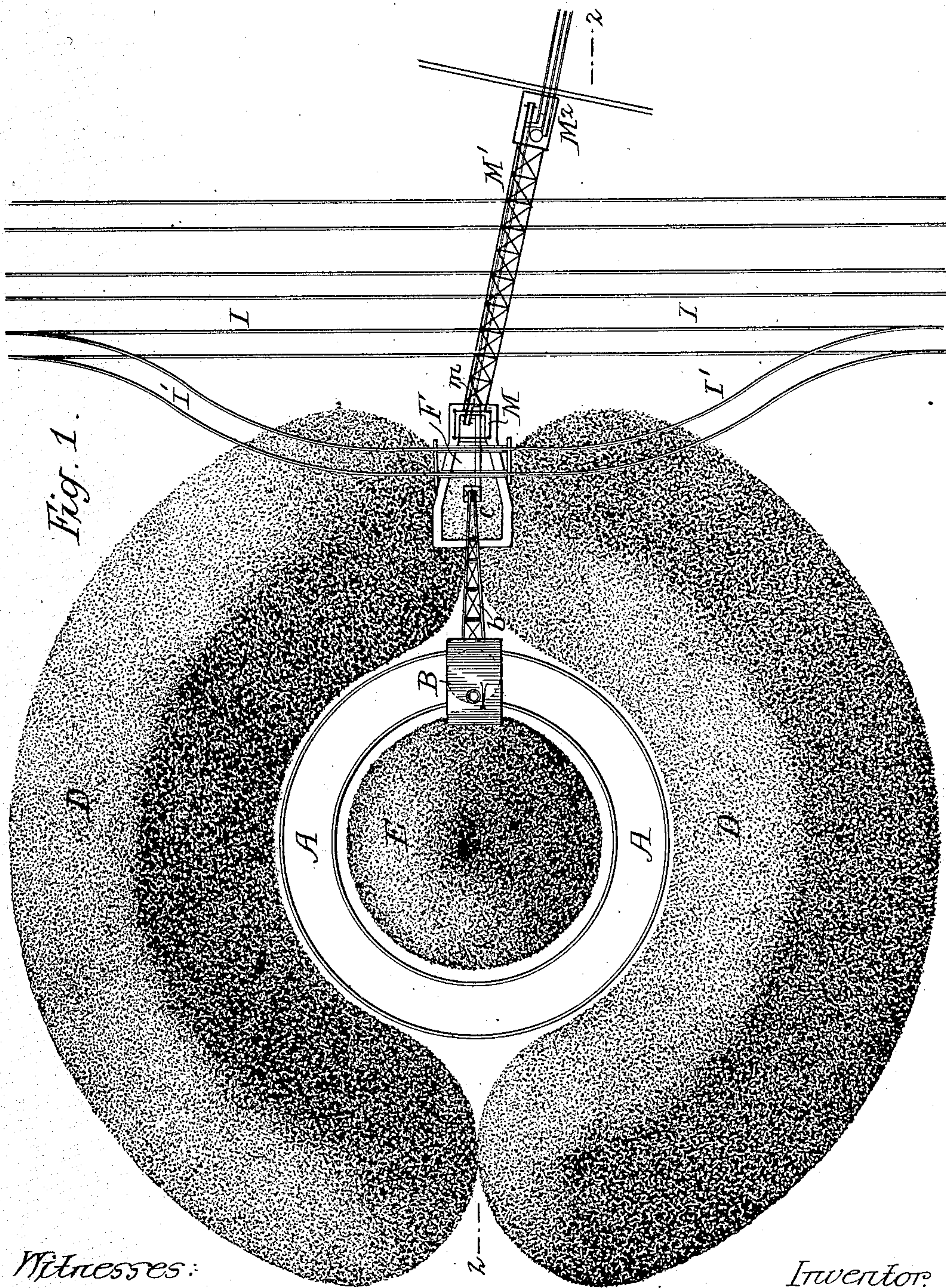


No. 860,365.

