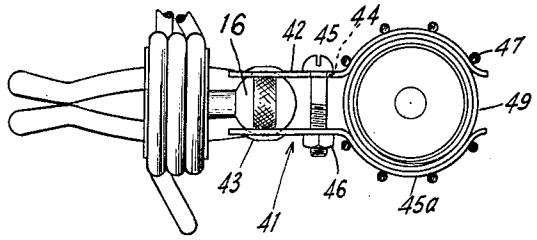
June 19, 1951 M. CHAFT 2,557,532

COMBINATION LAMP GUARD AND CLAMP FOR PHOTOGRAPHIC AND OTHER PURPOSES

Filed Aug. 30, 1947 2 Sheets-Sheet 1

Fig. 2



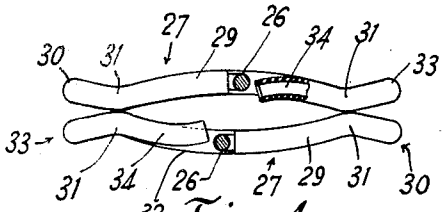
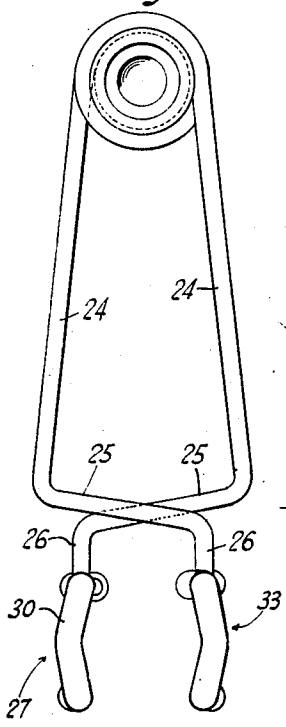


