

960,723.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Witnesses,

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UNITED STATES PATENT OFFICE.

THEODORE SMITH, OF CHICAGO, ILLINOIS.

ADJUSTABLE BRACKET.

960,723.

Specification of Letters Patent.

Patented June 7, 1910.

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To all whom it may concern:

Be it known that I, THEODORE SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Adjustable Brackets, of which the following is a specification.

This invention relates to adjustable brackets, and has for its object to provide a new and improved device of this description.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a view of a device embodying the invention; Fig. 2 is a sectional view through the portion of the bracket fixed to the base; Figs. 3, 4 and 5 are views showing separately the parts which are put together to form the upper end of the portion of the bracket fixed to the base; Fig. 6 is a sectional view taken on line 6—6 of Fig. 1; Fig. 7 is a sectional view taken on line 7—7 of Fig. 2.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings, a swinging arm 1 is provided at one end with a lamp or other part 2 in connection with which the device is used. Associated with the swinging arm 1 is the frictional part 3 by means of which the swinging arm is pivoted to a supporting piece 4 by means of a pivot 5. Associated with the part 3 are two frictional pieces 6 having curved eccentric friction faces 7 which frictionally engage laterally projecting shoulders 8 on the movable spring-pressed part 9. The friction part 3 also has friction surfaces 10 (see Fig. 6) which engage the sides of the supporting piece 4, and this friction is regulated by means of the nut 11 on the threaded end of the pivot 5.

The supporting piece 4, as herein illustrated, is screw threaded as shown in Fig. 3, and is screwed into the end of the tube 12 fastened to the base 13 of the device. The support may be adjusted up and down in the tube by means of the screw threaded connection. The support 4 has a laterally projecting head 14 through which passes the hole for the pivot 5, said hole being at one side of the axis of the support. The support 4 is free to rotate so that the swinging arm may be adjusted about the base in addition to being adjusted up and down about the pivot 5. A suitable stop is provided to limit the rotation of the support 4. As

herein shown a ring 15 surrounds the support 4 and the tube 12, and is provided with a screw 16 screwed therein and projecting into a slot or cutaway portion 17 in the tube 12, and a slot or cutaway portion 18 in the support 4. It will thus be seen that when the swinging arm is rotated it will move a certain distance until the edge of the slot 18 will come into contact with the screw or stop piece 16, whereupon the screw or stop piece will move in the slot or cutaway portion 17 until it strikes the edge thereof, whereupon the movement will be stopped. It will be seen that by this construction substantially a complete rotation may be secured, and then the movement stopped. It will further be seen that the movement will be equal to the sum of the length of the two slots 17 and 18.

The spring-pressed piece 9 is adjustably connected with the adjustable piece 19 in any suitable manner, as by a screw thread connection, and is slidably mounted upon the tube 12. A spring 20 engages a stationary part, such as the base 13 at one end engaging the adjustable piece 19, thus tending to push it and the spring-pressed part 9 into contact with the eccentric friction pieces 6. The tension of the spring, and hence the force exerted upon the spring-pressed piece 9 can be adjusted by rotating the adjustable piece 19 so as to compress or release the spring. If, for example, the device is used for an electric light fixture, the conductors 21 may be made to pass through an opening 22 in the swinging arm which is above the pivot 5; instead of passing out through the opening 22 the conductors may pass through the support 4 and the tube 12 into the hollow portion of the base 13, and out through the opening 23 therein. The conductors in this case are, as it were, fixed to the swinging arm 1 and are movable with relation to the other part of the device, that is, the support 4 and tube 12, and are arranged so that as the swinging arm 1 is moved up and down these conductors can move up and down with it inside of the tube 12 without injury to the parts. It will thus be seen that the swinging arm 1 may be moved up or down so as to adjust it to any vertical position, and that it will remain in such position when released. It will further be seen that the spring 20 acts as a spring lift to assist in moving the swinging arm to any of its various vertical positions, for

the pressure of the spring on the eccentric friction pieces 6 tends to lift the swinging arm. This tendency may be adjusted and controlled by adjusting the tension of the spring, and by tightening or loosening the nut 11. The spring-pressed part 9 has its end 24 projecting past the frictional eccentric face 7, and the friction pieces 6 engage this end 24 and insure the rotation of the piece 9 as well as the support 4 when the swinging arm is rotated.

I claim:

1. An adjustable bracket, comprising a swinging arm, an eccentric frictional part fixed to and moving with said arm, a movable part elastically mounted and separate from said arm and having contact with said eccentric frictional part.

2. An adjustable bracket, comprising a swinging arm, a part to which it is pivotally connected, a friction piece connected with said arm, and having an eccentric friction contact face, a base, a tube projecting therefrom, a movable part elastically mounted thereon and engaging said eccentric face.

