

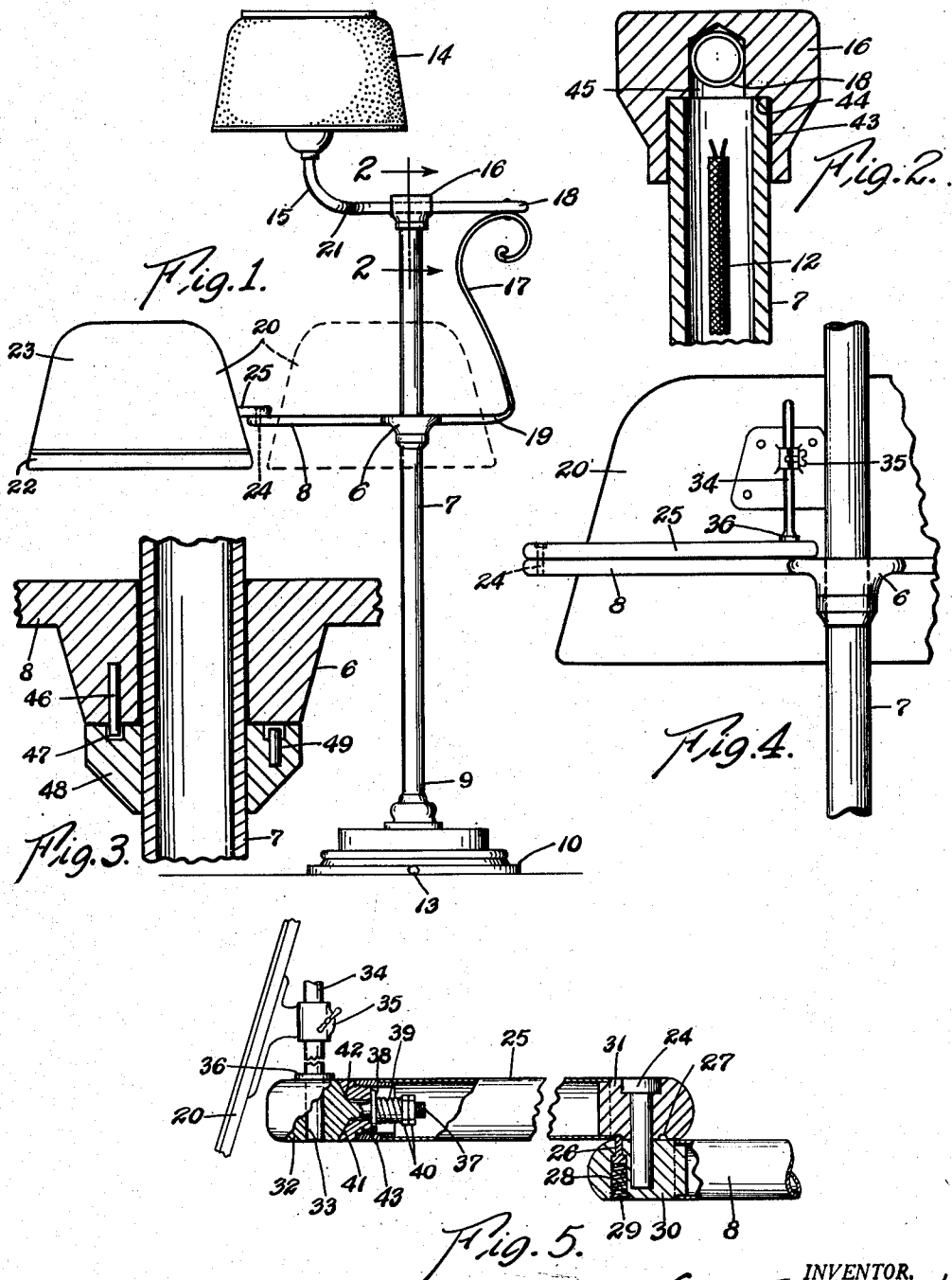
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COMBINATION READING LAMP AND ARTICLE SUPPORT

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COMBINATION READING LAMP AND
ARTICLE SUPPORT

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This invention relates to improvements in reading lamps incorporating means for the support of articles such as books and the like, and in which certain novel and practicable features are combined to provide a better and more useful product.

An object of the invention is to provide a device of the character referred to, including means for both simultaneously and independently adjusting a reading lamp and an article support relative to one another in accordance with the wishes or requirements of the user.

Another object is to provide means whereby the support may be disposed quickly to various elevations and angles for convenient usage, while maintaining proper lighting for the support, the support being shiftable instantly from operative to inoperative position so that the user when seated before the support may rise without delay or inconvenience, to a standing position.

Another object is to provide in a device of the character stated, means for rotating the lamp and the article support about the upright standard of the device, and means limiting the rotational movement to avoid damaging the electric conductors supplying current to the lamp.