PATENTED JULY 16, 1907.

C. A. FRY.  
STORAGE APPARATUS FOR COAL, &c.  
APPLICATION FILED MAR. 13, 1905.

2 SHEETS—SHEET 1.



Witnesses:

Titus Helms,  
Hamilton D. Turner

Inventor:  
Charles A. Frye.  
by his Attorneys:  
Housen & Housen.



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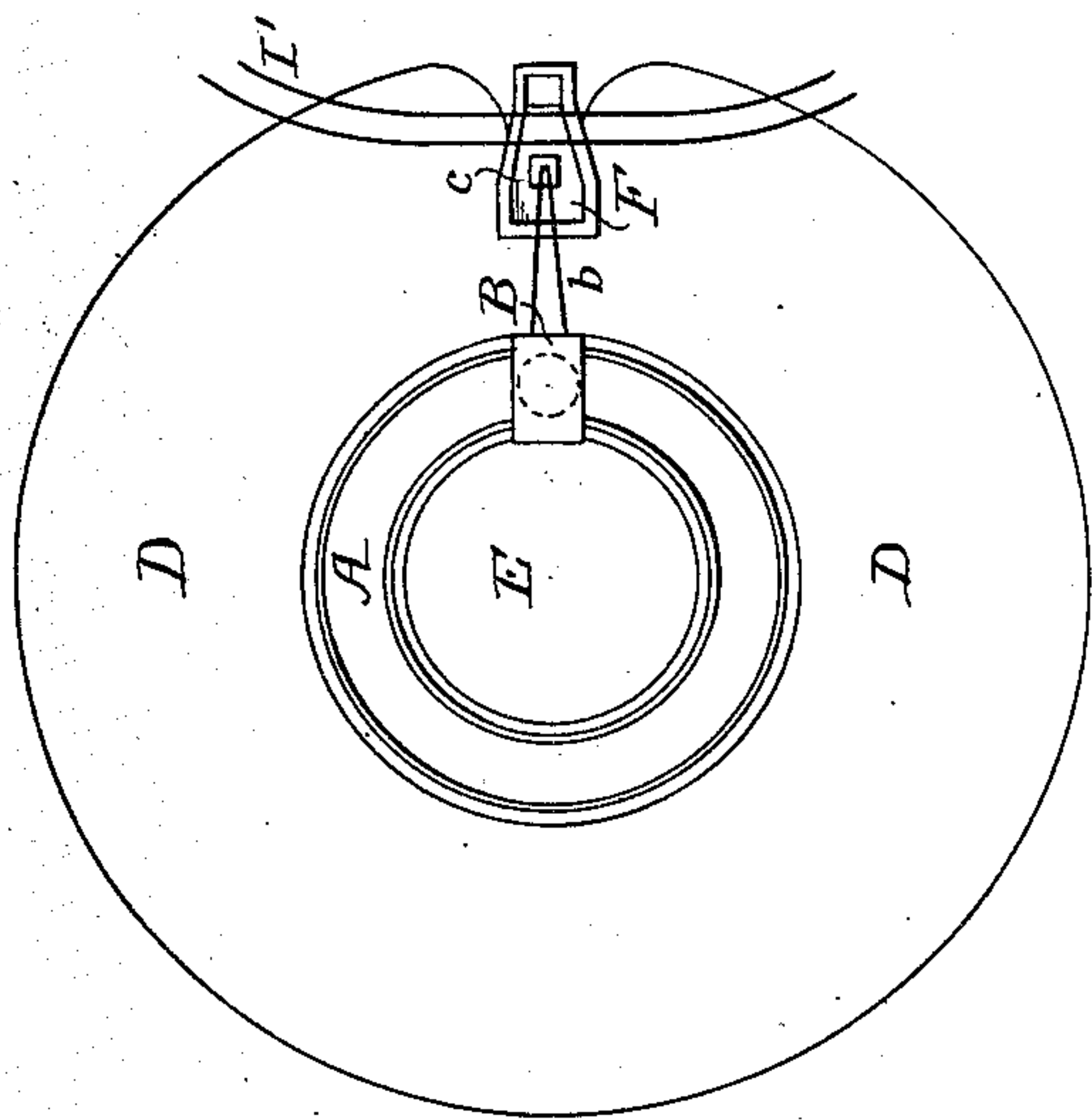


Fig. 3.

