

No. 723,742.

PATENTED MAR. 24, 1903.

D. W. SHIEK.
TELEPHONE RECEIVER SUPPORT.
APPLICATION FILED OCT. 21, 1901.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1

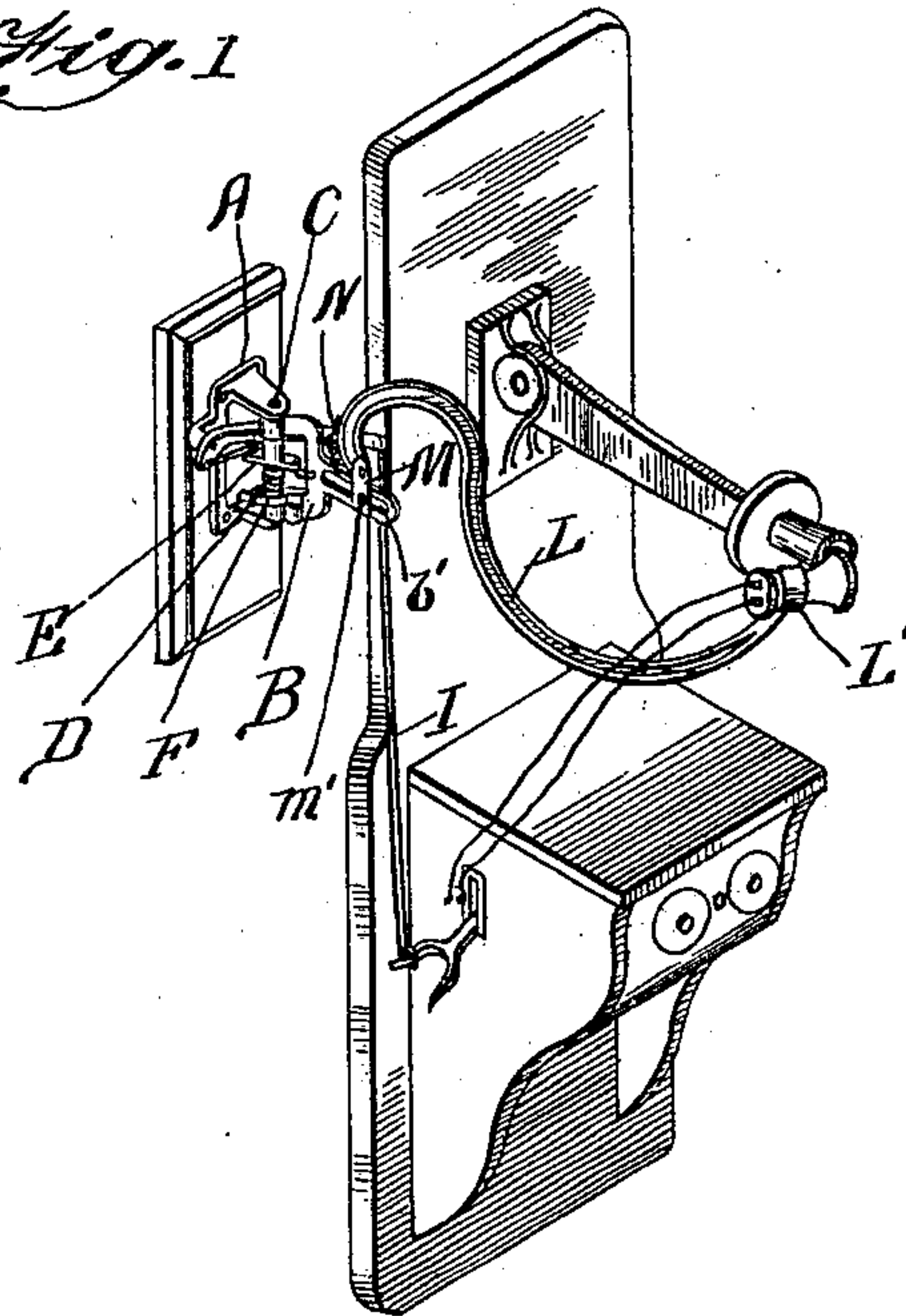
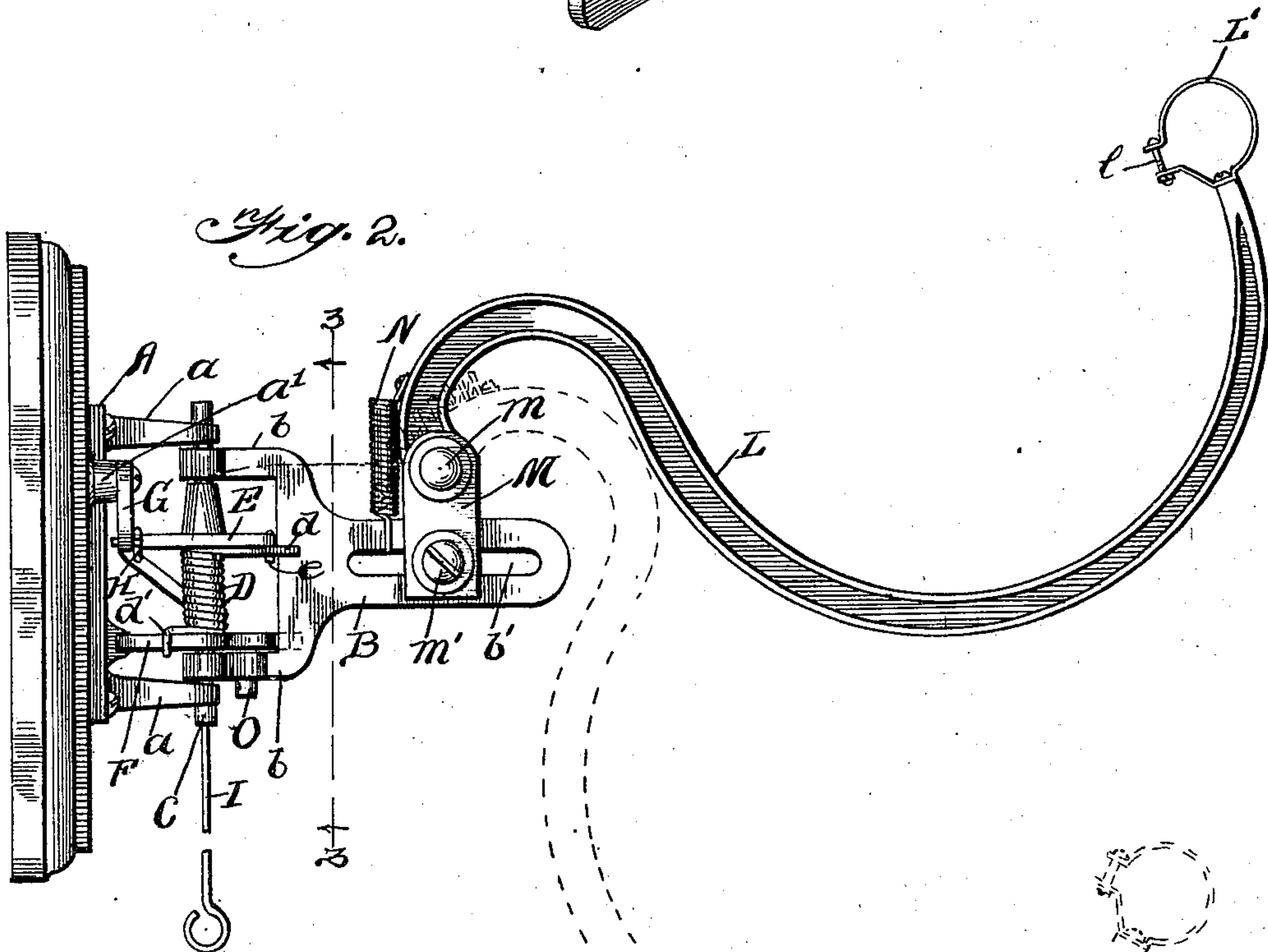


