No. 618,767. Patented Jan. 31, 1899.

# B. F. BALMER.

## CHART HOLDER.

(Application filed Feb. 1, 1898.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

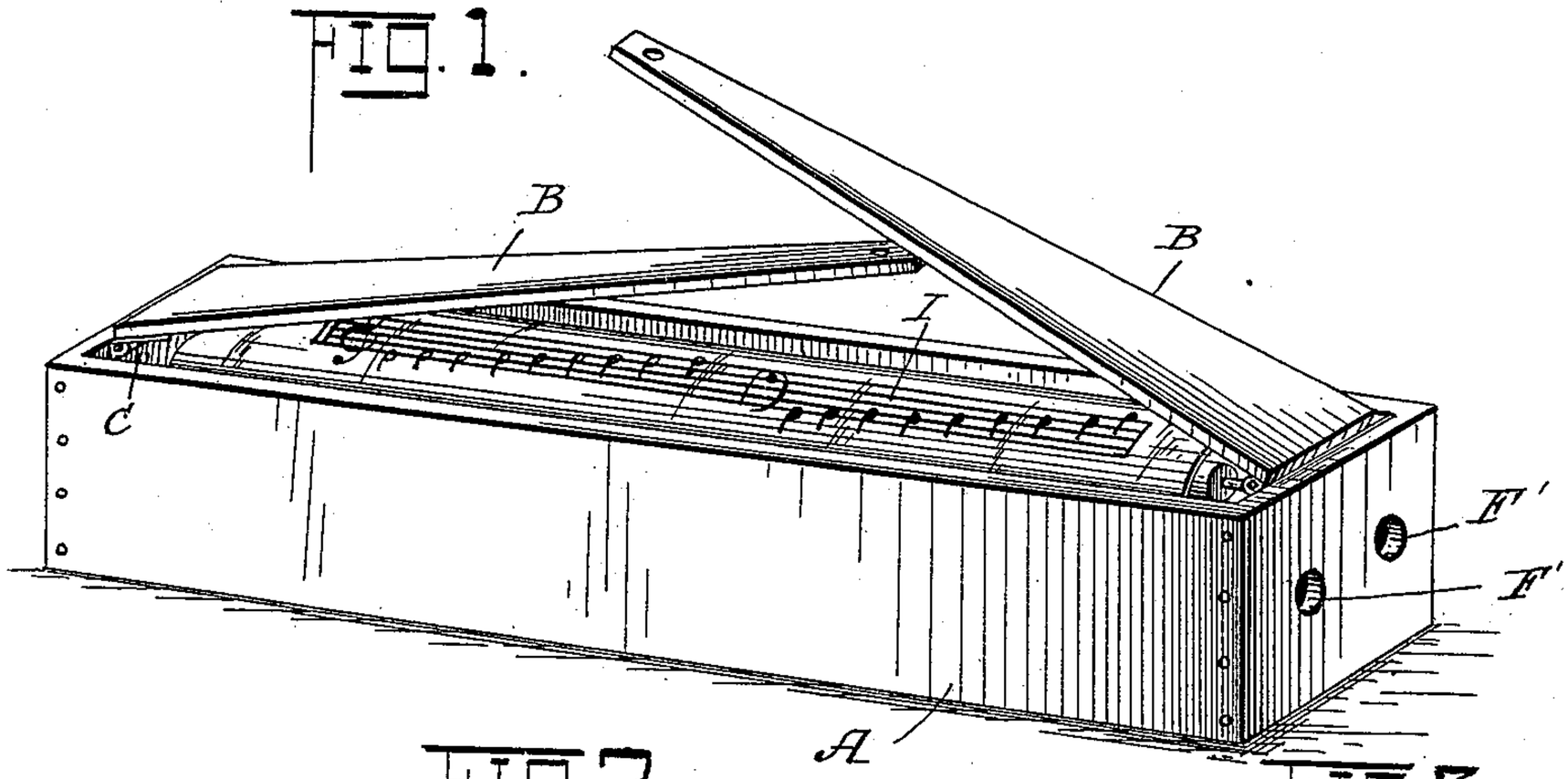
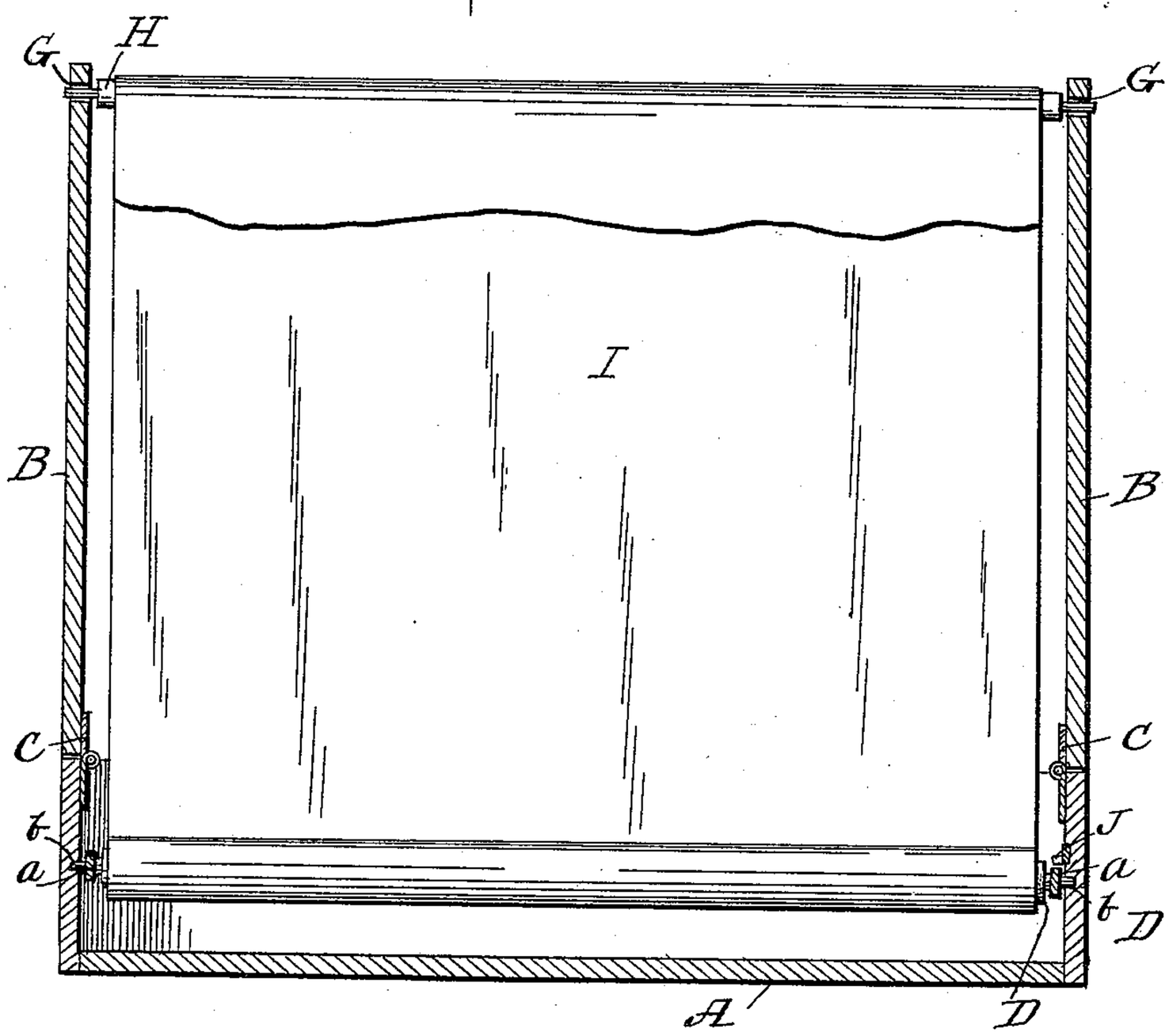
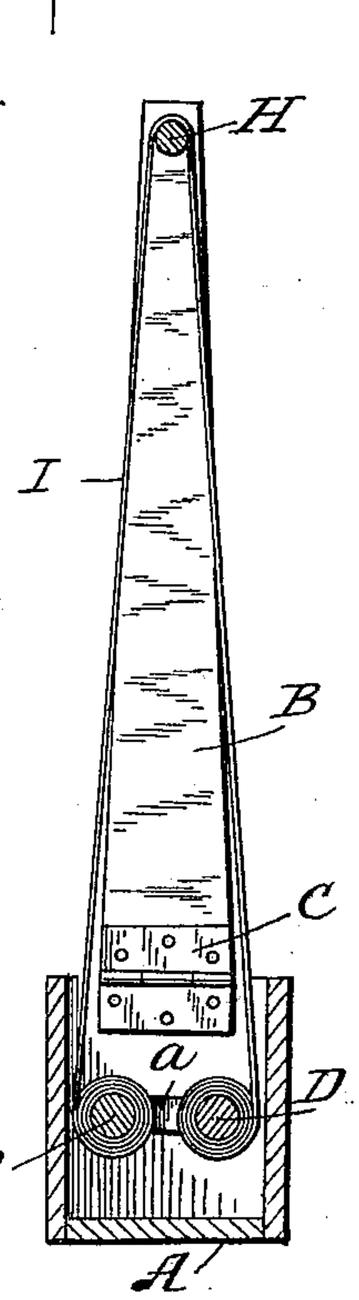



FIG. 2.

