

(No Model.)

C. A. CHASE.  
REPRODUCING DEVICE.

No. 545,422.

Patented Aug. 27, 1895.

Fig. 2.

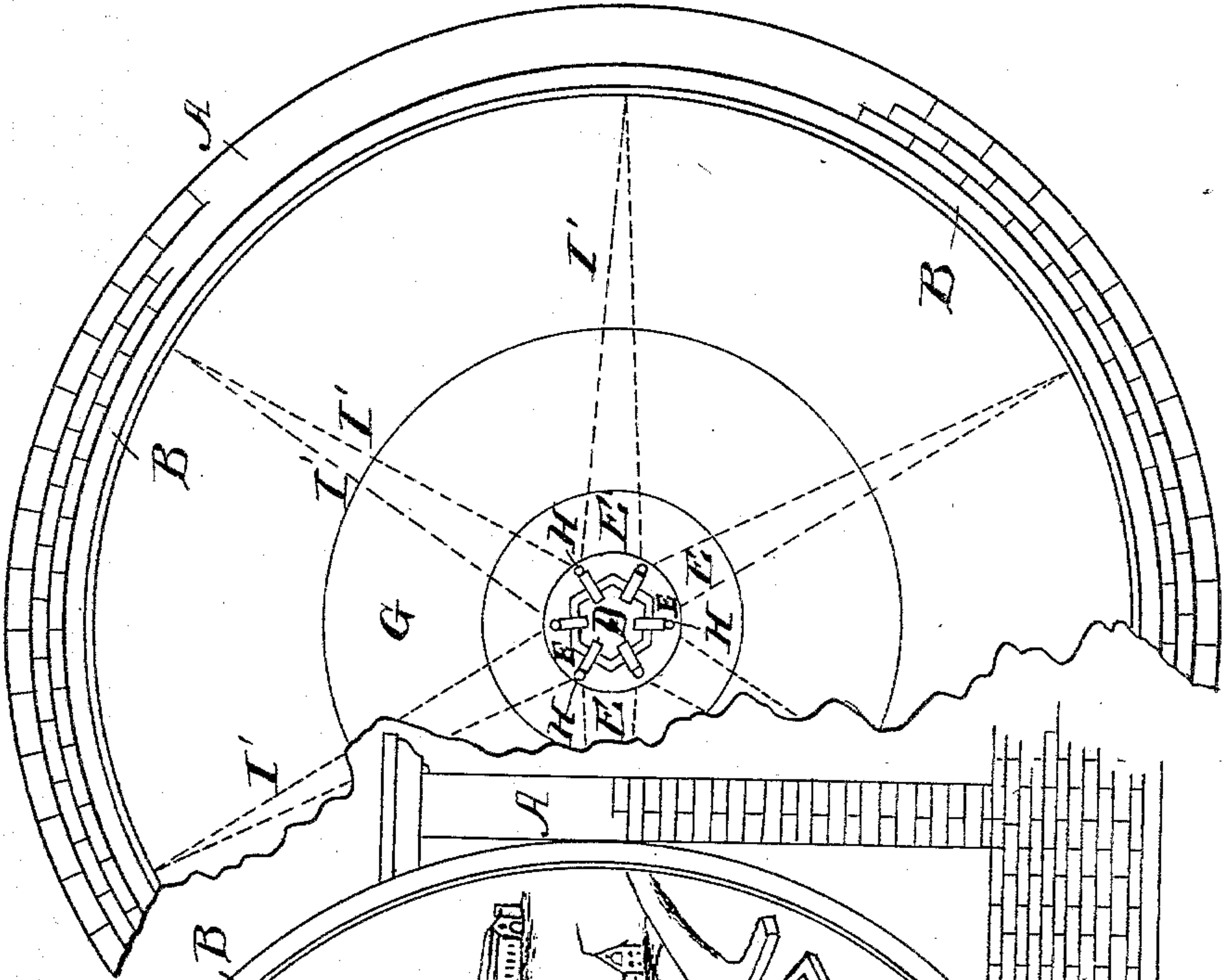
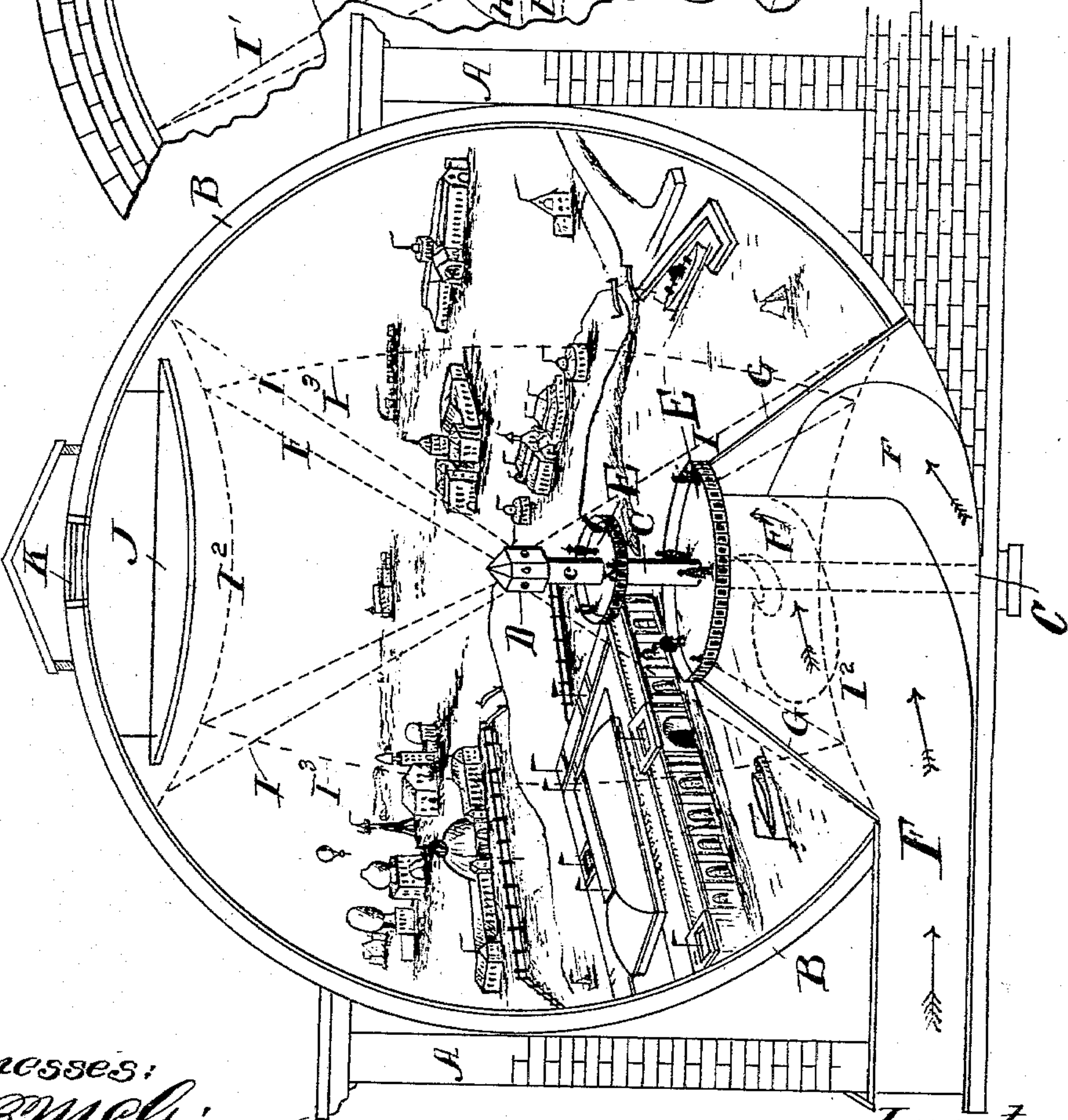