Fig. 2.



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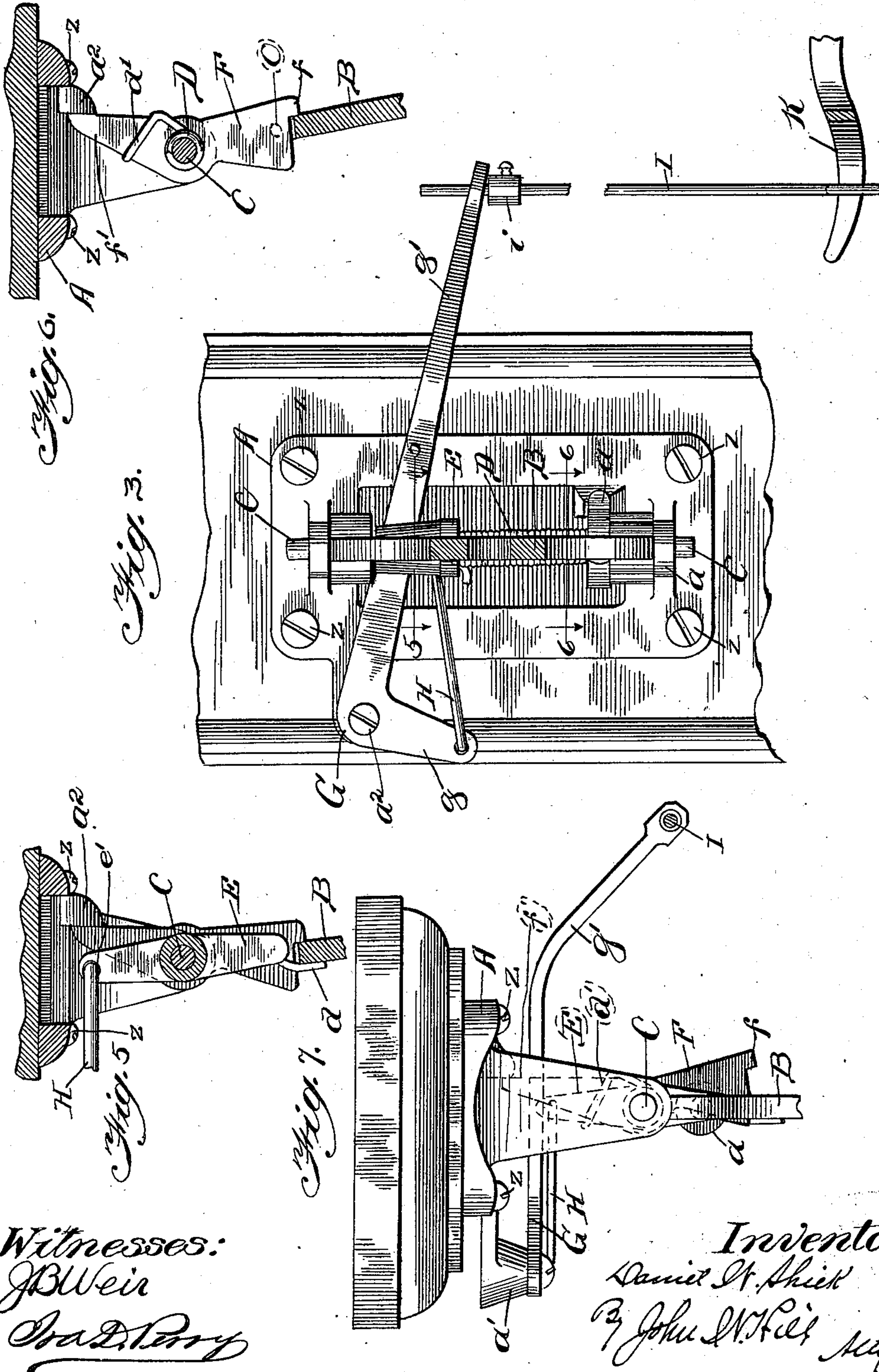
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4 SHEETS—SHEET 2.



