(No Model.) 2 Sheets—Sheet 1.

T. S. WEST.

SEGMENTAL MAP AND ATLAS.

No. 245,757. Patented Aug. 16, 1881.

Fig. 1

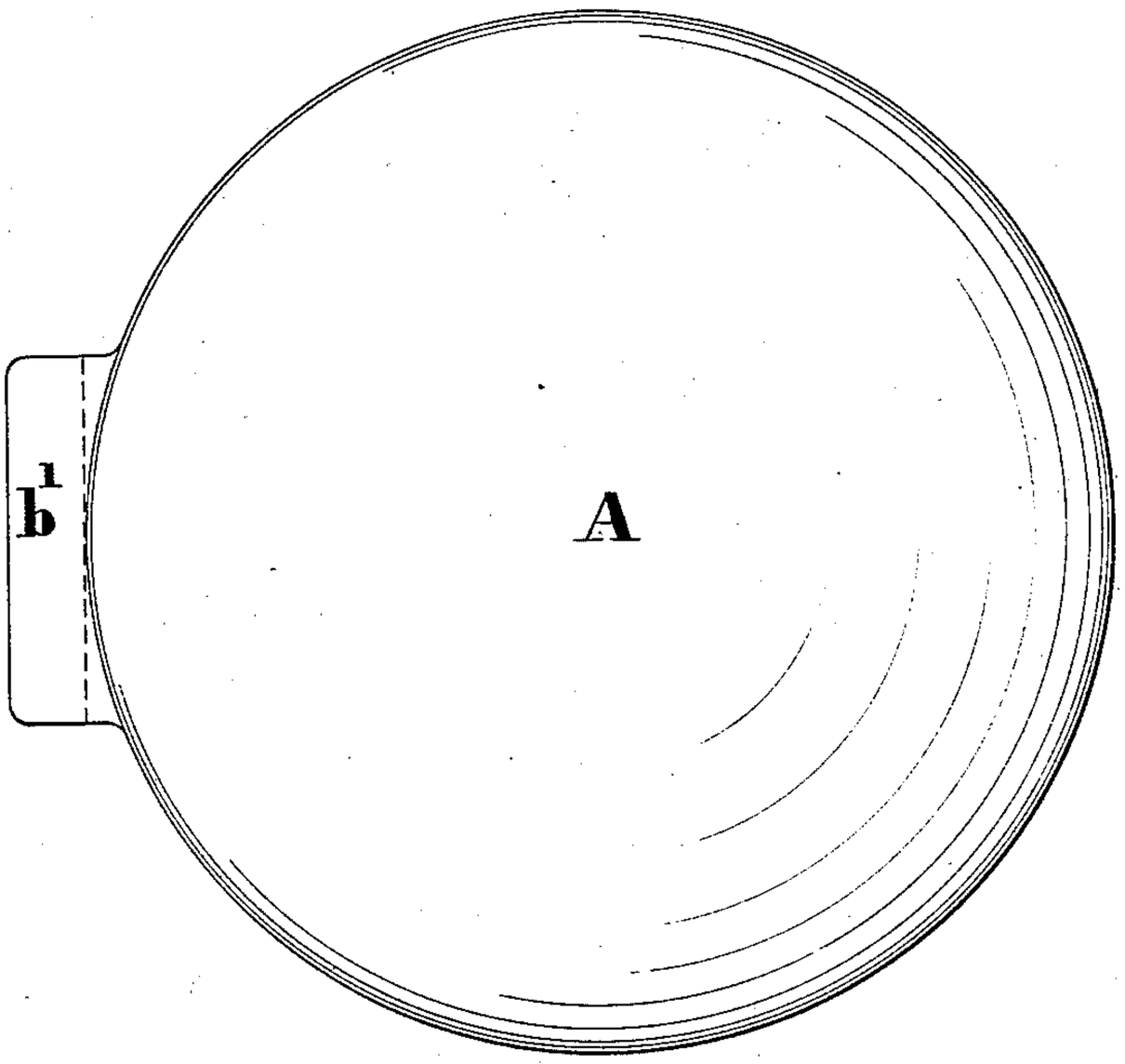
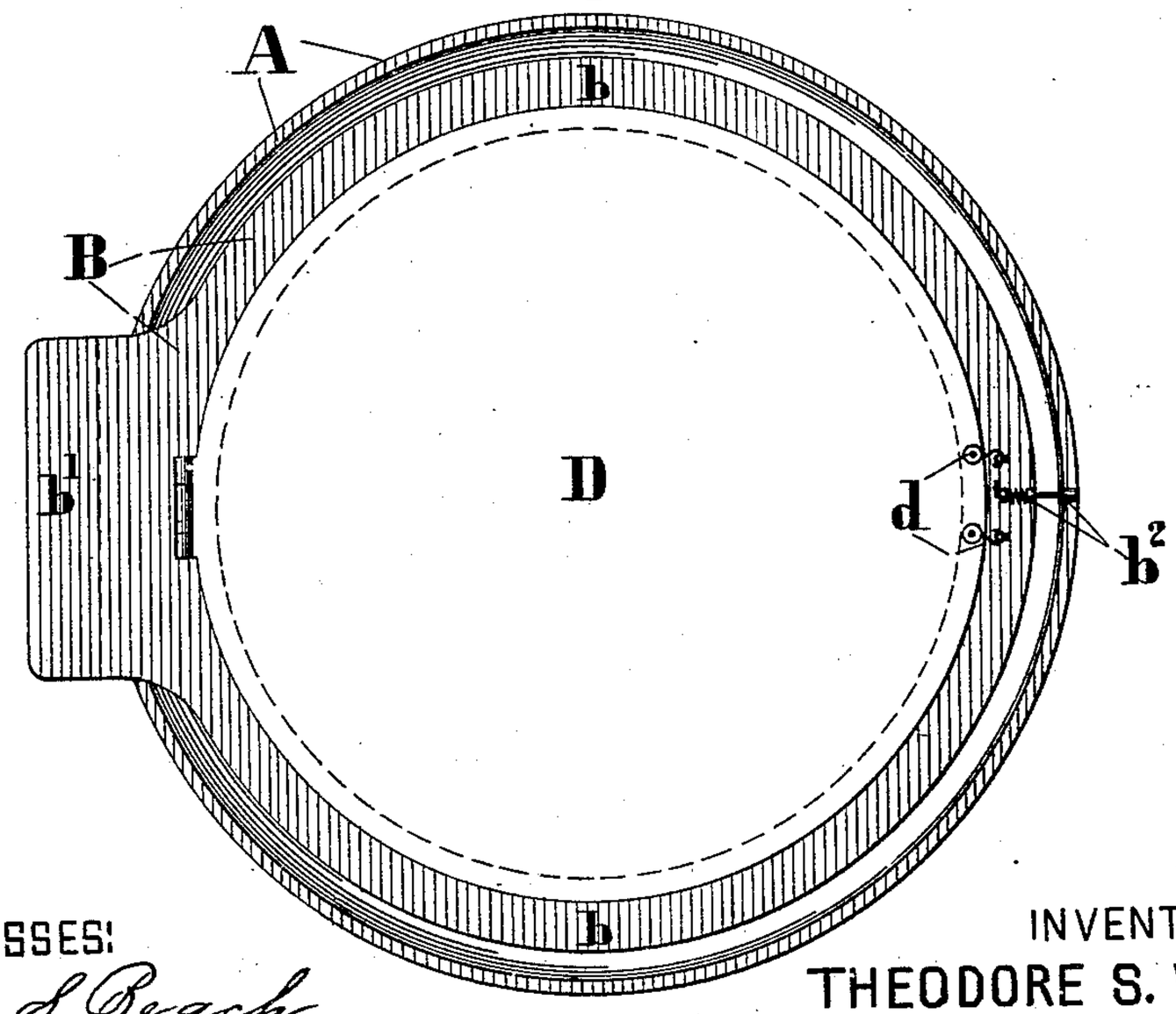


