April 19, 1932. R. J. OWENS ET AL 1,854,561

ELEVATOR LEG

Filed Feb. 13, 1931

Fig. 2

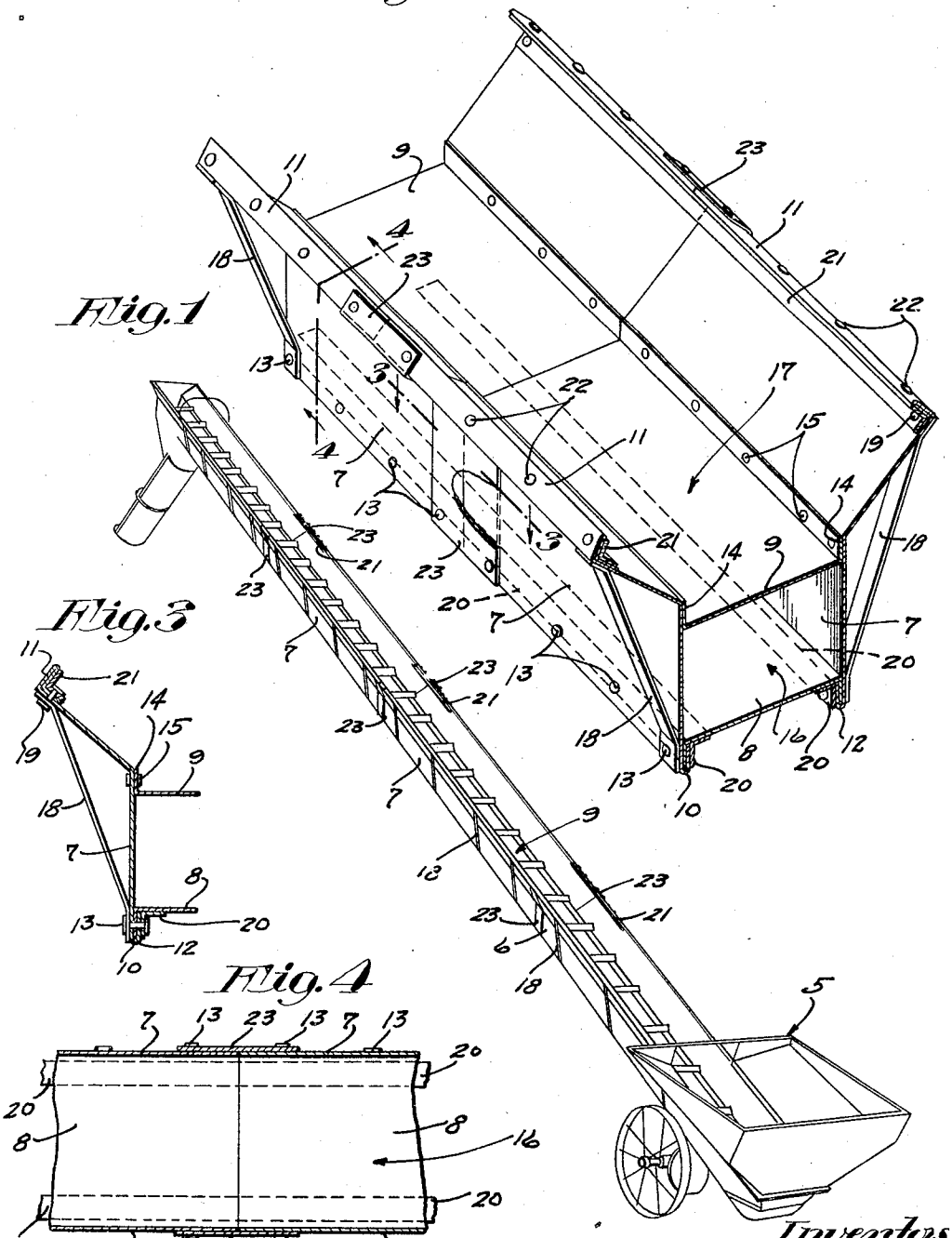
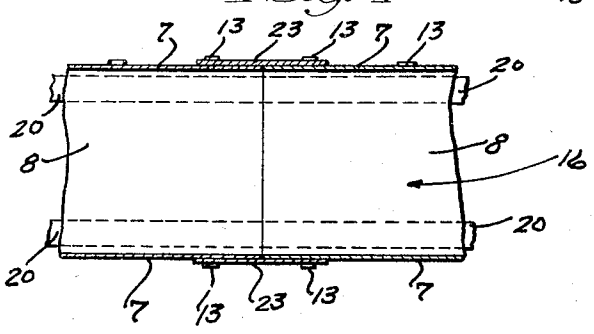


Fig. 1

Fig. 3

Fig. 4



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Patented Apr. 19, 1932 1,854,561

UNITED STATES PATENT OFFICE

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ELEVATOR LEG

Application filed February 13, 1931. Serial No. 515,556.

Our present invention relates to portable elevators for grain and the like and has for its object the provision of a novel leg therefor that is strong and durable and at the same time rigid and of relatively light weight.

To the above end, the invention consists of the novel construction and arrangement of parts hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a perspective view of a portable elevator, the leg of which is constructed in accordance with the invention;

Fig. 2 is a fragmentary perspective view of the elevator leg at one of the joints therein, on an enlarged scale; and

Figs. 3 and 4 are fragmentary detail views in section taken on the lines 3—3 and 4—4 of Fig. 2, respectively.