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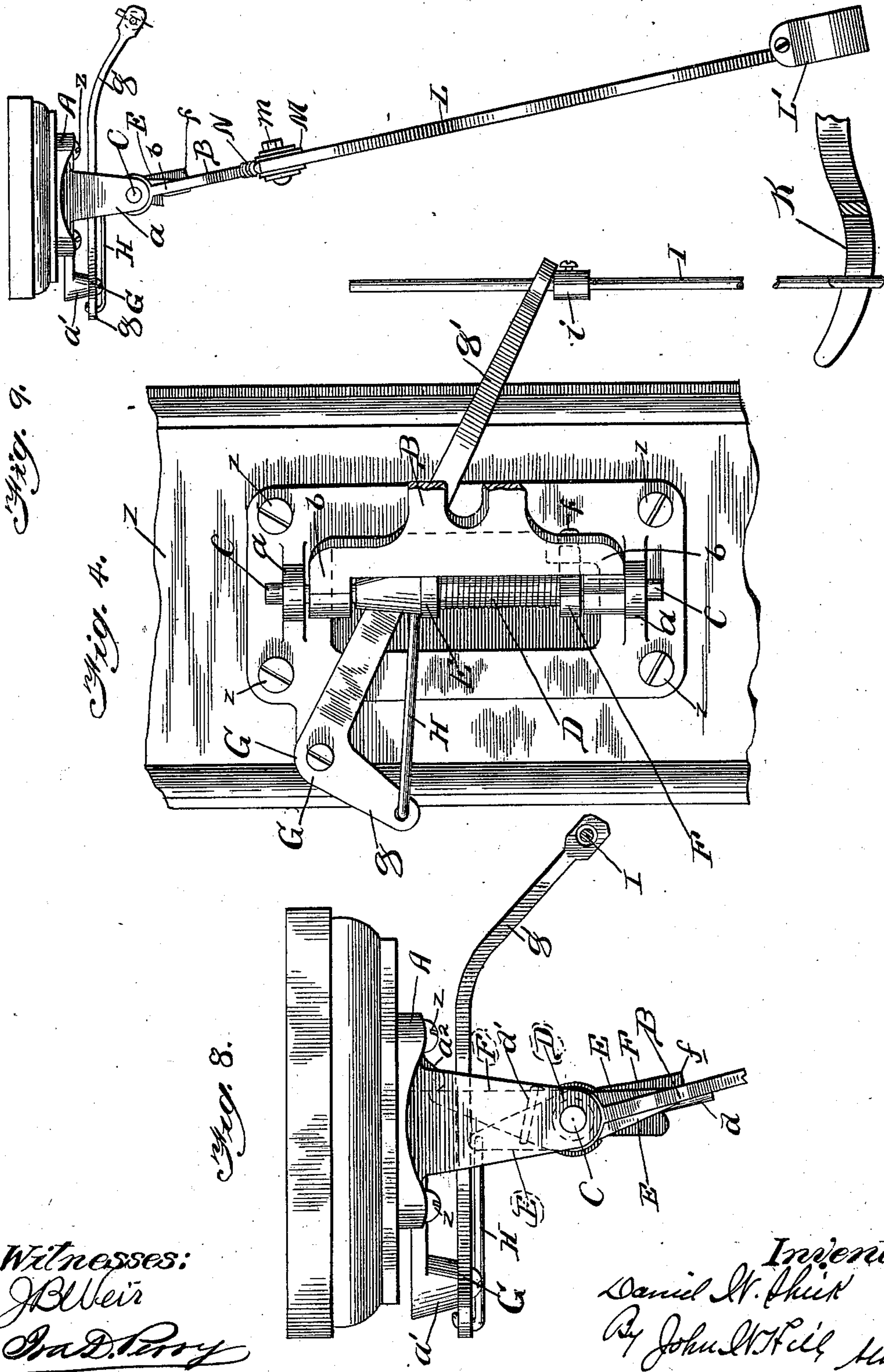
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

