

No. 861,906.

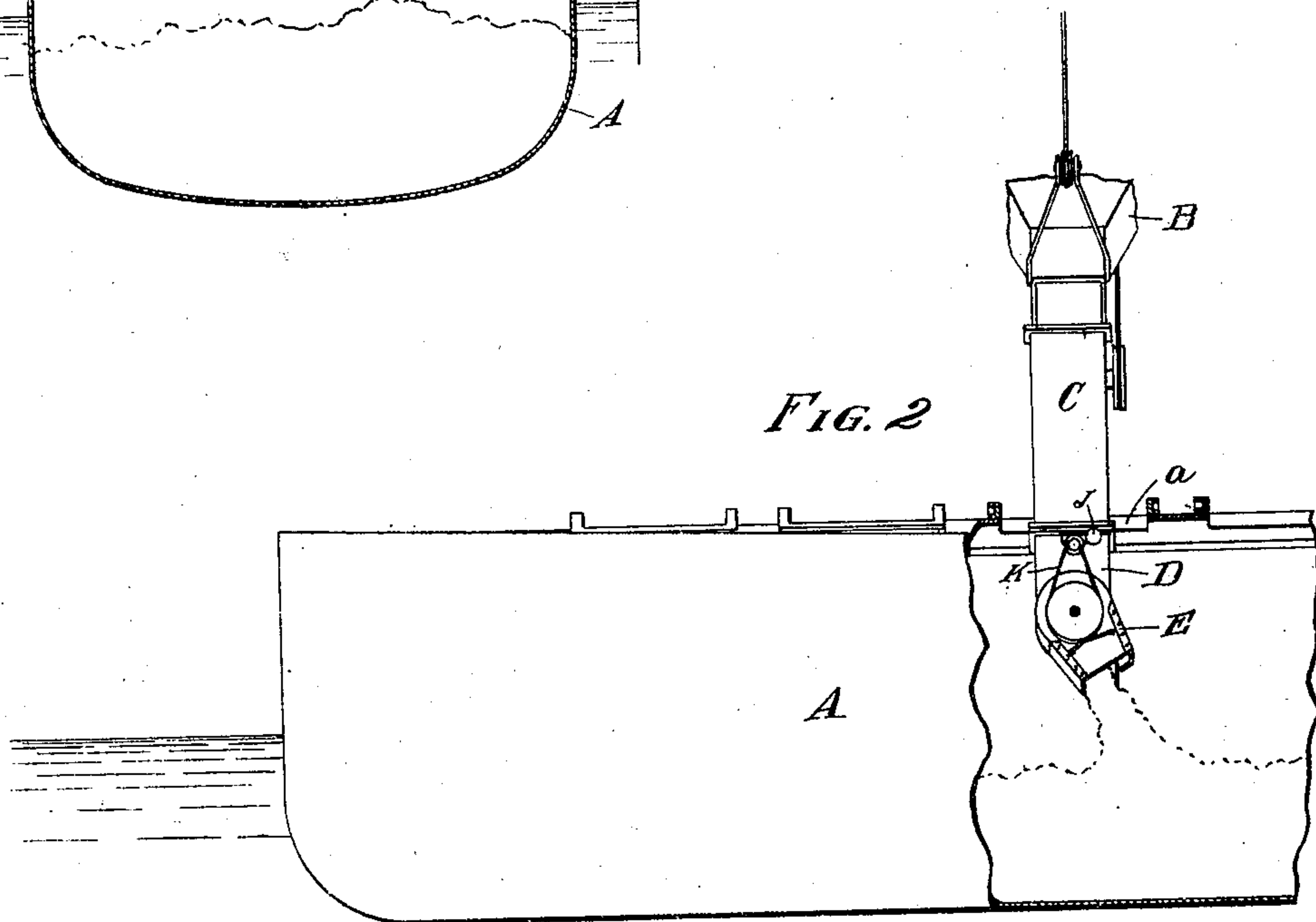
