumping devices prevented from operating,) so that the pans

dump into an empty car instead of into the one that has been loaded.

In Fig. 7 I have shown pans B′ which are especially adapted for powdered material or even liquids, the lip *b* overlapping an edge of an adjacent pan B′ and serving to prevent waste from the front end of one pan and the rear end of another.

The elevator H discharges into a hopper 26, preferably as shown in Fig. 1, and it is desirable to empty the cars into chutes 27, which are intermediate the tilting track and the bins, as shown in Figs. 1, 5, and 6.

It will be plain to all skilled in the art that the pans B may be of any form suitable for use; but when the conveyer is to dump between tracks or at the end of the tracks I prefer to form the pans as shown in Figs. 1 to 3—that is, with a bottom 28 and two side pieces 29 and one end piece 30, the end pieces 30 being inclined to the bottom 28 on the side pieces 29, cut at an angle with the bottom 28, so that the open end of one pan is closed by the end piece of the next contiguous pan when the pans are in line on the track, and the material is free to fall from the pans when the ends of the pans are lowered by the lowering of the tilting tracks, as shown in Fig. 3. An excellent form of pans B′ is that shown in Fig. 7 and above referred to, the bottom of the pan being formed of two pieces 31 31, at an angle to each other and provided with sides 32 32.

The details of construction of frame A, the endless chain of pans B, the wheels D, the dumping-tracks *a a′*, their operative devices J, the turn-table or its equivalent F, and the means for giving motion to the endless chain of pans (whether by so inclining the frame A as to cause the endless chain of pans to operate by gravity or by the application of power) will be clear to all skilled in the art without description.

What I claim as my invention is—

In combination, a frame, an endless chain of pans, two sets of wheels, two sets of tracks, and end wheels mounted on the frame, the frame and end wheels supporting the endless chain of pans, and the pans being also supported by the two sets of wheels, one set of wheels on one set of tracks and the other on the other set of tracks, and means whereby one set of tracks may be lowered and raised, all substantially as set forth.

THEO. L. MARVEL.

Witnesses:
H. C. YOUNG,
JOHN R. SNOW.