(No Model.)

# C. S. JENKINS.

## EXHIBITING APPARATUS.

No. 403,673. Patented May 21 1889.

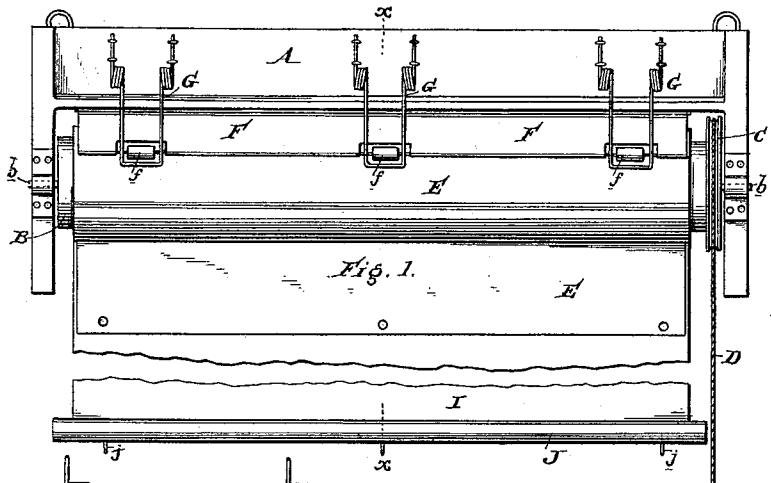



Fig. 1.

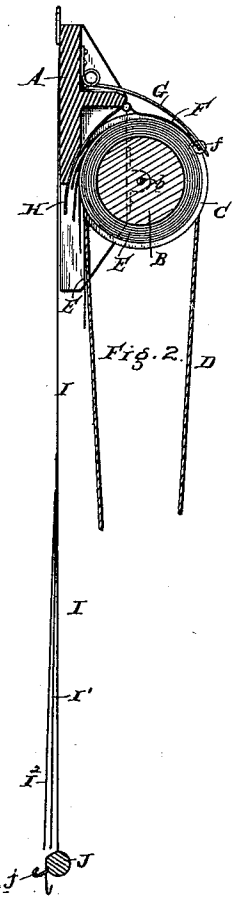



Fig. 2.

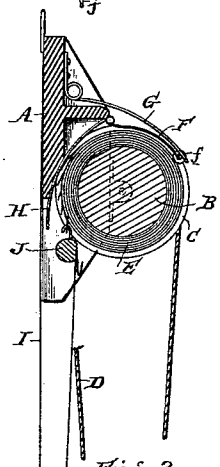



Fig. 3.

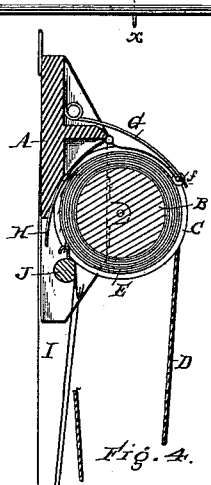



Fig. 4.

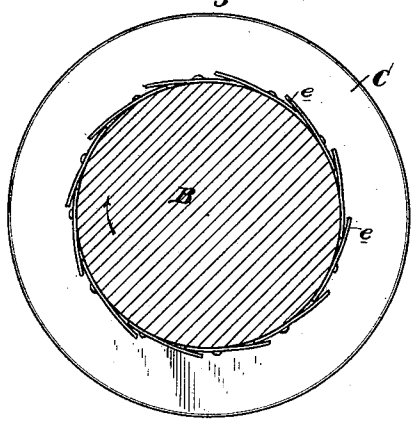



Fig. 5.

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# UNITED STATES PATENT OFFICE.

CHARLES S. JENKINS, OF LANSDALE, PENNSYLVANIA.

## EXHIBITING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 403,673, dated May 21, 1889.

Application filed January 17, 1889. Serial No. 296,634. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. JENKINS, of Lansdale, Montgomery county, State of Pennsylvania, have invented an Improvement in Exhibiting Apparatus, of which the following is a specification.

My invention relates to apparatus for exhibiting maps, charts, &c.; and it consists of certain improvements, which are fully set forth in the following specification, and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to construct a convenient apparatus for exhibiting maps, charts, diagrams, or other similar objects, in which a number of maps, &c., may be contained, any one of which may be brought forward and presented to the eye, as desired.

While my invention is particularly adapted to use in school-rooms for maps or charts, and may be made of any size to suit either the smallest or the largest maps, it is also adaptable to exhibiting purposes for samples, photographs, &c., and to use upon the stage for scene-shifting, as is more fully set forth hereinafter.

