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Patented Aug. 27, 1901.

E. M. COX & W. REED.

ADJUSTABLE ARM FOR SUPPORTING TELEPHONE RECEIVERS.

(Application filed Nov. 20, 1900.)

(No Model.)

Fig. 1.

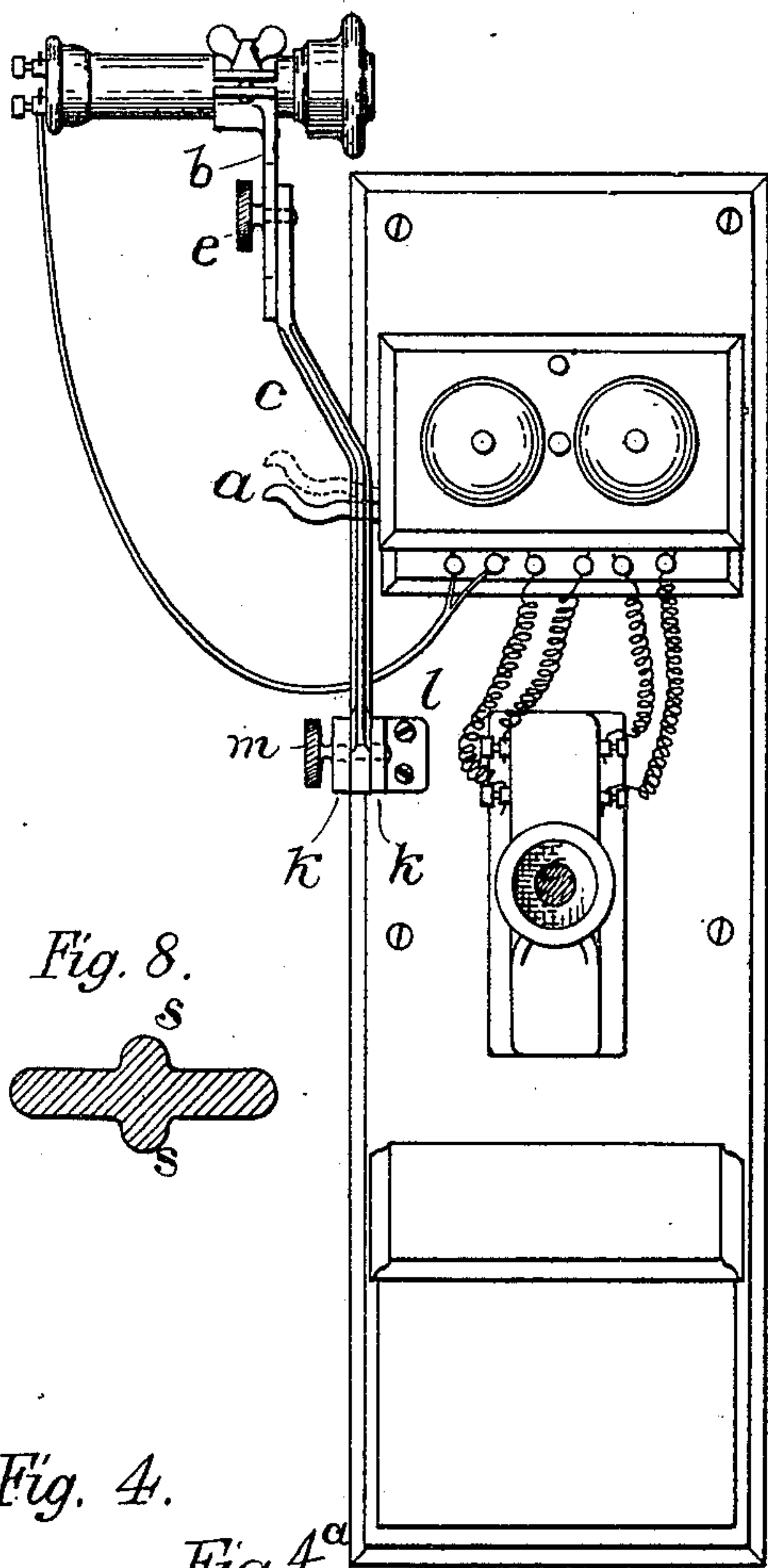


Fig. 2.