Fig. 13.

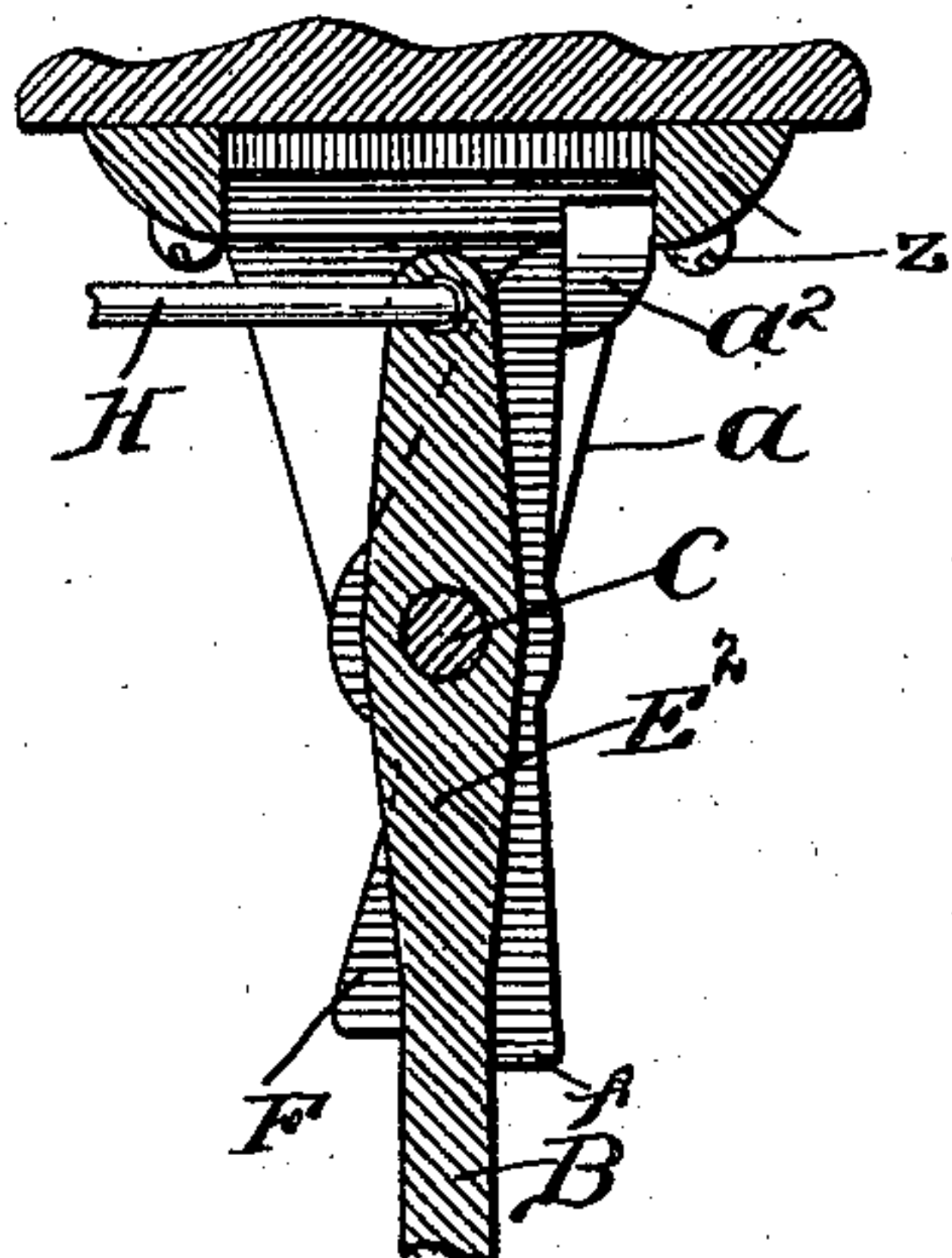


Fig. 12.

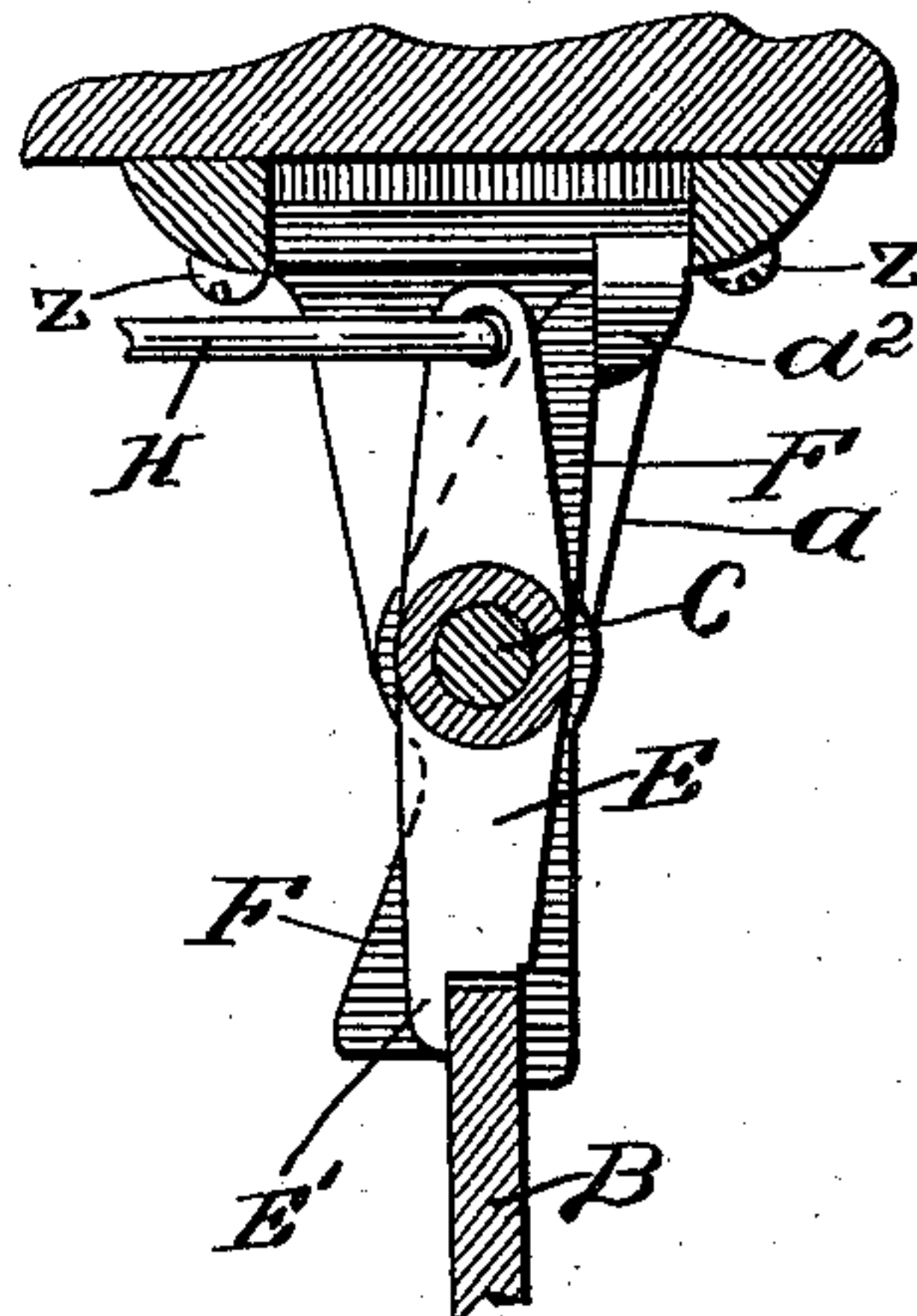


Fig. 10.

