P. C. BURNS.

ADJUSTABLE BRACKET.

APPLICATION FILED SEPT. 29, 1916.

1,285,025. Patented Nov. 19, 1918.

Fig. 1.

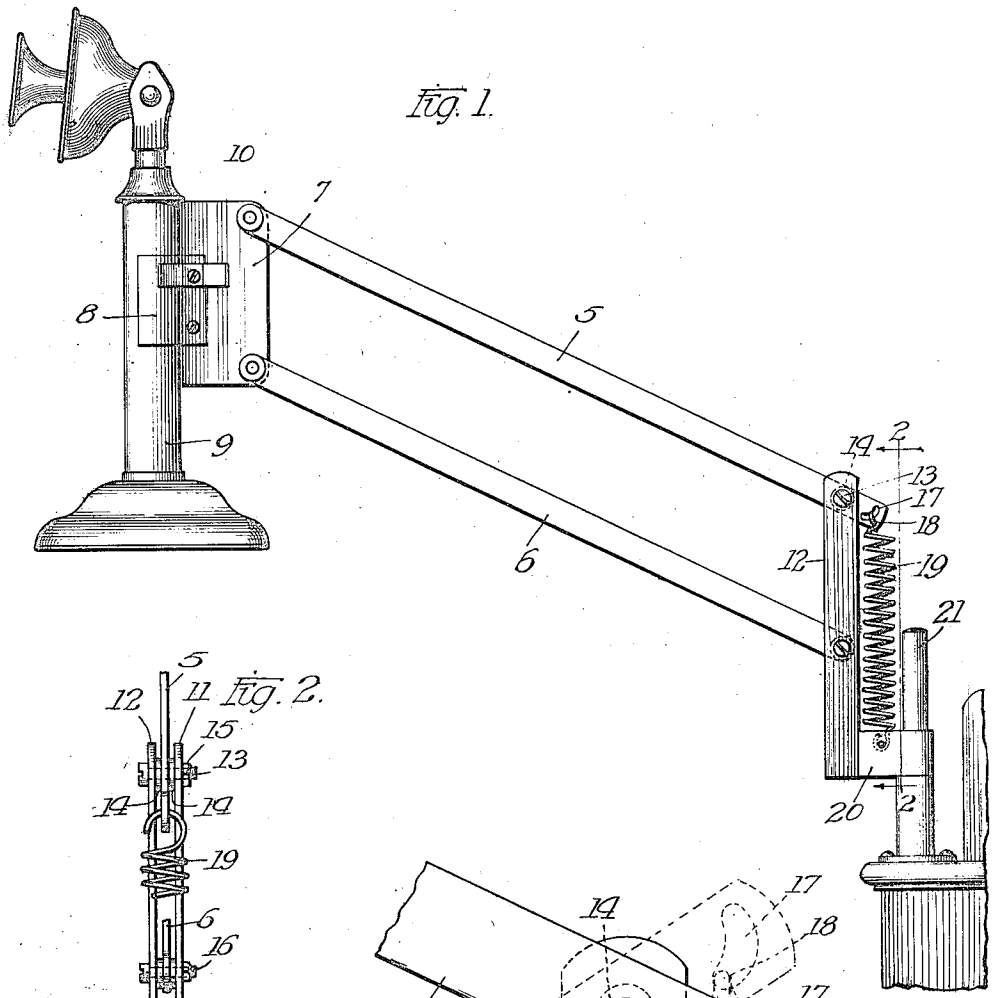


Fig. 2.

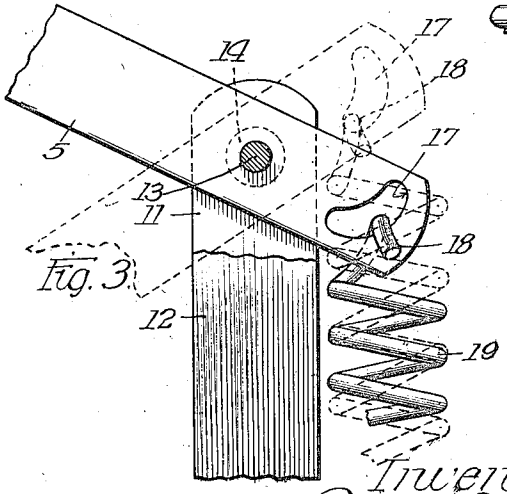


Fig. 3.

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE BRACKET.

1,285,025. Specification of Letters Patent. Patented Nov. 19, 1918.

Application filed September 29, 1916. Serial No. 122,805.

To all whom it may concern:

Be it known that I, PETER C. BURNS, a citizen of the United States of America, and resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Adjustable Brackets, of which the following is a specification.

My invention relates to an improvement in adjustable brackets and more particularly to brackets designed for use in supporting telephone sets.

The object of my invention is to provide a support or bracket which is very simple in construction and one which permits a wide range of movement.

The features and objects of my invention will be more clearly understood by having reference to the accompanying drawing in which I have illustrated one embodiment of the same.

Figure 1 is a side elevation of a bracket embodying the features of my invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is a detailed view partly in section.