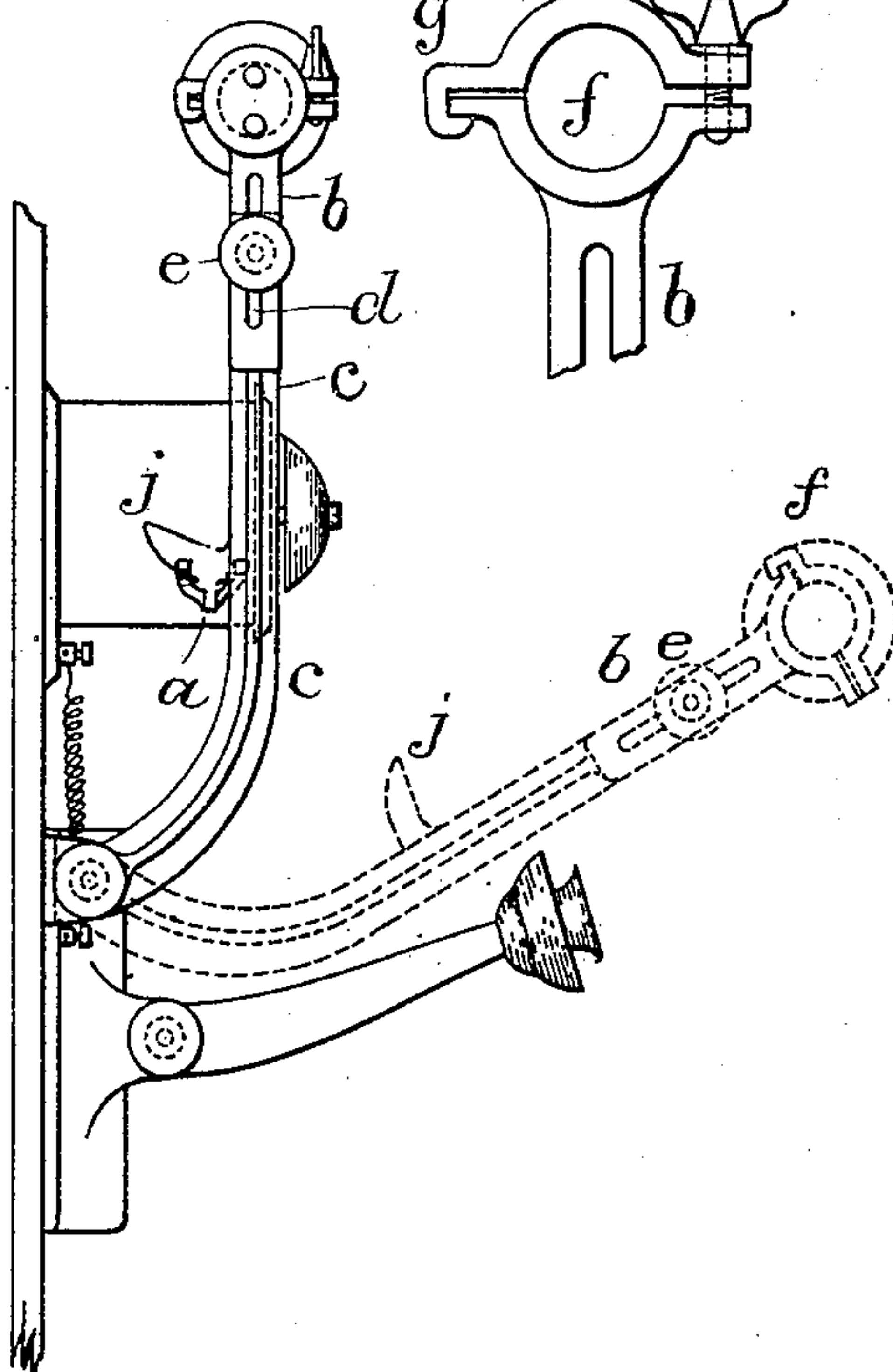


Fig. 3.

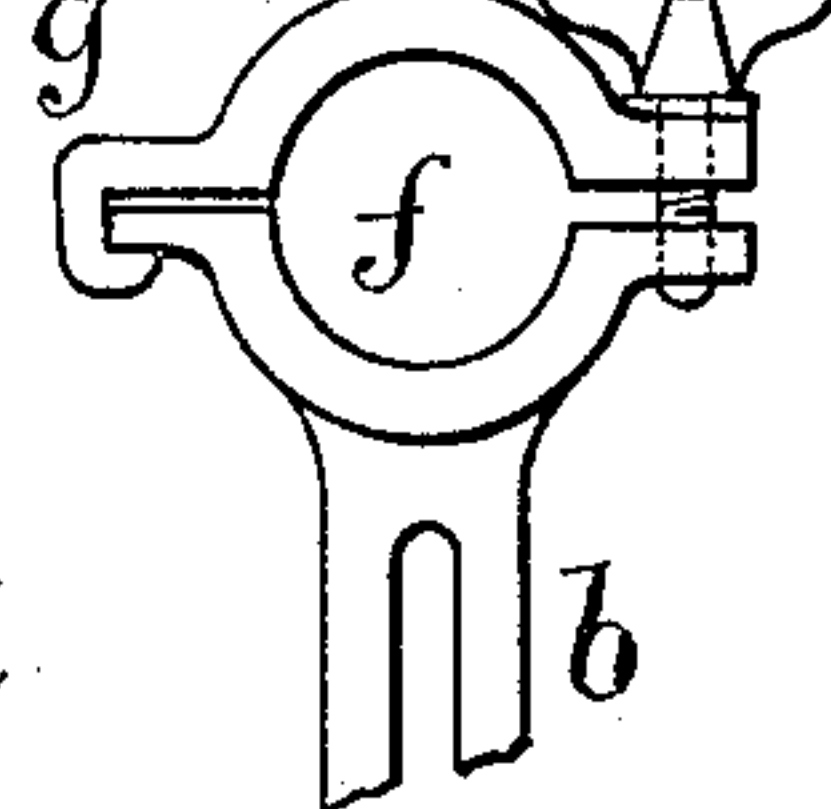


Fig. 8.