Fig. 4

Fig. 3



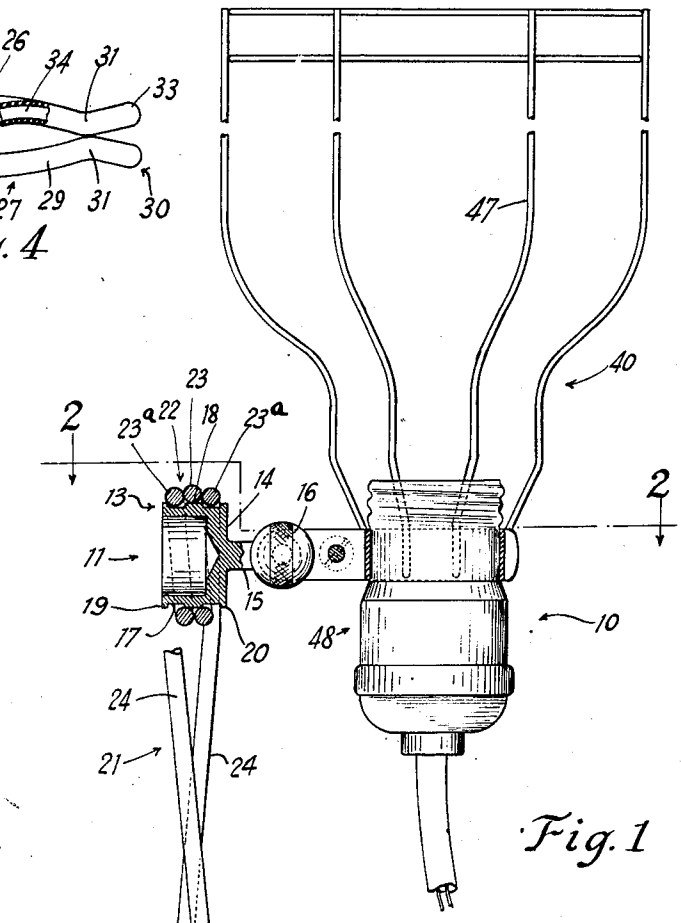


Fig. 1

Marc Chaft
INVENTOR

BY J. B. Felsher
ATTORNEY

June 19, 1951 M. CHAFT 2,557,532

COMBINATION LAMP GUARD AND CLAMP FOR PHOTOGRAPHIC AND OTHER PURPOSES

Filed Aug. 30, 1947 2 Sheets-Sheet 2

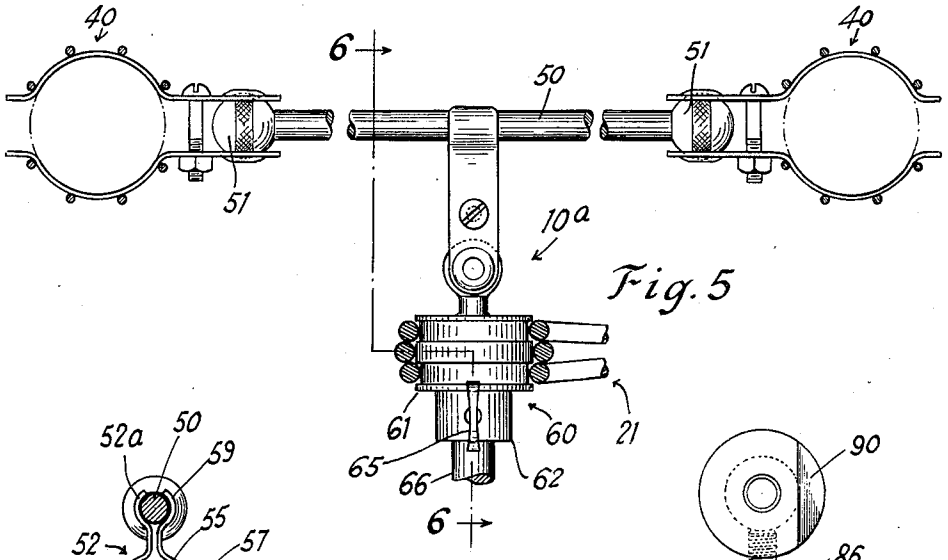


Fig. 5

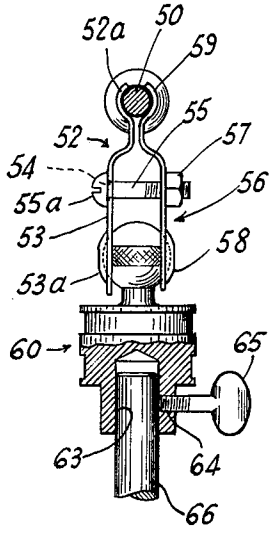


Fig. 6

Fig. 8

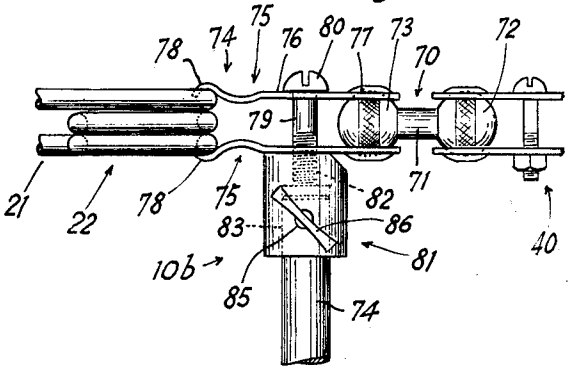


Fig. 7

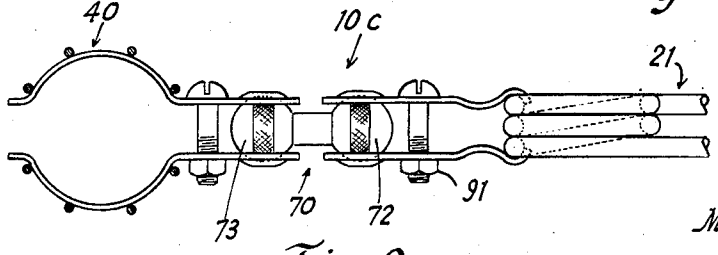


Fig. 9

Marc Chaft
INVENTOR

BY J. B. Felsher
ATTORNEY

Patented June 19, 1951

2,557,532

UNITED STATES PATENT OFFICE

2,557,532

COMBINATION LAMP GUARD AND CLAMP FOR PHOTOGRAPHIC AND OTHER PURPOSES

Marc Chaft, Queens Village, N. Y., assignor to Kenart Devices, Inc., Brooklyn, N. Y.

