Feb. 1, 1938. J. MARKERT 2,107,124

ADJUSTABLE STAND

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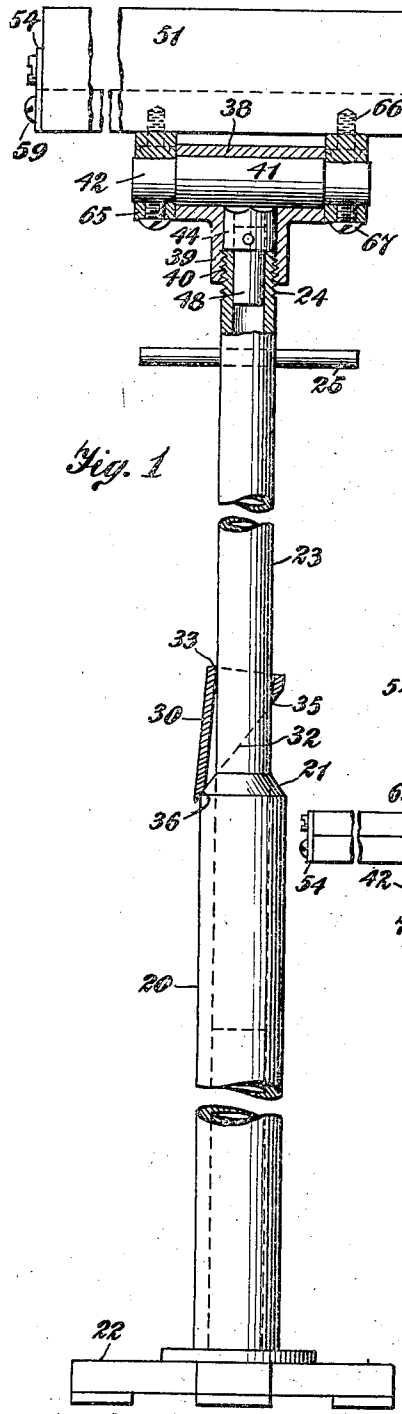


Fig. 1

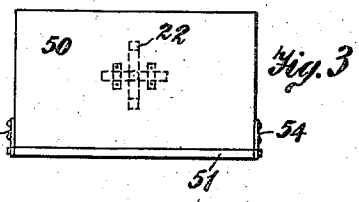


Fig. 3

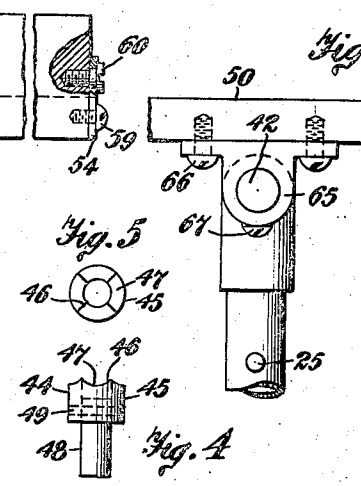


Fig. 2

Fig. 4

Fig. 5

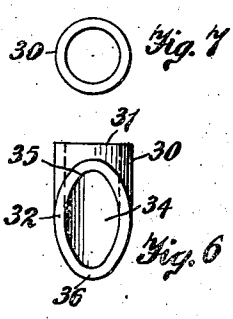


Fig. 6

Fig. 7

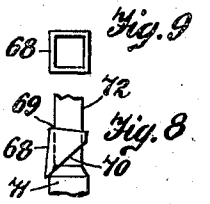


Fig. 8

Fig. 9

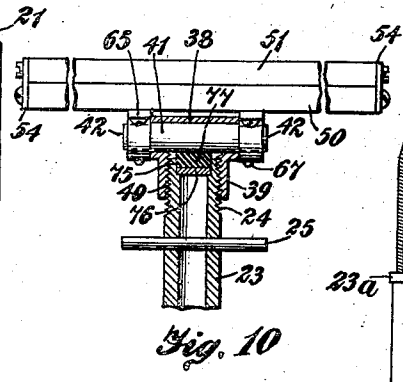


Fig. 10

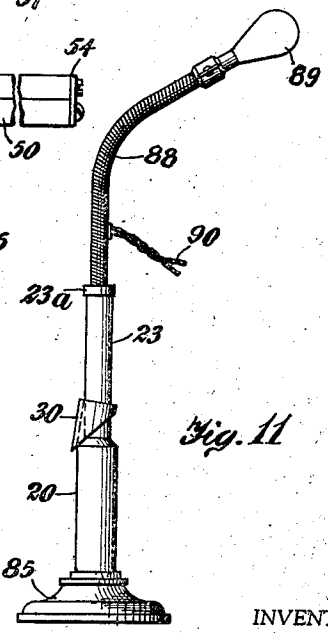


Fig. 11

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ADJUSTABLE STAND

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5 Claims. (Cl. 248—185)

This invention relates to an adjustable stand.