As illustrated, the bracket comprises a pair of parallel arms 5, 6 pivotally connected at their outer ends to a plate 7 which carries a suitable clamp 8. This clamp is adapted to grip the tubular standard 9 of an ordinary telephone desk set, while the upper edge of the plate 7 engages beneath the bead 10 on the upper end of the standard 9. By means of this engagement the telephone standard is prevented from slipping down in the clamp and in this manner there is no danger of the clamp engaging with the switch hook and thus interfering with the operation thereof. The opposite ends of the arms 5 and 6 are pivotally mounted between two upwardly extending members 11 and 12. (See Fig. 2.) Thus the arm 5 is pivotally supported on the bolt 13 which extends through the members 11 and 12. Suitable washers 14 are mounted on the bolt, on opposite sides of the arm 5, so as to frictionally engage with said arm. The amount of friction applied is controlled by means of the nut 15 on the bolt 13. It will be readily seen that by tightening this nut the arms 11 and 12 are drawn closer together and thereby the friction exerted on the arm 5 by the washers 14 increased. The arm 16 is pivotally mounted in a similar manner on the bolt 16.

The arm 5 is provided with a short rearward extension which is provided with an elongated curved slot 17 in which the end 18 of the spiral spring 19 engages. The lower end of this spring is secured to the supporting clamp 20 secured to the lower ends of the supporting members 11 and 12, which clamp is adapted to be slipped over a suitable post 21 for supporting the bracket.

The tension of the spring 19 is sufficient to substantially counter-balance the weight of the desk set 9. In order, however, to prevent the arms 5 and 6 from swinging too freely about their pivots, the nuts on the bolts 13 and 16 are adjusted so as to produce a retarding condition or damping effect on this movement by causing the washers on these bolts to frictionally engage these arms. Without such frictional engagement it is found that the desk set will move too freely, but with such frictional engagement the set is held in any desired position by means of the spring 19.

In order to prevent the tension of this spring being increased unduly when the arms are swung downwardly, I provide an elongated slot 17 on the inner end of the arm 5 in which the end 18 of the spring 19 engages. With this construction it will be seen that when the bracket is in its upper position the spring engages with the slot 17 at a point near its right hand end as shown in Fig. 3. When the bracket is swung downwardly, and thus the inner end of the arm 5 moved upwardly, the end 18 of the spring 19 moves along the slot until, when the bracket is in its downward position, as shown in dotted lines in Fig. 3, the spring engages with the lower left hand end of the slot. This shifting engagement between the spring 19 and the arm 5 not only prevents distortion of the spring, due to the pivoted or swinging movement of the lever, but also prevents undue tension being placed on the spring due to the movement of the lever. Thus it will be noticed that, due to this curved slot 17 in the arm, when the arm is swung about its pivot the point of attachment between the spring and the arm varies. That is, as the inner end of the arm 5 swings upwardly, the end of the spring 19 moves downward in the slot 17. In this manner the movement of the bracket does not materially increase the tension of the spring 19, but this spring is maintained under substantially uniform tension irrespective of the position of the bracket. It is found in

practice that if but a single point of attachment is employed between the spring and the inner end of the bracket arm that when this arm is swung downwardly, the tension on the spring is increased to such a degree as to prevent free movement of the bracket. Furthermore the downward pull exerted by the spring would be so great as to over-balance the weight of the telephone set and therefore the bracket would not remain freely in its lower position.

It will thus be seen that I have devised a very efficient and simple form of bracket and one in which the telephone set or other implement carried by the bracket is held in any desired position. Furthermore this bracket is permitted a wide range of movement and on account of the shifting connection between the spring and pivoted arm this wide range of movement is obtained without unduly increasing the tension of the spring and thus without diminishing in any way the ease with which the bracket may be swung up and down.

While I have illustrated and described one embodiment of my invention it will be understood that I do not wish to be limited to the exact form shown and described, but that various changes and modifications may be made without departing from the spirit of my invention.

What I claim as my invention is:

1. In a bracket, an arm pivotally mounted near one end thereof, a member supported by the long end of said arm, an elongated slot at the shorter end of said arm, a support, and a spring secured to said support and having a sliding engagement with said elongated slot.

2. In a bracket, parallel members spaced apart, an arm pivotally mounted near one end thereof between said members and frictionally held thereby, a weighted member supported by the outer end of said arm, an elongated slot at the inner end of said arm, and a spring having a sliding engagement with said arm in said slot, said spring operating to counter-balance the force exerted by said weighted member.

3. In a bracket, a pair of members suitably spaced apart, a pair of parallel arms pivotally mounted between said members and frictionally held thereby, a plate pivotally mounted to the outer end of said arms, said plate carrying a clamp for supporting a telephone set or the like, a short inward extension on one of said arms and extending beyond said supporting members, an elongated slot in said extension, and a spiral spring engaging in said slot whereby a shifting connection is obtained between said arm and spring, said spring operating to counter-balance the weight of said desk set or the like.

4. In a bracket, a pair of parallel arms pivotally connected at their inner end, a short inward extension for one of said arms extending beyond said pivotal point, a downwardly curved elongated slot in said inner extension, and a spring rigidly mounted at one end thereof and engaging in said slot at the other end whereby when said arms are swung downward the engaging portion of said spring moves downward in said slot to thereby prevent undue tension being placed upon said spring.

5. In a bracket, an arm pivotally mounted near one end thereof, a weighted member supported by the long end of said arm, a support, and a spring secured to said support having a hook at its upper end having a sliding engagement with the shorter end of said arm, said spring operating to counter-balance the force exerted by said weighted member.

6. In a bracket, parallel members spaced apart, an arm pivotally mounted near one end thereof between said members and frictionally held thereby, a weighted member supported by the outer end of said arm, and a spring having a hook at its upper end having a sliding engagement with the inner end of said arm, said spring operating to counter-balance the force exerted by said weighted member.

Signed by me at Chicago, Illinois this 22nd day of September, 1916.

PETER C. BURNS.

Witnesses:
DAVID W. CROZIER,
ERNEST A. GRUND.