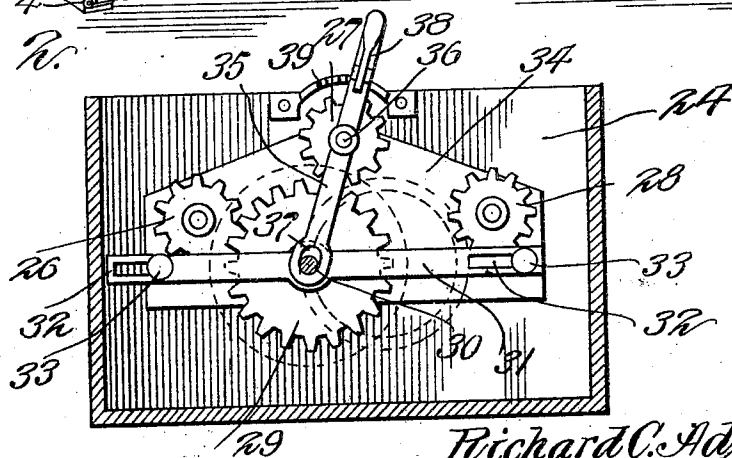


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Fig. 2.



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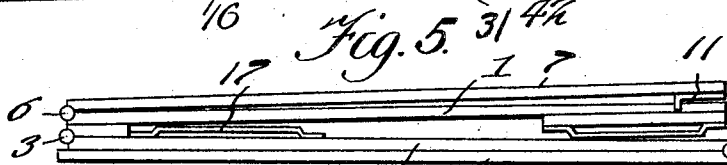
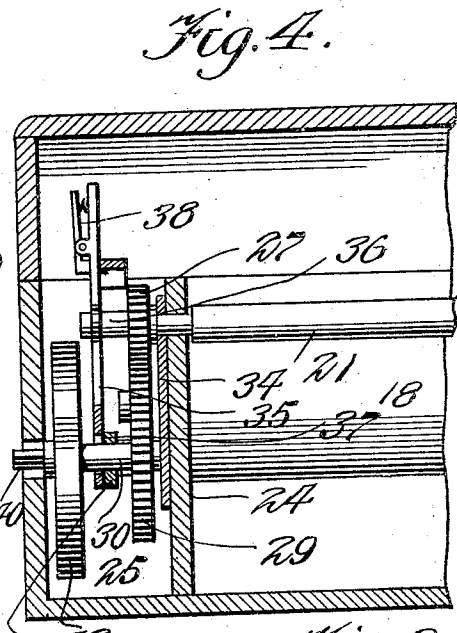
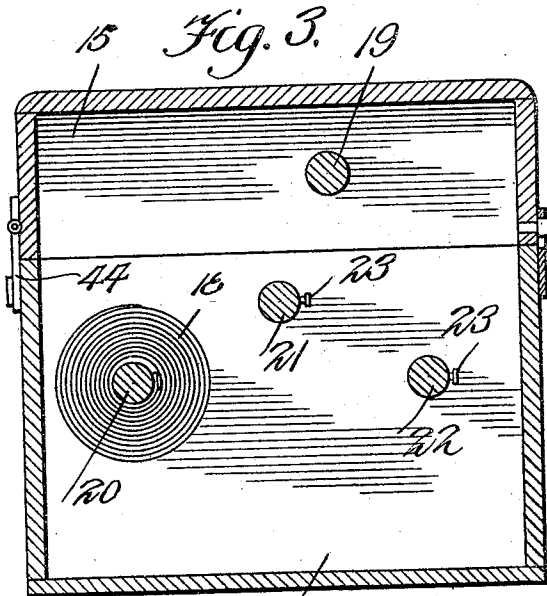
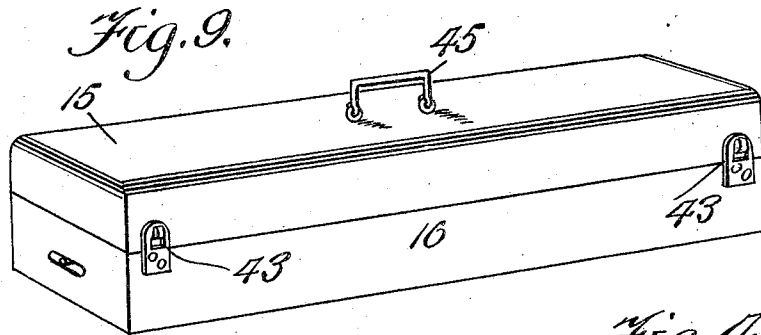
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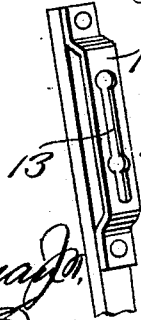
R. C. ADAMS.  
EXHIBITION APPARATUS.  
APPLICATION FILED JULY 7, 1908.

