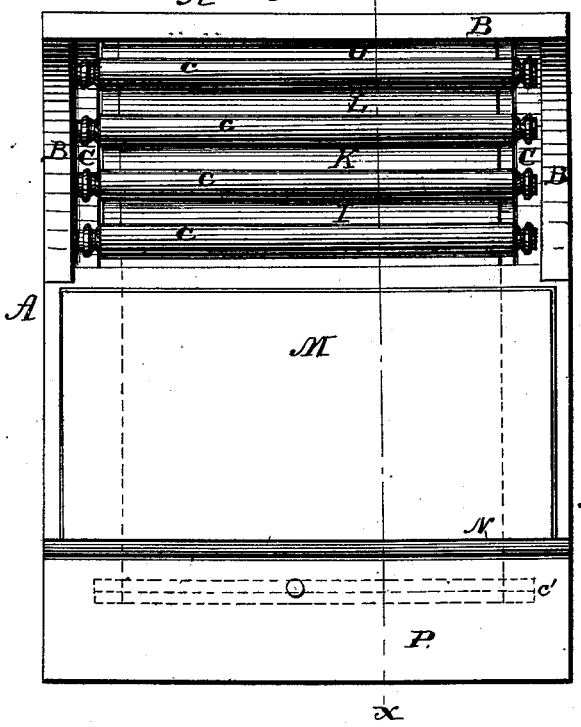
2 Sheets—Sheet 1.

G. H. GRANT.

Map-Cabinet.

No. 221,550. Patented Nov. 11, 1879.

Fig. 1.



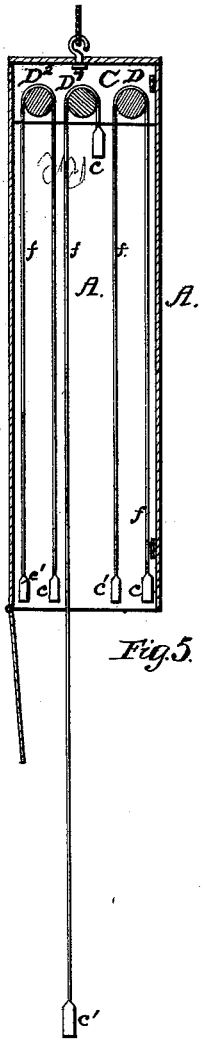


Fig. 5.

Fig. 2.

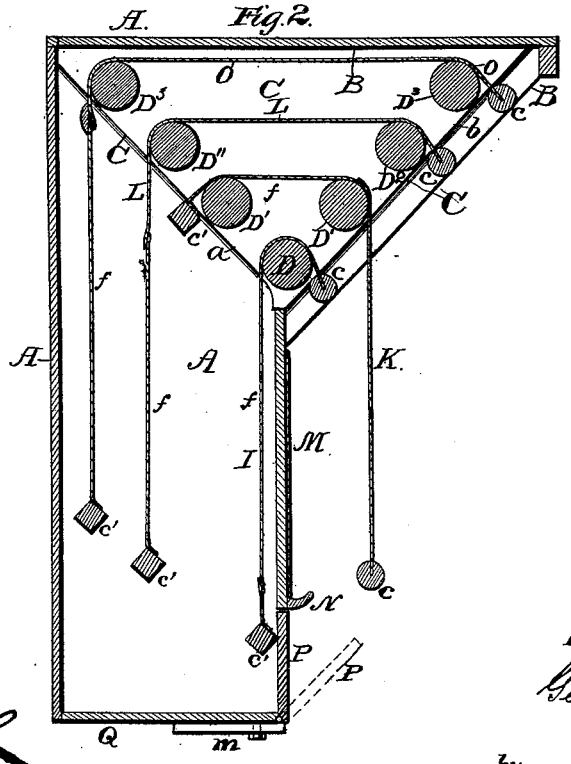


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Fig. 4.