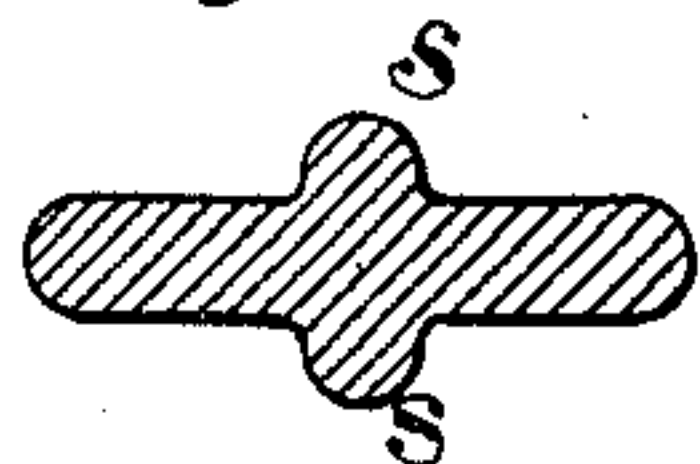


Fig. 4.

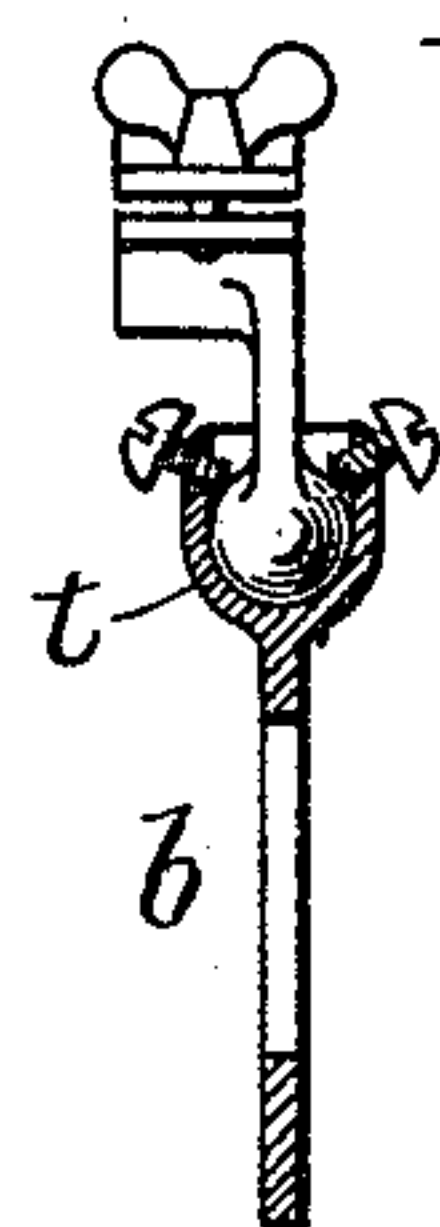


Fig. 4^a.

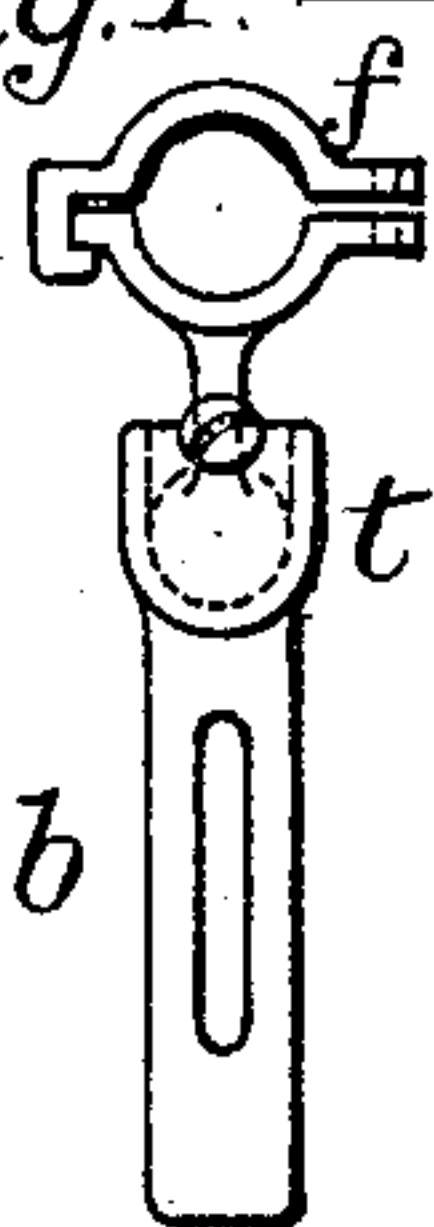


Fig. 7.