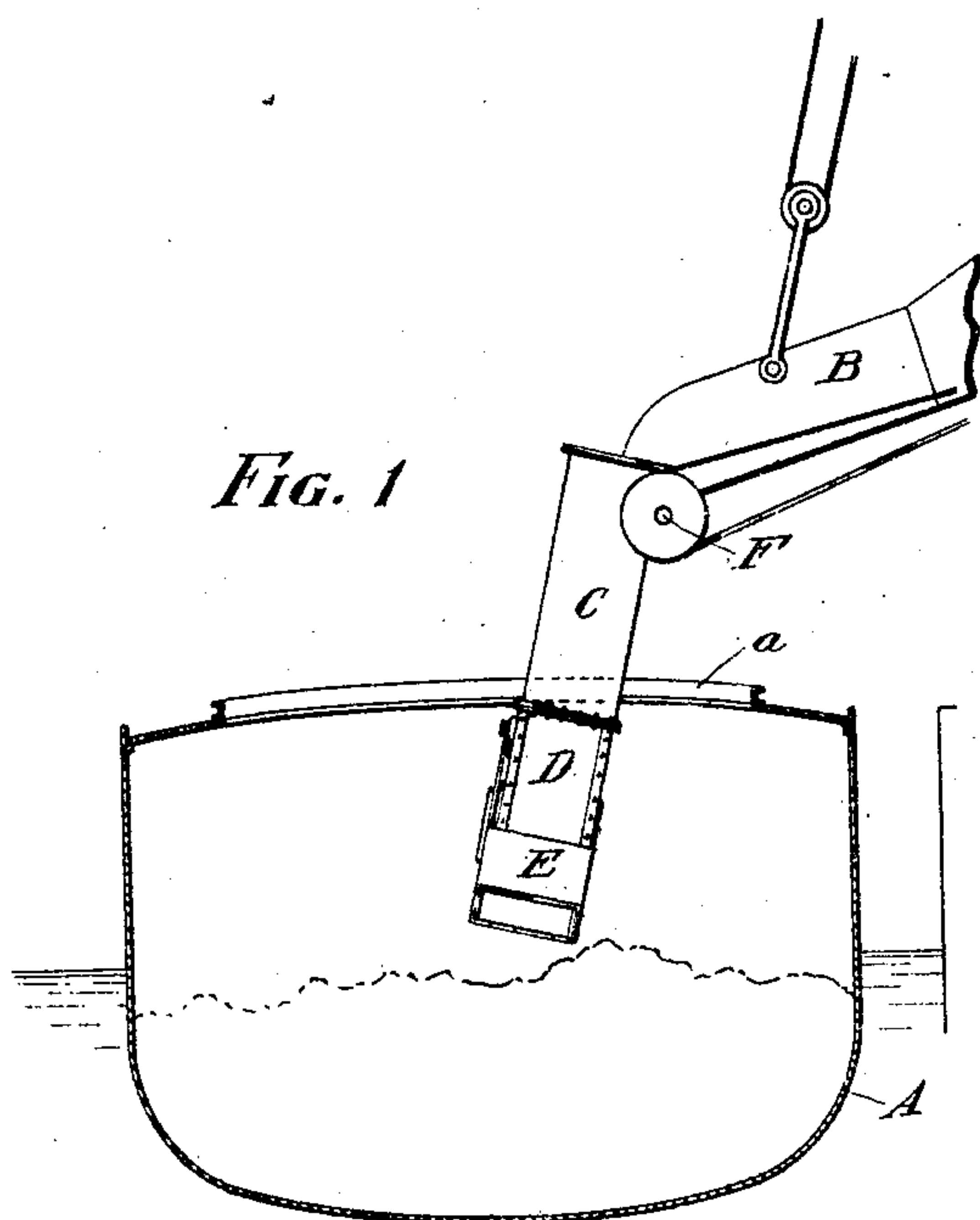
PATENTED JULY 30, 1907.