FIG. 3.

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## CHART HOLDER.

(Application filed Feb. 1, 1898.)

(No Model.) 2 Sheets—Sheet 2.

FIG. 4.

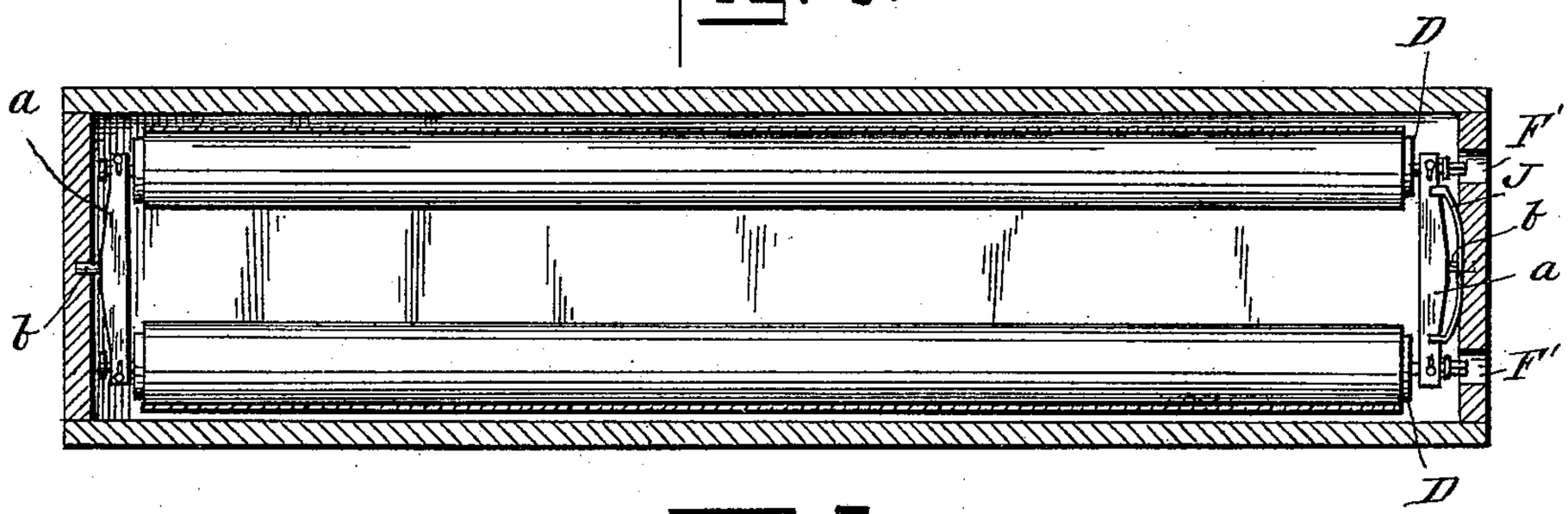



FIG. 5.

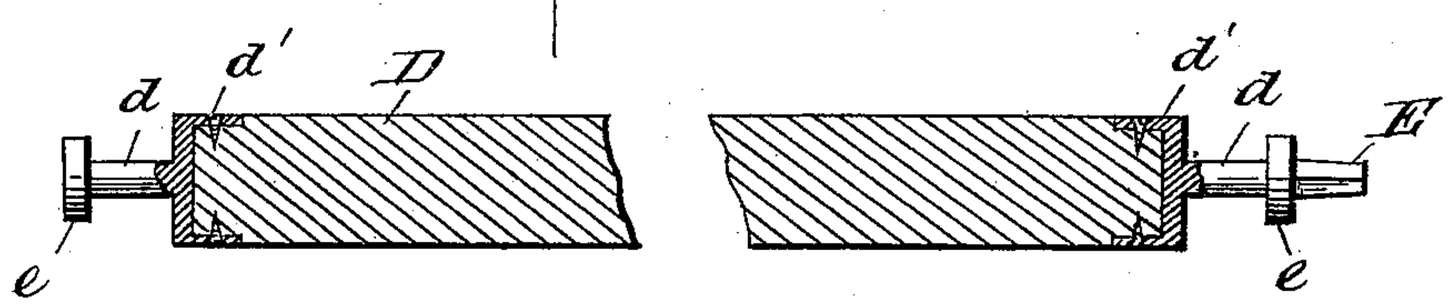



FIG. 6.