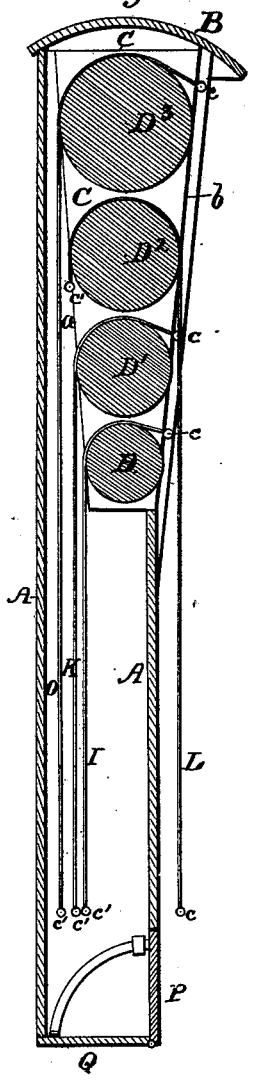
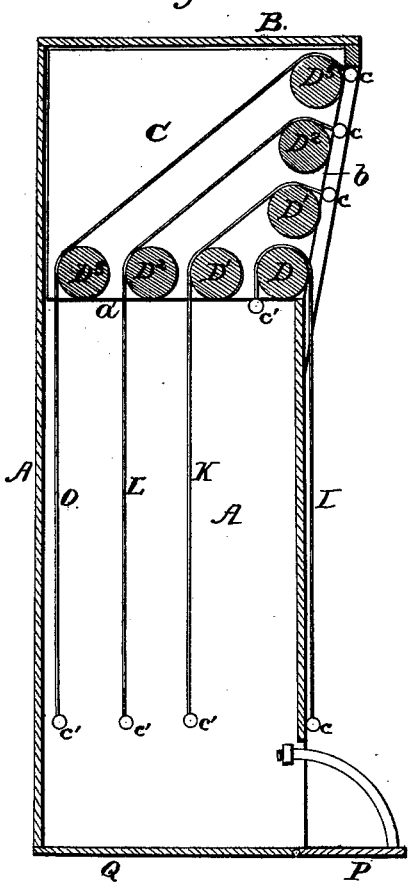


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE H. GRANT, OF RICHMOND, INDIANA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO AARON W. HEMPLEMAN, OF SAME PLACE.

IMPROVEMENT IN MAP-CABINETS.

Specification forming part of Letters Patent No. **221,550**, dated November 11, 1879; application filed March 18, 1879.

To all whom it may concern:

Be it known that I, GEORGE H. GRANT, of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Map-Cabinets; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a front elevation of a map cabinet or receptacle to which my improvements have been applied. Fig. 2 represents a vertical section of the same as taken through the line *x x* of Fig. 1. Fig. 3 represents a vertical section of a modified form of my improved map-cabinet, and Fig. 4 another modification of the same.

My invention relates to that class of appliances the object of which is to protect, display, or exhibit for use, examination, criticism, or explanation maps, charts, drawings, engravings, chromos, anatomical plates, plats, diagrams, samples of wall papers, window-shades, or other articles usually rolled for protection and unrolled for exhibition.

My invention consists, first, in providing the upper and lower ends of maps, charts, drawings, &c., with a counterpoise-weight, and then suspending it over a loose friction roller or rollers arranged in a cabinet or receptacle, whereby said map, chart, &c., can be drawn out or pushed back into the case or adjusted to hang at any required position for inspection or examination; secondly, in combining two or more counterpoised maps, drawings, &c., with a cabinet or receptacle provided with one or more series of rollers, so arranged and constructed with respect to each other that each and every map, drawing, &c., arranged thereon can be exhibited for inspection independently and without interference or displacement of the others of the series; thirdly, in combining with two or more maps, drawings, &c., whose ends are provided with counterpoises, a cabinet having V or L shaped brackets, for a purpose to be hereinafter described; fourthly, in a cabinet for the exhibition of maps, charts, drawings, &c., a compartment arranged at its lower end for the reception and protection of globes, models, &c.; fifthly, a map-exhibitor having a projecting hood for protecting the maps and drawings from dust and other matter; and, sixthly, the combination of a map-exhibitor with a blackboard provided with a shelf or elongated bracket for the reception of the crayons.