Patented Oct. 26, 1909.  
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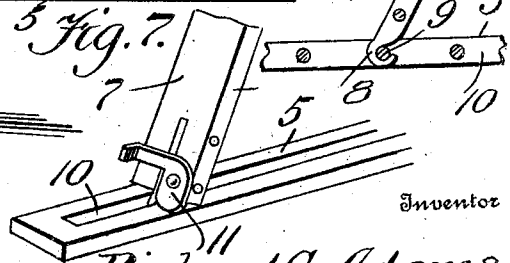
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*Fig. 6.*



*Fig. 7.*



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Patented Oct. 26, 1909.  
3 SHEETS—SHEET 3.

Fig. 10.

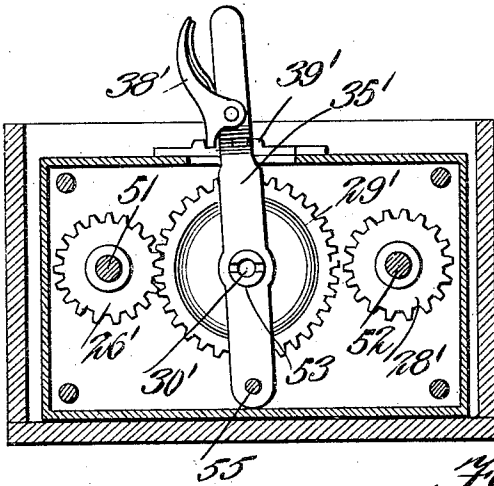


Fig. 11.

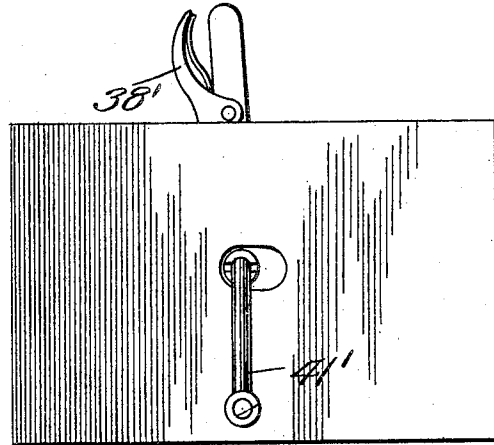


Fig. 12.

