

No. 701,962.

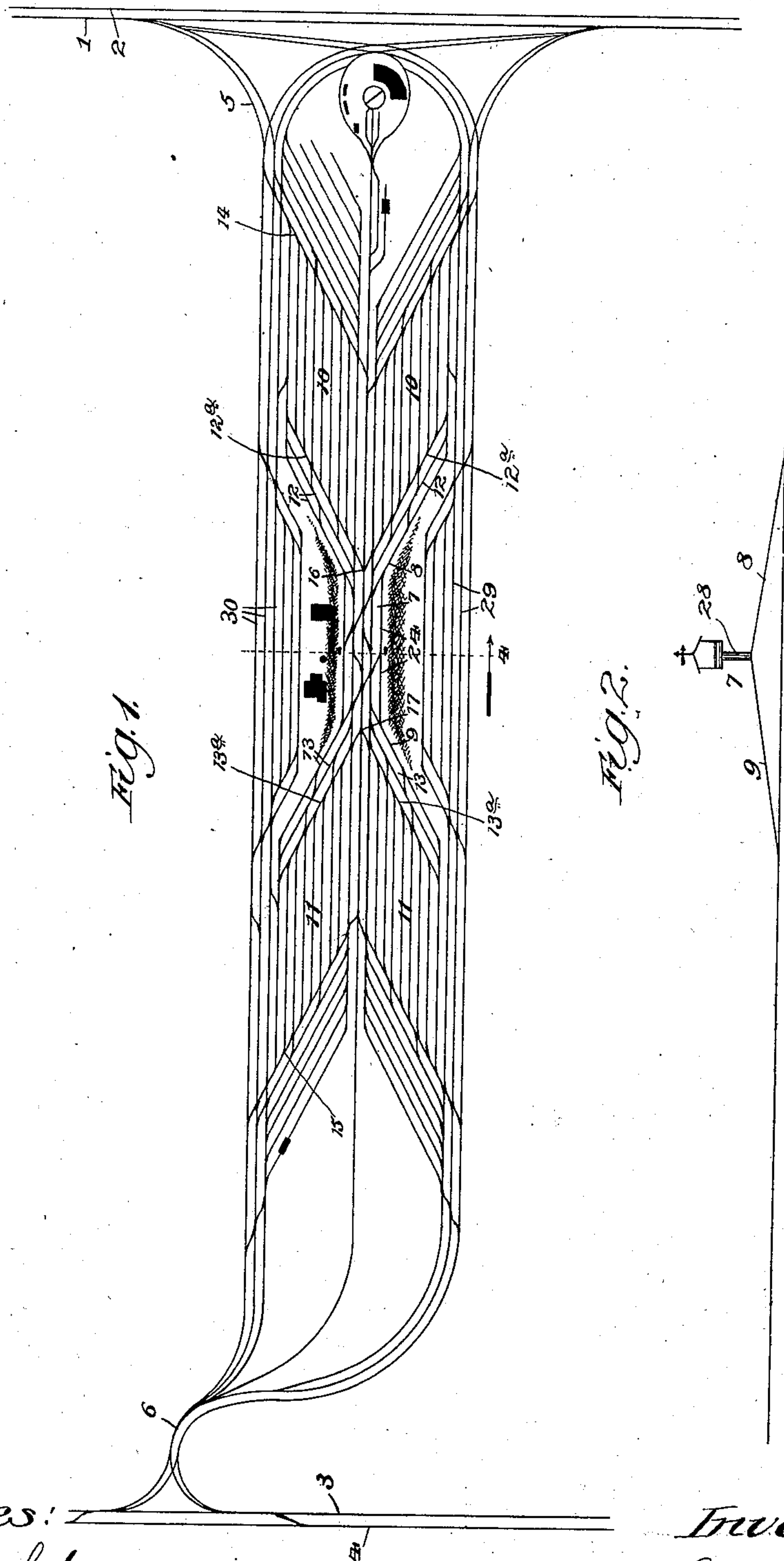
Patented June 10, 1902.

A. W. SWANITZ.  
RAILWAY CLEARING HOUSE.

(Application filed Feb. 17, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

Geo. E. Gaylord.

Geo. C. Duncan

Inventor.

