

No. 780,760.

PATENTED JAN. 24, 1905.

S. OTIS.
DUMP CAR.

APPLICATION FILED JUNE 18, 1903.

Fig. 1.

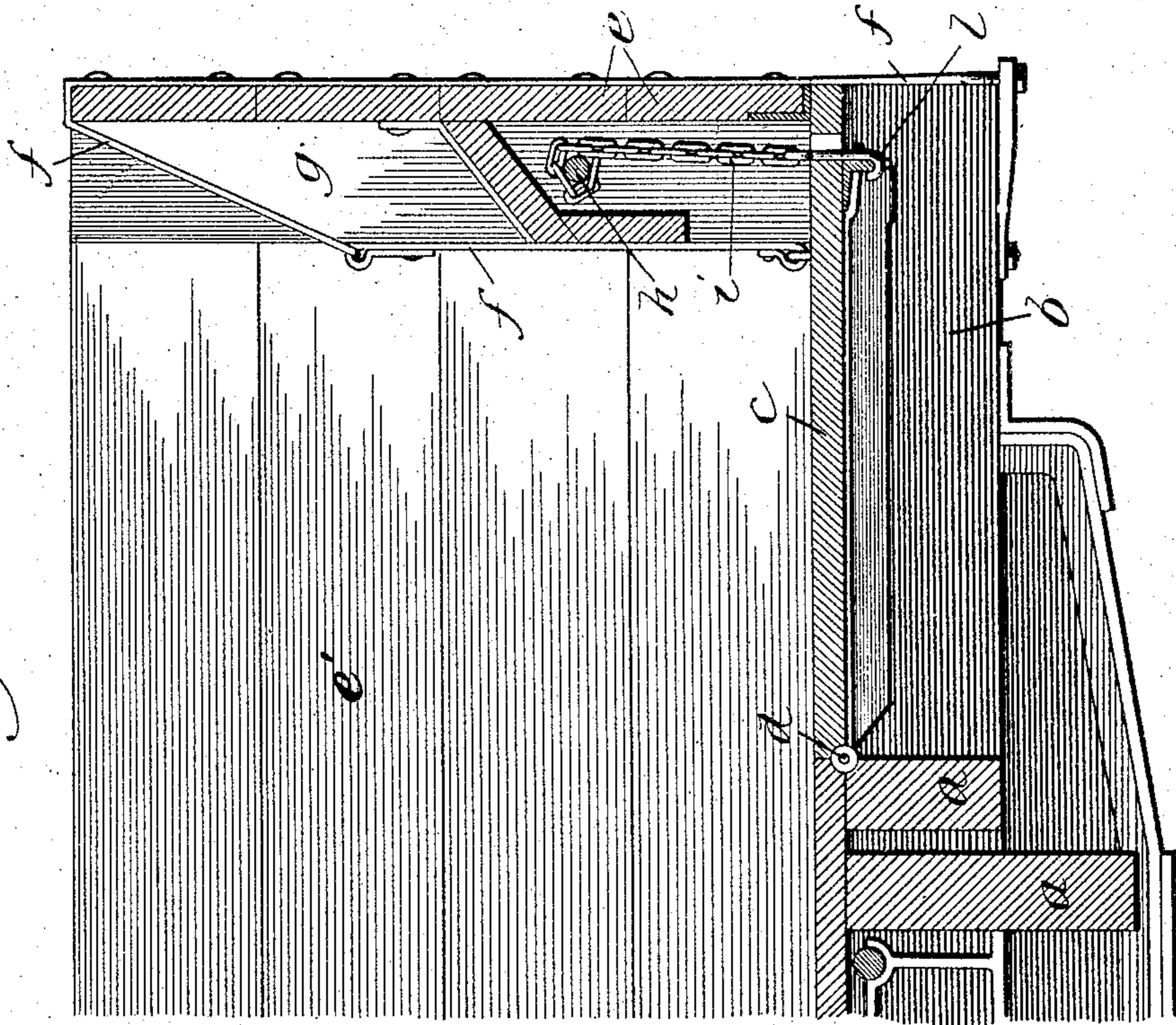


Fig. 2.