Fig. 1.



Witnesses:

J. B. McGirr.  
L. M. Carter.

Charles A. Chase, Inventor.

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# UNITED STATES PATENT OFFICE.

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## REPRODUCING DEVICE.

SPECIFICATION forming part of Letters Patent No. 545,422, dated August 27, 1895.

Application filed January 25, 1894. Serial No. 498,054. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. CHASE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Reproducing Devices, of which the following is a specification.

My invention relates to reproducing devices, and has for its object to provide means whereby a complete landscape can be reproduced. In the ordinary use of reproducing devices, such as stereopticons, a portion of the landscape is usually reproduced upon a flat surface.

My invention results in grouping a number of projecting devices at the center of, for example, a spherical, polygonal, or cylindrical room, so as to reproduce upon the inner surface of such room a complete landscape.

I have illustrated one means of realizing my invention in the accompanying drawings, wherein—

Figure 1 is a vertical section through a spherical room, showing stereopticons in position. Fig. 2 is a horizontal section of same.

Like parts are referred to by like letters throughout both the figures.

The outer wall of the building A is shown as made of brick. The inner or spherical wall B may be made in any suitable manner. It will be understood that the room may be spherical, polygonal, cylindrical, or the like. At the center of the building is a support C, the top of which is approximately at the center of the room. On the top of the support are several stereopticons H H. In the drawings six of these stereopticons are shown arranged in a circle at equal distances apart and inclosed in the apartment D. Attached to the support C are the platforms E E, upon which the spectators stand. A stairway F leads to such platforms. There is an opening K at the top of the building for ventilation.

J is a supported platform for excluding from the room the light tending to enter the opening K.

G is a wall to exclude the light from the interior of the room, and which also acts as a support for the platform E.

The lines I I represent the limits of the vertical compass of the stereopticons and the

lines I' I' the horizontal limits. It will be noticed that the vertical compass is represented by an arc of a circle less than a semi-circle, and hence there will be a portion bounded by the lines I<sup>2</sup> I<sup>2</sup> at the top and at the bottom of the building which will not be shown. These portions are composed of the sky and ground, and the landscape is practically complete. The area bounded by the lines I<sup>3</sup> I<sup>3</sup> and the lines I<sup>2</sup> I<sup>2</sup> represent that portion of the landscape reproduced by one of the stereopticons. In the case shown in the drawings there are six stereopticons and hence six of such portions, and they will be joined together so as to form a continuous landscape. I have suggested stereopticons; but, of course, it is to be understood that I do not wish to limit myself by this word. Any suitable reproducing or projecting device will suffice.