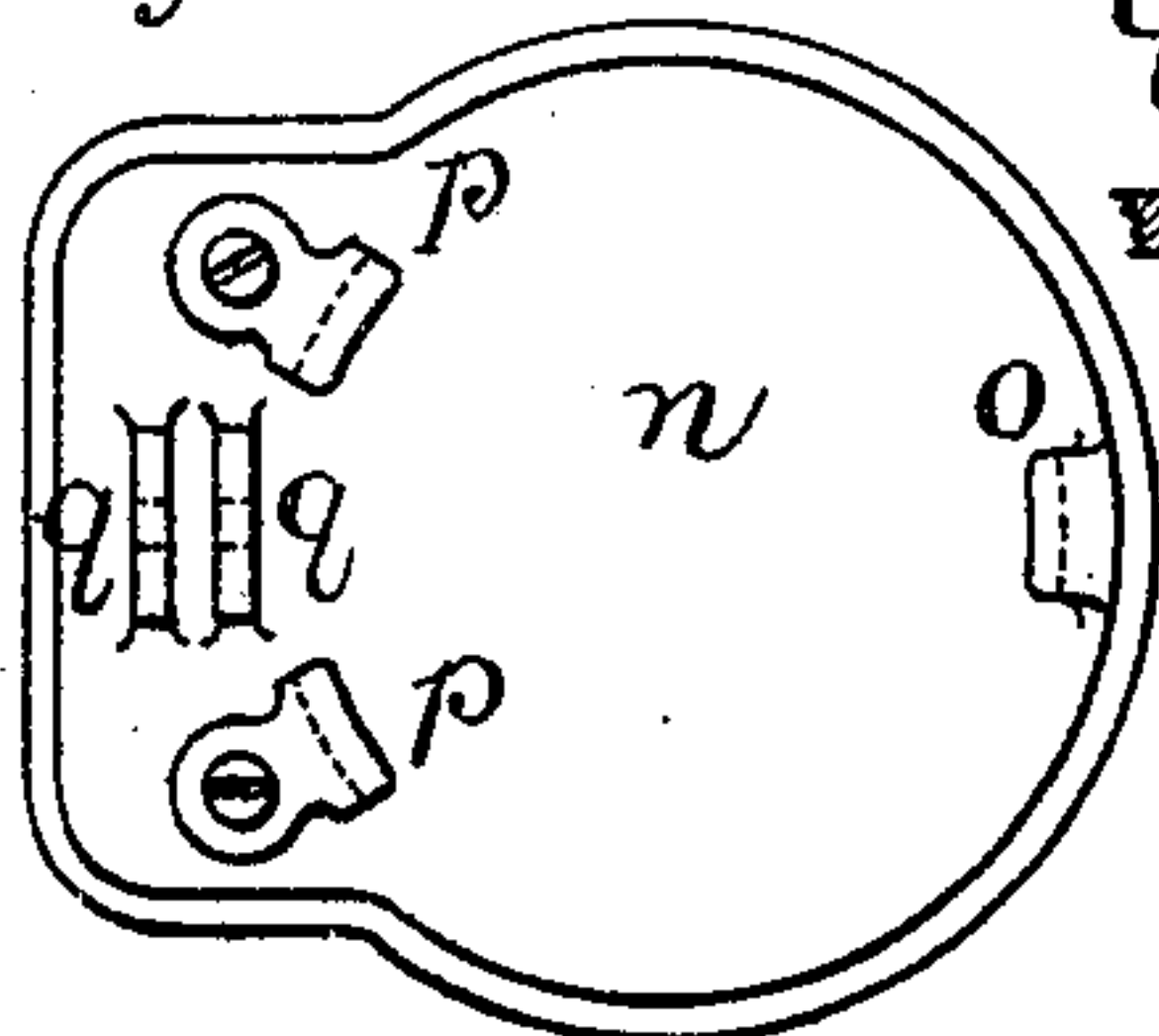


Fig. 5.