Alexander W. Swanitz

By Paul Synnestvedt

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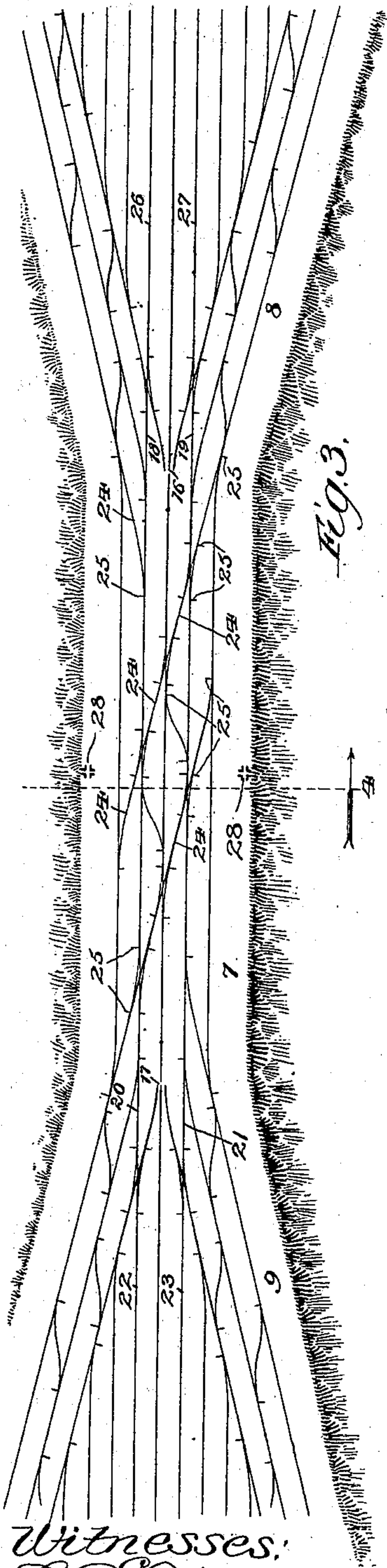
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2 Sheets—Sheet 2.



Witnesses:

Carl Gaylord.

Geo. O. Larson.

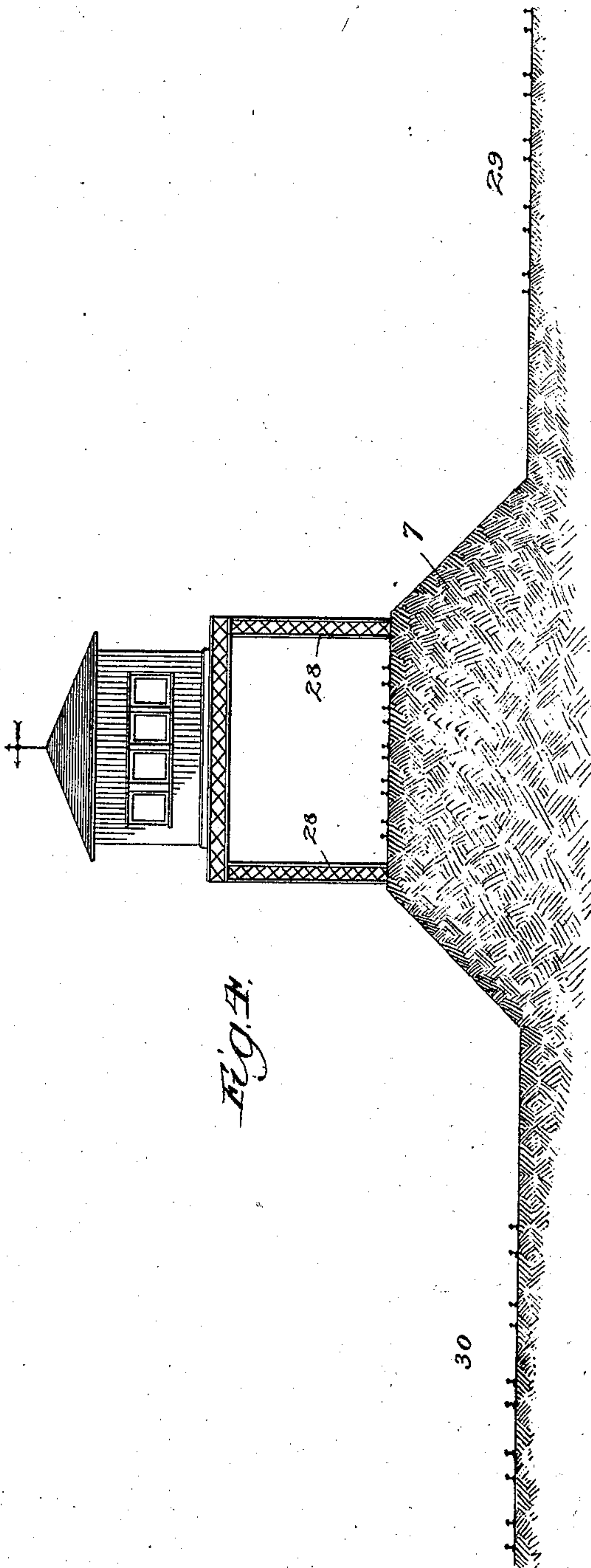


Fig. 4.

