No. 741,009. PATENTED OCT. 13, 1903.

P. R. BULLARD.

SUPPORT FOR MAP CARRYING DEVICES.

APPLICATION FILED MAR. 12, 1903.

NO MODEL.

Fig. 1.

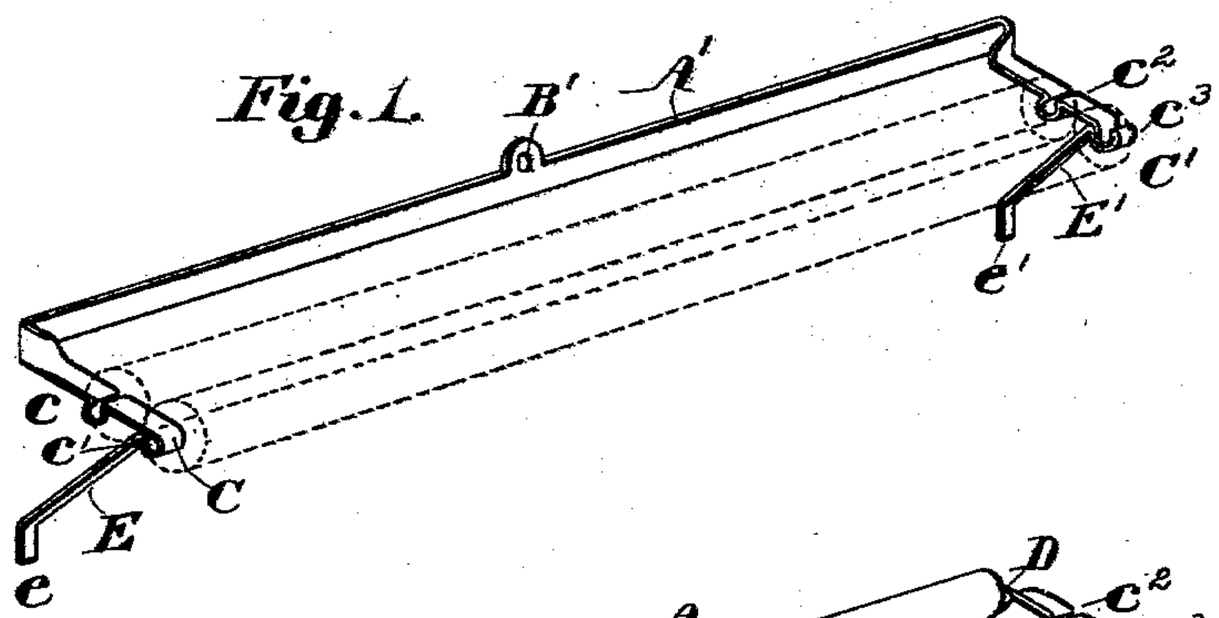


Fig. 2.