Application August 30, 1947, Serial No. 771,442

6 Claims. (Cl. 248—229)

1

This invention relates to a combination lamp guard and clamp for photographic and other purposes.

An object of this invention is to provide a device of the character described, comprising a lamp guard including a split ring carrying the wire guard and adapted to clampingly engage an electric lamp socket, and said split ring being connected by a universal ball and socket connector to an adaptor carrying a spring clamp by which the lamp guard may be mounted on a support. With such construction, the split ring may receive lamp sockets of various diameters and furthermore such construction eliminates overhang, as there is no chance for the lamp guard to swivel due to the weight of the lamp. With such construction, the lamp may be positioned directly over the universal ball, thereby reducing the overhang that causes the apparatus to sag out of position. With such construction furthermore, the guard is an integral part of the swivel socket which may be fastened to a suitable support, so that strain is on the support and swivel connection and not on the lamp socket. With the construction of the invention herein, in making adjustment of position of the guard, strain is transmitted directly to the clamp and not on the threaded portion of the lamp socket shell. Furthermore, there is no chance of the guard coming off the shell.

In accordance with the invention furthermore, an insulating ring may be interposed between the split ring and the lamp socket to insulate the socket from the clamp and guard.

Another object of this invention is to provide in a device of the character described, an adaptor receiving the torsion spring coil which interconnects the arms of the spring clamp, said adaptor carrying an integral ball forming part of the ball and socket connection for the lamp guard, and said adaptor including a central annular portion of increased diameter to receive the central convolution of the coil, and portions of reduced diameter on opposite sides of said central portion and receiving the outside convolutions of the coil whereby to permit opening and closing of the spring clamp jaws while firmly holding the central convolution of the coil gripped on the adaptor.

Another object of this invention is to provide in a device of the character described, spring clamp jaws formed at their ends with concave or V-shaped gripping portions which permits the jaws to be clamped securely on all types of regular and irregular shaped supports. In accordance with the present invention, each jaw comprises a loop which includes parallel portions bowed longitudinally, so that the pair of clamping jaws may be gripped at four points, so as to insure a good grip on flat surfaces regardless of the thickness of the support to which the clamp is fixed. In accordance with this invention, furthermore, each jaw of the clamp has a free resilient end portion which normally projects inwardly of the jaw slightly so that said free end advances toward the support ahead of the rest of the jaw, whereby to insure a good strong grip on the support. This feature of the invention gives the clamp jaws its ability to conform to and grip tightly on tapered or irregular surfaces and provides a two point advance contact to prevent rotation or slipping of the jaws.

2

Yet a further object of this invention is to provide an improved device of the character described comprising a bar formed with balls at its opposite ends, and lamp guards clamped to said balls by universal socket connections, and means to swivel said bar to an adaptor carrying a spring clamp by which the bar and the lamp guards carried thereon may be clamped to any suitable support or object.

Yet a further object of this invention is to provide a double light support of the character described, in which the adaptor is provided with means for fixing the same on a rod or tripod to thereby leave the clamp jaws free to receive a shield or any large sheet of cardboard therein to serve as a shield between the camera and the lamps in the lamp guard. Such construction furthermore permits clamping of a simple holder in the clamping jaws adapted to hold color filters so that the operator can get many desired photographic effects.

Yet another object of this invention is to provide a device of the character described comprising a lamp guard which may be clamped to a lamp socket and which is connected by a double universal swivel connection to a spring clamp, including clamping jaws which may be attached to a support or which may grip a photographic shield or filter or other photographic apparatus, and in which the connection between the double universal swivel and the spring clamp includes a bolt and a nut on the bolt formed with a socket to receive a rod or tripod. In accordance with the invention said nut may be formed with a beveled surface adapted to prevent torsion of the nut, and said nut being provided with a set screw to clamp a rod or tripod to the nut.

Still a further object of this invention is to

provide a strong, rugged and durable device of the character described, which shall be relatively inexpensive to manufacture, easy to manipulate, and safe and practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown various possible illustrative embodiments of this invention,

Fig. 1 is a side elevational view of a device embodying the invention;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1 with parts broken away and in section, to more clearly show some of the features of its construction;

Fig. 3 is a side elevational view of part of the device shown in Fig. 1;

Fig. 4 is a cross-sectional view taken in part on line 4—4 of Fig. 1;

Fig. 5 is a side elevational view of a device embodying the invention; and illustrating a modified construction;

Fig. 6 is a cross-sectional view taken on line 6—6 of Fig. 5;

Fig. 7 is a view similar to Fig. 5, but illustrating another modified form of the invention;

Fig. 8 is a side view of the nut shown in Fig. 7; and

Fig. 9 is a view similar to Fig. 7, but illustrating a modified form thereof.

