

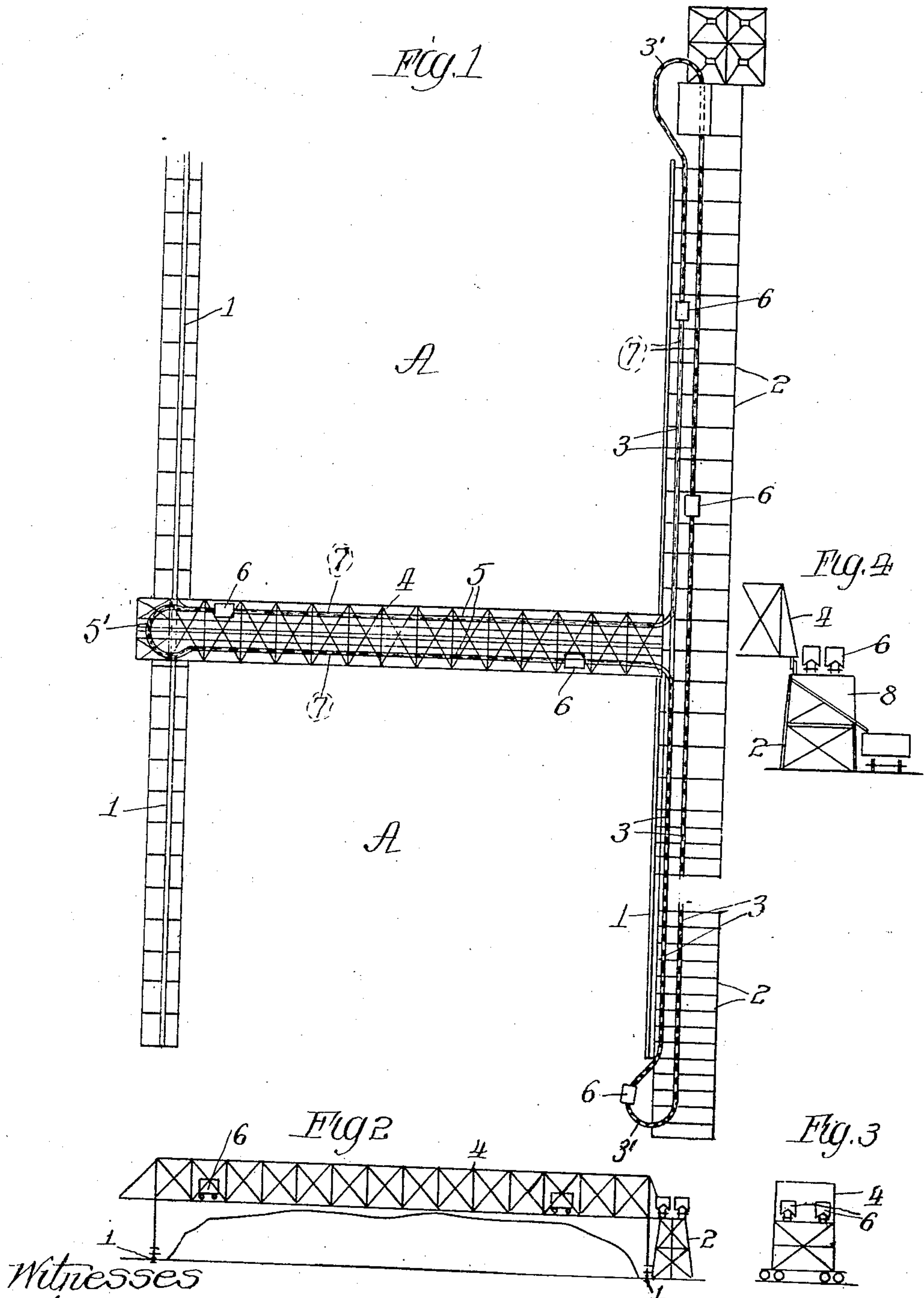
No. 879,473.

PATENTED FEB. 18, 1908.

T. C. KENNEDY & E. A. ELDER.

STORAGE APPARATUS.

APPLICATION FILED JAN. 31, 1907.



Witnesses  
 W. H. Barrett  
 Louis B. Brown

Inventors  
 Thomas C. Kennedy & Edward A. Elder  
 T. C. Rector, Hibben & Davis  
 Attorneys



# UNITED STATES PATENT OFFICE.

THOMAS C. KENNEDY, OF CHICAGO, AND EDWARD A. ELDER, OF LA GRANGE, ILLINOIS,  
ASSIGNORS TO FAIRBANKS, MORSE & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## STORAGE APPARATUS.

No. 879,473.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed January 31, 1907. Serial No. 355,069.

*To all whom it may concern:*

Be it known that we, THOMAS C. KENNEDY and EDWARD A. ELDER, citizens of the United States, the said KENNEDY residing at Chicago, and the said ELDER at La Grange, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Storage Apparatus, of which the following is a specification.