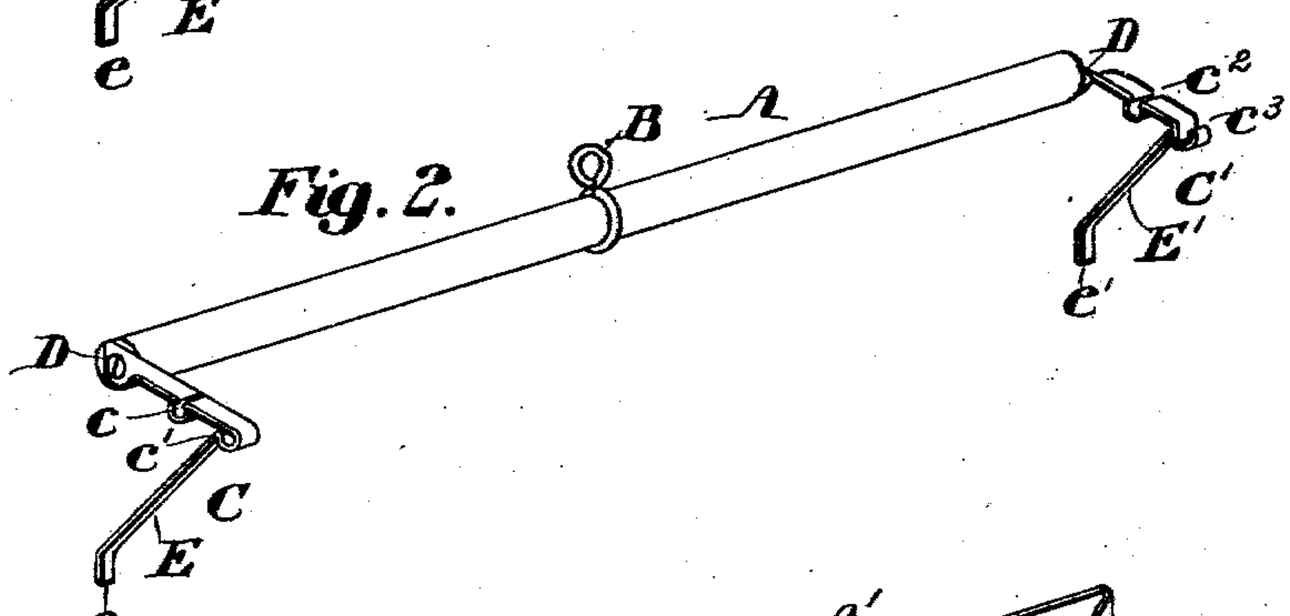


Fig. 3.

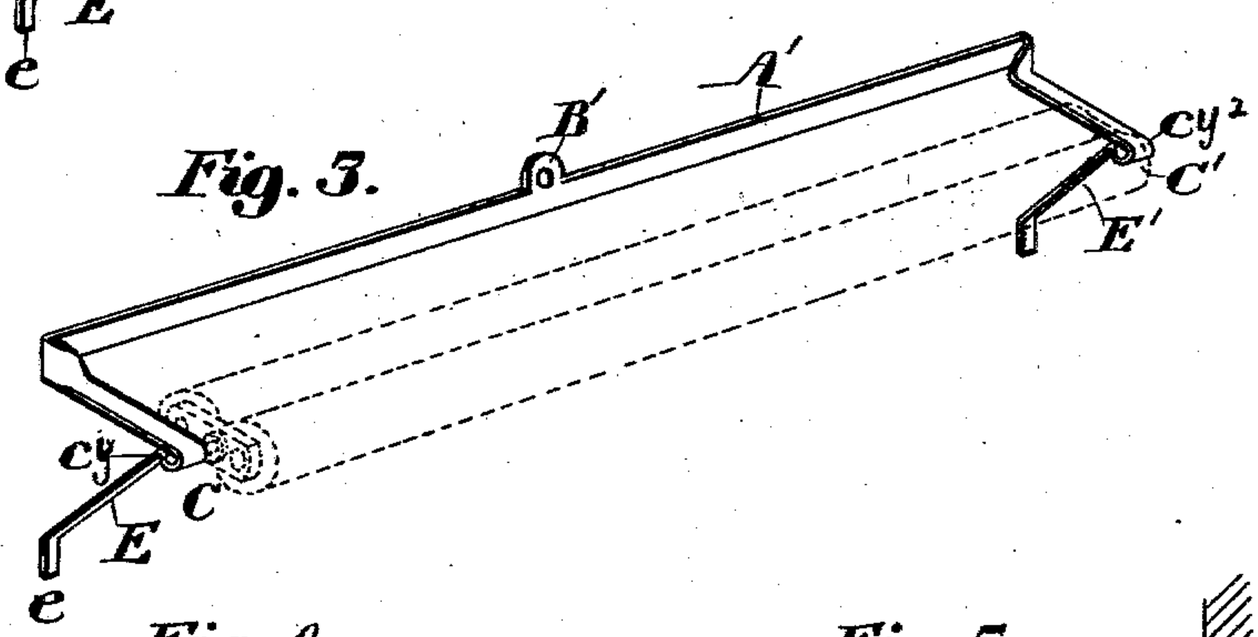


Fig. 4.