Referring now in detail to the drawing, 10 designates a combination lamp guard and clamp embodying the invention. The same comprises an adapter member 11 provided with an annular portion 13 which may be hollow as shown in the drawing. Said annular portion is provided with an end wall 14, from which extends a stem 15. At the end of the stem 15 is a ball 16. The annular portion 13 is formed with a pair of spaced annular grooves 17. Between the annular grooves 17 is an annular raised rib 18. At the outer ends of the grooves 17 are annular end ribs 19 and 20.

Mounted on the annular portion 13 of the adaptor 11 is a spring clamp 21. The spring clamp 21 comprises a torsion spring coil portion 22 consisting of a plurality of convolutions including a central convolution 23 engaging the rib 18 and end convolutions 23*a* received in the grooves 17. Extending from the end convolutions 23*a* are arms 24. The arms 24 may diverge outwardly. Extending inwardly from the ends of arms 24 are cross portions 25. The cross portions 25 cross each other as shown in Fig. 3 of the drawing. Extending from each cross portion 25 is a jaw-holding portion 26. Portions 26 of the two arms are located close to each other and parallel to each other when the clamp is closed. Extending from each portion 26 is a looped jaw 27. The jaws 27 are similar and symmetrically disposed. When the arms 24 are pressed together, the jaws 27 are sprung open. The jaws 27 are each covered by a sleeve 28 of rubber or like material.

The jaws 27 are generally in opposed relation, being disposed at right angles to the plane of the arms 24. Each loop jaw 27 comprises a portion 29 extending from portion 26 substantially at right angles thereto. Portion 29 is preferably bowed inwardly as shown in Fig. 4 of the drawing. Extending from portion 29 is a concave or V-shaped bent back or U-shaped portion 30. Between portion 30 and portion 29 as shown in Fig. 4 is an inwardly bent or pointed portion 31. The bent back portions 30 may either be V-shaped or curved concavely as shown in Fig. 3 of the drawing. Extending from the bent back portion 30 is a portion 32 generally parallel to portion 29 but extending beyond the portion 26, from which said portion 29 extends. Said portion 32 is likewise bowed longitudinally. At the opposite end of portion 32 is another bent back portion 33 similar to the bent back portion 30. Thus portion 33 is V-shaped or concavely curved. Between the bent back portions 30 and 33 and the longitudinal portion 32, are inwardly bent or pointed portions similar to portions 31. Extending from the bent back portion 33 is a portion 34 having a free end terminating adjacent the portion 26, from which portion 29 extends. Portion 34 is likewise curved somewhat longitudinally and between said portion 34 and the bent back portion 33 is an inwardly bent or pointing portion 31. The portion 34 as shown in Fig. 4 of the drawing, however, normally extends inwardly of portion 29.

The other jaw 27 is similar in construction to the first jaw and symmetrically disposed therewith, so that it is not necessary to describe it in detail.

It will be noted, however, that at the opposite sides of the jaw inwardly pointing portions 31 tend to contact while the end portions 30, 33 flare away from each other. The advantages of jaws constructed as described herein, are as follows:

Various shaped rods or supports may be gripped between the jaws, such as round, square or rectangular bars. Such gripping is permitted by the concave ends 30, 33 of the jaws. Furthermore, should the edges clamp an elongated object therebetween, there will be four point contact on each end of the jaw due to engagement of the inwardly pointing portions 31 with the support.

If portions 29, 32 and 34 were straight it might be possible that the support would be gripped only at the center thereby causing a rocking action instead of a tight grip as would be the case with the construction disclosed herein. Furthermore, the inwardly bent terminal portions 34 are engaged by a support before the remainder of the edges, thereby insuring a good strong contact with the support and a firm clamping action.