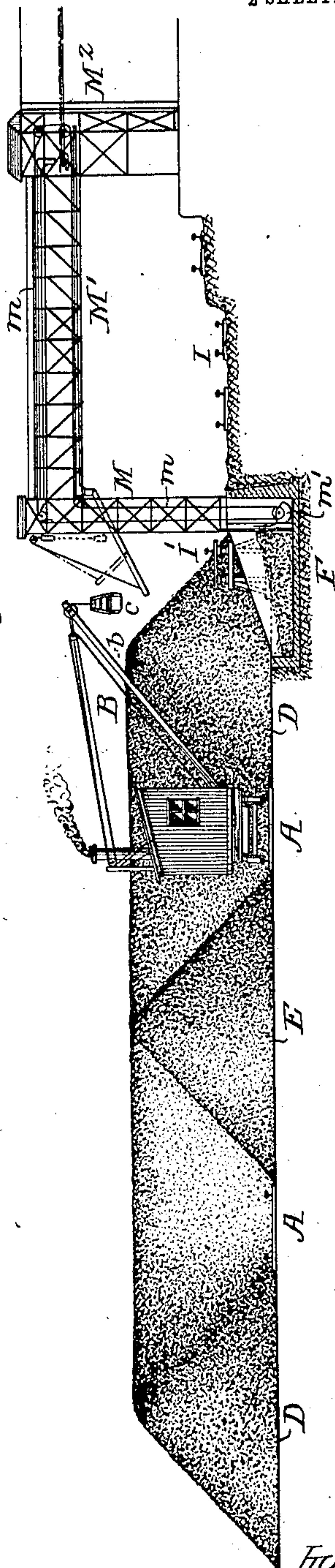


Fig. 2.

Witnesses:

Titus Helms.

Hamilton S. Turner

Inventor:  
Charles A. Frye.  
by his Attorneys,

*Hovson & Hovson*



# UNITED STATES PATENT OFFICE.

CHARLES A. FRY, OF NEW YORK, N. Y., ASSIGNOR TO THE DODGE COAL STORAGE COMPANY,  
OF NAUGATUCK, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## STORAGE APPARATUS FOR COAL, &c.

No. 860,365.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed March 13, 1905. Serial No. 249,868.

*To all whom it may concern:*

Be it known that I, CHARLES A. FRY, a subject of the King of Great Britain and Ireland, residing at New York city, New York, have invented certain  
5 Improvements in Storage Apparatus for Coal, &c., of which the following is a specification.

My invention relates to certain improvements in that class of storage apparatus for coal or similar material which consists of a storage floor, a track and crane  
10 for transferring the coal from a pit to the storage floor, or from the storage floor to a conveyer.

The object of my invention is to construct an apparatus for storing coal or similar material in which a crane is used on a circular track which receives the coal  
15 from a pit at the side of the piling floor and not at the center of the floor as heretofore in structures of this type, thus enabling me to provide an annular pile of coal in as many sections as desired, and to make a distributing pile at the center from which coal can be removed  
20 either for replenishing the annular pile or for use. This object I attain in the following manner, reference being had to the accompanying drawings, in which:—

Figure 1, is a plan view showing my improved coal storage plant; Fig. 2, is a transverse section on the line  
25 2—2, Fig. 1; and Fig. 3, is a diagram plan view.

In many instances it is not desirable or convenient to arrange a piling floor on each side of a supply track. Heretofore when the piling floor was on one side of the track only the pile was semi-circular in form, limiting  
30 its capacity to a considerable extent, but by my invention I am enabled to place a circular pile on one side of a track, thus increasing the capacity and utilizing the central portion of the floor as a distributing floor.

