

No. 843,334.

PATENTED FEB. 5, 1907.

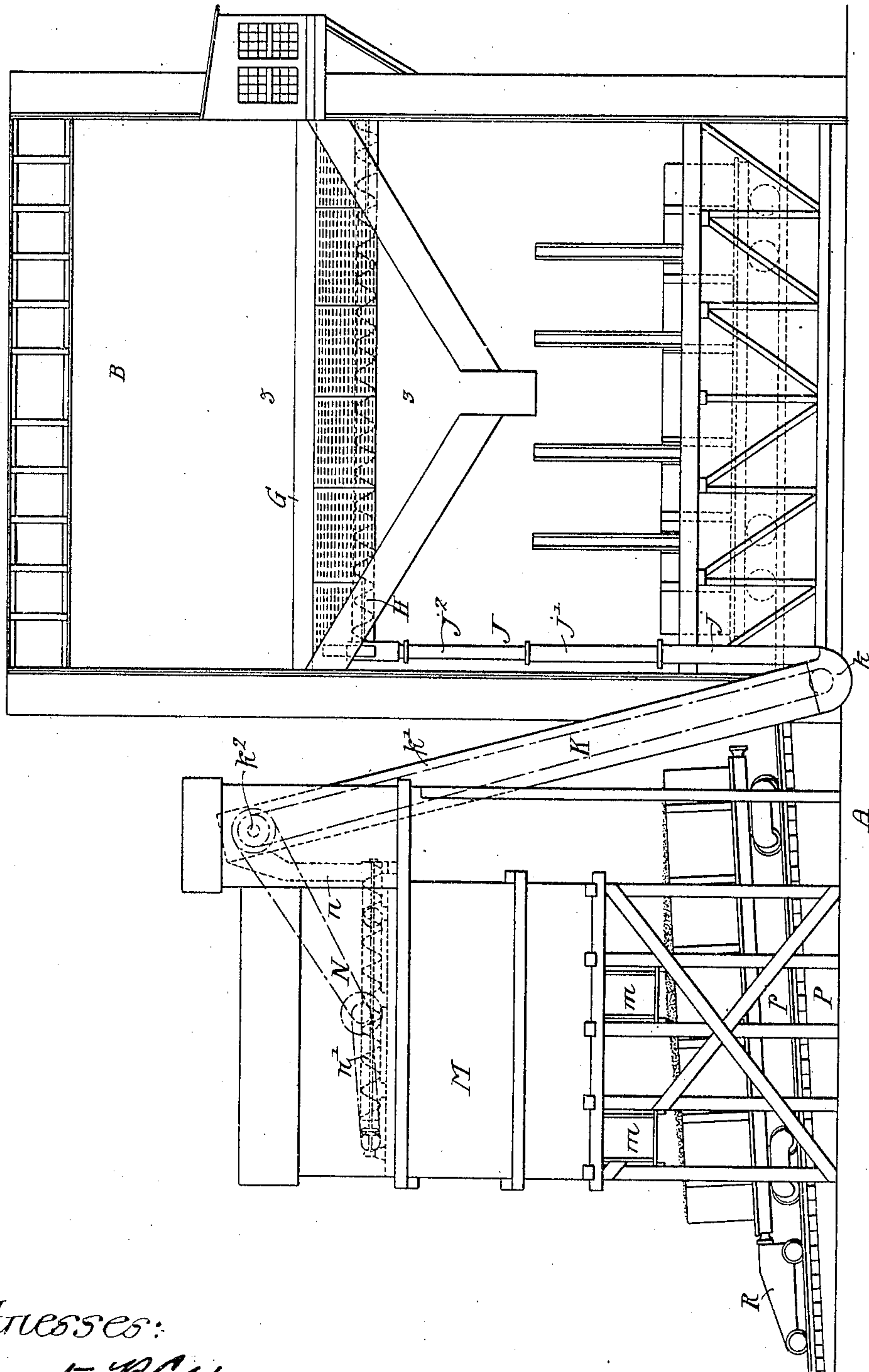
C. A. FRY.

SCREEN FOR CAR DUMPING APPARATUS.

APPLICATION FILED OCT. 18, 1904.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses:  
Augustus B. Oppen  
Titus N. Irons.