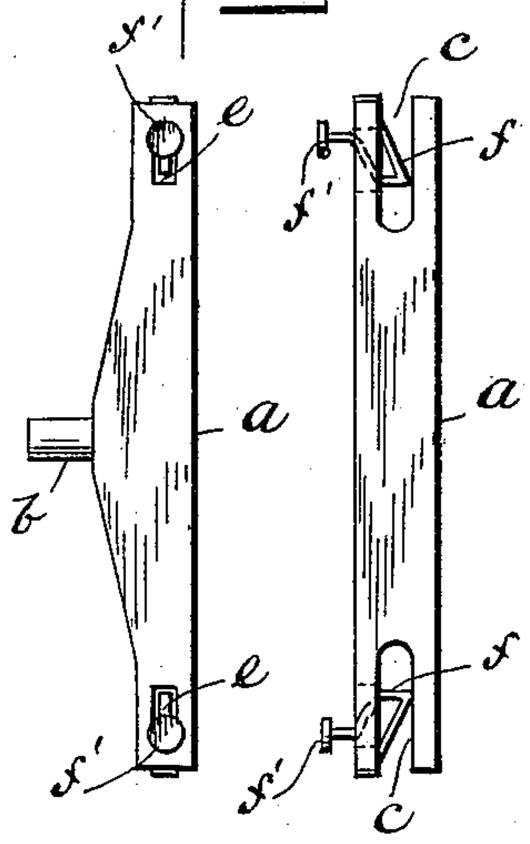
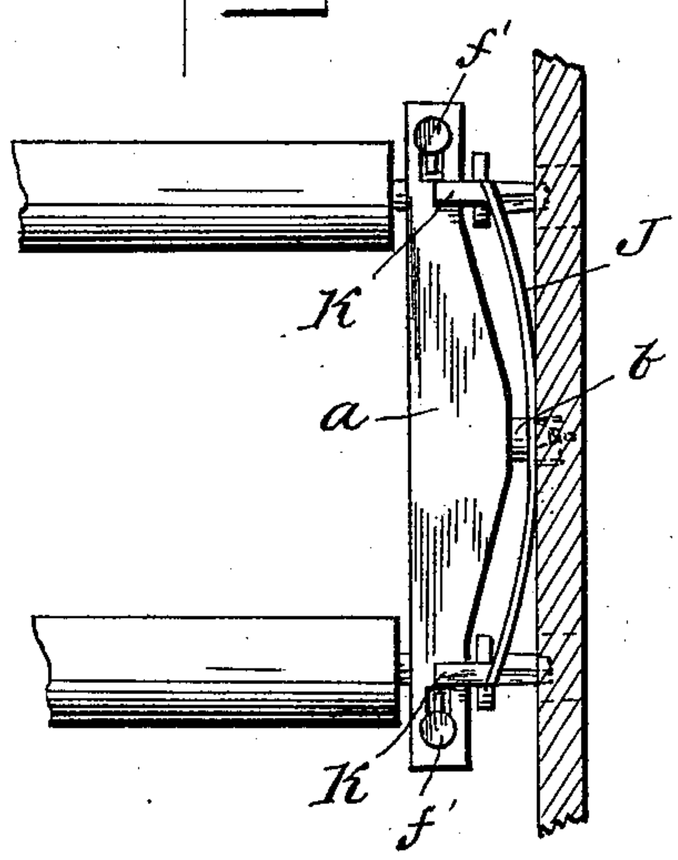



FIG. 7.

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# UNITED STATES PATENT OFFICE.

BENJAMIN F. BALMER, OF EDSON, KANSAS.

## CHART-HOLDER.

SPECIFICATION forming part of Letters Patent No. 618,767, dated January 31, 1899.

Application filed February 1, 1898. Serial No. 668,741. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. BALMER, a citizen of the United States, residing at Edson, in the county of Sherman and State of Kansas, have invented certain new and useful Improvements in Chart-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved chart-holder; and the object thereof is to provide a simple construction of holder which may be quickly and readily assembled to support and exhibit the chart and which when not in use may be folded to convenient form, so as to be out of the way and also to protect the chart.

With the above object in view the invention consists in the novel details of construction hereinafter fully described in the specification, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a perspective view of the holder, showing the supporting-arms partially unfolded preparatory to assembling the holder and chart. Fig. 2 is a vertical longitudinal sectional view showing the chart and holder assembled. Fig. 3 is a transverse sectional view of the same. Fig. 4 is a horizontal sectional view. Fig. 5 is an enlarged sectional view of one of the rollers. Fig. 6 is an enlarged sectional detail view of one of the castings in which the rollers are journaled. Fig. 7 is a similar view of the casting, showing the rollers journaled therein and the locking device therefor.