F. H. SCHLEGELMILCH.

LOAD TRIMMER.

APPLICATION FILED MAY 7, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR,

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2 SHEETS—SHEET 2.

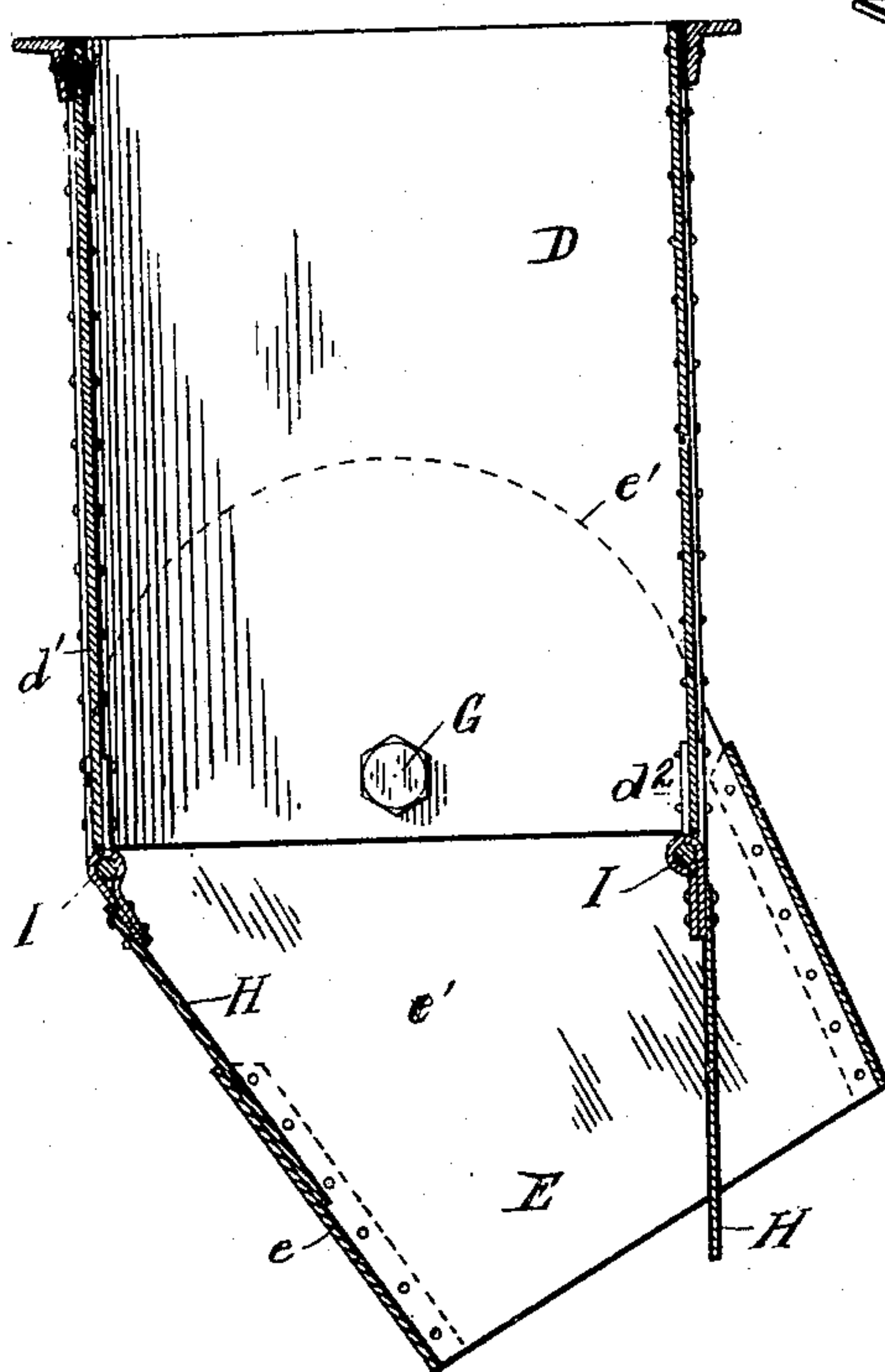


FIG. 3

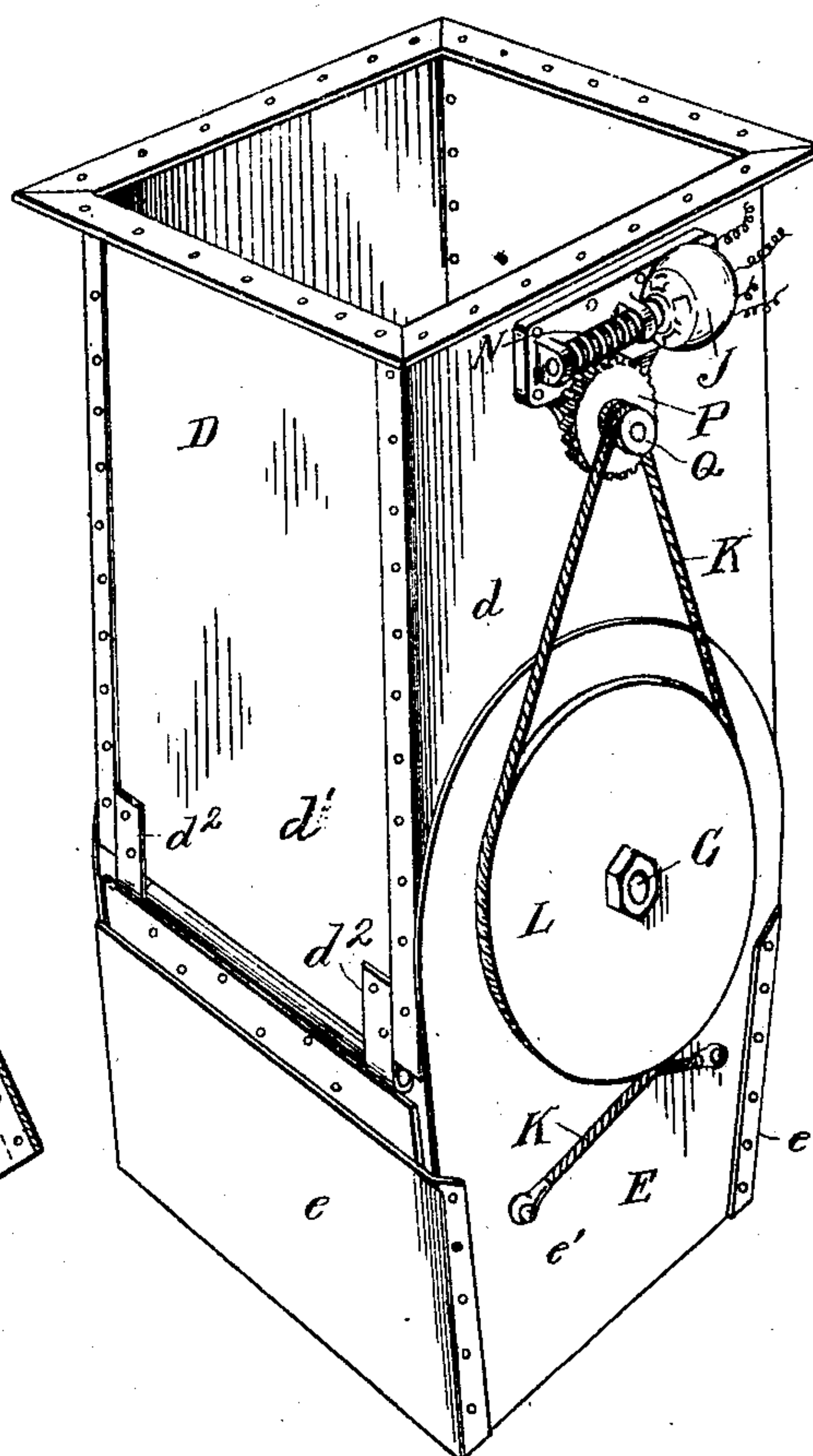


FIG. 4

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UNITED STATES PATENT OFFICE.

FREDERICK H. SCHLEGELMILCH, OF ASHTABULA HARBOR, OHIO.

LOAD-TRIMMER.

No. 861,906.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed May 7, 1907. Serial No. 372,401.

To all whom it may concern:

Be it known that I, FREDERICK H. SCHLEGELMILCH, residing at Ashtabula Harbor, in the county of Ashtabula and State of Ohio, have invented a certain new and useful Improvement in Load-Trimmers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a very simple and efficient adjustable spout for use in discharging bulk material.

The spout is particularly well suited for loading coal or ore into the holds of vessels, being adapted to direct such material in either direction from the hatch opening which the spout occupies. My adjustable spout thus constitutes an effective load trimmer.

The invention is hereinafter more fully explained and its essential characteristics summarized in the claims.

In the drawings, Figures 1 and 2 represent my load trimmer in place discharging into the hold of the vessel,—Fig. 1 being a cross section through such vessel and Fig. 2 a longitudinal view. Fig. 3 is a section through the load trimmer proper, and Fig. 4 is a perspective view of the same.