Inventor:  
Charles A. Fry,  
by his Attorneys,  
Horton & Horton

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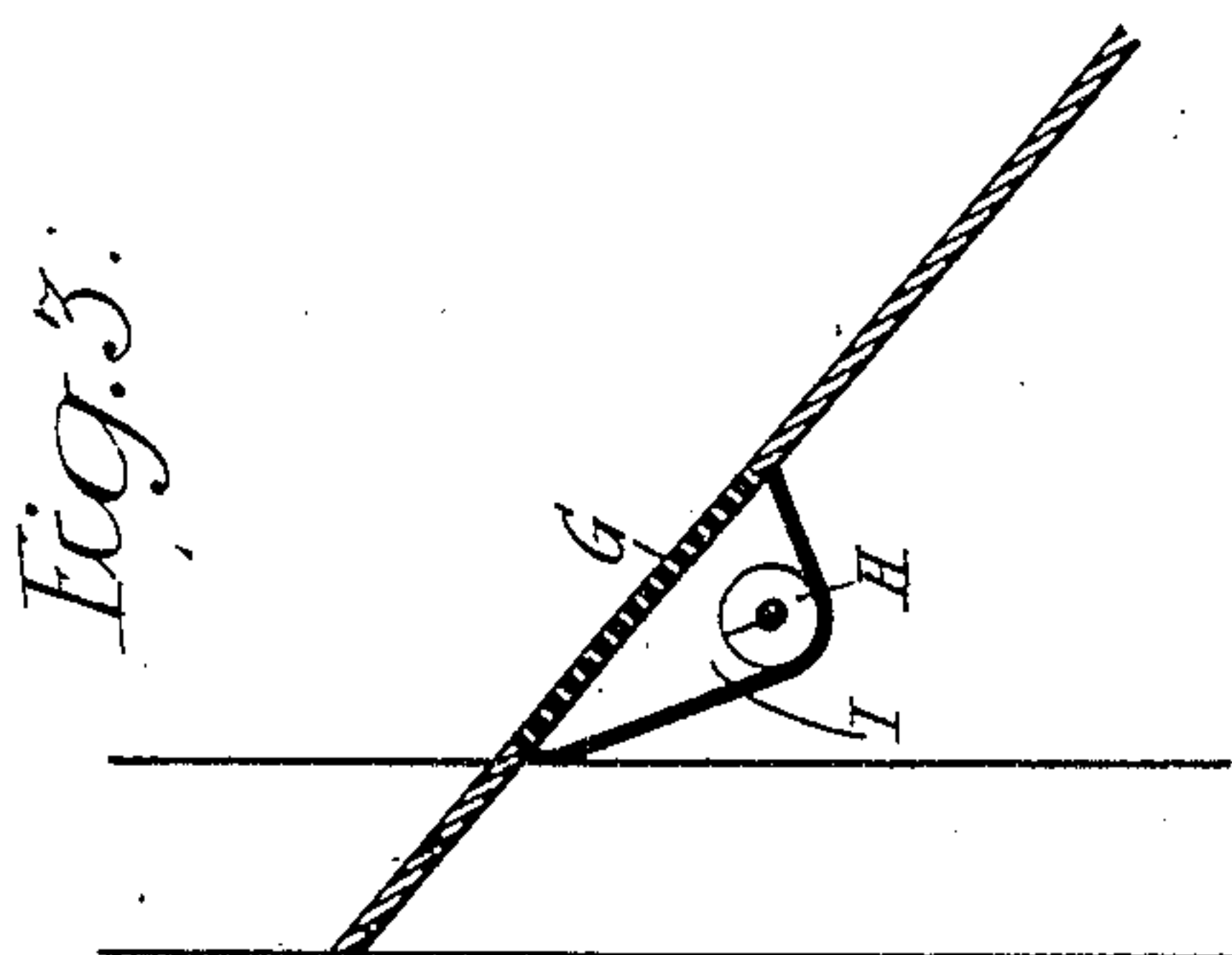