3. An adjustable bracket, comprising a swinging arm, a supporting device therefor, horizontal and vertical frictional surfaces associated with said support, friction parts on the swinging arm engaging said frictional surfaces said frictional surfaces slidably mounted upon said supporting device, and means for adjusting the friction between the parts on the swinging arm and said frictional surfaces.

4. An adjustable bracket, comprising a swinging arm, a frictional part connected therewith, two frictional pieces associated with said part and having eccentric frictional faces, a supporting piece upon which said swinging arm is mounted and located between said frictional pieces, a movable part elastically mounted engaged by said eccentric frictional faces.

5. An adjustable bracket, comprising a base a swinging arm, a frictional part connected therewith, two frictional pieces associated with said part and having eccentric frictional faces, a supporting piece upon which said swinging arm is mounted and located between said frictional pieces, a movable part engaging said eccentric frictional faces, and a spring associated with said movable part and pressing against said faces, said spring mounted upon said base.

6. An adjustable bracket, comprising a swinging arm, a part to which said swinging arm is pivoted, a spring beyond said swinging arm and out of contact therewith, but adapted to act upon the said swinging arm so as to tend to move it about its pivot, and a friction device for holding the swinging arm against movement when released.

7. An adjustable bracket comprising two

sections pivoted together one consisting of a hollow arm, a base to which the other section is attached, the pivotal point of the section attached to the base being at one side of the axis thereof a pivot uniting the sections at said pivotal point.

8. An adjustable bracket, comprising two sections pivoted together, one consisting of a hollow arm, the pivotal point of the other section being at one side of the axis thereof, a base with which said latter section is connected, an eccentric frictional face associated with said hollow arm, and a movable spring-pressed part engaging said frictional face, said spring-pressed part mounted upon the section connected with said base.

9. An adjustable bracket comprising a swinging arm, a support to which it is pivoted, said support rotatably mounted and being provided with a slot, a tube surrounding said support and provided with a slot, a ring surrounding said support and tube and provided with a projecting part which projects into both slots.

10. An adjustable bracket comprising a swinging arm, a support to which it is pivoted, a tube in which said support is rotatably mounted, said tube and support cut away in the same plane, an exterior part surrounding said tube and support, a stop carried by said exterior part and extending into the cutaway portions of the support and tube.

11. An adjustable bracket, comprising a base, a tube connected thereto, a spring surrounding said tube, a movable part sliding upon said tube, a support connected with said tube, a swinging arm pivoted to said support, frictional, eccentric faces connected with said swinging arm and engaging said movable part on the tube, an adjustable piece connected with said movable part and engaging said spring.

12. An adjustable bracket, comprising a base, a tube connected thereto, a spring surrounding said tube, a movable part sliding upon said tube, a support connected with said tube, a swinging arm pivoted to said support, frictional, eccentric faces connected with said swinging arm and engaging said movable part on the tube, an adjustable piece connected with said movable part and engaging said spring, and means for adjusting said adjustable part with relation to the movable part with which it is connected.

13. An adjustable bracket, comprising a swinging arm, a part to which said swinging arm is pivoted, a spring beyond said swinging arm and out of contact therewith, but adapted to act upon said swinging arm so as to tend to move it about its pivot, a friction device for holding the swinging arm against movement when released, the part to which the swinging arm is pivoted being rotatably mounted.

14. An adjustable bracket, comprising a swinging arm, a support having a laterally projecting head, a pivot connecting said swinging arm with said head at one side of the axis thereof, a tube to which said head is connected, a spring-pressed part on said tube, an eccentric frictional face on the swinging arm engaging said spring-pressed part.
15. An adjustable bracket, comprising a swinging arm, a support having a laterally projecting head, a pivot connecting said swinging arm with said head at one side of the axis thereof, a tube to which said head is connected, a spring-pressed part on said tube, an eccentric frictional face on the swinging arm engaging said spring-pressed part, the end of said spring-pressed part projecting past said eccentric frictional face on the swinging arm.
16. An adjustable bracket comprising a base, a tube connected therewith, said base hollowed out around said tube, a spring in

the hollow portion of said base and surrounding said tube, a swinging arm carried by said tube, a frictional part engaging said swinging arm and slidably mounted about said tube, said frictional part being pressed toward the swinging arm by said spring.

17. An adjustable bracket comprising a swinging arm, a supporting device upon which it is mounted, a stationary part with which said supporting device is movably connected, said supporting device and stationary part provided with slots which register under predetermined conditions, an associated part provided with a projection which enters both of said slots, whereby said supporting part is held in place and its rotation limited.

Signed at Chicago, Illinois, this 10th day of September, 1908.

THEODORE SMITH.

Witnesses:

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