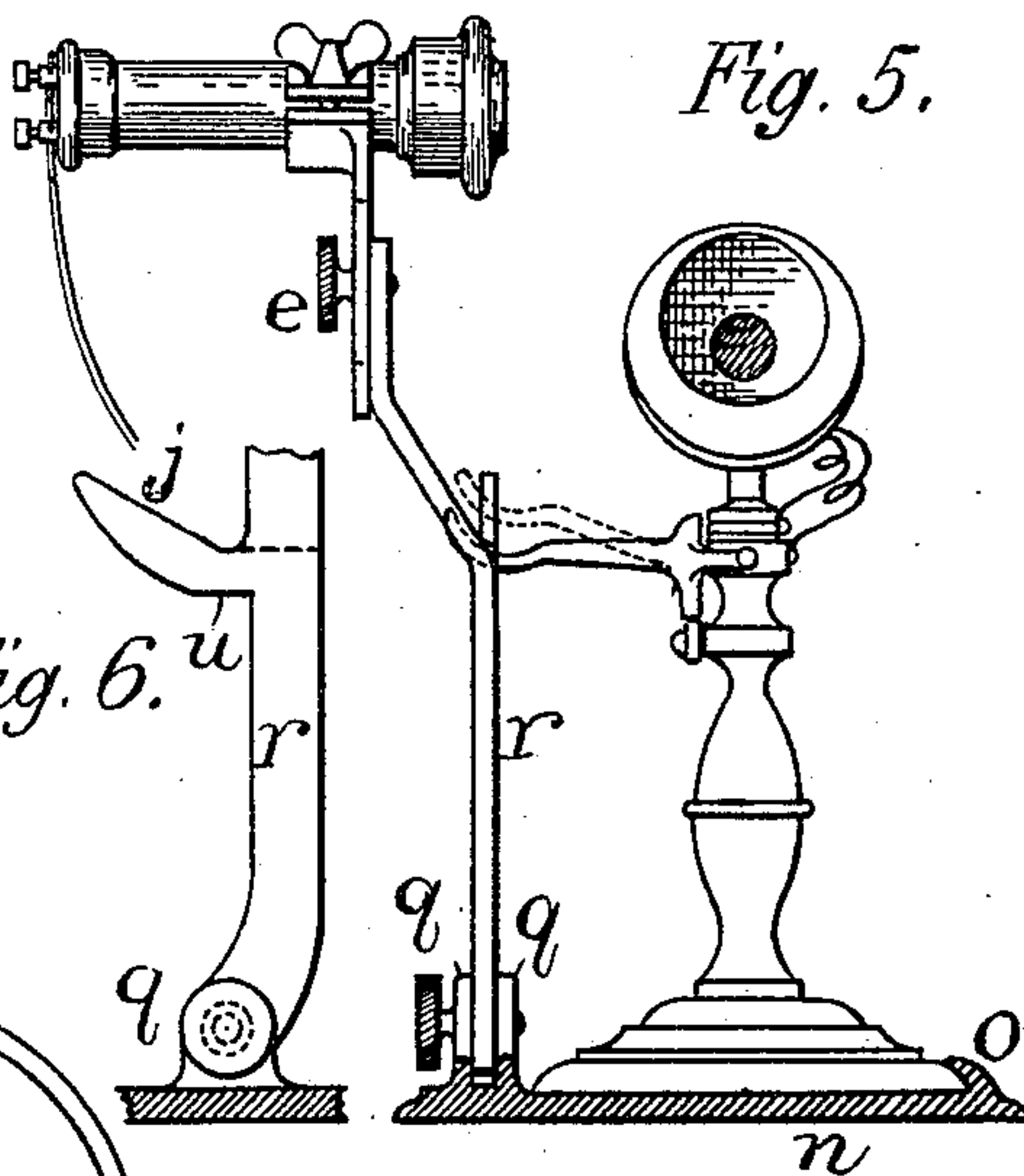
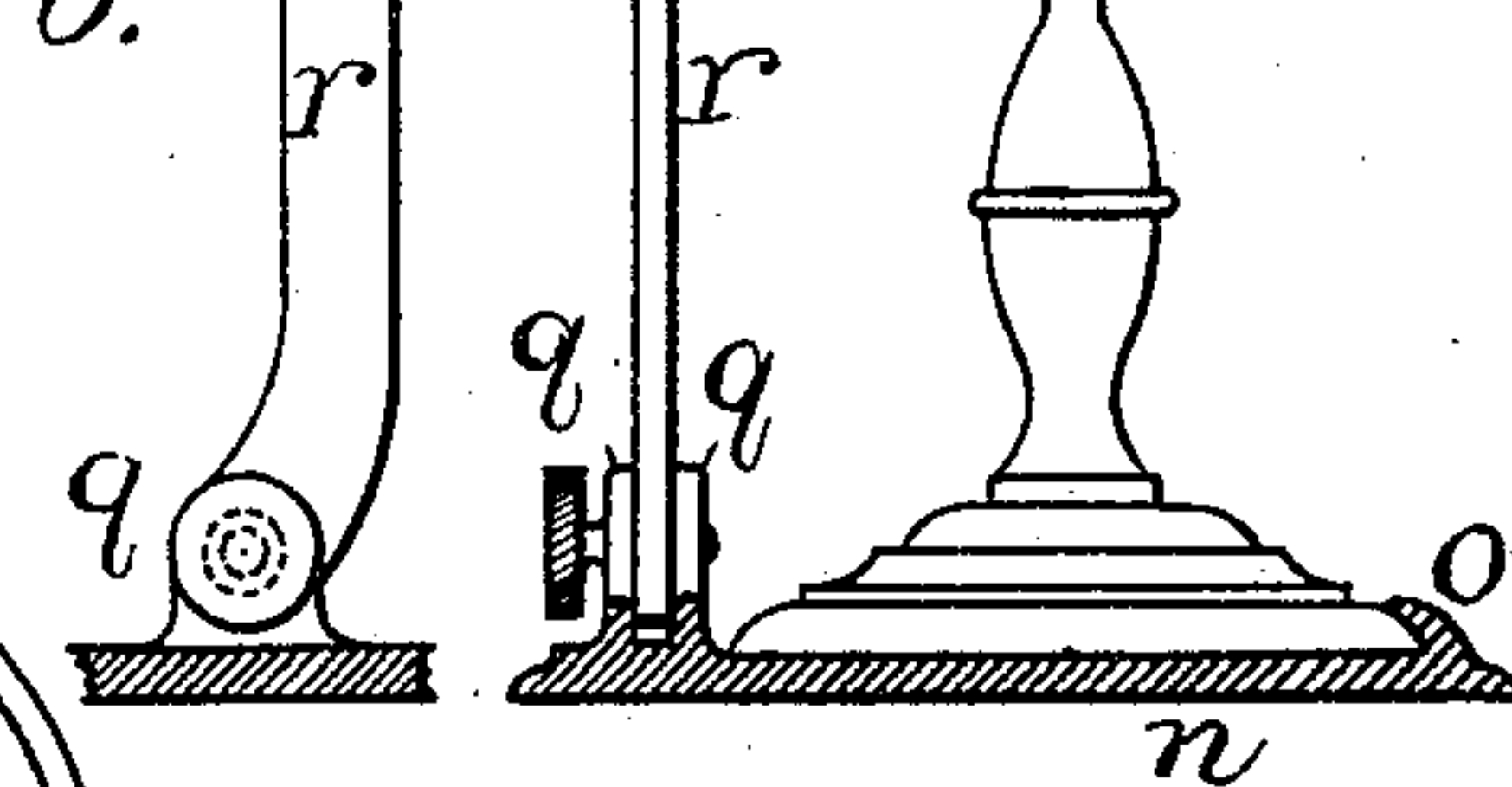