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# UNITED STATES PATENT OFFICE.

ALEXANDER W. SWANITZ, OF CHICAGO, ILLINOIS, ASSIGNOR TO SWANITZ COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE.

## RAILWAY CLEARING-HOUSE.

SPECIFICATION forming part of Letters Patent No. 701,962, dated June 10, 1902.

Application filed February 17, 1902. Serial No. 94,527. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER WILLIAM SWANITZ, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway Clearing-Houses, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention has reference to the provision of certain improvements in what I have termed a "railway clearing-house," by which I mean an arrangement of tracks, grades, switches, and other devices whereby trains  
15 which require to be broken up and re-formed can be handled with a minimum expenditure of time and at a very low cost.

Heretofore it has been known to use a yard containing a plurality of switch-tracks in conjunction with what is called a "gravity-mound"—that is, a hill or other equivalent inclination whereon the cars are started downward to be distributed by the switches throughout the yard in their proper places,  
25 motion being derived from the grades.

The first of the objects of my present invention relates to the provision of certain improvements in connection with this class of apparatus, whereby a single gravity-mound  
30 can be used in conjunction with two inclines, one at each end thereof, thus serving to operate two switch-yards and greatly reducing the amount of room necessary for the installation of such apparatus.

35 Since an installation of the kind referred to requires several miles of territory as a general rule, I have only attempted to show it in a diagrammatic way in the accompanying drawings, and instead of each track being  
40 shown as a double line with the rails provided with the usual switch-points and actuating devices each track and each crossover is shown by only a single line.

Figure 1 is a plan view of the whole installation. Fig. 2 is a view showing the mound in profile, and Fig. 3 is an enlarged view showing the track arrangement on top of the mound, and Fig. 4 is a transverse section through the mound near the middle.

50 At each end of Fig. 1 there are shown two

tracks 1 2 and 3 4, the said tracks being provided, respectively, with curved connecting-lines, (marked 5 and 6, respectively,) leading to the yards. In a location preferably about midway between the two sets of tracks 1 2  
55 and 3 4 I locate a gravity-mound 7, having, preferably, five tracks extending longitudinally thereof in the middle and switch connections therefrom, leading down inclines 8 and 9, one of which I provide at each end of  
60 the gravity-mound, as shown in Fig. 2 of the accompanying drawings. The tracks on the incline 8 are constructed to deliver cars to the several parallel tracks of the distribution-yard, which I have marked 10, while those of  
65 the incline 9 are intended to deliver cars to the distribution-yard, which I have marked 11. At 12 I have shown tracks running up the incline 8 at each side of the distribution-yard 10 and connecting with the centrally-dis-  
70 posed tracks on top of the mound 7. A like arrangement for the other end is shown at 13. The tracks 12 and 13 are diagonally disposed relative to the tracks in the yards 10 and 11, as shown, and the several tracks of the yards  
75 10 and 11 are connected by other diagonal tracks at their outer ends, (marked, respectively, 14 and 15.) The primary purpose of the tracks 14 and 15 is to permit the ready  
80 removal of the cars which have been distributed to the various parts of the yards 10 and 11 without interfering with the continuation of the distributing operation at the inner ends of the yards.

In order to permit the simultaneous oper-  
85 ation of both ends of the mound 7, I provide a novel arrangement of crossover-tracks 24, having switches at 25, (shown more clearly on Fig. 3,) on examination of which it will be seen that a train coming up the incline 8 from  
90 either side of such incline can pass another train coming up from the diagonally opposite side of the incline 9 on top of the mound and reach the three throw-switches 16 and 17, respectively, which constitute the principal dis-  
95 tributing points for the two yards, without interfering with each other's movements in any way.