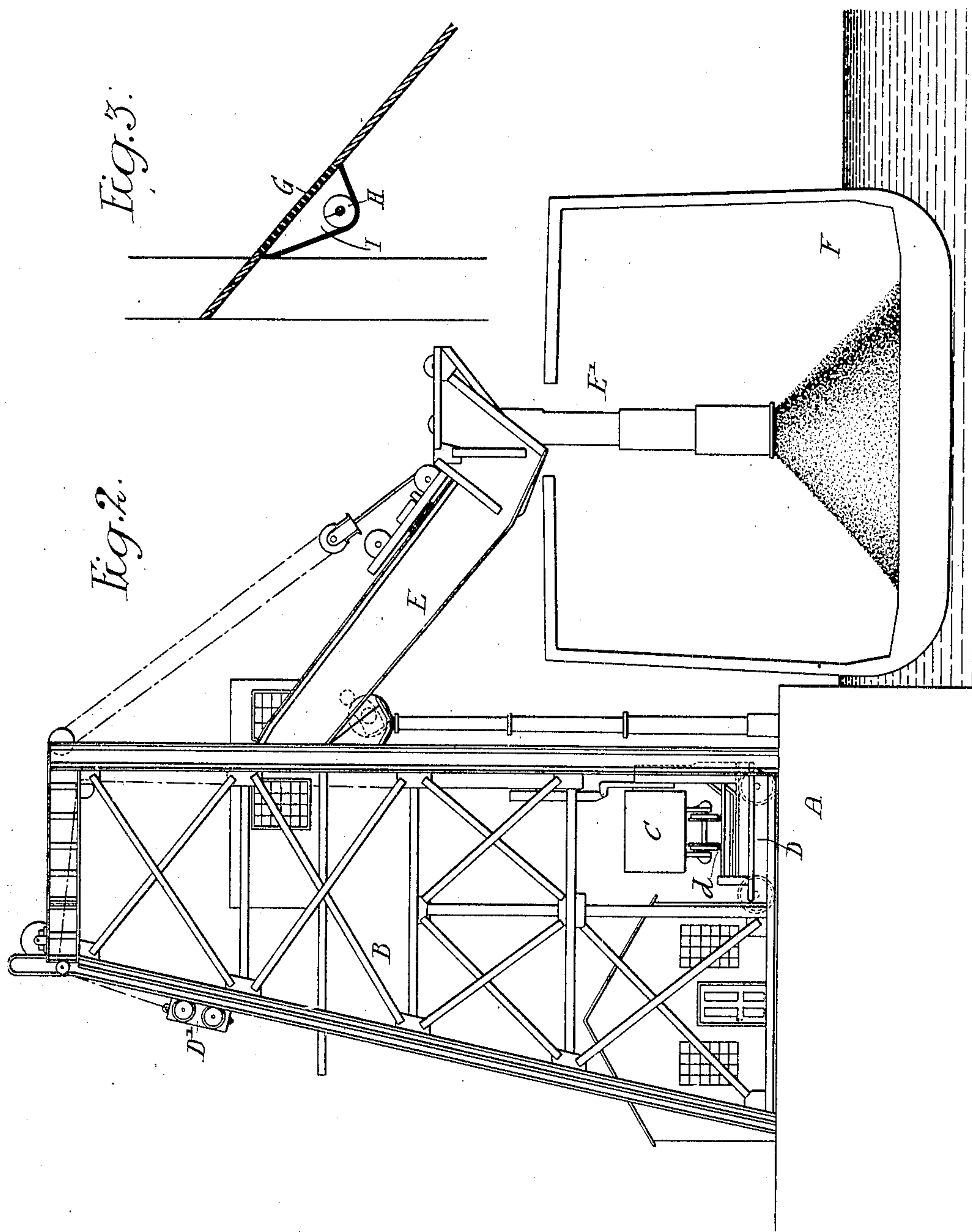
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SCREEN FOR CAR DUMPING APPARATUS.