Fig. 6.



Witnesses:
E. M. Howatson.
R. M. Bingham

Inventors:
Walter Reed
Edward M. Cox
By, J. J. Geisler
Attorney.

UNITED STATES PATENT OFFICE.

EDWARD M. COX AND WALTER REED, OF PORTLAND, OREGON.

ADJUSTABLE ARM FOR SUPPORTING TELEPHONE-RECEIVERS.

SPECIFICATION forming part of Letters Patent No. 681,408, dated August 27, 1901.

Application filed November 20, 1900. Serial No. 37,139. (No model.)

To all whom it may concern:

Be it known that we, EDWARD M. COX and WALTER REED, citizens of the United States, and residents of Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Adjustable Arm for Supporting Telephone - Receivers, of which the following is a specification, reference being had to the accompanying drawings as a part thereof.

The object of our invention is to provide the telephone instrument commonly in use with an attachment or contrivance which will hold the receiving instrument in convenient position to the ear, so that one may converse through the telephone without being obliged to hold such receiver with one hand. As instances of conveniences which such contrivances will relieve it may be mentioned that holding the receiver to the ear for any length of time or at frequent intervals is quite a tiresome exertion. Then one is liable to be called to the telephone just at the moment one hand is engaged in holding some papers, and if the conversation requires the taking down of memoranda such papers will have to be laid down in the first place, which may cause their misplacement or derangement, and, besides, having both hands free to take down memoranda while conversing is in itself an appreciable convenience. Such attachment or contrivance is to be in the form of an adjustable arm, whereby the receiver would be permanently supported and such arm be movable to an up-and-down position and be adapted to operate the lever of the calling and switching apparatus in substantially the same manner as is done now by "hanging up" and "taking down" again the receiver when desiring to have telephonic communication and discontinuing the same again. We accomplish our object by the contrivance illustrated in the accompanying drawings above referred to.