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

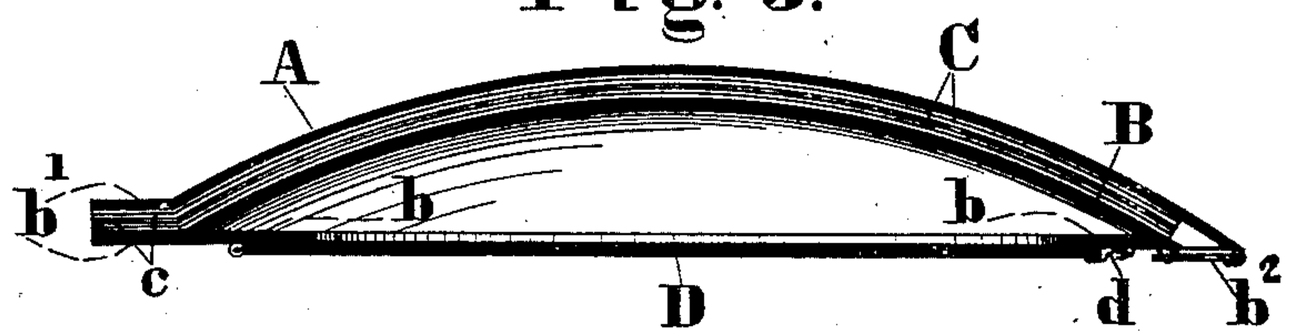


Fig. 4.

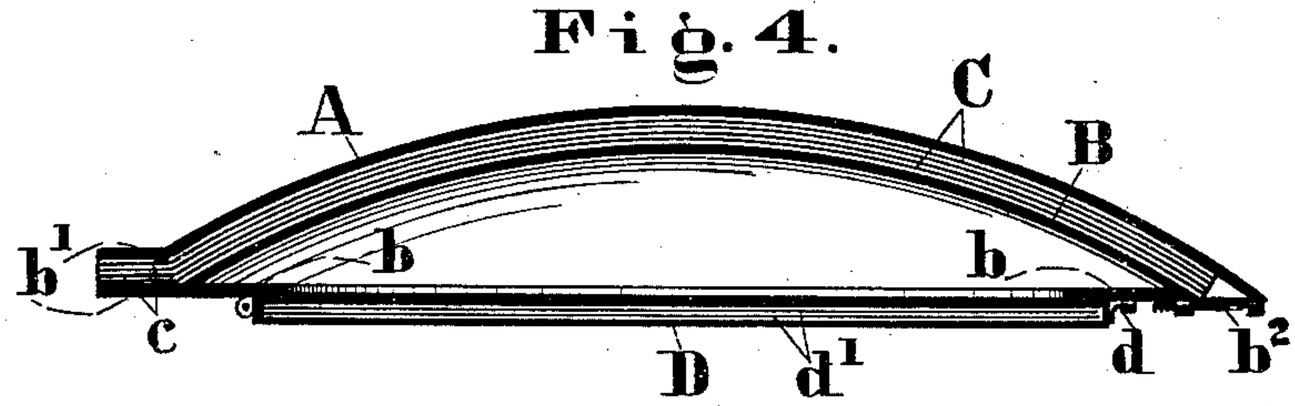


Fig. 5.