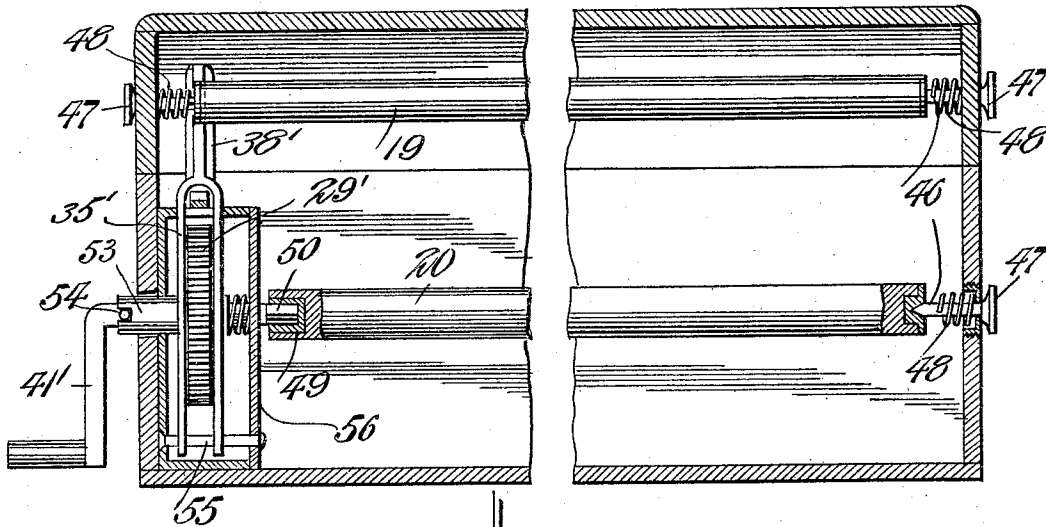
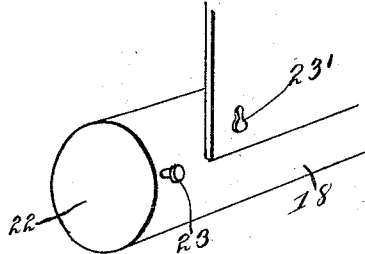


Fig. 13.



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# UNITED STATES PATENT OFFICE.

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## EXHIBITION APPARATUS.

937,981.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed July 7, 1908. Serial No. 442,270.

*To all whom it may concern:*

Be it known that I, RICHARD C. ADAMS, a citizen of the United States, residing at Panola, in the county of Madison and State of Kentucky, have invented new and useful Improvements in Exhibition Apparatus, of which the following is a specification.

This invention relates to exhibition apparatus, the object of the invention being to provide a simple, portable and practical apparatus for exhibition purposes adapted especially for the display of charts, maps, drawings, pictures, reading matter and the like, which matter is carried on a web adapted to be rolled back and forth on rollers so as to display the contents of the web in an advantageous manner.

A further object of the invention is to construct the apparatus in such manner that portions of the apparatus may be contained within other portions thereof, the device as a whole when folded, being in the form of a carrying case.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the drawings:—Figure 1 is a perspective view of the apparatus complete, and set up in position for use. Fig. 2 is an enlarged vertical cross section through the hollow base, showing the operating mechanism for the winding rollers. Fig. 3 is a vertical cross section through the cap and base when coupled together. Fig. 4 is a vertical longitudinal section through one end of the cap and base, showing the roller actuating mechanism. Fig. 5 is an edge view of one of the supporting uprights folded for storage. Fig. 6 is a detail perspective view illustrating the detachable connection between the cap and one of the uprights. Fig. 7 is a detail perspective view of the connection between the brace and foot members of the uprights. Fig. 8 is a detail vertical sectional view of the same. Fig. 9 is a perspective view on a reduced scale, of the folded apparatus. Fig. 10 is a vertical cross section through the device, showing a modified arrangement of gearing, involving, however, the same principle. Fig. 11 is an end elevation thereof. Fig. 12 is a vertical longitudinal section through the same. Fig. 13 is a detail

perspective view showing the means for attaching the web to the rollers.

The apparatus comprises a pair of sectional and folding uprights the upper sections of which are indicated at 1 and the lower sections of which are indicated at 2, the said sections being hinged together at 3. Hinged at 4 to the lower extremity of the section 2 is a foot section 5 while hinged to the upper section 1 at the point 6 is a brace 7 provided at its lower extremity with a terminal hook 8 adapted to engage in one of a series of pins 9 extending transversely across a slot 10 in the foot section 5, whereby the angle of the brace and the extending angle of the uprights may be adjusted to suit requirements. Connected to the lower extremity of the brace section 7 is a cam-shaped clamp 11 by the jam of which against the foot section 5, the hook 8 is held locked in engagement with the respective pin 9 as best illustrated in Figs. 7 and 8. When the uprights are not in use, they are adapted to be folded from the position shown in Fig. 1 to the position shown in Fig. 5.