In such drawings, Figure 1 is a front elevation showing the adjustable arm as supporting the receiver, the arm being raised as it will be when the telephone is not in use, having operated the lever *a* of the telephone instrument, so as to disconnect the same, as would be done by hanging up the receiver from the forked extremity of such lever. Fig. 2 is a

side elevation corresponding to Fig. 1, the adjustable arm also being shown in dotted outline as adjusted to the position in which it will be placed when using the telephone—that is to say, bringing the receiver to the ear while the mouth is talking into the transmitter. Fig. 3 is an enlarged side elevation of the clamp *f*, with which the extremity of the arm is provided for holding the receiver, as illustrated in Figs. 1 and 2. Figs. 4 and 4^a show a front elevation and side elevation, respectively, the former view being partially in section, of a modification in the construction of the clamp whereby to secure the receiver as mentioned. In this, such clamp, as here shown, instead of being rigidly affixed on the extremity is so affixed by means of a ball-and-socket joint as to cause the same to automatically adjust itself to the ear, as will be more fully explained in the body of this specification. Fig. 5 shows our invention so modified that the same is adapted to be affixed to a telephone instrument of the style commonly known as a "desk-stand." Fig. 6 is a partial side elevation of the adjustable arm modified to the use shown in Fig. 5. Fig. 7 is a plan of the base by which our adjustable arm is pivotally supported when designed to the use shown in Fig. 5; and Fig. 8 is a detail of construction, being a transverse section of the adjustable arm, representing the same as a casting, wide but thin, with exterior ribs for the purpose of giving strength.

The letters designate the parts of our invention referred to in the description thereof.

As our invention is designed to be an attachment capable of being applied to the general styles of telephone instruments, and as such vary somewhat in their dimensions we have deemed it expedient to make the arm for supporting the receiver, as mentioned, adjustable in length. To this end the same comprises two parts *b c*, the upper being provided with a slot *d*, through which extends a thumb-screw *e*, adjustable in a threaded perforation in the outer end of the member *c*. The member *b* carries on its extremity a clamp *f*, comprising two jaws, the lower of which is an integral part of the member *b* and the upper having a knuckle *g*, by which it engages a projecting lip of the lower jaw, and the opposite extremities of the jaws being provided

with perforated lips, the perforation in the lower lip being threaded to engage the thumb-screw *h*. The lower member *c* of the arm is curved forwardly and laterally, as observable from Figs. 1 and 2, so as to clear the telephone instrument and bring the lug *j* on the member *c* in operative position with respect to the projecting lever *a* of the calling and switching apparatus.

The member *c* of the jointed arm is jointly affixed to the telephone instrument by the means illustrated in Figs. 1 and 2 and 5 and 6, the choice of means depending on the character of the instrument to which our invention is to be applied, but being substantially alike in their operative effect. In Fig. 1, representing a telephone instrument fixed to the wall, the joint of the adjustable arm comprises a socket consisting of two lugs *k*, projecting from a plate *l* and having perforations registering with a perforation in the lower extremity of the member *c*, and the parts being operatively held together by a screw *m*. The perforation in the inner lug *k* is threaded, and by adjusting the screw *m* the joint can be caused to so operate that the adjustable arm will remain in any position in which it is set. The construction of the joint of the adjustable arm seen in Figs. 5 and 6 differs only from that described by the one seen in Fig. 1 in this respect, that the plate *l* (seen in Fig. 1) is enlarged into a base *n*, on which the standard of a desk-stand telephone instrument is to be placed, such base being provided with a fixed lug *o* and two movable lugs *p p*, adapted to clamp over the rim at the base of the standard of the telephone instrument, as shown in Fig. 5. The base *n* is best a casting, and by its weight will help to steady the desk-stand, and the portion on which are the lugs *q q* holds the stand against being tilted when pressing the ear against the receiver. The perforated lugs *q q* represent similar lugs, as *k k*. (Seen in Fig. 1.)

The lower member *r* of the movable arm (seen in Figs. 5 and 6) is substantially like the member *c* of Figs. 1 and 2, being only modified to such extent as required in order to conform to the difference in proportions and arrangement of the desk-stand telephone instrument. The upper member of the adjustable arm and the clamp carried thereby (shown in Figs. 5 and 6) is like the same parts shown in Figs. 1, 2, and 3.

The lower member of the movable arm may be a casting of the style shown in cross-section in Fig. 8, broad and thin, with laterally-projecting ribs *s s* for the purpose of giving strength and rigidity.

Instead of using the screw *m* the lower member of the movable arm may be pivotally secured in between the lugs of its supporting-socket by means of the common rivet-pin. Other structural modifications may also be made in regard to the construction of our contrivances, which we do not believe it nec-

essary to specify, as they are a mere matter of mechanical detail.

The projecting lug *j*, with which the lower member of the movable arm is provided, is so constructed as to easily slide over and recede again from the lever *a* of the calling and switching apparatus. The best view of such lug *j* is obtained in Fig. 6, and it will be observed that the under side is curved at the extremity and flat near its root or place where it merges into the lower member, so as to be adapted to its specified work. The function of such lug is to depress the lever *a* when the arm is turned up to disconnect the telephone and to release such lever again when the arm is turned down for the purpose of using the telephone in substantially the same manner as such operations are performed by hanging up and taking down the receiver. As the position of the receiver when held to the ear by hand is generally slightly oblique or slanting with respect to the head of the user, a like adjustment of the receiver to the ear may be deemed desirable when supporting the receiver on an adjustable arm, as contemplated in our invention. To meet this requirement, we have devised the modification illustrated in Figs. 4 and 4^a. In this modified construction it will be observed the clamp *f* is not rigidly carried on the extremity of the upper member of the adjustable arm, but is secured to such extremity by means of a ball-and-socket joint *t*, thus allowing the receiver some limited motion and placing the same in such condition that when the adjustable arm is pulled down and the ear placed against the receiver the latter will automatically adjust itself to the position of the head of the user of the telephone, and thereby remove the inconvenience which may be experienced where the receiver is rigidly held and cannot so accommodate itself.