The object of the invention is the production of a stand, by means of which a table, electric light bulb or other objects can be maintained at different inclinations.

The second object of the invention is the production of a stand having a table which can be easily collapsed.

Other objects will be evident from the specification and drawing.

In the drawing Fig. 1 represents an elevation with portions in vertical section of an exemplification of the adjustable stand with a table; Fig. 2 shows a partial left hand side view of Fig. 1; Fig. 3 indicates a top view of Fig. 1 on a reduced scale; Fig. 4 represents an elevation of a clamping plug; Fig. 5 is a top view of Fig. 4; Fig. 6 indicates an elevation of the clamping sleeve; Fig. 7 is a top view of Fig. 6; Fig. 8 shows an elevation of a modified clamping sleeve with its adjacent elements; Fig. 9 shows a top view of the locking sleeve indicated in Fig. 8; Fig. 10 represents a fragmentary portion of the stand partly in section with a modification; and Fig. 11 shows an elevation on a reduced scale of the stand supporting an electric light bulb.

Referring to Figs. 1 to 7 inclusive, the adjustable stand in this instance comprises the following:

A lower outer tube **20** is indicated with the tapered upper end **21**, and its lower end is supported in the foot **22**. An upper and inner supporting tube **23** having the outer thread **24** at its upper end telescopes with the lower tube **20**. An operating handle **25** extends through the tube **23**.

An adjustable tubular locking sleeve **30**, in this instance having a cylindrical body portion, is shown with its upper end **31** at right angles to its longitudinal axis and with the tapered lower face **32** inclined to said axis. The inner edge of the upper end is shown at **33**. The face **32** is shown with the oval opening **34** having the tapered curved edge **35** at its upper end. The lower portion of the face **32** is indicated with the tapered lower end **36**.

A T shaped fitting is indicated with the cylindrical longitudinal portion **38** from which extends the cross member **39**, having the interior thread **40**, and the latter is in threaded engagement with the thread **24**.

A cylindrical supporting shaft **41** is indicated with the ends **42** somewhat smaller in diameter. The shaft **41** is rotatively supported in the T shaped fitting. A locking plug **44** is shown with the upper tubular portion **45**.

The latter in its upper face has formed therewith the gripping edges **46** with the valleys **47** between them. A stem **48** extends from the tubular portion **45** and is secured thereto by the pin **49**. The lower end of the tubular portion **45** bears upon the top end of the tube **23**, and the stem **48** extends into the said tube.

A table **50** is indicated with the adjustable front stop plate **51**. The latter is normally positioned in a vertical plane against the front end of the table as indicated in Figs. 1 and 2, to avoid an opening between said table and stop plate. Hinges **54** pivotally connect the stop plate **51** to the table **50**. Each of said hinges comprises the bottom member **56** and the member **57** at right angles thereto. The members **56** are fastened to the sides of the table **50**, by the screws **59**, and the pivot screws **60** pivot the stop plate **51** to the hinges **54**. The stop plate **51** may be positioned parallel to the table **50** and bear on the same.

To the lower face of the table **50** are fastened a pair of journal brackets **65**, by the screws **66**, and support the ends **42** of the supporting shaft **41**. Screws **67** clamp the ends **42** in different positions.

Referring to Figs. 8 and 9 a modification of the locking sleeve **30** is indicated at **68**. The locking sleeve **68** comprises a body portion square in shape and having the upper end **69** perpendicular to its longitudinal axis and the tapered lower face **70**. The lower outer tube is indicated at **71** and the upper and inner supporting tube is shown at **72**. The tubes are square in cross section and telescope with each other.

Referring to Fig. 10 with its modification, the table is again indicated at **50** with its front stop plate **51** and the hinges **54**. In this instance the stop plate **51** has been swung to bear upon the upper face of the table **50** so that it can be easily shipped without injury thereto. The cylindrical longitudinal portion of the fitting is again shown at **38**, with its cross member **39** having the interior thread **40** and the latter is again in threaded engagement with the thread **24** of the upper tube **23**. The operating handle for the tube **23** is again shown at **25**. The upper end of the tube **23** is counterbored at **75**. In the said counterbore is tightly positioned the cylindrical washer **76** and the latter supports the clamping disc **77** of flexible material, which may be leather. The upper face of the disc **77** extends above the upper end of the tube **23**. The cylindrical supporting shaft is again shown at **41** with its ends **42**. The shaft **41** is again rotatively supported in the T shaped

fitting having the longitudinal portion **38**. The journal brackets for the ends **42** are again shown at **65** with their clamping screws **67**.

Referring to the modification indicated in Fig. 11, the invention is applied to the stand for an electric light bulb. A foot is indicated at **85**, which supports the outer tube **20**. The upper supporting tube is again shown at **23** with the collar **23***a* at its upper end. The adjustable locking sleeve is again shown at **30**. From the collar **23***a* extends the usual flexible support **88** for an electric bulb **89**. A coil **90** for electric current leads through the support **88** to the electric light bulb **89**.