A further object is to establish in the combination reading lamp and article support, a proper distribution of weight of the constituent parts, and such proportioning thereof, as will result in a balanced and stable structure which may be manipulated with ease and safety.

The foregoing and other objects are attained by the means described herein and illustrated upon the accompanying drawing, in which:

Fig. 1 is an elevational view of the combination reading lamp and article support, showing, in broken lines, disposition of the support to an inoperative position substantially abutting the standard.

Fig. 2 is a fragmentary cross-sectional view, on an enlarged scale, taken on line 2-2 of Fig. 1.

Fig. 3 is an enlarged cross-sectional view taken longitudinally of the standard, through the bushing 6 of the article support arm.

Fig. 4 is a view showing in full lines, the disposition of the article support to an inoperative position alongside the standard.

Fig. 5 is a detail view partly in cross-section and on an enlarged scale, showing the construction of the articulated arm on which the article support is adjustably mounted.

With further reference to the accompanying drawing, the character 1 indicates an upright standard extending above and below the bushing

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or hub 6 of the articulated arm 8, the lower end portion 9 of the standard being rigidly and non-rotatably fixed to a weighted base 10. The standard preferably is tubular in form, and the base may be suitably bored, to accommodate electric conductor means 12 (Fig. 2) which enter an opening 13 in the base and terminate at the usual lamp socket located within the shade 14. The conductors pass through the tubular lamp support arm 15, as will be explained.

The cap 16 which carries the lamp support arm 15, is rotatably mounted atop the standard 1, and is caused to rotate with the bushing 6 by reason of a rigid connection provided in the form of a connecting strut or ornate bracket 17 spanning the arms 15 and 8, or their extensions 18 and 19. Thus, upon imparting rotation to either of the arms 15 and 8 or their extensions, the user may dispose the lamp 14 and the article support 20 simultaneously to any desired position about the standard.

The strut or bracket 17 may be an integral part of one of the arm extensions, or it may be a separate element secured to the arms or their extensions in any common manner, as by means of rivets, bolts, welds or the like. Its principal functions are to impart balance to the structure, provide ornamentation, and ensure unitary rotation of the arms 15 and 8, thereby maintaining the lamp in proper illuminating relationship to the article holder or support 20. If desired, the lamp support arm 15 may be bent forwardly as indicated at 21, so as to dispose the lamp slightly forwardly of the holder 20 and thereby increase the proportion of light falling upon the planar working surface of the support or holder.

In the present embodiment, and for purpose of illustration, the article support or holder 20 is exemplified as a book rest having a forwardly extending shelf 22 to support the weight of the book as the latter rests against the plane surface 23. However, it is to be understood that the element 20 is adjustable as to elevation and angularity, and may be disposed in a horizontal plane to serve as a platform or table usable in various ways to properly support articles other than books or papers, if desired. In the position illustrated by Figs. 2, 4 and 5, the element 20 is properly disposed for use as a book rest.

The arm 8 and its extension 19 may be integral with the hub 6 as shown, or if desired, these parts may be separate elements rigidly joined together in any common manner. The parts 8 and 19 preferably are in axial alignment and extend laterally from the standard at an

elevation beneath that of the lamp support arm 15—18. At its outer end, the arm 8 may carry a pivot member 24, by means of which a section 25 may be swung toward the standard as shown by Fig. 4, or away from the standard as shown by Fig. 1. The latter is considered the operative position, or extended position, of the article support.

If desired, the parts 8 and 25 may be frictionally retained in the extended or retracted positions, or in any intermediate positions, by means of suitable stops here shown by way of example, in Fig. 5, as a plunger or pin 26 yieldingly urged into shallow sockets such as 27, by means of a spring 28 or its equivalent. The spring may be retained under compression within a bore as shown, by means of a set screw 29 or the like. In order that the plunger 26 may release the arm section 25 for rotation about the pivot 24, the projectile end of the plunger may be made hemispherical, in accordance with practice common in the friction latch art. When the arm sections 8 and 25 are constructed of tubular stock as shown (Fig. 5), the jointed ends may be provided with solid metal heads 30 and 31 fixed thereto, as a means of accommodating the pivot 24 and the friction plunger 26. Means other than the plunger, as for instance a friction disc or clutch between the heads 30—31, may be substituted to avoid undesirable free swinging of arm section 25 about the pivot connection 24.

At the free end of arm section 25 is provided means for varying the elevation and the angularity to vertical, of the article support member 20. Said means may take various forms, and accordingly, the particular means shown in the drawing is to be considered exemplary only. At 32 is indicated a swivel head bored transversely at 33 to accommodate a post 34 upon which the support member 20 may be retained at various elevations by means of a clamp device 35. The post may be provided with a shoulder or collar 36 to rest upon the head 32 as the post rotates within the bore 33 to permit adjustments of the support member or holder 20 about the end of arm section 25.