The upper sections 1 of the uprights are provided at or near their upper ends with keepers 12 each of which is provided with a double key-hole slot 13 adapted to receive the headed studs 14 on the back of a hollow cap 15, the studs 14 being located in vertically alined pairs at or near the opposite ends of the cap so that when the cap is connected to the uprights, it forms a cross bar or brace for holding the uprights at fixed distances apart.

Beneath the cap 10 is a hollow base 16 which like the cap 15 is provided with headed studs corresponding to the studs 14 and adapted to be removably inserted in key-hole slots corresponding to the slots 13 in other keepers 17 secured to the lower sections 2 of the uprights as indicated in Fig. 1.

18 designates a web upon which charts, maps, drawings or the like are adapted to be represented, and the cap 15 is provided with a roller 19 over which the web 18 is adapted to pass, the web being mounted on and carried by a roller 20 journaled in the hollow base 16, as best shown in Fig. 3. Additional rollers 21 and 22 are journaled in the base 16 as seen in Fig. 3, upon which the web 18 is adapted to be wound after passing from the roller 20 upward over the roller 19 in the cap and downward. The

rollers 21 and 22 are provided with buttons 23 to which the extreme edge of the web 18 may be fastened by providing said web with button-holes 23' in a manner that will be readily understood and it will be seen that the web may be fastened to either the roller 21 or the roller 22, as may be desired.

Adjacent to one end of the base 16 there is arranged a cross partition 24 thus leaving an end compartment 25 in which the operating mechanism of the roller is mounted. The rollers 20, 21 and 22 have secured to the adjacent ends thereof spur pinions 26, 27 and 28, and with said pinions a spur gear wheel 29 is adapted to cooperate as shown in Fig. 2. The wheel 29 is mounted on a stud shaft 30 which is carried by a slide 31 movable horizontally across the base and provided with guide slots 32 which engage studs 33 on a bearing plate 34 fastened to the partition 24 as shown in Figs. 2 and 4. Connected with the stud shaft 30 is a shipping lever 35 which is fulcrumed on the shaft 36 of the roller 21, the lower end of said lever being slotted as shown at 37 to permit the back and forth movement of said lever in shifting the wheel 29 into engagement with the pinions 26, 27 and 28. The lever 35 carries a thumb latch 38 the point of which is adapted to engage the rack segment 39 whereby the lever 35 may be held at any point of adjustment so as to maintain a meshing engagement between the wheel 29 and either of the pinions 26, 27 and 28. It will thus be seen that either of the rollers 20, 21 and 22 may be driven by means of the wheel 29 for winding the web 18 thereon.

The stud shaft 30 has one end squared as shown at 40 to receive a detachable operating crank 41 by means of which the rollers may be revolved, and it is also preferred to mount a fly wheel 42 on the shaft 30 to give a uniform and smooth rotation of the rollers in the operation of winding the web.

By means of the arrangement of rollers hereinabove described, the web may be wound around the rollers 21 and 22 in either direction and either end of the web may be connected to said rollers which enables both sides of the web to be utilized in the display of charts, maps, pictures, reading matter and the like.

It will be observed that by attaching the end of the web on the roller 20 to the roller 22 and winding the same over the supporting roller 19, the inner surface of the web will be exposed to view. In order to expose the reverse side of the web to view, the web after leaving the roller 20 is carried first around the roller 22 and thence upward over the roller 19 and downward to the winding roller 21 to which the end of the web is attached. In this way, either side of the web may be exposed to view. It will also be observed that the apparatus as a whole is of

sectional construction which enables the parts thereof to be separated and folded, the cap 15 and base 16 forming two sections of a carrying case as shown in Figs. 3, 4 and 9 in which the folded uprights are adapted to be placed after the web is wound up upon one of the rollers. The cap and base are provided with suitable fasteners 43 at one side and the catch 44 at the opposite side by means of which the sections of the carrying case, or in other words, the cap and base 15 and 16 may be securely connected together for transportation, as illustrated in Fig. 9. 45 designates a carrying handle mounted on the cap 15.