APPLIOATION FILED OCT. 18, 1904.

3 SHEETS—SHEET 2.



Witnesses:  
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3 SHEETS—SHEET 3.

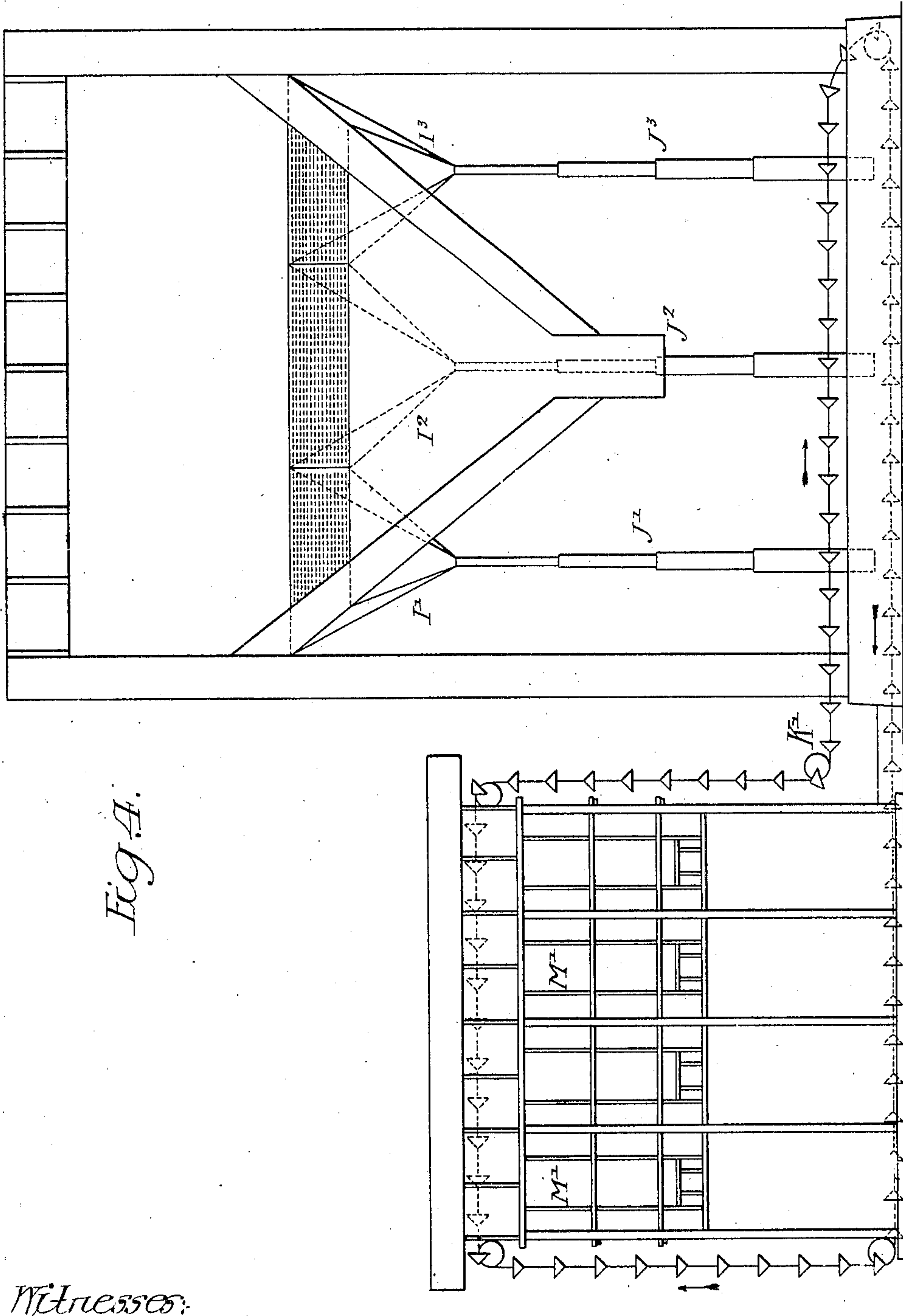


Fig. 4.

Witnesses:

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Inventor:  
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# UNITED STATES PATENT OFFICE.

CHARLES A. FRY, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS,  
TO DODGE COAL STORAGE COMPANY, OF SAUGATUCK, CONNECTICUT, A  
CORPORATION OF CONNECTICUT.

## SCREEN FOR CAR-DUMPING APPARATUS.

No. 843,334.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed October 18, 1904. Serial No. 229,030.

*To all whom it may concern:*

Be it known that I, CHARLES A. FRY, a subject of the King of Great Britain, residing in New York city, New York, have invented certain Improvements in Screens for Car-Dumping Apparatus, of which the following is a specification.

The object of my invention is to provide means for screening coal or other material as it is being dumped from a car into a boat or other receptacle. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a view in elevation illustrating my invention, the details of the delivery-spout having been removed, so as to simplify the drawing. Fig. 2 is a side view showing a vessel in section. Fig. 3 is a section on the line 3 3, Fig. 1; and Fig. 4 is a view in elevation illustrating a modification of my invention, the conveying mechanism being shown in diagram.