The head 32, moreover, may be rotated axially of arm section 25 to adjust the pitch or angularity of post 34 from vertical position. This adjustment may be achieved by providing the head with a threaded shank 37 adapted to carry a washer 38, a compression spring 39, and a pair of locking nuts 40, arranged as shown to draw the friction cone face 41 of the head yieldingly into contact with a complementary friction face 42 of a bushing 43 screwed or otherwise fixedly secured to the free end of the tubular arm section 25. The bushing 43 is bored longitudinally as shown, to loosely accommodate the shank 37. By unscrewing and bodily displacing the bushing 43, and moving the locking nuts toward and from the compression spring 39, the amount of friction needed to preclude accidental or undesirably free rotation of the head 32 may be regulated. From the foregoing, it will readily be understood that the pitch of post 34, and consequently that of the support 20, may be altered to suit the reader.

The structure just described is susceptible to considerable modification and substitution of parts, so that I do not wish my invention to be limited thereby unless the specific structure is recited in the appended claims.

Referring now to Fig. 2, it will be noted that the cap 16 is bored at 43 to loosely receive the

upper end of standard 7, and thereby permit the cap to rotate while its shoulder 44 rests upon the top of the standard. A counterbore 45 in the cap provides a passage through which the conductor means 12 may pass for entering the tubular arm 15 and supplying electric current to the lamp.

In order to avoid undue twisting of the conductor means as the arms 8 and 15 are rotated about the standard, means are provided for limiting rotation of the arms. Such limiting means may vary in construction and location, and may be incorporated in either the cap 16 or the hub 6. As herein disclosed by way of example, the hub 6 (Fig. 3) is provided with a fixed depending pin or stop element 46 adapted to extend into an annular groove 47 formed in the collar 48. This collar is securely fixed to the standard 7, and cannot therefore rotate with the hub 6. At a proper location within the groove 47 is fixed an obstruction 49, which may be in the form of a stop pin as shown, to abut the stop 46 and limit rotational movement of the hub. This arrangement limits rotation of the hub 6 to something less than 360 degrees. By utilizing additional stop pins, the rotational movement of the hub may be further limited; however, in practice the use of two stop pins as shown will suffice.

In conclusion, it is pointed out that the combination reading lamp and article support herein disclosed embodies a number of desirable features as hereinbefore related, and which never before have been incorporated in any similar arrangement. The lamp moves always with the article support arm, and therefore always sheds the needed light thereon. When the article support is not in use, it may quickly and easily be disposed to an inoperative position alongside the standard, as shown in Figs. 1 and 4, where it is out of the way and therefore does not interfere with normal usage of the lamp for general illuminating purposes. The various adjustments for the article support are highly desirable, and enhance the utility of the structure without detracting from the pleasing appearance of the device as a household fixture, or one suitable for use in libraries, reading rooms, dormitories, hospitals, or the like. The device can be manufactured at reasonable cost, and may be shipped inexpensively in knocked-down condition for easy assembly at the point of destination or delivery.

It is to be understood that various modifications and changes in structural details of the device may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim is:

1. A portable reading lamp structure comprising in combination, a rigid standard, and a floor-supported base fixedly secured thereon, a pair of arms laterally extended from the standard and rotatable unitarily thereabout in different substantially horizontal planes, a lamp supported by the uppermost arm, a swingable section pivoted to the lowermost arm near the outer end of the latter, said section having a free end moving in a substantially horizontal plane toward and from the standard, and an article holder carried by the free end of the swingable section for disposition from an operative position remote from the standard, to an inoperative position in close proximity to the standard.

2. A portable reading lamp structure comprising in combination, a floor-supported base, a rigid standard fixed thereon, a pair of spaced

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substantially parallel arms laterally extended from the standard and rotatable unitarily thereabout in different substantially horizontal planes, a lamp supported by the uppermost arm, a swingable section pivoted to the lowermost arm near the outer end of the latter, said section having a free end moving in a substantially horizontal plane toward and from the standard, and an article holder carried by the free end of the swingable section for disposition from an operative position remote from the standard to an inoperative position in close proximity to the standard, and means for adjusting the article holder as to elevation and angularity relative to the swingable section and the lamp.

3. A book-rest comprising in combination, a floor-supported base, a rigid standard fixed upon the base and having an upper end portion, an articulated arm in two sections, means mounting the first section upon the standard for swinging movement in a substantially horizontal plane below the level of the upper end of the standard, a pivot means joining adjacent ends of the first and second sections, whereby the second section may be swung toward and from substantial parallelism with said first section, a head on the free end of said second section, means mounting said head for rotation axially of the second section, friction means opposing rotation of the head, a rotary post supported by the head at right angles thereto, a book support adjustable along the length of the post, and an overhead lamp supported by the upper end portion of the standard, including an arm movable in unison with said first section of the articulated arm.