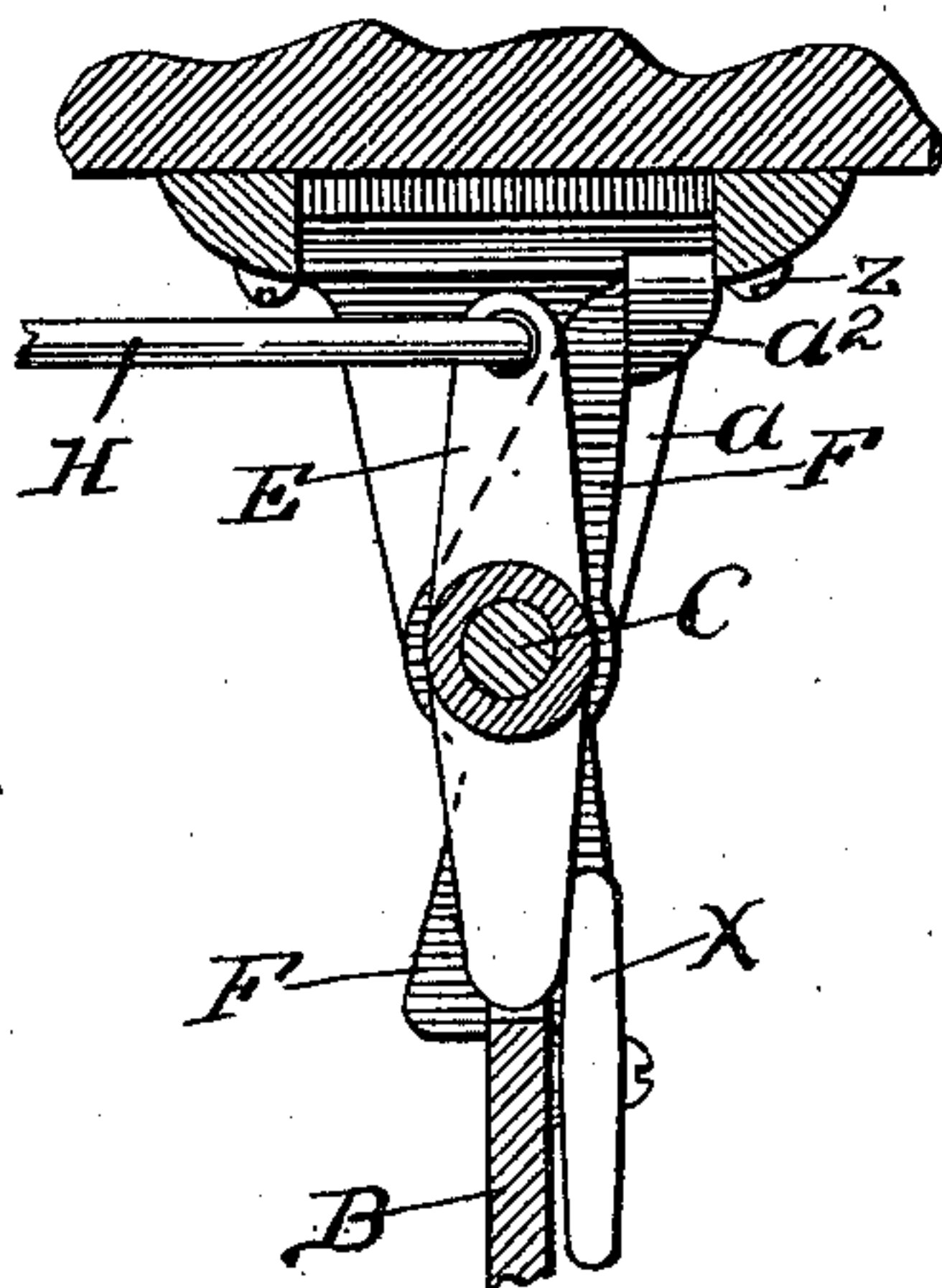
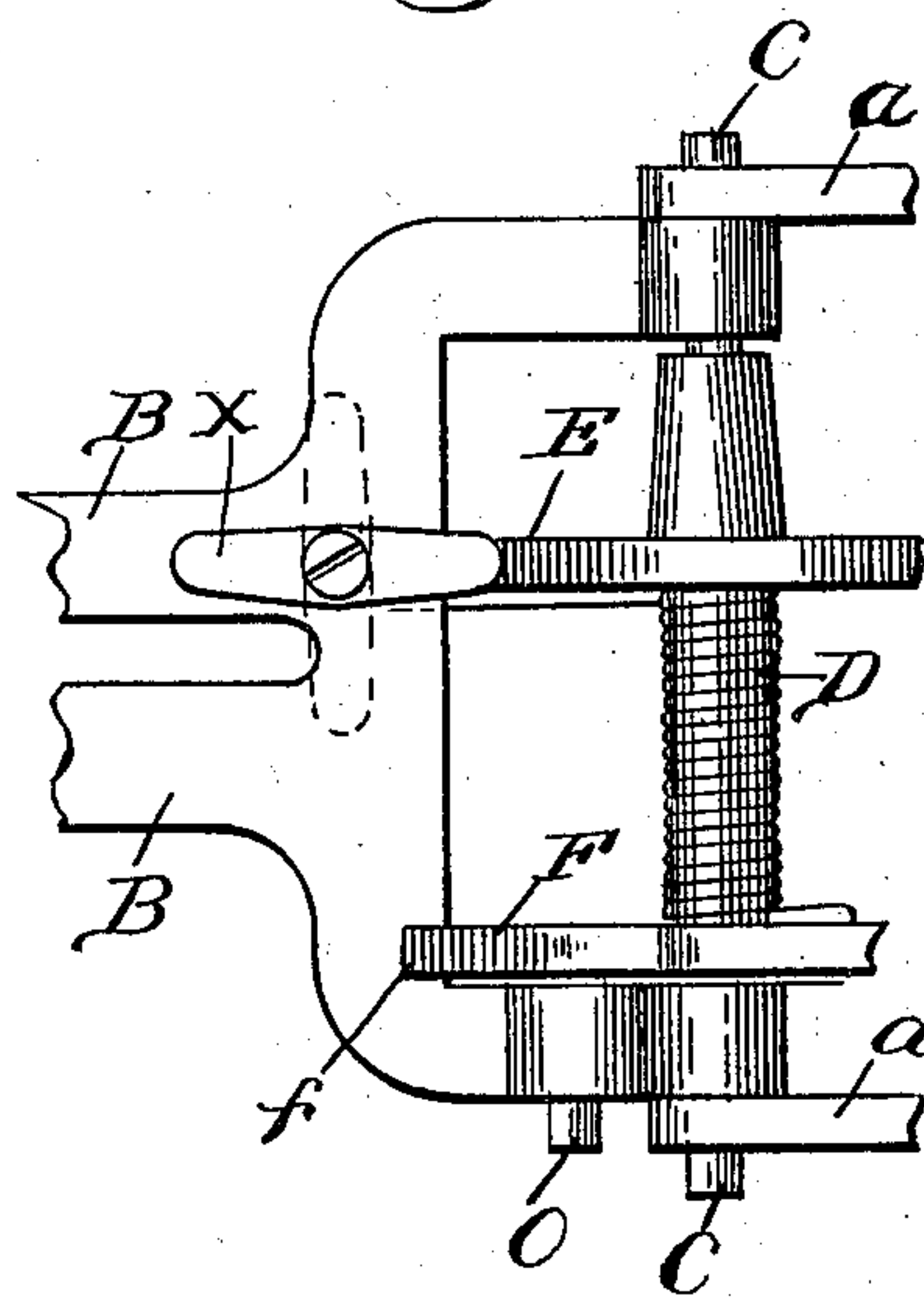