Referring first to Figs. 1 and 2 of the drawings, A represents a vessel having hatches *a*. B represents a suitable apron, which is adapted to discharge into the swinging spout composed of the section C pivotally connected with the apron, the section D secured to the section C and the swinging extension E pivoted to the section D on an axis at right angles to the pivot F of the section C. The arrangement of the pivots enables the whole spout consisting of the sections C, D and E to be swung athwartship as desired, while the section E may be swung fore-and-aft to direct the load beneath the space between the hatchways.

Referring now more particularly to Figs. 3 and 4, it will be seen that the section D is a rectangular tube made of sheet metal plates, and that the section E is composed of the cross plates *e* and the end plates *e'* to which the cross plates are riveted, the end plates extending onto the outer sides of the section D and being pivoted to them by bolts G secured to the side plates of the section D. Mounted on one of the side plates *d* of the section D is a suitable electric motor J, the armature of which carries a worm N meshing with a worm wheel P and rigid with this worm wheel is a pulley Q. A cable K wraps several times around this pulley and then passes onto opposite sides of a sheave L on the bolt G and has its ends anchored to the discharge section, as shown. By means of this motor and gearing the section E may be swung in either direction, it being understood that the motor may be reversed and controlled by a suitable controller located wherever desired. The worm holds the gearing and swinging section in whatever position they may be given.