It is evident that the construction, form, and arrangement of these several parts may be greatly altered without departing from the spirit of my invention. For example, I may use a different form of projecting device than herein described, and I may use such device in connection with a polygonal, spherical, or cylindrical shaped room, and I do not, therefore, wish to be limited to the exact construction shown.

The use and operation of my invention are as follows: If it is desired to reproduce a given landscape for use in my invention, such landscape is photographed in sections from an elevated point with an instrument made especially for the purpose. Such work is known as "horizon" photographs. The horizon may be divided into a number—say six—of equal portions, each portion being photographed upon a separate negative; or if the horizon were divided into, say, two portions, the negatives would be divided after the picture was taken. The plates are then prepared from these negatives, and the reproducing or projecting device is so made that when placed in position in their correct order the complete horizon or landscape is reproduced upon the walls of the spherical, polygonal, or cylindrical room. The lines where the views from the different instruments meet will not be readily discernible. Persons upon the platforms E E will thus see the landscape as



it would appear if they were standing at a point where the photographs were taken.

When views of parts of a landscape are reproduced upon a flat surface, an adequate  
5 idea of the size, location, &c., of the different objects cannot be obtained, while when reproduced in the manner herein described the entire horizon appears, and everything in  
10 view from the point where the photograph is taken will be reproduced exactly as it appears when seen from such point. It will thus be  
15 seen that landscapes from all parts of the world can be reproduced so that the spectators may see them as they would appear when  
20 seen in reality, and that the interior of the buildings may be reproduced so as to appear to the spectators as seen from within. By  
25 this manner of reproducing views a person can get a better idea of the different parts of the world without actually going there than  
30 in any other manner heretofore devised. In fact he may see such views exactly as they would appear if seen on the ground. A series  
of scenes may thus be reproduced. For example, a view of the World's Fair grounds  
may be given to remain in sight for a definite period—say ten minutes—then a view within  
the Manufacturers' Building, and then a view  
on Lake Michigan, assuming that the subject  
be the World's Fair.

To avoid confusion, I have preferred to employ the term "polyhedral" to represent the  
shape of the apartment, and this term I use  
in its broadest sense, as it is plain that the  
35 apartment might be spherical, cylindrical, polygonal, or the like.

In all my experiments I have used a cylindrical or polyhedral room, and am therefore  
unable to say whether or not there are any  
40 practical difficulties that would make a spherical room objectionable. I show a spherical  
room in the drawings, because I consider such  
construction an ideal construction for accomplishing the object of my invention, provided,  
45 of course, that there are no practical difficulties that would make the use of such a room  
objectionable.

I claim—

1. The method of reproducing views such  
50 as landscapes or the like, which consists in first making an image thereof in sections, then producing photographic slides of such sections, then reproducing by projecting from  
such slides the said section views simultaneously  
55 ously upon a receiving surface, the several

section views joining or blending into each other so as to make a continuous reproduction.

2. The method of reproducing landscapes or the like, consisting in photographing the  
entire horizon from a given point, dividing  
60 the negatives or photographs into sections and preparing stereopticon plates from such sections, and then inserting said plates in a  
number of reproducers or stereopticons arranged so that the several sections will be  
65 projected upon a receiving surface, the contiguous or adjoining sections blending or uniting so as to form a continuous horizon view.

3. The combination in a reproducing device  
of a number of reproducers adapted each to  
70 reproduce a separate view, a receiving surface upon which said views are projected, said reproducers being associated with each other  
and with the receiving surface in such a manner that the several views reproduced by them  
75 are projected upon the receiving surface so as to be joined or blended into a continuous reproduction.

4. The combination with a polyhedral  
shaped apartment, of a number of repro-  
80 ducers or stereopticons grouped near the center of such apartment and a series of views, slides or plates taken from a given point, each  
reproducer adapted to project a separate view  
upon the wall of the apartment and arranged  
85 so that the several views are joined or merged together, whereby different views taken from  
a given point, each comprising part of the horizon, shall be reproduced upon the wall of  
said apartment so as to show a continuous  
90 view of the entire horizon.

5. The combination with an apartment of a  
polyhedral form, of a number of reproducers  
or stereopticons grouped near the center of  
such apartment and placed at an equal distance  
95 apart and a series of views, slides or plates taken from a given point, each reproducer adapted to project a separate view upon  
the wall of the apartment and arranged so  
that the several views are joined or merged  
100 together, whereby different views taken from  
a given point, each comprising part of the horizon, shall be reproduced upon the wall of  
said apartment so as to show a continuous  
view of the entire horizon.

CHARLES A. CHASE.

Witnesses:

WALTER J. GUNTHERP,  
ALICE H. GEDDES.