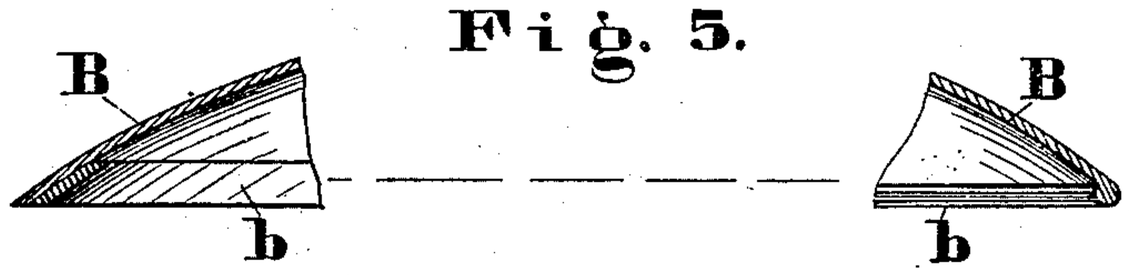
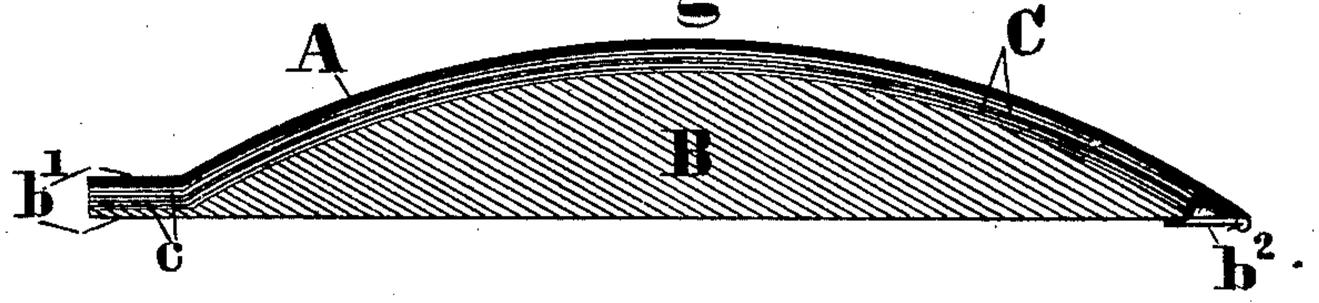


Fig. 6.



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UNITED STATES PATENT OFFICE.

THEODORE S. WEST, OF ALEXANDRIA, VIRGINIA.

SEGMENTAL MAP AND ATLAS.

SPECIFICATION forming part of Letters Patent No. 245,757, dated August 16, 1881.

Application filed June 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, THEODORE S. WEST, of Alexandria, county of Alexandria, and State of Virginia, have invented a new and useful Atlas; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is the construction of an atlas principally for use in schools, which, while having none of the disadvantages of a globe, will truthfully represent the contour of the earth's surface, and will permit the demonstration of certain geographical facts in a manner that is impossible with an atlas composed of the ordinary flat maps.

The invention consists, mainly, in making the maps which compose the atlas and the upper and lower covers thereto of the form of segments of hollow spheres fitting one within the other from above downward. The said maps and covers are united together by a suitable flexible joint at proper corresponding points on their edges, and the covers are provided with a proper device for keeping them closed when necessary.

The invention further consists in certain details of construction, hereinafter more fully described.

In the drawings accompanying and forming part of this specification, Figure 1 represents a plan view of the invention. Fig. 2 shows a reversed plan view of the same. Fig. 3 shows a central vertical section of the atlas, with the lid D made in one piece. Fig. 4 shows a central vertical section of the same with the lid D modified, so as to constitute two covers with interposed maps. Fig. 5 shows slightly-modified forms of the upper cover, and Fig. 6 represents a central vertical section of the atlas with the lower cover made solid.

The following is the description of the various parts which together form the invention:

A and B, Figs. 2, 3, 4, 6, represent, respectively, the upper and lower covers of the atlas. The upper cover, A, is of the form of a segment of a hollow sphere, with an outer convex surface and an inner concave surface. It is found that in practice the sphere on which the cover A is made should be about one foot radius, and that the diameter of the convex surface of the cover should be about one-sixth of the circumference of the sphere. The lower cover, B, is similar in shape to the cover A, but somewhat smaller, and is provided around its edge with the narrow circular flange *b*, extending horizontally inward. If desired, a re-enforcing strap or bead may be used in place of the flange *b*, as shown in Fig. 5. Both covers are made of binder's board or other suitable material.

b' b' are similar rectangular or other proper shaped pieces, extending horizontally outward from corresponding points on the edges of the covers A and B; and b^2, a suitable fastening device attached to the covers opposite the pieces *b' b'*.