To prevent the material passing out at the angle on the underside of the elbow, that is through the opening between the lower end of the side plates *d'* of the section D and cross plates *e* of the discharge section, I provide a pair of doors H pivoted to the lower ends of these side plates *d'* and lying inside of the discharge section E. These doors are preferably mounted on or secured to cross rods I, which in turn are mounted in straps *d''* secured to the side plate *d'*. As shown more clearly in Fig. 3, when the discharge section E is turned in one direction, the corresponding door H bridges the opening between the lower end of the plate *d'* and the upper end of the plate *e*, one door or the other performing this service according to which way the discharge section is turned. The other door H, however, is not idle but, lying on top of the discharging material, restrains its lighter portions from flying into the air, making a more condensed stream. This is of considerable importance in the loading of coal, for example, as it reduces the amount of dust.

My load trimmer is very cheaply constructed, may be applied to the existing discharging spouts without in any way interfering with the movement or operation thereof, and may be conveniently operated from any suitable point.

Having thus described my invention, I claim:

1. The combination of a tubular section, a discharge section pivoted thereto, a pair of doors hinged at the lower end of said tubular section and depending into the discharge section, either of said doors acting to bridge the opening on the lower side of the elbow provided when the discharge section is at an angle.
2. The combination of a tubular section, a discharge section pivoted thereto, a pair of doors pivoted at the lower end of said tubular section and depending loosely into the discharge section, one of said doors acting to bridge the opening on the lower side of the elbow provided when the discharge section is at an angle, and the other door operating to bear on top of the discharging load.
3. In a load trimmer, the combination of a tubular section, a discharging section pivoted at the lower end thereof, a pair of doors hinged at the lower end of the tubular section adapted to depend loosely into the discharging section, and means for swinging the discharging section.
4. In a load trimmer, the combination of a tubular section, a discharging section pivoted at the lower end thereof, and a pair of doors hinged by means of rods mounted at the lower end of the tubular section adapted to depend into the discharging section.
5. In a load trimmer, the combination of a tubular section, a discharging section pivoted at the lower end thereof, a motor mounted on the tubular section, and a driving connection between the motor and discharge section.
6. In a load trimmer, the combination of an upper section, a swinging section pivoted at the lower end thereof, a pair of doors hinged at the lower end of the upper section adapted to depend into the lower section, a sheave mounted to turn with the lower section, a motor mounted on the upper section, and a driving connection between the motor and lower section.
7. In a load trimmer, the combination of a tubular section having a pair of opposite flat sides, a discharging

- section having a pair of side plates extending onto the outside of said flat sides and there pivoted, and a pair of doors hinged to the lower edges of the tubular section and depending freely into the interior of the discharging section.
8. The combination of a rectangular tubular section, a discharging section having end plates extending alongside of the tubular section, means pivoting such end plates to the tubular section, the discharging section having side plates whose upper edges are some distance below the lower edges of the side plates of the tubular section, doors hinged to the lower edges of said last mentioned side plates and adapted to engage the side plates of the discharging section.
9. In a load trimmer, the combination of a rigid section, a swinging section pivoted at the lower end thereof, a motor mounted on the rigid section, and a driving connection between the motor and swinging section including a driving worm and a driven worm-wheel.
10. In a load trimmer, the combination of a supporting section, a swinging section pivoted thereto, a pair of doors hinged to the lower edges of the supporting section and depending freely into the interior of the swinging section,

a motor on the supporting section having a worm, a meshing worm wheel carrying a pulley, and a flexible connection between said pulley and swinging section.

11. The combination of a rectangular tubular section, a discharging section having end plates extending onto the outside of the tubular section, means pivoting such end plates to the sides of the tubular section, a suitable sheave secured alongside of one of such end plates of the discharging section, a motor on the tubular section driving a worm, a meshing worm wheel on the tubular section, a pulley driven by the worm wheel, and flexible means running on said pulley and engaging such sheave and anchored to the discharging section.

12. In a device of the character described, the combination of an upper section, a pivoted lower section, and a pair of doors hinged to the upper section and extending into the lower section.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

FREDERICK H. SCHLEGELMILCH.

Witnesses:

ALBERT H. BATES,
S. E. FOUTS.