The portable elevator illustrated is indicated as an entirety by the numeral 5, with the exception of its leg 6 which is the subject matter of the present invention. This elevator leg 6, as shown, comprises several longitudinally aligned sections, and the endwise abutting sections are connected by a novel joint.

The elevator leg 6 is preferably formed from galvanized sheet metal, and each section thereof comprises a pair of side members 7, a bottom member 8 and a partition member 9. Each side member 7 is formed from a single sheet of metal. This sheet of metal at its lower longitudinal edge portion is folded inwardly upon itself to form a joint channel 10, and its upper longitudinal edge portion is folded inwardly upon itself and pressed together to form a reinforcing angle member 11.

The bottom member 8 of each section is formed from a single sheet of metal, and the longitudinal edge portions thereof are bent laterally outward to form a pair of joint flanges 12. These joint flanges 12 extend into the joint channels 10, and the sides of said channels are tightly pressed thereon. A multiplicity of rivets 13 extend through aligned holes in the sides of the channels 10 and the flanges 12, and rigidly connect the side members 7 and bottom member 8.

The partition member 9 of each section, at its longitudinal edge portions, is bent laterally outward to form a pair of flanges 14 that bear against the inner faces of the side members 7 and are rigidly secured thereto by a multiplicity of rivets 15. This partition member 9 divides the elevator leg 6 into a lower or closed compartment 16, and an upper or open compartment 17. The closed compartment 16 is rectangular in cross-section, and the side members 7, above the flanges 14, are bent laterally outward so that the walls of the upper compartment 17 are in diverging relation.

The outwardly inclined portions of the side members 7 are supported and rigidly held by a plurality of upright brace bars 18, the lower ends of which are secured to the joints 10—12 by certain of the rivets 13, and their upper ends are secured to the angle members 11 by rivets 19.

The abutting sections of the elevator leg 6 are rigidly connected and reinforced by novel joints, each of which comprises a lower pair of angle bars 20 and an upper pair of angle bars 21. These pairs of angle bars 20 and 21 overlap the abutting sections of the elevator leg 6 on each side of the joint therebetween. The lower pair of angle bars 20 are fitted in the corners formed by the bottom members 8 and the joints 10—12, with their outturned flanges rigidly secured to said joints by the rivets 13, and their other flanges extend under the bottom member 8 and support the same. The upper pair of angle bars 21 are nested in the angle members 11 and rigidly secured thereto by rivets 22 and the rivets 19.

The angle bars 20 and 21 rigidly hold the abutting sections of the elevator leg 6 against movement in all directions, and are applied thereto in such a manner as to be entirely out of the way, confined within the field of the leg structure, and at the same time so positioned as to give the greatest rigidity to the leg structure.

Joint plates 23 are fitted on the outer faces

of the side members 7, overlap the joint between abutting sections of the elevator leg 6, and are rigidly secured to said members by certain of the rivets 13 and 22. Fig. 1 shows the upper run of an endless conveyor on the partition member 9, and the lower run thereof is on the bottom member 8 within the compartment 16.

The joints between the side members 7 and bottom members 8 are very tight and at the same time rigid, so that the same will not open up and permit an accumulation of dirt and grain therein that would interfere with the action of the conveyor in the elevator leg 6. Where grain is allowed to accumulate in a joint, the same will swell when damp and open up the joint.

What we claim is:

1. An elevator leg having two side members and a bottom member, each of which is formed from sheet metal, the joint between each side member and the bottom member includes a longitudinal channel in one thereof, and a flange on the other thereof extending into said channel with the sides of the channel pressed thereagainst and rigidly secured thereto.

2. An elevator leg having two side members and a bottom member, each of which is formed from sheet metal, the side members at their lower longitudinal edge portions being folded inwardly upon themselves to form channels, the longitudinal edge portions of the bottom member being bent laterally outward to form flanges that extend into said channels, the sides of the channels being pressed onto said flanges and rigidly secured thereto.

3. The structure defined in claim 2, in which the longitudinal edge portions of the partition member are bent laterally outward to form flanges that bear against the side members and are rigidly secured thereto, said side members above the partition member being bent laterally outward into diverging relation.

4. An elevator leg comprising two endwise abutting sections, each having two side members, a bottom member, and a partition member, said side members and bottom member being rigidly connected by joints that extend outwardly from the bottom member substantially in the planes of the side members, and angle bars nested in the corners formed by the bottom member and said joints, overlapping the sections of the elevator leg on each side of the joint therebetween, certain of the said flanges of the angle bars being rigidly secured to said joints and their other flanges extend under the bottom member and support the same.

5. An elevator leg comprising two endwise abutting sections, each having two side members, a bottom member and a partition member, said side members and bottom member being rigidly connected by joints that extend outwardly from the bottom member substantially in the planes of the side members, said side members above the partition member being bent laterally outward into diverging relation, the upper longitudinal edge portions of the side members being bent inwardly upon themselves and pressed together to form reinforcing angle members, and angle bars nested in the corners formed by the bottom member and said joints, and in said angle members, said angle bars overlapping the sections of the elevator leg on each side of the joint therebetween, the angle bars nested in the corners formed by the bottom member and said joints having certain of their flanges rigidly secured to said joints and with their other flanges supporting the bottom member, the angle bars nested in the angle members being rigidly secured thereto.

In testimony whereof we affix our signatures.

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