Referring to the drawings, in which the same letters of reference indicate the same parts, A represents a box or cabinet, provided at the top on its front side with a projecting hood, B. To the face of the inner opposite sides of the cabinet A and hood B are arranged and secured two V or L shaped brackets, C C, one on each side, into which are journaled a series of rollers, over and upon which the maps or charts pass and are suspended.

Along the lower converging lines, *a* and *b*, of the brackets C C are formed the bearings for the rollers D, D′ D′, D^2 D^2, and D^3 D^3. At or about the lower angle of the brackets C are formed the bearings for the under roller, D, of the above series of rollers, and which supports and suspends the lowest map or drawing, I, intended for exhibition. This map or drawing is counterpoised by weighted strips *c c′*, one at each end, so that the chart will remain, when adjusted, in any position desired, and slide readily over the roller D into the cabinet when the strip *c* is elevated, thus protecting it from dust, moisture, sudden changes of temperature, &c.

It is obvious that other methods of counterbalancing may be used instead of the strips or rods *c c′* employed in the illustration of my invention—as, for instance, simple weights of suitable gravity and size—in which case each end of the map should be provided with a suitable stop or stops to prevent it from slipping off the roller. For this purpose, if only one map or chart is used in the case or receptacle A, the roller D should be arranged sufficiently near to the cover B of the case to prevent such accident. As a rule, however, more than one map, chart, or other drawing

will be arranged in the case A. The plan I prefer for this purpose is shown in Figs. 1 and 2, in which a cabinet having four maps is illustrated. In this form a V-shaped bracket is employed to form the bearings for the rollers that support the maps. In this case or cabinet, I represents the lower or inner map, mounted or suspended upon a single roller, D, and K the next lower map, mounted upon two rollers, D′ D′, these being so arranged with respect to the roller D as to allow map K to slide freely up and down without interfering with map I. L represents the next lowest map, supported or suspended from the two rollers D^2 D^2, and which are so arranged as to allow map L to slide freely up and down without interfering with maps K and I below. O represents the next or uppermost map, supported or suspended from two rollers, D^3 D^3, so arranged as to allow map O to slide freely up and down without interfering with the others, and that as well on the inside as outside of the receptacle. Each of these maps, it will be seen, is provided at each end with a metal or wooden strip, the outer strip being marked *c* and the inner one *c′*. These strips extend all the way across the ends of the maps and project a little beyond at each end, as shown in Fig. 1, so as to bear against the edges of the V-shaped brackets C, thereby preventing the maps or other drawings attached from slipping off their supporting-rollers. These strips are made of such weight as to keep the ends of the maps to which they are attached on the stretch, and yet sufficiently heavy to prevent the greater length of the map on one side from moving or dragging it from the other, with the view of making the map remain in any position in which it is placed. These strips may be made of any suitable shape; but I prefer to make them round.

The cabinet thus constructed, any of the maps contained therein may be drawn out for examination by simply taking hold of the strip *c* of the required chart and pulling on it until all or as much of it is exposed as required. Strip *c* is then detached from the hand, and will hold the map in that position as long as may be desired. When done with that map, it is pushed in by raising strip *c*, which, through strip *c′* on the other end, will cause the map to descend on the inner side of the cabinet.

In Fig. 2, K represents one of the maps drawn out for inspection, while maps O, L, and I are shown inclosed in the case—that is to say, in the position they are intended to occupy when not in use—their outer strips, *c*, bearing against the outer edge, *b*, of the V-shaped brackets C, which serves to prevent them from slipping off their respective supporting-rollers.

To the inner ends of the maps pieces of cloth *f*, or paper, are attached to lengthen them, as otherwise the maps could not be used in this manner. In this style of map-cabinet the case A is provided with a cover, which projects over and for some short distance beyond the upper front end of the V-shaped brackets C, that support the rollers, and forms a hood, B, to protect the maps, charts, or other articles from dust, &c.

On the lower part of the front side of this case A is arranged a blackboard, M, which, when the maps are not on exhibition, forms an excellent board for map-drawing or making mathematical calculations, diagrams, &c. At the lower edge of this board M is arranged a shelf, N, for holding chalks, crayons, &c.

