

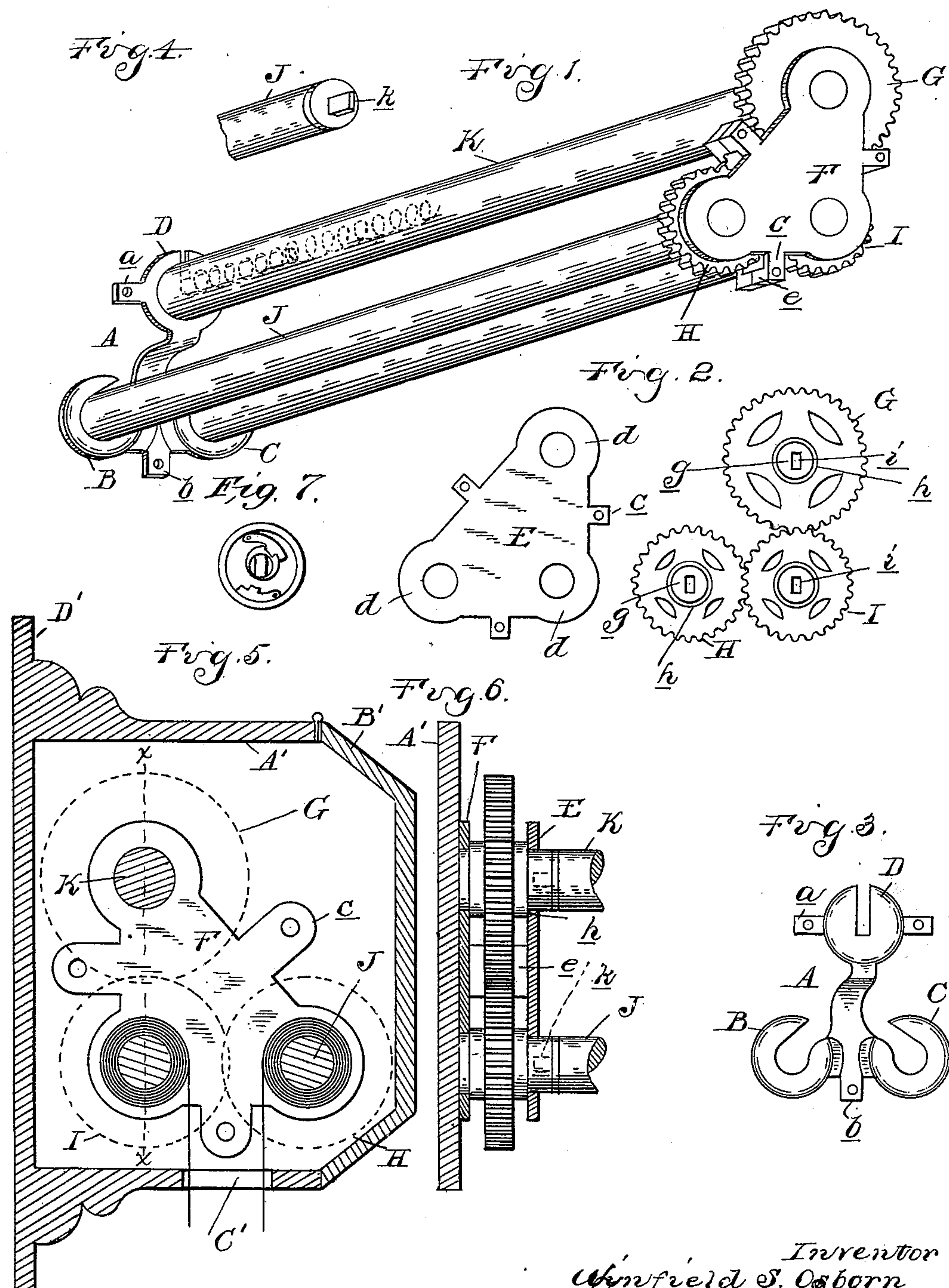
No. 644,450.

Patented Feb. 27, 1900.

W. S. OSBORN.
CHART CASE.

(Application filed Apr. 12, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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CHART-CASE.

SPECIFICATION forming part of Letters Patent No. 644,450, dated February 27, 1900.

Application filed April 12, 1899. Serial No. 712,799. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD S. OSBORN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Chart-Cases, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates generally to map or chart cases, and has particular reference to an improved supporting mechanism or hanger for the rolls upon which the maps or charts are wound.

One of the objects of my invention is to produce a chart-hanger in which any number of maps may be displayed and to provide means whereby the maps or charts after being unrolled for inspection will be automatically re-wound upon their respective rolls.

The further object of the invention is to so construct the hanger mechanism that both sides of the chart or maps may be exhibited and to so form the winding mechanism that it will operate the chart-rolls when arranged for exhibiting the obverse sides of the maps or charts or their reverse sides.

With these objects in view my invention consists in a novel type of chart or map hanger and the peculiar construction, combination, and arrangement of its various parts, as more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the chart-hanger, showing in dotted lines the well-known construction of spring-roller. Fig. 2 is a detached view of parts forming one end of the hanger. Fig. 3 is a detached view of the opposite hanger end. Fig. 4 is a perspective view of one end of the chart-roller. Fig. 5 is a vertical central section through the casing and hanger. Fig. 6 is a section taken on line *xx*, Fig. 5; and Fig. 7 is an end elevation of a spring-roller.