C C, Figs. 3, 4, 6, are the maps forming the atlas. These maps lie between and conform in contour to the covers A and B, and gradually diminish in size from above downward, so as to fit snugly within each other. The maps, as a whole, fit within the cover A and over the cover B.

c c are similar rectangular or other proper shaped pieces, extending horizontally outward from the edges of the maps of which they form part. The pieces *c c* conform in shape to the pieces *b' b'*, between which they lie, and are secured to form the flexible joint of the atlas. Each piece *c* is attached to the due-west point of the map of which it forms part, so that the north points of all the maps lie in one and the same great circle of the earth.

D, Fig. 3, is a circular lid, hinged or otherwise properly jointed to the circular flange *b*, (or to the re-enforced or beaded edge of the cover B,) and designed to close, when necessary, the circular opening in the lower cover, B.

d is a suitable fastening device for keeping the lid D closed upon the cover B.

The lid D, instead of being made in one piece, may consist, if desired, of a flat map of the world, showing the usual eastern and western hemispheres upon the same equatorial line, and inclosed between paper covers, or it may consist of a number of flat maps, *d'*, between proper covers, as shown in Fig. 4.

The cover B, instead of being made hollow, may be made the section of a solid sphere, of light wood or other suitable material, as seen in Fig. 6.

When the atlas is being used the maps are protected from breaking or bending in the following way: All maps below the one consulted will lie between that one and the lower cover, B, and will be supported directly or indirectly by the latter, while all maps above the one consulted will be turned off and will rest within the hollow of the upper cover, A, and thus be protected by it.

In view of the facts that it has not proved practical to teach geography in schools with the globe, and that flat maps constructed according to any projection heretofore used (or any that can be used) totally displace the lines of latitude and longitude and the relative positions of places on the surface of the earth, the following are offered as some of the advantages of the invention:

Upon this atlas, as upon the globe, the lines of latitude and longitude will lie in their proper places. The offing can be practically demonstrated. All points will take their proper positions on the surface of the earth.

It will be apparent to the eye that the nearest distance between two points on the earth's surface is on a great circle of the earth, &c.; but as it never can be with the globe the atlas can be readily reduplicated. There will be no waste of material in its manufacture. It can be easily and conveniently handled. It can lie upon and be put away within the desk, and can be conveniently carried to and from home by the pupil. In fact, all the causes which unite to prevent the teaching of geography in school by the globe are avoided in this invention, which has all the truthfulness of the globe and all the convenience of the ordinary atlas.

It is evident that while all the maps of which this atlas is constructed necessarily differ in size, this difference, so far from being large enough to cause confusion of idea in the pupil, is hardly large enough to be readily detected by an unskilled eye. In fact, while truthfulness of form is retained, a much larger difference could produce no erroneous impression.

Within the box formed by the lower cover, B, and the lid D may be kept small articles, to demonstrate geographical problems, or other small utensils for school use.

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

1. A blank for maps, consisting of a shell corresponding to a flat segment of a hollow sphere, having its convex surface adapted to receive impressions from a printing-press, substantially as set forth.

2. An atlas consisting of interposed maps and upper and lower covers, each map and cover in the form of a segment of a hollow sphere and of such size that its convexity will just fit into the concavity of the map or cover next above, and its concavity will just fit over the convexity of the map or cover next below, as shown and described, for the purpose specified.

3. An atlas consisting of interposed maps and upper and lower covers, each map and cover in the form of a segment of a hollow sphere, and of such size that its convexity will just fit into the concavity of the map or cover next above, and its concavity will just fit over the convexity of the map or cover next below, and all the maps united together and to the covers in such manner that the due-west point of each map shall correspond with the joint of the atlas, as shown and described.

4. In combination with the covers A and B, interposed maps C, and flexible joint composed of the pieces *c c* and *b′ b′*, the lid D and fastening devices b^2 and *d*, as shown and described, for the purpose specified.

5. In combination with the atlas composed of the covers A and B and interposed maps C, the lid D, composed of two covers and one or more flat maps, as shown and described, for the purpose specified.

THEODORE S. WEST.

Witnesses:
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EMANUEL BLOUT.