

E. F. RUSSELL.
Map-Exhibitors.

No. 149,884.

Patented April 21, 1874.

FIG 1.

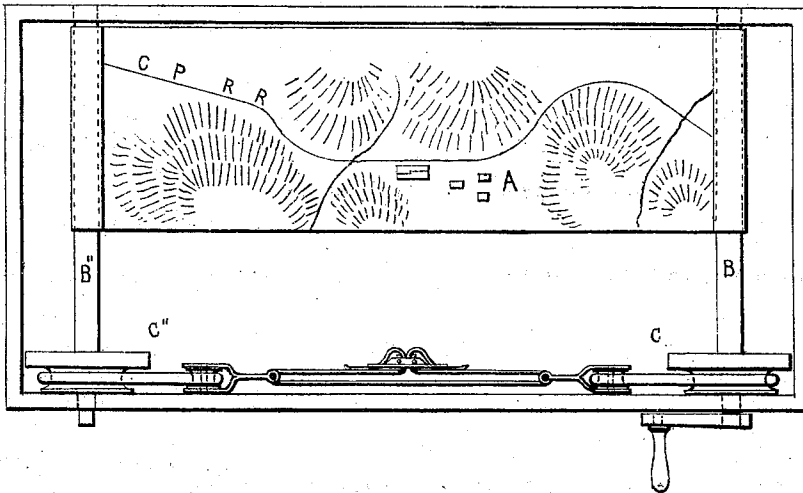
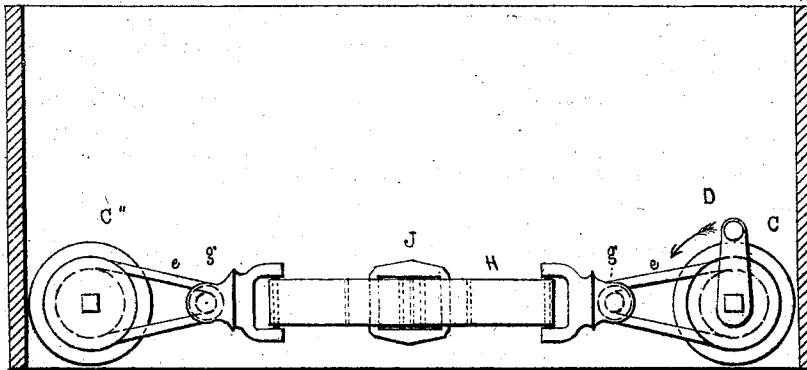


FIG 2.



WITNESSES.

J. P. Dickinson
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 INVENTOR.

UNITED STATES PATENT OFFICE.

ELI F. RUSSELL, OF PORTLAND, OREGON.

IMPROVEMENT IN MAP-EXHIBITERS.

Specification forming part of Letters Patent No. **149,884**, dated April 21, 1874; application filed February 6, 1874.

To all whom it may concern:

Be it known that I, ELI F. RUSSELL, of Portland, in the county of Multnomah and State of Oregon, have invented a new and valuable Improvement in Adjustable Double-Roller Attachments for Exhibiting Charts, Maps, &c.; and do hereby declare that the following is a full, clear, and exact description of the same in its construction and operation, reference being had to the annexed drawings, making part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of the apparatus supporting a chart. Fig. 2 represents plan of apparatus for moving the chart upon the rollers, and regulating the tension upon the same.

In Fig. 1, A represents the chart or drawing; B and B'', rollers upon which the chart operates; *c* and *c*, pulleys permanently fixed to the rollers B B''; D, crank for operating the entire apparatus; *e e*, cords passing around the pulleys *c c* and *g g*; J, a buckle for taking up and strengthening the tension of the elastic connection H.

By reference to the drawing, it will be seen that, by turning the crank D in the direction indicated by the arrow, the chart A will accumulate upon the roller B, and disengage from the roller B'', and that by placing the crank upon the pulley *c''*, and giving it a re-

verse motion, the chart will disengage from the roller B, and accumulate upon the roller B''. The tension of the map upon the rollers is regulated by the elastic connection H, and its adjusting device connected with the rollers, as heretofore described. The pulleys *c* and *c''* have suitable flanges, as seen in the drawing, for the support of the charts upon their edges, if same possess greater weight than the strength of the tension will support. The entire combination to be supported either in a frame or upon brackets.

The object of this invention is to provide a convenient means for exhibiting maps, charts, drawings, panoramic views, or other sheets of similar design.

I claim—

In combination with the frame A, map-rollers B B', cords *e e*, crank D, and pulleys *c c*, the intermediate elastic connecting-piece H when provided with the buckle J, or equivalent adjusting device, for adjusting the tension of said connecting-piece, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ELI F. RUSSELL.

Witnesses:

J. P. DICKINSON,
GEO. WOODWARD.