Referring more particularly to the accompanying drawings, A designates a box or casing constituting the base of the holder, and B arms pivoted to the end pieces of said casing adjacent to their upper edges by the hinges C, placed on the inner faces of said arms and end pieces, so that the former are adapted to swing inwardly when the holder is not in use. When said arms are swung upwardly to vertical position, their lower edges abut against the upper edges of the end pieces of the casing, and thus the arms are held from outward movement.

Castings *a* are pivoted in the casing by the pivots *b*, extending centrally therefrom and engaging bearings formed in the end walls of said casing, said castings being slotted at their respective ends at *c* to receive the journals *d* of rollers D. These journals *d* are formed integrally with caps *d'*, which are adapted to fit upon the reduced ends of the rollers and at their outer ends are enlarged to form shoulders *e*, the journals at one end of the rollers being formed on the outer sides of the shoulders *e* with the stems E to receive an operating-key F, which is inserted through openings F' in the end wall of the casing and which may be positioned upon either of said stems to rotate the rollers.

Castings *a* are slotted vertically adjacent to their respective ends at *e'*, said slots opening into the slots *c* and receiving the spring-latches *f* when they are pressed upwardly to permit the insertion and removal of the roller-journals in and from the slots *c* of the castings. These latches have their free ends extending upwardly through the vertical slots and provided with buttons *f'*, by means of which they may be raised to permit the journals of the rollers to be removed therefrom.

Arms B are formed at their upper ends with openings G to receive the journals of roller H, which are adapted to be positioned therein by springing the arms slightly outwardly after they have been raised to vertical position. This roller when supported by the arms is above and at a point between the rollers D.

A chart I of any flexible material is attached at its respective ends to the rollers D and is adapted to be wound thereon, said chart also passing over the roller H. Upon both sides of this chart may be placed any desired matter—such as lessons in music, penmanship, geography, &c.—or the same may be used as a calendar, and I do not of course limit myself to the nature or character of the chart.

In operation the key is applied to either roller and the latter revolved to wind the chart thereon, so that any lesson printed on the chart may be exhibited, and by reversing the positions of rolls D by swinging the castings on their pivots the reverse side of the chart may be used. This reversing operation may be conveniently accomplished by detaching the upper roller H, winding up the portion of the chart extending thereover,

turning the castings on their pivots a half-revolution, so as to bring the lower sides of the rollers D uppermost, unwinding the free portion of the chart at the center, and passing the same upwardly through the space between the said two rollers D. It will thus be seen that by this operation the reverse side of the chart will be exposed, and the free central portion of said chart may then be again passed over the roller H, supported by the arms B, and either one of the rollers D turned to unwind the chart to disclose the matter imprinted thereon.

For preventing the rotation of the castings while the rollers are being operated to exhibit the lessons on the desired side of the chart I provide the spring J, secured intermediate its ends to the end wall of the casing and having lugs K secured to its respective ends, which extend upon the upper side of one of the castings. In order to reverse the position of the rollers, it is therefore necessary to press the spring backwardly until the lugs carried thereby are out of the path of the casting, when the reversal of the rollers may be effected.

When not in use, the roller H is removed, the chart wound upon the rollers D, and arms B folded inwardly, so that the chart and roller H are positioned in the casing with the arms folded thereon. A lid may be provided for the box or casing and hinged to one edge thereof, if desired, so as to close said box or casing and protect the chart from dust and dirt.

The holder may be readily and quickly assembled by swinging the arms upwardly and raising roller H with the chart and positioning the same between said supporting-arms.

From the above description it will be seen that I have provided a very simple construction of holder for charts, which may be quickly assembled for use, and which when not in use is adapted to fold to convenient form and contain the chart, so that the same is protected from dust and dirt.

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

1. In a device of the character described, the combination with a base, of rotatable castings supported thereby, rollers journaled in said castings, and a flexible band adapted to be wound on said rollers, substantially as described.

2. In a device of the character described, the combination with a base, of rotatable castings supported thereby, rollers journaled in said castings, a flexible band adapted to be wound on said rollers, and a locking device for preventing the rotation of said castings, substantially as described.

3. In a chart-holder, the combination of a casing, rotatable castings journaled in the opposite ends thereof by pivots projecting from said castings each of said castings being provided at its opposite ends with slots, a pair of rollers having journals mounted in said slots, latch devices to hold the journals of the rollers confined in said slots, and means for holding the castings against rotation, substantially as described.

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

BENJAMIN F. BALMER.

Witnesses:
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HENRY F. FLETCHER.