In carrying out my invention I employ a cylinder or rotatable drum, to the periphery of which the maps, &c., are secured at their upper edges and preferably at slight distances apart. By suitable mechanism this drum or cylinder may be rotated in either direction, so that when it is rotated in one direction the maps will be wound up upon the cylinder, and when it is rotated in the other direction they will be unwound and one of them will be presented to the eye. The maps may be secured to the periphery of the cylinder directly, or they may be attached to sheets secured thereto, and when maps, pictures, or articles of various sizes are to be exhibited these sheets are desirable. By securing the maps or sheets, which are of substantially equal length, at slight distances apart upon the drum or cylinder their lower edges will extend one beyond the other and be exposed successively as the cylinder or drum is rotated. Upon each of these lower edges a number or mark may be placed for identification, and when the number or mark of the desired map or sheet is reached the cylinder is rotated in the opposite direction and all of the maps or sheets are unwound with the desired one presented to the eye.

When photographs or articles that cannot be bent without injury are to be exhibited, they are not rolled up in the manner above described, but are secured upon cards or sheets, which are raised successively, like the leaves of a book, to present to the view the desired articles, and in the same apparatus both flexible and inflexible articles may be exhibited, as is hereinafter more fully disclosed.

Referring to the drawings for greater particularity, Figure 1 is a front elevation of my improved exhibiting apparatus. Fig. 2 is a sectional view of the same through the line *x x* of Fig. 1. Figs. 3 and 4 are similar views illustrating the operation of my improved apparatus when inflexible articles are to be exhibited, and Fig. 5 is a cross-sectional view of the drum or cylinder on an enlarged scale to show the manner of attaching the sheets.

A is a frame or support, in which is loosely journaled the shaft *b* of a drum or cylinder, B. This shaft is preferably journaled removably in the frame A, so that the drum B may be removed to change the sheets supported upon it or for any other purpose.

C is a sheave or pulley formed upon one end of the drum or cylinder B, over which an endless band or cord, D, passes. This endless band or cord is guided by a wheel or ring at its lower end and is kept taut, so that the drum or cylinder B may be rotated by it in either direction.

E are the maps or sheets upon which the pictures, &c., to be exhibited are secured. They may be secured directly to the periphery of the cylinder or drum B, preferably at intervals or slight distances apart; but I prefer to have a number of strips, *e*, secured to the periphery, as shown in Fig. 5, to which the maps or sheets may be attached. The width or general size and shape of the maps or sheets is of no importance to the operation of the apparatus, except that they must be of substantially the same length, and they may be made of the proper length by attaching strips of paper or textile material to them when necessary. It is apparent, as the sheets are thus of substantially equal length and are

secured to the cylinder at intervals, that their ends or lower edges will project beyond the other when the sheets are wound up. While I prefer this construction in which the sheets are of equal length and are attached to the cylinder at intervals apart, it is apparent that the same effect of having the lower edges of the sheets project one beyond the other may be obtained by using sheets of different lengths and securing them at the same place upon the cylinder, and in this case the cylinder may be slightly cut away or recessed to present an even surface when a number of sheets are attached.

F is a curved metallic guide secured to the frame A and extending over a part of the cylinder or drum B. It is provided with rollers *f* upon its edge. This guide F and its rollers *f* are pressed downward by springs G, so that the rollers are always in contact with the cylinder, the diameter of which, as is apparent, increases and decreases as the maps or sheets are rolled up upon it or unrolled. In practice I prefer to secure these springs G to the main frame A, and to have them press upon the edge of the guide F directly over the rollers *f*. In this manner an even pressure is obtained upon the cylinder as its diameter increases and decreases from the rolling up and unrolling of the maps, and the rollers prevent the edges of the maps catching in the guide F. If desired, this guide F may be dispensed with, and the rollers *f* may be supported upon the springs G directly; but I prefer the former construction.

H is a curved guide secured to the frame A and extending downward over the back of the cylinder or drum to guide the maps or sheets as the cylinder is rotated. The sheets E come in contact with this guide and are kept straight and flat, as shown in Fig. 2.

If desired, the guides F and H may be made of one piece; but I prefer the construction shown.

Hanging from the back of the frame A is a sheet, I, which is preferably constructed with a rod, J, upon its lower edge. This sheet, having no connection with the cylinder or drum B, will be exposed to the view when the maps or sheets E are rolled up, and may be used as an index. The first of the maps or sheets E, I prefer to construct with holes or eyelets upon its lower edge, by which it may be secured to the rod J of the sheet I by means of hooks or pins *j*, and the sheet I may then be drawn up, as shown in Fig. 3, exposing a second sheet, I′, behind it, and a series of these sheets, I I′ I², &c., may be used, upon each of which may be placed inflexible articles—such as photographs or samples of merchandise to be exhibited—and by attaching these sheets at the bottom or lower edge to the rod J by suitable hooks they may be drawn up or raised, like the leaves of a book, and the pictures or objects to be exhibited may be placed upon both sides of each leaf. As the sheet I is raised up only one-half, it is apparent that the sheets I′ I², &c., should be attached at about the middle of the sheet I, as shown in Figs. 2, 3, and 4.