Fig. 11.



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UNITED STATES PATENT OFFICE.

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TELEPHONE-RECEIVER SUPPORT.

SPECIFICATION forming part of Letters Patent No. 723,742, dated March 24, 1903.

Application filed October 21, 1901. Serial No. 79,342. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. SHIEK, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Telephone-Receiver Supports, of which the following is a description.

The object of my invention is to provide a simple and efficient support for telephone-receivers of economical construction and adapted to yieldingly hold the receiver with a gentle pressure against the ear, whereby a slight movement of the head will automatically produce the closing and opening of the talking-circuit.

To this end my invention consists in the novel construction, arrangement, and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a perspective view of my improvement as applied to a telephone. Fig. 2 is a side elevation of my improvement. Fig. 3 is a section of my improved device in line 3 3 of Fig. 2. Fig. 4 is a similar view showing the parts in a slightly-different position. Fig. 5 is a section in line 5 5 of Fig. 3. Fig. 6 is a similar section in line 6 6 of Fig. 3. Figs. 7 and 8 are partial top-plans of my improvements, showing parts in the different positions illustrated in Figs. 3 and 4, respectively. Fig. 9 is a top plan of my improvement. Fig. 10 is a top plan of a modification providing means for permitting the lever K to be operated by its own mechanism or positively operated by the connection with the lever G. Fig. 11 is a partial side elevation of the same. Fig. 12 is another modification in which the lever E serves to positively operate the lever G, and hence the controller K; and Fig. 13 is another modification in which the lever E is integral with the arm B, providing for the positive operation of the parts before referred to.