As a means for still further facilitating the work on the mound I also provide at each end 100



of the mound certain tracks, (marked 18 and 19 on the incline 8 and 20 and 21 on the incline 9,) whereby connection may be made from the tracks on the mound intermediate the center and side tracks to either the distributing-yard tracks 22, 23, 26, and 27 or the diagonal tracks which lead off on each end from the three throw-switches.

At 28 I locate a tower extending over the five tracks on top of the mound and so located as to command full view of both distribution-yards and connections, whereby both yards can be controlled from the same tower.

Between the two distribution-yards and at each side of the mound 7 are located receiving-yards 29 and 30, on which trains are put as they come in ready to be classified, and these receiving-yards are, as shown, equally accessible from either direction.

The operation of the improvements above described is substantially as follows: A train of cars having been brought in over one of the outside lines 1 2 or 3 4 is taken up onto the gravity-mound from either end—that is, from either the diagonal tracks 12 or the diagonal tracks 13—and pushed to the summit of the mound, at which point the cars strike the reverse grade and run down by the action of gravity into either the yard 10 or the yard 11 on any of the tracks thereof, as desired. Assuming that a train has been pushed up over one or other of the diagonal tracks 12, it will pass over the summit of the gravity-mound 7, and the cars having been uncoupled on the way up, when the couplers are slack, are run down of their own weight onto the tracks 13 and thence by manipulation of the switches onto the parallel tracks in the yard 11. While the distribution throughout the yard 11 is taking place from the inclined diagonal tracks 13 another train can be pushed up from one or other of the tracks 14 onto the gravity-mound and over to the tracks 12, where like distribution of the several cars of the train can be made.

By means of the tracks 18, 19, 20, and 21 it will be seen that two engines may work up through the center of one yard and over into the opposite yard at the same time that two other trains are being classified from the sides of the opposite yard into the first yard. This operation may be reversed in working to the other end.

If desired, one engine may operate through the middle of one yard, classifying into the whole of the opposite yard, and two engines, working on the outside of the opposite yard, classify onto each side of the first yard.

It is thus obvious that by the improvements set forth I am enabled to use a single gravity-mound in connection with two yards, the gravity-mound being placed between said yards, and can thus utilize certain of the diagonal tracks of each of said yards as push-

ing-in tracks for the yard at the other end of the gravity-mound without interfering with the distribution-tracks of the opposite yard. This arrangement, it is estimated, saves at least forty per cent. of the space and cost of construction which would otherwise be required for the installation of a certain number of miles of distribution-track, besides concentrating the work in a way so that it can be handled by a less number of men and will require the installation of a considerably less amount of operating apparatus.

Where the yard is located at the summit of a hill, the natural grades can be used.

My improvement is particularly useful where there is classification for traffic moving in each direction.

Attention is called to the fact that by the provision of the middle diagonal track leading up from the sides of the yards in case of a wreck on the inner diagonal track the cars may be allowed to run around through the middle track to the nearest crossover-switch at that point, thereby avoiding the necessity of cutting out more than a small number of tracks.

If it is deemed desirable to make the grade long enough, cars may be thrown down the middle track of either one of the classification-yards into the tracks at the farther end of it, all of which are connected with the middle track.

The top of the grade should be sharp, so that as a car strikes the top and having been uncoupled comes on the downgrade it runs away from the train and separates far enough to allow the switches to be thrown before the next car following can interfere. In this way the trains can be constantly coming up and the cars constantly dropping off the end without any stops. Each car or cut of cars as it comes up the hill is mounted by a brakeman who controls its movement as it goes down, keeping them a like distance apart, the grade being made sufficient to move the ordinary hard-running car.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A railway clearing-house comprising a gravity-mound, a distributing incline at each end of said gravity-mound, and a distributing-yard for each of said inclines, substantially as described.

2. A railway clearing-house comprising a gravity-mound, an incline at each end of said gravity-mound, a distributing-yard connected with each of said inclines, and crossover-tracks, and switches so disposed as to permit simultaneous operation of trains coming from opposite directions, upon said gravity-mound, substantially as described.

3. A railway clearing-house comprising a gravity-mound, an incline at each end of said gravity-mound, a distributing-yard connect-



ed with each of said inclines, and diagonal  
tracks, adjacent to each of said distributing-  
yards, and arranged to permit trains requir-  
ing to be cleared to be switched onto said grav-  
5 ity-mound, from either end, and distributed  
at the other, substantially as described.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing  
witnesses.

ALEXANDER W. SWANITZ.

Witnesses:

PAUL SYNNESTVEDT,  
HORACE SMALLEY.