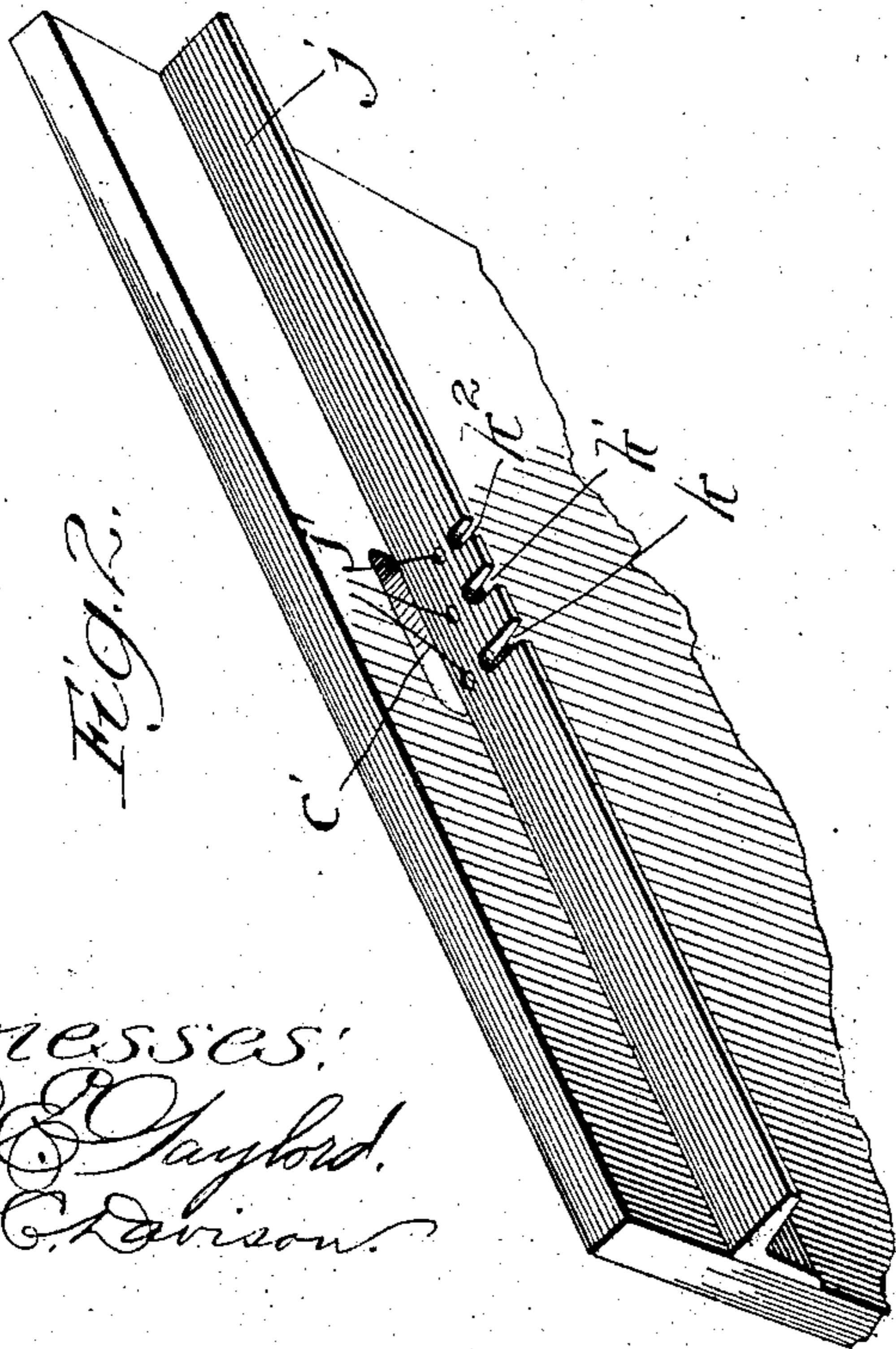
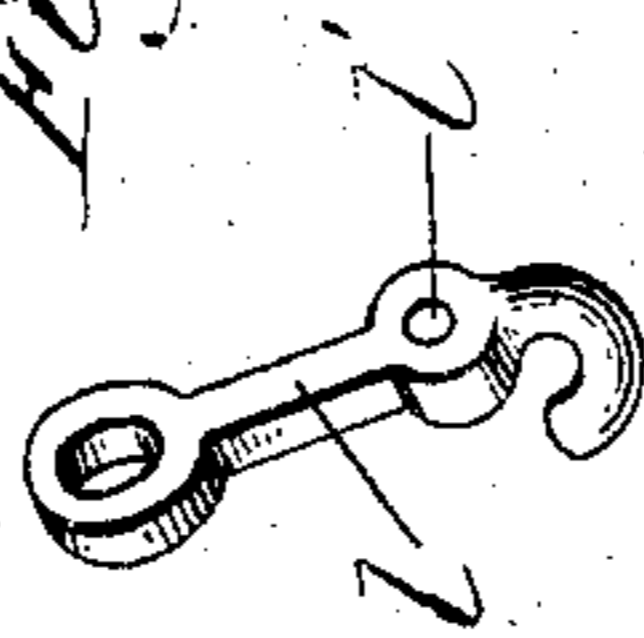


Fig. 3.



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UNITED STATES PATENT OFFICE.