The operation of the apparatus is as follows: Suppose all of the sheets E to be rolled up upon the cylinder and the sheet I exposed upon which is the index. The lower edge of each of the sheets is provided with a number or mark corresponding to a similar mark or number on the index. If a certain sheet is desired, the cylinder B is caused to rotate by moving the cord D. This will cause the lower edges of the sheets to fall successively from under the rollers *f* and guide F, and when the particular sheet desired (which is known by its mark or number) is reached and drops from under the guide-roller *f* the cylinder is rotated in the opposite direction, which will unroll all of the sheets E, with the desired sheet presented in front. To exhibit another sheet, all of the sheets E are rolled up and the one desired is obtained in the same manner, and the stiff cards or objects upon the sheets I may be exhibited in the manner heretofore described.

It is apparent that my apparatus may be made of any size and is readily adaptable to use upon the stage for scene shifting. When so used, each sheet E may represent a particular scene, and the shifting of one scene to another will be easily and quickly accomplished by the mechanism herein set out. If desired, the apparatus may be supported upon tracks, so as to be moved forward and backward, or to one side or the other of the stage, as the particular scene to be presented may require. It may also be used to advantage upon railway-trains for the purpose of indicating stations.

While I prefer the construction here shown I do not limit my invention to the mere details thereof, as it is apparent that they may be varied in many ways without departing from the principles of my invention.

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

1. In an exhibiting apparatus, the combination, with a fixed support adapted to be suspended at an altitude, of a rotatable support journaled therein and having a number of sheets to be exhibited secured thereto, so that when wound up their lower edges will project one beyond the other, means, substantially as described, to rotate said rotatable support successively in opposite directions, and a spring-guide secured to said fixed support and projecting over said rotatable support for the purpose of guiding the edges of the sheets as they are wound up and unwound.

2. In an exhibiting apparatus, the combination, with a fixed support adapted to be suspended at an altitude, of a rotatable support journaled therein and having a number of sheets to be exhibited secured thereto, so that when wound up their lower edges will project one beyond the other, means, substantially as

described, to rotate said rotatable support successively in opposite directions, a spring-guide secured to said fixed support and projecting over said rotatable support and provided with rollers upon its edge for the purpose of guiding the edges of the sheets as they are wound up and unwound.

3. In an exhibiting apparatus, the combination, with a fixed support adapted to be suspended at an altitude, of a rotatable support journaled therein and having a number of sheets to be exhibited secured thereto, so that when wound up their lower edges will project one beyond the other, means, substantially as described, to rotate said rotatable support successively in opposite directions, and guide-rollers supported from the fixed support pressing upon the sheets at the front part of said rotatable support for the purpose of guiding their edges as the sheets are wound up or unwound.

4. In an exhibiting apparatus, the combination, with a fixed support adapted to be suspended at an altitude, of a rotatable support journaled therein and having a number of sheets to be exhibited secured thereto, so that when wound up their lower edges will project one beyond the other, means, substantially as described, to rotate said rotatable support successively in opposite directions, guide-rollers supported from the fixed support pressing upon the sheets at the front part of said rotatable support for the purpose of guiding their edges as the sheets are wound up or unwound, and springs to press said rollers against said sheets with a yielding pressure.

5. In an exhibiting apparatus, the combination, with a number of sheets, E, secured to a rotatable support and adapted to be rolled up thereon, of one or more sheets, I, suspended from a fixed support arranged close to said rotatable support, and means to attach said sheets E and I together at their bottoms, substantially as and for the purpose specified.

6. In an exhibiting apparatus, the combination, with a number of exhibiting-sheets, E, secured to a rotatable support and adapted to be rolled up thereon, of a sheet, I, suspended from a fixed support arranged close to said rotatable support having a number of leaves, I′ I², attached to its back, and means, substantially as described, to attach the bottom of said sheet I and leaves I′ I² and sheets E together for the purpose of exhibiting objects upon said sheet I and leaves I′ I².

7. In an exhibiting apparatus, the combination, with the supporting-frame A, of the cylinder B, having a number of sheets secured thereto, so that when wound up upon said cylinder their lower edges will project one beyond the other, guides F and H, to guide the sheets when they are rolled up upon the cylinder or unrolled therefrom, and means, substantially as described, to rotate said cylinder successively in opposite directions.

8. In an exhibiting apparatus, the combination, with the supporting-frame A, of the cylinder B, having a number of sheets secured thereto, so that when wound up upon said cylinder their lower edges will project one beyond the other, guides F and H, to guide the sheets when they are rolled up upon the cylinder or unrolled therefrom, and means, substantially as described, to rotate said cylinder successively in opposite directions, consisting of sheave C and endless band D.

In testimony of which invention I hereunto set my hand.

CHARLES S. JENKINS.

Witnesses:
SYL JENKINS,
WILSON H. GODSHALL.