Attached to the ball 16 for swivelling action is the lamp guard 40. Said lamp guard 40 comprises a pair of similar, symmetrically disposed or opposed jaws 41, preferably made of strip metal. Each jaw 41 comprises an arm 42 formed at one end with a concave socketed portion 43. Each arm 42 is furthermore formed with a through opening 44. Extending from arm 42 is a substantially semi-circular spring finger portion 45*a*. The socketed portions 43 contact opposite sides of the ball 16. Extending through the holes 44 is a bolt 45. The head of the bolt contacts one arm 42, whereas, a nut 46 on the bolt contacts the other arm. The semicircular portions 45*a* constitute a split ring for the purpose hereinafter appearing.

Attached to the semi-circular portions 45*a* as by welding or in any other suitable manner, is a wire cage or guard 47 which is adapted to guard an electric bulb or lamp. The cage interconnects jaws 41. Gripped between the semi-circular portions 45*a*, is a lamp socket 48. Surrounding the

lamp socket and disposed between the lamp socket and the spring semi-circular fingers **45***a* is an insulating ring **49**.

It will now be noted that the guard **40** is carried directly by the clamp. The spring fingers **45***a* yield to permit reception of sockets of various sizes. The bolt **45** serves to clamp the spring fingers against the socket.

It will be noted that the arms **24** of the clamp may be readily compressed as the outside convolutions **23***a* are over reduced diameters thereby allowing sufficient clearance for contraction of the outside convolutions.

It will be noted furthermore that the lamp is mounted directly over the universal ball thereby reducing the overhang and eliminating possibility of sag or movement of the guard relative to the clamp.

It will be noted, furthermore, that the provision of the inwardly pointed portions **31** permit the rubber covered gripping jaws to grip snugly all flat surfaces regardless of the thickness of the object to which the clamp is fixed. The free ends **34** being bent inwardly slightly is advanced towards the support ahead of the rest of the jaws, and this feature gives the clamp jaws its ability to conform to and clamp tightly upon tapered or irregular surfaces and to prevent rotational slipping.

In Fig. 5 there is shown a combination clamp and lamp guard **10***a* embodying the invention and illustrating a modified form thereof. The device **10***a* comprises an elongated rod **50** provided at each end with a ball **51**, similar to ball **16**. Clamped on each ball **51** is a lamp guard **40**, similar to the lamp guard **40** described hereinabove.

Welded to the center of rod **50** is a member **52** made of strip metal. Said member **52** is formed at its upper end with a hook portion **52***a* which is the part that is welded to the rod. Said member **52** is formed with an arm **53** having a socketed concave portion **53***a* adjacent its outer end. Arm **53** is formed with an opening **54** through which extends a bolt **55** having a head **55***a* contacting said arm **53**. Bolted to member **52** by means of the bolt **55** is a member **56**, which is similar to member **52** except that it is not welded to the rod **50**. Member **56** is also formed with an opening through which the bolt **55** passes. A nut **57** screwed to the bolt serves to clamp members **52**, **56** together. Member **56** is formed with a socketed portion **58**. At the upper end of member **56** is a curved portion **59** which grips the rod **50**. Members **52**, **56** are clamped to an adapter **60**. Said adapter **60** comprises an annular portion **61** similar to the annular portion **13** of adapter **11**. A spring clamp **21**, similar to the spring clamp **21** shown in Figs. 1 to 4, may be attached to the annular portion **61** of the adapter **60**. Said adapter **60** further is formed with a downwardly projecting skirted portion **62**, and is also formed with a central blind opening **63**. The skirted portion **62** is formed with a screw threaded opening **64**, receiving a set screw **65**. A rod **66** may be inserted into the opening **63**, and the adapter may be fixed to the rod by means of the set screw **65**. Thus, the device **10***a* may be supported on the rod **66**, leaving the clamp **21** free for clamping reflectors, shields or other apparatus required for photographing or other purposes.