SPENCER OTIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO NATIONAL COAL DUMP CAR COMPANY, OF RAPID CITY, SOUTH DAKOTA, A CORPORATION OF SOUTH DAKOTA.

DUMP-CAR.

SPECIFICATION forming part of Letters Patent No. 780,760, dated January 24, 1905.

Application filed June 18, 1903. Serial No. 162,003.

To all whom it may concern:

Be it known that I, SPENCER OTIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Dump-Cars, of which the following is a specification.

My invention relates to that class of cars known as "drop-bottom dump-cars," and has
10 for its principal object the providing of a drop-bottom dump-car with means for adjusting the door-closing chain mechanism.

Other objects of the invention will appear from an examination of the drawings and the
15 following description and claims.

The invention consists in the features, combinations, and details of construction herein-
after described and claimed.

In the accompanying drawings, Figure 1
20 is a sectional elevation taken transversely across a dump-car, showing a portion of one side thereof as it appears when constructed in accordance with these improvements; Fig. 2,
a perspective view of the under side of one
25 end of a swinging section forming a part of the drop-bottom of the car, and Fig. 3, a perspective view of one of the adjusting chain-hooks.

In illustrating and describing these improve-
30 ments I have only illustrated and described that which I consider to be new, taken in connection with so much as is old as will properly disclose the invention to others and enable those skilled in the art to practice the
35 same, leaving out of consideration other and well-known mechanisms which if set forth herein would only tend to confusion, prolixity, and ambiguity.

In constructing a car in accordance with
40 these improvements I provide a supporting-framework containing center sills *a* and transverse deck-beams *b*, tied together in any desired manner. Secured to the supporting-
framework so as to provide a flat drop-bottom
45 and at each side of the longitudinal center thereof is a plurality of swinging sections *c*, with their inner edges containing the hinge-pivots *d*. Side-boards *e* and end-boards *e'*

are provided, which may be secured in any
desired manner; but I prefer to secure them, 50
by means of straps *f* and posts *g*, to the under-
framing or supporting-framework of the car.

In this type of car it is well known that the
chain mechanism by which the swinging sec-
tions of the drop-bottom are raised and lowered 55
are oftentimes stretched during use. Again,
as a plurality of chains are used, one for each
door, in the first instance they do not allow the
closing of the doors on account of the variations
in the lengths thereof. It becomes desirable, 60
therefore, and indeed necessary, to provide
some means by which the variations in the
original length of these chains or caused from
the use thereof may be taken up at any desired
time or times. To accomplish this, a rock- 65
shaft *h* is provided, around which is wound a
plurality of chains *i*, one for each door. The
lower outer edge of each door is provided
with an angle-iron or metal bar *j*, having a
plurality of grooves *k*, *k'*, and *k''* in the lower 70
edge of the depending portion. Each chain
is provided with a hook portion *l*, secured to
the lower end thereof, which hook may be
pivoted to the angle-iron by means of a rivet
or bolt passed through the perforation *l'* in 75
the hook or in one of the perforations *j'* in
the angle-iron. In use the pivot of the hook
is pressed through the perforation *j'* opposite
the deepest groove *k* when the chain is new
or first in use, the upper part of the hook 80
passing through the slot *c'* in the door. Should
the chain for any reason stretch, the pivot-
bolt of the hook may be removed and passed
in the next or any of the other per-
forations *j'* opposite either groove *k'* or *k''*. 85
By this means it will be seen that the varia-
tions of the chains may be compensated for
and each and every door closed tightly as de-
sired.

I claim—

1. In a drop-bottom dump-car, the combi- 90
nation of a supporting-framework provided
with upwardly-extending side and end boards,
a drop-bottom portion formed of plurality of
swinging sections, a rock-shaft, a plurality of 95
chain mechanisms secured thereto and adapted

to be wound therearound—one for each swinging section, a metallic bar attached to each swinging section provided with a plurality of grooves of different depths, and a hook secured
5 to each chain and adapted to be pivotally secured to the metal bar and engage any groove therein, and to each chain, substantially as described.

2. In a drop-bottom dump-car, the combination of a supporting-framework provided
10 with upwardly-extending side and end boards, a drop-bottom portion formed of a plurality of swinging sections pivotally secured to the framework of the car at each side of the longitudinal center with their free edges extending
15 out toward the sides of the car, a rock-shaft in each side frame of the car provided

with a plurality of chain mechanisms wound therearound—one for each swinging section, an angle-iron secured to the under surface of
20 each swinging section at or near its outer edge and provided with a plurality of grooves in the lower edge and a pivotal perforation opposite each groove, and a hook secured to
25 the lower end of each chain mechanism and pivotally secured to the angle-bar of each door in one of the pivotal perforations and engaging one of the grooves thereof, substantially as described.

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Witnesses:

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