A is a circular track on which is mounted a crane B  
35 having a boom *b* from which is suspended a bucket *c* of the clam shell type in the present instance. This crane is so arranged that it can swing in a complete circle without moving on the track, or can travel in a complete circle on the track.

40 D is the main piling floor situated outside the annular track A.

E is the distributing floor situated within the annular track.

45 F is a pit at one side of the piling floor in such a position that the bucket suspended from the crane can be lowered into the pit to receive material from it.

I is one of the railroad tracks and I' is a branch track which is curved as shown, in the present instance, so as to pass over the pit F, and the cars to be dumped are  
50 shifted onto this track and their contents dumped into the pit.

At one side of the pit between the siding and the main track is a tower M in the present instance, and extending over the main tracks is a bridge M' supported at its

opposite end by another tower M<sup>2</sup>. In the tower M  
55 the bridge M' is a combined endless elevator and conveyer *m* arranged to receive coal from a boot *m'* in the bottom of the tower. This boot receives coal in turn from the pit F and the elevator and conveyer carries the coal up the tower, over the bridge and dis-  
60 charges it onto a second horizontal conveyer to any point desired. This feature is not the main one of my invention as it may be modified considerably according to the location and general arrangement of the buildings which are to be connected with the coal  
65 piling floor.

In piling coal I can either remove the coal from the pit by means of the crane and discharge it directly on either semi-circular pile at each side of the pit without moving the crane, or I can pile on the central floor by  
70 swinging the crane on its pivot and then by moving the crane on its track I can remove material from its center pile and discharge it at any point on either segmental piling floor, it being noted that the circular area on which said center pile rests is of such a diameter  
75 that all of the material thereon is within reach of the crane bucket, or, in other words, as shown in the drawings, the crane boom must be of a length sufficient to reach to the center of the pile.

I may in some instances place coal at any point on  
80 the piling floor direct from the pit by allowing the bucket to receive the load, moving the crane on the track and swinging the boom to any point desired. This latest method is rather tedious and expensive and I find that I can economize considerably in the work of  
85 piling by removing coal from the pit as it is discharged from the cars directly onto the central piling floor and when the cars, for instance of a train, have been discharged and the coal transferred from the pit to the central piling floor I can then traverse the crane to any  
90 point on the annular track and discharge the coal from the central piling floor to adjacent points, and the coal can be removed from the central pile when it is wished to transfer a certain quantity of coal to a power house or other building for use.  
95

As illustrated in the drawings, the coal on the annular piling floor can be divided so that a portion of the floor can be used for anthracite coal and a portion for bituminous coal, while the central piling floor can be used for either one or the other.  
100

I claim as my invention:—

1. The combination of an annular track, a piling floor outside the track, a piling floor within the track, both piling floors being on or about the level of the track, a pit on one side of the track, a crane mounted on the annular  
105 track and arranged to swing, a boom on the crane, a bucket suspended from the end of the boom and arranged to enter the pit and receive coal from the pit and transfer it to either the piling floor outside or inside the track, said

floor within the track being of a diameter such that its center may be reached by the boom of the crane, substantially as described.

2. The combination of an annular track, a piling floor  
5 outside the track, a piling floor within the track, a pit outside the track, a conveyer for elevating material from the pit, a crane mounted on the annular track, a boom on the crane, a bucket suspended from the end of the boom and arranged to enter the pit so that coal can be removed from  
10 the pit and transferred to either of the piling floors or discharged into the pit from the piling floors and carried away by the conveyer, substantially as described.

3. The combination of a pit, an annular track at one side of the pit, a crane mounted on the track having a boom, a

bucket suspended from the boom and arranged to enter the 15  
pit, a track for loaded cars extending over the pit and an elevating conveyer at one side of the pit and arranged to receive coal from the pit, and a bridge over the main tracks of the railway over which the coal is conveyed by the conveyer, the crane arranged to distribute material on either 20  
side of the annular track, 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:

C. SEDGWICK,

-- HUBERT HOWSON.