Immediately below shelf N is a door, P, hinged at its lower end to the bottom Q of the cabinet A, so as to open outwardly and downwardly, as indicated in dotted lines in Fig. 2. To the under side of the bottom Q two or more slide-bars are properly secured, so that when drawn out they will form a support for the door P when lowered down; or, instead of drawbars, two or more pivotal bars, *m*, may be secured. This is the form shown in the drawings, Fig. 2.

Door P, when lowered and supported by bars *m*, forms a table, on which globes, philosophical and other apparatus, &c., may be supported while being exhibited or explained to pupils and others, after which they can be placed back into the cabinet on bottom board Q, and the door P then closed and latched or locked, as may be desired, and bars *m* pushed back in place under the bottom board of the cabinet.

In Fig. 3 is represented a modification of my improvement. In this figure the inner rollers, D′ D^2 D^3, are arranged in a horizontal plane, while their corresponding rollers may be either arranged in a vertical or an inclined plane, as in Fig. 2. In the drawings they are arranged in the latter way. In either case they will be mounted in brackets C, of suitable size and corresponding shape.

In Fig. 4 is shown another modification. In this modification the maps, charts, &c., are suspended on single rollers arranged, one above the other in a vertical plane, there being one roller for each map or chart. These rollers may be of the same size; but I prefer to make them successively larger the one than the other, as shown in that figure, the largest being the uppermost, and the one immediately below the next largest, and so on down through the whole series. By this plan the different maps will hang free and independent of each other, and will not interfere with each other as they are pushed in or drawn out of the case. These rollers D D′ D^2 D^3 are all mounted in suitable bearings in V-shaped brackets C, which, as in Figs. 2 and 3, serve to arrest the rods or strips *c* secured to the ends of each map, in order to prevent them slipping off their respective rollers.

The cases A of the modifications shown in Figs. 3 and 4 may, if desired, be provided with blackboards, crayon-shelves, and with a door at their lower ends, in the same manner and for the same purposes as these devices are used in the cabinet-case A of Figs. 1 and 2.

In all the cabinet or case may be supported on suitable legs, or securely hung or suspended from the wall of the room; and in the same connection it may be stated that these maps, cabinets, or cases may be made of any required size or capacity, so as to suspend any required number of maps, charts, &c.

In Fig. 5 is represented still another modification. In this modification the rollers are all arranged on the inside of the casing and in a horizontal plane.

The operation is apparent, and need not be particularly described. The casing is suspended by a pivotal hook from a bracket on the wall or from the ceiling. By this plan the maps can be mounted, back to back, upon the ends of the cloth strips *f*, so that four maps or charts may be suspended for exhibition from each of the rollers in the casing. In this modification all maps or charts on the front side of each of the webs *f* can be examined or exhibited without turning the case; then the remainder can also be exhibited by simply turning the case round on its swivel-hook and operating each in turn.

The case may be a simple inclosed box, having a door at bottom and another in front, the former to close the case when not in use, and the latter for use in mounting the maps on their respective rollers. These doors may be secured in any suitable way.

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

1. A map, chart, &c., provided with a counterpoise rod or strip at each end, in combination with a roller and inclosing-case, substantially as set forth.

2. Two or more maps, charts, &c., each having counterpoise rods or strips, in combination with a cabinet or case provided with one or more rollers for each, in the manner substantially as set forth.

3. In combination with a cabinet or case provided with two or more rollers on which to suspend maps, charts, &c., carrying a counterpoise-rod at each end, two inwardly-projecting brackets, C, arranged on the opposite sides of the case, for the support of the rollers, and to prevent the maps, &c., from slipping over the latter, substantially as set forth.

4. A cabinet or case for the exhibition of maps, charts, &c., provided with a blackboard, arranged in the manner substantially as set forth.

5. In combination with a map, chart, &c., provided with counterpoise rods or strips, a lengthening-strip, *f*, for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE H. GRANT.

Witnesses:
A. W. HEMPLEMAN,
CHARLES F. GRANT.