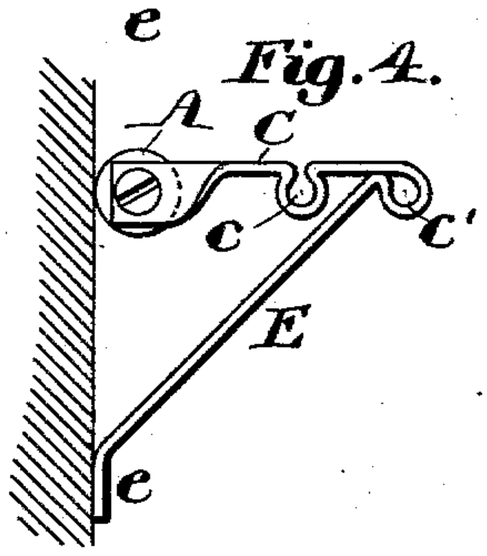
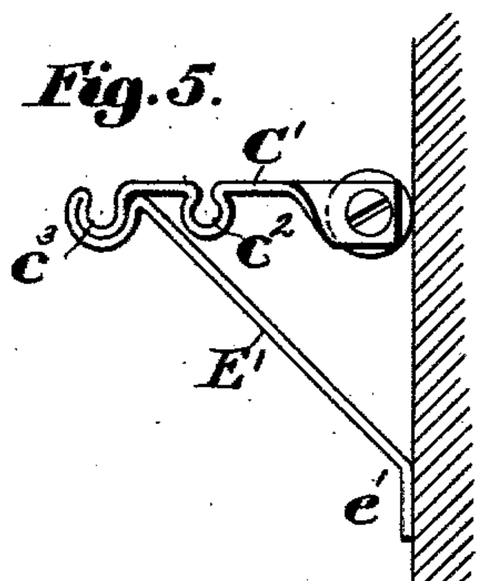


Fig. 5.



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No. 741,009. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

PAUL R. BULLARD, OF WALTHAM, MASSACHUSETTS, ASSIGNOR TO WALTER C. SCARBOROUGH, OF NEWTON, MASSACHUSETTS.

SUPPORT FOR MAP-CARRYING DEVICES.

SPECIFICATION forming part of Letters Patent No. 741,009, dated October 13, 1903.

Application filed March 12, 1903. Serial No. 147,544. (No model.)

To all whom it may concern:

Be it known that I, PAUL R. BULLARD, of the city of Waltham, county of Middlesex, and State of Massachusetts, have invented certain new and novel Improvements in Supports for Map-Carrying Devices; and I hereby declare that the following is a clear, full, and exact description of the same.

This invention relates to means for the supporting of devices for the carrying of maps, curtains, pictures, and other flexible rollable articles of the type which forms the subject of Patent No. 733,137, dated July 7, 1903, in such a manner that when hung upon or against a wall or other vertical support the rollers carrying and sustaining the map will be held away from said wall or backing, so as to allow of their freely revolving upon their axes; also, when used in connection with revoluble carriers to allow said revoluble carriers to revolve about each other without striking the backing or wall; also, to provide means for disengaging one end of one of two rollers from its support, so as to readily insert the map between them. It is also obvious that this device would produce the same effect when laid flat or attached to a desk, table, or other horizontal surface; but for purpose of description I will describe it as hanging against a vertical surface.

This device consists of a piece of material suspended near its center, the outer ends being extended at right angles to the main portion and each looped on itself, so as to form bearings for the trunnions of rollers. The further extension of these ends are then bent backward upon themselves, so as to bear against the same surface that the centrally-supported part bears against, for the purposes of keeping the parts comprising the bearings sustained clear of and away from the surface against which the whole device is supported. The advantages of these forms of devices are that they can be easily manufactured by automatic machinery and in the case of preferred form by removing the screws can be easily packed for transshipment in small bulk. They also form a support for map-carrying devices of extreme lightness, and if for transportation the maps can be readily rolled around the supporting device, as well as the sustaining-rollers, without mutilating or destroying the map. The centrally-disposed hanger provides a device easily suspended from the usual picture-cornice molding, and in the preferred form this loop can be turned forward, so as not to interfere with the rolling of the map around the supporting device.