Our invention relates to a storage apparatus or system for the handling of coal, iron ore and the like, and the depositing of the same into a storage area or space or into pockets, and the object of our invention is to provide novel and efficient apparatus of this character having the features of advantage and utility hereinafter made apparent.

In the drawing, Figure 1 is a plan view of our storage system or apparatus; Fig. 2 an end view thereof; Fig. 3 an end elevation of the movable bridge; and Fig. 4 a detail view of our apparatus involving the use of so-called pockets.

Referring to the embodiment of our invention as shown in Figs. 1, 2 and 3 of the drawing, the same consists essentially of a structure or bridge movable upon tracks longitudinally of the storage space or area, and cars arranged to be drawn by an endless cable upon tracks at one side of the storage space and also upon tracks on the bridge, with the result that the cars are positively drawn along said longitudinal tracks at the side of the storage space and also upon the tracks on the movable bridge, the cars entering and leaving the bridge at the same end thereof.

Referring to our new apparatus or system in detail, we provide parallel tracks 1—1 which are arranged on opposite sides of the storage space or area (indicated by the reference letter A), such tracks being in the present instance on the ground level with the frame of the bridge hereinafter described extended downwardly accordingly. These tracks may, if desired, be elevated and supported in any suitable manner, as by framework or the like, or as described, may be on the ground level when pockets are provided below the bridge or at the sides of the storage area. Upon suitable framework such as the structure or framework 2 at one side of the storage space we arrange a pair of parallel tracks 3 which are connected at their ends by

loops 3' so that the cars which are arranged to run thereon can make a complete circuit over said tracks and over the bridge tracks now about to be described.

The movable structure or bridge 4 is constructed in any suitable manner and is arranged to travel upon the tracks 1—1 and to be moved in any desired manner longitudinally of the storage space. This bridge is provided with a pair of longitudinal tracks 5, whose ends adjacent the stationary tracks 3 are curved so as to connect with the innermost one of said tracks 3 and whose other ends are joined by the loop 5' at the opposite end of the bridge. The construction and arrangement is such that the cars 6 after being loaded are adapted to run upon the tracks 3 and then upon one of the bridge tracks 5—5, where the same are dumped in any suitable manner and are then caused to be returned around the loop 5' on the bridge and over the other track 5, thence back again to the system of tracks 3, to be finally carried to the point of loading. It will be understood that the tracks 5 or rather their curved ends move over or upon the stationary tracks 3 and connect with the latter in all positions of the bridge relative to the storage area.

As hereinbefore stated, the cars are drawn positively upon the stationary tracks and over the tracks on the bridge and for this purpose we provide an endless cable 7 which follows the system of tracks 3 except that the same passes over the bridge tracks. By this means the cars, when gripped to the cable, will be drawn positively upon the tracks 3 and will then be carried over the bridge tracks and they will continue to be positively drawn over the bridge by the cable after being unloaded and in their empty condition will be drawn positively in the opposite direction across the bridge and also be carried or drawn along the tracks 3. As clearly shown in Fig. 1, the cars enter and leave the bridge at the same end, entering the same in loaded condition and leaving the same in empty condition. Of course if it should be desired to fill pockets at one side of the storage area beyond the bridge, the cars would traverse the bridge in both directions in loaded condition and would be dumped at the proper point along the stationary tracks. As will be understood, when



the space below the bridge has been sufficiently filled the bridge is moved longitudinally of such space by any suitable means, but, as will be evident, this will have no effect upon the cable circuit inasmuch as it remains of the same length whatever position the bridge may occupy along the length of the storage space.

Our invention has thus far been described as employed in connection with a storage space or area but it will be understood that the same may be employed in connection with the usual pockets or bins as illustrated in Fig. 4, wherein the pocket is indicated at 8, the only difference in the operation being represented by the fact that the cars are dumped along the stationary tracks and above the pockets instead of upon the bridge. We thus provide a novel and efficient system or apparatus for handling coal, iron ore and the like and provide for the positive running of the cars at all points of the system. That is along the tracks 3 and also on the bridge tracks, with the result that the system may be positive and substantially automatic throughout. Moreover, our construction and arrangement are such that end or connecting structures at the ends of the stationary tracks become unnecessary inasmuch as the bridge per-

forms all functions thereof by returning the cars to the loading point.

We claim:

1. In a storage apparatus, the combination of a pair of stationary parallel tracks connected by end loops and extending along one side of the storage space or area, a bridge movable longitudinally thereof, and tracks on said bridge connected by an end loop and arranged to connect at their other end with one of the stationary tracks in all positions of the bridge.

2. In a storage apparatus, the combination of a pair of stationary parallel tracks connected by end loops and extending along one side of the storage space or area, a bridge movable longitudinally thereof, a pair of parallel tracks on said bridge connected by an end loop and arranged to connect at their other end with one of the stationary tracks in all positions of the bridge, and a cable circuit following the stationary tracks and the bridge tracks and arranged to draw the cars therealong.

THOMAS C. KENNEDY.  
EDWARD A. ELDER.

Witnesses:

ROBT. ELDER,  
W. T. KRAUSCH.