4. A reading lamp structure which comprises in combination, a floor-supported base, a rigid non-rotatable upright standard fixed upon said base and having an upper end above normal table height, a laterally extended arm freely rotatable about the upper end of the standard, a second laterally extended arm rotatably supported upon the standard at an elevation beneath that of the arm first mentioned, means joining the arms for maintaining same in a substantially vertical common plane, and enforcing unitary rotation of the arms about the axis of the standard, a lamp on the first arm located at a point remote from the axis of the standard, and a rack for reading matter carried by the second arm at a distance from the standard and located beneath the lamp at a common side of the standard, so that manual displacement of the rack rotationally about the standard to facilitate seating or rising of the user in relation to an adjacent chair, results in similar displacement in the same direction, of said lamp.

5. A reading lamp structure which comprises in combination, a floor-supported base, a rigid non-rotatable upright standard fixed upon said base and having an upper end above normal table height, a laterally extended arm freely rotatable about the upper end of the standard, a second laterally extended arm rotatably supported upon the standard at an elevation beneath that of the arm first mentioned, a lamp on said first arm located at a point remote from the axis of the standard, a rack for reading matter carried by the second arm at a distance from the standard and located beneath the lamp at a common side of the standard, a fixed extension on each arm directed toward the opposite side of the standard and away from the lamp and the rack, and a strut joining the extensions of the arms for maintaining the arms in a sub-

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stantially vertical common plane, and enforcing unitary rotation of the arms about the axis of the standard, so that manual displacement of the rack rotationally about the standard to facilitate seating or rising of the user in relation to an adjacent chair, results in similar displacement in the same direction, of said lamp.

6. A portable reading lamp structure which comprises in combination, a floor-supported base, a rigid upright hollow standard fixedly secured to said base against relative rotation, said standard having an upper end above normal table height, a cap supported rotationally upon the upper end of the standard, a lamp, a lamp support arm fixed to the cap and extending laterally therefrom at approximate right angles to the axis of rotation of the cap, an extension fixed to the cap and projecting laterally therefrom beyond the standard in a direction opposite to the direction of extension of said arm, a rotatable bushing surrounding the standard at an elevation below the rotatable cap, an articulated rack support arm having one section fixed to the bushing and extending laterally therefrom in approximately the same direction as the lamp support arm, and a second section pivoted to said one section for swinging movement in a horizontal plane, a rack for reading matter mounted upon the second section of the articulated arm remote from the pivot connection aforesaid, an extension fixed to the bushing and projecting therefrom beyond the standard in a direction opposite to the direction of extension of the fixed section of the rack support arm, a strut at that side of the standard which is opposite the lamp and the rack, said strut rigidly joining the extensions for maintaining the arms in a substantially vertical common plane, and enforcing unitary rotation of the arms about the axis of the standard, so that manual displacement of the rack rotationally about the standard to facilitate seating or rising of the user in relation to an adjacent chair, results in similar displacement of the lamp.

7. A device in accordance with claim 6, and in which the two sections of the articulated rack support arm are of such length as to guide the rack against the standard when the sections are folded substantially upon one another.

8. A portable reading lamp structure which comprises in combination, a floor-supported base, a rigid upright hollow standard fixedly secured to said base against relative rotation, said standard having an upper end above normal table height, a hollow cap supported rotationally upon the upper end of the standard, said cap having a lateral opening therein to receive electric conductors, an electric lamp, a tubular lamp support arm carrying the lamp, and fixed to the cap with the lateral opening of the cap communicating with the interiors of the standard and said arm, electric conductors extending from the base upwardly through the standard, the cap, and the support arm, to the lamp, said lamp support arm extending laterally from the cap at approximate right angles to the axis of rotation of the cap, an extension fixed to the cap and projecting laterally therefrom beyond the standard in opposition to the lamp support arm, a rotatable bushing surrounding the standard at an elevation below the rotatable cap, an articulated rack support arm having one section fixed to the bushing and extending laterally therefrom in approximately the same direction as the lamp support arm, and a second section pivoted to said one section for swinging move-

ment in a horizontal plane, a rack for reading matter mounted upon the second section of the articulated arm at a point remote from the pivot connection aforesaid, an extension fixed to the bushing and projecting therefrom beyond the standard in a direction opposite to the direction of extension of the fixed section of the rack support arm, a strut at that side of the standard which is opposite the lamp and the rack, said strut rigidly joining the extensions for maintaining the arms in a substantially vertical common plane, and enforcing unitary rotation of the arms about the axis of the standard, so that manual displacement of the rack rotationally about the standard results in similar displacement of the lamp.

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