Figure 1 is a perspective view of the invention made of flat rectangular-shaped metal, provided with supports for two horizontally-disposed rollers non-revoluble about each other. Fig. 2 is a preferable form of the same device in which the main sustaining portion consists of a round cylindrical piece of wood to which end brackets are rigidly attached by button-headed screws. Fig. 3 is similar in construction to Fig. 1, excepting that it is designed to receive the trunnions of revoluble carriers, which in turn carry a plurality of rollers between them. Fig. 4 is an end view of Fig. 2, which is the most preferable form. Fig. 5 is an end view from the opposite side of Fig. 4, showing bracket with one open bearing, so as to admit of easily removing rollers.

A is the main supporting member, and A′ a modified form thereof. (Shown in Figs. 1 and 3.)

B is a loop for suspending the same, and B′ a modified form thereof. (Shown in Figs. 1 and 3.)

C C′ are forwardly-projecting arms.

D represents button-headed screws attaching the arms C C′ to the main supporting member A. These arms C C′ are looped upon themselves, so as to make two bearings in each, c c' c^2 c^3, transversely disposed in the forward extension of the arms. The material of which these arms are composed is then bent backward and downward, as at E E′, so as to bear against the same plane surface that the main supporting part A rests against. The extreme ends of the parts E E′ e e' may be bent to coincide with the plane against which they rest; but this is merely a matter of constructive detail.

The operation of this device is as follows, reference being had to Fig. 2: Part A or A′ is suspended against a wall or other vertical surface by means of the loop B or B′. The

trunnions of a cylindrical roller are inserted in the open depressed centrally-disposed bearings $c\,c^2$. The trunnion on one end of a similar cylindrical roller is inserted in the depressed closed bearing c'. A map or other flexible rollable article is then interposed between the two rollers, and the trunnion on the other end of the roller from that inserted in c' is inserted in the depressed open bearing c^3, thus supporting the map or other flexible rollable article between the two rollers. If now there were no rearward of backward projecting parts E E', the weight of the map and rollers would cause the outer end of the arms C C' to descend until the map and rollers rested against the plane surface against and upon which this device was suspended, and the friction caused by such contact of the rollers against this surface would prevent these rollers from revolving upon their axes, and consequently cause the functions of the rollers to become inoperative; but by providing the rearwardly-extending parts E E' to bear against the plane surface against which this device is suspended the forwardly-projecting parts C C' are held in an approximately horizontal position, thereby holding the rollers away from the plane surface against which the whole device is suspended and allowing the map or other flexible rollable device to hang freely and be easily moved in another direction between the rollers by exerting traction on either end of the same. A similar function is performed in the device shown in Fig. 3, excepting that this form of supporting device is intended to be used with the revoluble carriers which sustain the plurality of cylindrical rollers described in Patent No. 733,137, dated July 7, 1903, and as means for inserting a map or other flexible rollable article between the rollers must be accomplished in another part of the device the trunnion-supports cy cy^2 in Fig. 3 are both shown closed.

Having fully described and explained the merits of this device, what I desire to claim and secure by Letters Patent is as follows:

1. A support for map-carrying devices comprising a bar having supporting means, a horizontally-disposed bearing-arm extending from the end of the bar and bent rearwardly upon itself to form a closed bearing upon the under face of the outer end thereof, a bracket-arm integrally connected to the bearing-arm at the rear of said bearing and extended downwardly and rearwardly therefrom and a cooperating bearing-arm at the opposite end of the bar from the first-mentioned arm.

2. A support for map-carrying devices comprising a bar having a centrally-disposed supporting means capable of being revolved about said bar, rigid bearing-arms extended from the opposite ends of said bar, and rotatably adjustable thereon, to bring the arms to the same horizontal plane, substantially as described.

3. A support for map-carrying devices comprising a bar having supporting means, arms at the opposite ends of the bar, one of which is provided with open depressed bearings at its mid-length and outer end, and the other with an open bearing at its mid-length and a closed depressed bearing at its outer end; and brackets extending at an angle from the outer bearing upon said arms.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

PAUL R. BULLARD.

Witnesses:
WILLIAM D. KELLOGG,
CHAS. BRADFORD.