To raise the table **50** to different levels, the upper supporting tube **23** is grasped and raised to position the table at the desired level, and the tube **23** is then released. The locking sleeve **30** will permit the tube **23** to be raised without grasping said sleeve. When the tube **23** is released the locking sleeve **30** will automatically drop into locked position with the tubes **20** and **23**, as indicated in Fig. 1. When the sleeve **30** drops into its locking position, its lower face **36** bears on the tapered upper end **21** of the tube **20**, and thereby said sleeve **30** is tilted in position, as shown in Fig. 1.

When the locking sleeve **30** is in its locked position, a portion of the inner edge **33** of its upper end **31** pinches the adjacent portion of the supporting tube **23**, and at the same time the upper tapered curved edge **35** of the opening **34** pinches the opposite side of the tube **23** to lock the latter in position.

To lower the table **50** the locking sleeve **30** is separated from the lower tube **20** and the table is lowered to the desired level and the locking sleeve **30** is allowed to drop to its locked position.

To position the table indicated in Fig. 1 in different tilted positions, the operating handle **25** is grasped and swung to turn the upper adjusting tube **23**, to lower it somewhat, by the coaction of the threads **24** and **40**. By this means the gripping edges **46** are released from the supporting shaft **41**. The table **50** can then be tilted to the desired position, after which the operating handle **25** is turned to raise the upper supporting tube **23**, by means of which the gripping edges **46** of the locking plug **44** are forced to pinch the supporting shaft **41**, and the table **50** is locked in operative position.

Referring to Fig. 10, to tilt the table to different positions, the upper supporting tube **23** is turned by means of the operating handle **25**, to lower the clamping disc **77** from the supporting shaft **41**. The table **50** is then tilted to the required position and then the tube **23** is turned in the opposite direction, to position the clamping disc **77** tightly against the shaft **41**.

Referring to Fig. 11, the electric light bulb **89** is raised by raising the tube **23** and locking it in position by means of the tubular locking sleeve **30**, as already described.

Attention is called to the fact that the locking sleeves indicated at **30** and **68**, do not require to be cylindrical or square in cross-section, but may be various other shapes.

Various other modifications may be made in the invention, and the present exemplifications are to be taken as illustrative and not limitative thereof.

Having described my invention, I claim:

1. In a stand the combination of a tube, a T shaped fitting comprising a longitudinal portion and a cross member, the upper end of the tube extending into said cross member, means to vary the extent of the entrance of the tube into said cross member, a supporting shaft rotatively supported in the longitudinal portion of the fitting, means coacting with the upper end of the tube to detachably clamp the supporting shaft and a table supported by said supporting shaft.

2. In a stand the combination of a tube, a T shaped fitting comprising a longitudinal portion and a cross member, the upper end of the tube extending into said cross member, means to vary the extent of the entrance of the upper tube into said cross member, a supporting shaft rotatively supported in the longitudinal portion of the fitting, a clamping disc supported at the upper end of the tube adapted to bear against the supporting shaft, to detachably maintain the same in fixed position, and a table supported by said supporting shaft.

3. In a stand the combination of a tube, a T shaped fitting comprising a longitudinal portion and a cross member, the upper end of the tube extending into the said cross member, in adjustable locked relation thereto, means to vary the extent of the entrance of the upper tube into said cross member, a supporting shaft rotatively supported in the longitudinal portion of the fitting, a locking plug supported on the upper end of the tube adapted to pinch the supporting shaft, a pair of journal brackets adjustably fastened to the ends of the supporting shaft, and a table supported on said journal brackets.

4. In a stand the combination of a tube, a T shaped fitting comprising a longitudinal portion and a cross member, the cross member having an interior thread, the latter thread in engagement with the thread of the tube, means to turn the tube to vary the extent of the entrance of the thread at the upper end of the tube into the cross member of said fitting, a supporting shaft rotatively supported in the longitudinal portion of the T shaped fitting, a locking plug supported at the upper end of the upper tube adapted to pinch and hold in fixed position the supporting shaft, when the tube is turned to the requisite position, a pair of journal brackets detachably fastened to the supporting shaft and a table supported on the journal brackets.

5. In a stand the combination of a tube, a thread at the upper outer face of the upper end of the tube, a T shaped fitting comprising a longitudinal portion and a cross member having an interior thread in engagement with the thread at the upper end of the tube, a supporting shaft rotatively supported in the longitudinal member of the fitting, a locking plug comprising an upper portion, gripping edges integral with the upper face of the upper portion, a stem extending from the upper portion of the locking plug, said upper portion bearing on the upper end of the tube and said stem extending into said tube, means to turn said tube to vary the extent of its entrance into said cross member, the gripping edges of said plug adapted to pinch the supporting shaft, a table, and supporting means interposed between said shaft and said table.

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