The operation of our invention is obvious from the description given above.

What we claim, and desire to secure by Letters Patent, is—

1. The combination with a telephone instrument provided with a projecting switch-arm, a pivoted receiver-supporting lever consisting of an inner and outer member, the outer member being slotted, a fastening device passing through said slot and secured in the inner member, and a cam-shaped lug on said inner member, said lug engaging and holding down the switch-arm of the telephone when the receiver-supporting arm is thrown up against the telephone, substantially as described.

2. The combination with a telephone instrument provided with a projecting switch-arm, a pivoted receiver-supporting lever consisting of an inner and outer member, the outer member being slotted, a fastening device passing through said slot and secured in the inner member, and a lug projecting from the inner member, said lug being beveled on its engaging face and merging into a

flat surface or seat portion which is adapted to engage the switch when the receiver-supporting lever is thrown up against the telephone, substantially as described.

5 3. The combination with a telephone instrument provided with a switch-arm, a pivoted receiver-supporting lever, a clamp on the outer end of said lever for securing a receiver, said clamp consisting of a section hav-
10 ing a seat therein and laterally-projecting flanges, and a second section having a seat which registers with the seat in the first-named section and laterally-projecting flanges one of which is turned in and adapted to clamp one
15 of the flanges of the first-named section, means for locking the two sections together, and means on the lever for engaging the switch when the said lever is thrown up against the telephone, substantially as described.

20 4. The combination with a telephone instrument provided with a switch-arm, a pivoted receiver-supporting lever composed of two members, one of said members being adjustable with relation to the other, means for
25 securing said members together, a clamp on the outer end of said lever for securing a receiver, said clamp consisting of a section having a seat therein and laterally-projecting flanges, and a second section having a seat
30 which registers with the seat in the first-named section and laterally-projecting flanges one of which is turned in and adapted to clamp one of the flanges of the first-named section, means for locking the two sections together, and
35 means on the lever for engaging the switch when the said lever is thrown up against the telephone, substantially as described.

5 5. The combination with a telephone instrument provided with a switch-arm, a piv-
40 oted receiver-supporting lever composed of two members, one of said members being adjustable with relation to the other, means for securing said members together, a clamp on the outer end of said lever for securing a
45 receiver, said clamp consisting of a section having a seat therein and laterally-projecting flanges, and a second section having a seat which registers with the seat in the first-named section and laterally-projecting flanges
50 one of which is turned in and adapted to clamp one of the flanges of the first-named section, means for locking the two sections together, and a lug projecting from the lever for engaging and holding down the switch
55 when said lever is thrown toward the tele-

phone, said lug being beveled on its engaging face and provided on its under side with a flat surface to form a seat to rest on the switch, substantially as described.

6. The combination with a telephone in- 60
strument provided with a switch-arm, a pivoted receiver-supporting lever consisting of an inner and outer member, the outer member being slotted, a fastening device passing
65 through said slot and secured in the inner member, said outer member being divided, a ball-and-socket joint at the junction of said divided ends, a sectional clamp for holding the receiver at the end of said outer mem-
70 ber, and a cam-shaped lug projecting from the inner member which is adapted to engage and hold down the switch when the lever is thrown toward the telephone, substantially as described.

7. The combination with a telephone in- 75
strument provided with a switch-arm, a lever composed of an inner and outer member, a slot-and-pin connection between said members for lengthening and shortening said lever, a clamp-arm connected to the outer mem- 80
ber of the lever by a ball-and-socket joint a two-part clamp at the outer end of said arm for holding a receiver, a lug on the inner member, said lug being beveled and having a flattened portion to form a seat which is 85
adapted to engage and hold down the switch-arm when the lever is thrown in a vertical position, substantially as described.

8. An attachment for a telephone instru- 90
ment to hold the receiver thereof, comprising a lever composed of an inner and outer member, means for extensibly securing the latter to the former, a two-part clamp attached to the outer member, a ball-and-socket joint be- 95
tween the clamp and the outer connection between the members of said lever, a lug projecting from the lever which is adapted to engage the switch of the telephone when
100 said lever is thrown up in a vertical position, and means for jointly pivoting and holding the lever to the telephone, substantially as described.

In testimony whereof we have hereunto af-
fixed our signatures, in the presence of two
witnesses, this 1st day of November, 1900. 105

EDWARD M. COX.
WALTER REED.

Witnesses:

T. J. GEISLER,
W. H. MACRUM.