In the drawings referred to, *A'* designates a suitable casing provided with a hinged cover *B'* and having formed in its lower side an opening *C'*, through which the maps or charts are adapted to be drawn.

B' designates extensions upon the casing, through which nails or bolts are adapted to be driven to secure the casing to a suitable support.

A designates a bracket provided with apertured lugs *a* and *b*, the bracket being adapted to be fastened within the casing, to one of the walls thereof, by means of nails or screws extending through the lugs.

The bracket referred to is provided at its lower end with the oppositely-turned hooks *B* and *C* and terminates at its upper end in a slotted plate *D*.

The opposite end of the hanger is preferably triangular in configuration and comprises in its construction two complementary plate-sections *E* and *F*, each of said sections being provided with outwardly-extending lugs *c* and each having the apertured corners *d*. One of the sections is provided with lugs *e*, arranged upon the lugs *c*, upon which is mounted the complementary plate-section, the sections being secured to each other in any suitable manner and the said end being in turn secured to the casing opposite the bracket.

Within the casing formed by the complementary plate-sections *E* and *F* are arranged the gear-wheels *G*, *H*, and *I*, said wheels being so arranged as to be constantly in mesh. Each gear-wheel is provided with a hub *g*, extending on opposite sides of the wheel, said hubs in turn being provided with shoulders *h*, adapted to bear against the inner sides of the plate-sections. The wheels are arranged between the corners of the plate-sections, the hubs of the wheels extending through the apertures, as shown, the latter forming the journal-bearing of the gear-wheels. The latter wheels are so arranged that the wheel *G* will be constantly in mesh with the gear-wheel *I* and the latter wheel with the gear *H*, whereby upon rotation of the gear-wheel *G* the remaining gear-wheels will be driven in opposite directions.

In the inwardly-projecting hub portions of the gear-wheels are formed sockets *i*, preferably rectangular in configuration, the hubs, with the sockets formed therein, constituting rotary supports for the chart-rollers and the actuating mechanism hereinafter described.

The letter *J* designates a roller upon which a chart or map is wound, provided at each end with a stud or pin *k* of the same configuration as the socket in the gear-wheels. One end of the roller is adapted to be inserted

within one of the gear-wheels H or I and the opposite end of said roller within the hooks B or C opposite the sockets.

Above the chart-roller is arranged the actuating mechanism for rewinding the maps upon the rollers after said maps have been drawn out for inspection. This actuating device is preferably a spring-actuated roller K of the Hartshorn type, one end of said roller being detachably secured within the slotted plate D and the opposite end being arranged within the socket formed in the gear-wheel G. In construction this roller comprises the well-known elements (shown partly in Fig. 7 and partly in dotted lines in Fig. 1) of the shaft w' , the spring x' , encircling the shaft and having its ends connected, respectively, to the shaft and roller, the pawls y' , supported upon the frame z' , and the ratchet z^2 , carried by the shaft w' .

In the operation of my device a chart-roller having a chart thereon is first supported in the gear-wheel H and hook B and the map drawn out for inspection. Motion is communicated through the gear-train to the spring-actuated roller K, winding the spring of said roller. The map is returned to its roller in the usual manner by pulling the map downward slightly and allowing it to rewind. When the opposite side of the map or chart is to be displayed, the chart-roller is removed from its first position, turned end for end, and inserted within the gear-wheel I and hook C. It is obvious from this arrangement of the roller that the rotary movement of the latter caused by the drawing out of the map is in the opposite direction to its first movement. The gear-wheel I, however, being driven in a direction opposite to the gear H, the same rotary motion is transmitted to the gear G, whereby the spring is wound in a similar manner.

From the description of my invention as thus set forth it will be observed that I have provided a single chart-hanger on which any number of maps or charts may be exhibited and that I have likewise provided means for rewinding the maps or charts upon their respective rolls when the latter are arranged to exhibit the obverse or reverse sides thereof.

Although I have shown and described a par-

ticular form of spring-actuating mechanism—namely, a spring curtain-roller—for rotating the chart-rollers, I do not desire to be limited to this type, as other similar devices may be employed without departing from the spirit of my invention, which embraces any spring-actuating device embodying the elements of a curtain-roller. Likewise while I have shown a particular type of support for the chart-roller ends other forms of rotary supporting devices may be employed and still be within the scope of my invention.

What I claim as my invention is—

1. In a chart-hanger, the combination of a stationary support, and a rotary support spaced therefrom, a Hartshorn curtain-roller journaled in said supports, the spring-actuated shaft of said roller being mounted within the stationary support against rotary movement, a chart-roller adjacent and parallel to the Hartshorn roller, supports for the ends of said chart-roller, one of said supports being a rotary support, and a gear connection between said rotary supports.

2. In a chart-hanger, the combination of a casing, a spring-motor, comprising the elements of a spring curtain-roller, a chart-roller, two rotary supports journaled adjacent to the motor, a gear connection between said supports and between one of the supports and the motor, each support being adapted to detachably hold one end of the chart-roller, and a bearing opposite each support for the other end of the chart-roller.

3. In a chart-hanger, the combination of a casing, a spring curtain-roller journaled therein, provided with a gear-wheel on one of its ends, two intermeshing gear-wheels, each having a socket formed therein, one of said wheels being in mesh with the gear-wheel upon the curtain-roller, a support opposite each socket and a chart-roller adapted to be detachably secured within the sockets and supports, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WINFIELD S. OSBORN.

Witnesses:

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