In the present instance, A is a wharf on which is built a structure B. Arranged to move vertically on this structure is an elevating-platform D, which has tracks *d*, on which the car C to be dumped is run. This car is secured to the elevator D in any suitable manner, and the elevator is counter-balanced by a weight D', traveling on rails on the structure B and connected to the elevator.

The means for raising and lowering the elevator and for turning the same with the car, so as to discharge the contents of the car bodily, forms no part of my invention, as any of the well-known forms of car-dumping mechanism may be used in carrying out my invention.

E is a chute over which the coal passes from the car into the vessel or other receptacle. This chute is shown with a telescopic extension E', which passes into the hold of the vessel F in the present instance. The details for raising and lowering this chute and the extension form no part of my invention.

Heretofore the coal was discharged from the car through the chute directly into the vessel without screening. Consequently considerable dust and fine particles of coal would pass into the vessel. This is objectionable for many reasons, and in order to prevent the

fine particles of coal passing with the large particles I mount a screen G in a portion of the chute E, as clearly shown in Figs. 1 and 3, and directly under the screen in this instance is shown a screw conveyer H, rotating in a trough I, so that the screening passing into the trough will be conveyed toward one end of the structure B and passed down a tube J, which is preferably made telescopic, having sections *j j' j''* in the present instance, so that when the chute E and its sections are raised and lowered the telescopic tube will accommodate itself to the adjustment, and it will be understood that in many instances the chute must be raised and lowered so as to accommodate vessels or other receptacles into which the coal is discharged.

The tube J communicates with the boot *k* of an elevator K, in which travels an endless-chain elevator of the bucket type. This conveyer *k'* passes around a head-wheel *k''*, and the buckets discharge into a tube *n*, which communicates with a horizontal trough N, in which is a screw conveyer *n'*. This screw conveyer conveys and discharges the screenings into a screenings-bin M, placed at one side of the structure B. This screenings-bin has discharge-openings *m m*, which extend over the track *p*, which is on an inclined support P. The tracks *p* aline with the tracks of the railroad, as well as the tracks of the platform D, when the platform is in the lowest position, so that a car can be transferred from the track *p* directly onto the track *d* of the platform D.

A pusher R may be used for pushing the cars, if desired, and this pusher can be driven in any suitable manner, as pushers of this type are common.

When it is desired to remove the screenings from the screenings-bin M, all that is necessary is to move a car onto the inclined tracks *p*, open the discharge-openings *m m* into the bin, and allow the screenings to flow directly into the car, which can then be either returned to the main track and conveyed to any point desired or can be moved onto the platform D and discharged into any suitable receptacle. When it is desired to discharge the screenings, the screens G of the chute may be covered.

When it is desired to pivot the chute so that it can be adjusted to different angles, as



shown in the drawings, I preferably mount the conveyer and its trough on a chute, and also the driving mechanism for the screw conveyer may be mounted on a chute, as indicated at *h* in the drawings. In this instance there is an extension *i* on the trough, through which the material passes to the hopper at the upper end of the tube *J*.

In Fig. 4 I have shown three tubes *J'* *J*<sup>2</sup> *J*<sup>3</sup>, which connect with hoppers *I'* *I*<sup>2</sup> *I*<sup>3</sup>. These hoppers take the place of the conveyer-trough and screw conveyer shown in Fig. 1, and in place of the elevator shown in Fig. 1 a combined bucket elevator and conveyer *K'* may be used, which will convey the screenings from the discharge end of the tubes and discharge them into the screenings-hopper *M'*.

The details of my invention may be modified considerably without departing from the main feature, which is to provide a screen which will screen the coal or other material discharged from a car being dumped and

convey the screenings to a suitable receptacle.

I claim as my invention—

The combination in a car-dumping apparatus, of a structure, a platform for carrying the car, means for dumping the platform and the car, a chute at one side of the structure into which the material is discharged from the car, a screen at the inner end of the chute, a trough under the screen, a conveyer in the trough, a telescopic tube connecting with the trough, a screenings-hopper, and a conveyer leading from the outlet end of the telescopic tube to the screenings-hopper, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES A. FRY.

Witnesses:

FRANK A. BUTLER,  
HERBERT HOWSON.