In Figs. 7 and 8 there is shown a combination lamp guard and clamp **10***b* embodying the invention and illustrating another modified form of the invention. The device **10***b* comprises a dumb-bell shaped member **70**, comprising an intermediate stem or shank **71** provided with balls **72** and **73** at its ends. Clamped to the ball **72** is a lamp guard **40**, similar to the lamp guard **40** described hereinabove. Clamped to the ball **73** is a clamping member **74** comprising a pair of similar, symmetrically disposed members **75**. Each member **75** comprises an arm **76** formed with a socket **77** at one end, gripping the ball **73**. At the opposite end of each member **76** is a hook **78**. The arms **76** are formed with aligned openings from which extends a bolt **79**. The bolt **79** has a head **80** contacting one of said members **75**. Screwed to the shank of the bolt **79** is an adapter **81**.

Said adapter **81** is formed with a screw threaded opening **82** to receive the shank of screw **79**. It is furthermore formed with a socket **83** adapted to receive the upper end of a rod **74**. Said adapter is furthermore formed with a screw threaded opening **85** to which is screwed a set screw **86**. The adapter **81** serves as a nut that may be drawn up by the screw **79** to press members **75** together, thereby pressing the lower member **75** against the nut. The torsion coil portion **22** of a spring clamp **21**, similar to the spring clamp **21**, described hereinabove, may be gripped between the hook **78**. Thus, the clamp **21** may support a shield, filter plates, reflector or any other desired apparatus, while member **70** carries the lamp guard **40**. The entire apparatus may be supported on the rod **74** which may be part of a tripod. The nut or adapter **81** is formed at its upper end with an inclined beveled surface **90**, which is close to the socket **77** of the lower member **75**, and serves to prevent rotation of the nut or adapter **81** relative to member **74**, thereby keeping the set screw in position where it may be easily reached for manipulation.

In Fig. 9 there is shown a device **10***c* embodying another modified form of the invention. The device **10***c* is similar to the device **10***b*, with the exception that an ordinary nut **91** is substituted for the adapter **81**. With such construction, the spring clamp **21** is attached to any suitable support.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A device of the character described comprising an adapter including an annular portion, a stem extending from the annular portion, and a ball on said stem, a lamp guard clamped to said ball for swivel movement, and a clamp comprising a torsion coil spring received on said annular portion, arms extending from the end convolutions of said torsion spring, and jaws on said arms, said adapter being formed with an opening, a supporting rod projecting into said opening, and set screw means for clamping said rod to said adapter.

2. In combination, a lamp guard, a torsion spring clamp, swivel means to connect said clamp to said lamp guard, and means to support said clamp and lamp guard including a member formed with a socket, a rod projected into said

socket, and set screw means to attach said member to said rod.

3. A device of the character described comprising in combination a lamp guard, said lamp guard comprising a pair of similar, symmetrically disposed members, said members having substantially semi-annular spring fingers, and a pair of arms, a bolt interconnecting said arms, said arms being formed with socketed portions, a wire cage attached to said spring fingers and yieldably uniting them, and a member provided with a ball received between said socketed portions of said arms.

4. In combination, a lamp guard, a spring clamp, a swivel connection between said lamp guard and clamp, and means between the lamp guard and clamp for supporting said lamp guard and clamp, and including a member formed with an opening, and a rod projecting into said opening, and set screw means to attach the guard to said member.

5. In a device of the character described, an adapter having an annular portion defining a pocket for selectably receiving a mounting member, a stem extending from said annular portion, and a ball secured to said stem, a spring clamp having a torsion spring secured to said adapter, and clamp jaws for selectably engaging cooperating members, and a lamp-holding lamp guard member swivelled to said ball for protectively holding at least one lamp in selectable positions

with respect to the adapter and the cooperating members.

6. In a device of the character described, an adapter having a body portion, a stem extending from said body portion, and a ball secured to said stem, a spring clamp having a torsion spring secured to said adapter, and clamp jaws for selectably engaging cooperating members, and a lamp holder swivelled to said ball for holding at least one lamp in selectable positions with respect to the adapter and the cooperating members, said lamp holder including a mounting rod for carrying the lamps, and a pair of socketed arms clamped around opposite sides of the mounting rod as well as the ball, one of said socketed arms being integral with the mounting rod to facilitate adjustment.

MARC CHAFT.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,141,152	Stahl	June 1, 1915
1,555,659	Gough	Sept. 29, 1925
1,561,603	Glade	Nov. 17, 1925
1,562,994	Stewart	Nov. 24, 1925
1,680,723	Bloom et al.	Aug. 14, 1928
1,722,773	Stewart	July 30, 1929