Another simple form of gearing, embodying the same principle is illustrated in Figs. 10, 11 and 12 wherein for the sake of convenience in unmounting the rollers, each of said rollers may be supported at one or both ends as shown in Fig. 12 by spring-pressed journals or bearing pins 46 having enlarged heads 47 at their outer ends, the inner pointed ends of the pins being sustained in operative relation to the rollers by means of the coiled springs 48. The upper roller 19 may be mounted at both ends on the spring-pressed journals 46 just described, while the lower rollers 20 and 22 may be mounted at one end on such spring-pressed journals while at their opposite ends they are provided with squared sockets 49 to receive the squared ends 50 of short shafts 51 and 52 on which the gears 26' and 28' are mounted as shown in Fig. 10. The intermediate gear 29' may be mounted on a stud shaft or journal 30' carried directly by the shifting lever 35' which is provided with a thumb latch 38' to engage a rack 39' for holding the intermediate gear in mesh with either of the gears at opposite sides thereof.

The gear 29' is provided with a notched hub 53, the diametrically opposite notches of which are adapted to receive and be engaged by a pin 54 on the operating crank 41' as shown in Fig. 12. The shifting lever 35' is preferably forked so as to straddle the gear 29' as shown in Fig. 12 and is fulcrumed at its lower end on a pin 55. A suitable gear case 56 may be arranged within the main casing or section of the apparatus as shown in Figs. 10 and 12, in which the gears 26', 28' and 29', together with the major portion of the shifting lever 35' are mounted, and in placing the upper section of the casing on the lower section, the lever 35' may be swung to one side so as to escape the roller 19 as shown in Fig. 12.

I claim:—

1. An exhibition device embodying a knock-down structure comprising a sectional and folding supporting frame, a sectional carrying case embodying a hollow cap section, a hollow base section, a web-supporting roller journaled in the cap section, web-

carrying rollers journaled in the base section, and means for revolving one of the last-named rollers.

5 2. An exhibition device comprising up-  
rights consisting of hinged and folding up-  
right foot and base sections, a carrying case  
comprising a hollow cap section and a hol-  
low base section, a plurality of web carrying  
and winding rollers journaled in the base  
10 section, a web supporting roller journaled in  
the cap section and means for revolving  
either one of the rollers in the base section.

15 3. An exhibition device embodying up-  
rights consisting of hinged and folding sec-  
tions, foot and brace sections, the base sec-  
tion being slotted and provided with pins  
and the brace section having terminal hooks  
and clamps for connection with the slotted  
base or foot section, a hollow cap, a hollow  
20 base, web carrying rollers journaled in the  
cap and base, and means for revolving one  
of said rollers.

25 4. An exhibition device embodying sec-  
tional and folding uprights, a carrying case  
comprising a hollow cap section detachably  
connected to the uprights, and a hollow base

section also detachably connected to the up-  
rights, a plurality of web carrying rollers  
journaled in the base section, a web sup-  
porting roller journaled in the cap section, 30  
and an operating element in the base sec-  
tion shiftable from one roller to the other.

5. An exhibition device embodying sec-  
tional and folding uprights, a carrying case  
comprising a hollow cap section detachably 35  
connected to said uprights, and a hollow base  
section also detachably connected to the up-  
rights, web-carrying rollers journaled in the  
base section, a web supporting roller jour-  
naled in the cap section, said cap and base 40  
sections being separable and adapted to con-  
tain the sectional and folding uprights, and  
means for fastening the cap and base to-  
gether whereby they form a carrying case  
for the entire apparatus. 45

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

RICHARD C. ADAMS.

Witnesses:

D. TEVIS HUGAELY,  
R. B. TERRILL.