In the preferred construction shown in the drawings, A represents a plate adapted to be secured to a wall or board Z by any preferred means—as, for example, by screws or bolts z.

The plate A is provided with outwardly-extended arms *a a*, constructed to pivotally support the movable parts, as shown.

a' is a lug or equivalent means constructed to pivotally support the arm or lever G.

B is an arm or lever pivotally supported between the arms *a a* by means of the pin C. As shown, the part B is provided with extending arms *b b*, preferably adapted to be positioned between the arms *a a* and to have positioned between them the levers E F, pivotally supported near their centers upon the pin C, as shown.

D is a coil-spring or its equivalent preferably secured to the pin C and having one end, *d*, extended to a point in the path of the movement of the lever B, and the other end, as *d'*, extended in the path of and engaged with the pivoted lever F.

G is a bell-crank lever provided with an arm *g*, downwardly extending, and an arm *g'*, outwardly extending and adapted to be connected with the receiver-support of the telephone. As shown, the rod I serves as the intermediate connection between the telephone-receiver support or controller K and the arm *g'*. The adjustable collar *i* on the rod I permits the adjustment of the parts.

E is preferably a lever loosely supported near its center upon the pin C, so as to rotate freely thereon, and having one end adapted to loosely engage the end *d* of the spring D and having the other end constructed to engage with rod H. As shown, an aperture *e'* is formed in the end of the rod E for the end of the rod H, which rod extends from the end of said lever to the arm *g* of the bell-crank lever G. (See Figs. 2, 3, and 5.)

Referring to Fig. 5, it will be seen that as the arm B is moved to the left the end *d* of the spring will be moved away from the end *e* of the lever E, permitting an unrestricted movement of the lever upon the pin C, except as controlled by the rod H. The bell-crank lever G is so formed that this action permits the ordinary support or controller K to move upward in the usual manner, lifting the end *g'* of the bell-crank lever G. When, however, the arm B is in its normal position, (shown in Fig. 3,) the end *d* of the spring is in forcible contact with the end *e* of the le-

ver E and holds the same in a rigid position, transmitting this function also to the bell-crank lever G, forcing the rod I and the connected controller K downward and holding the same in such position. The lever F is also loosely supported near its center on the pin C, as shown in Fig. 6, and is provided upon one end with an extending shoulder f , in line with the movement of the arm B, and upon the other end f' with an extension constructed to contact with a shoulder a^2 , formed upon the plate A. The end d' of the spring D engages with the end f' of the said lever and tends to normally hold the end f' in contact with the said shoulder a^2 . The function and office of this lever is to hold the arm B normally in a central position, as shown. The arm B is preferably provided with a slot b' , and the extension L is connected therewith by straps M, secured thereto by a bolt m' . This construction permits a longitudinal adjustment of the arm L to fit the device to telephones of different forms. The arm L is provided with a counterbalancing-spring N or its equivalent, so that it may be readily adjusted to any desired height. The free end of the arm L is provided with any preferred form of clasp L' , adapted to be secured to a telephone-receiver.

The mode of operation is as follows: The device is secured to the wall or support by the side of the telephone, as shown in Fig. 1, and the arm L is adjusted so that when placed to the ear of the operator the mouth will be located at a proper distance from the telephone. The operator using the telephone places his ear to the receiver and gently pressing thereon the arm L B is pressed away from the telephone, at the same time forcing the end d of the spring D away from the extension e of the lever E and releasing said lever from the action of said spring. This action relieves the bell-crank lever G from the force of the spring, when the ordinary spring of the receiver support or controller K will lift the arm g and the bell-crank and complete the connection of the telephone with the central office in the usual manner. By this means the telephone-receiver is held in proper position against the ear of the operator, who has both hands free to take any notes that may be necessary. When the operator leaves the telephone, he simply removes his ear from the receiver, when the spring D will force the arm toward the telephone and in contact with the lever E, thus pushing upon the arm g of the bell-crank G and forcing downward the arm g' thereof, together with the rod I and controller K, breaking the connection of the telephone with the central office. If the operator should hastily leave the telephone, the arm L B might be forced by the action of the spring D around in violent contact with the telephone. The lever F prevents this action, as the arm B connects with the extension f of the lever F, which is yieldingly retained in normal position

against the shoulder a^2 by means of the end d' of the spring D, as clearly shown in Fig. 6.

It is obvious that in some cases, as in the usual practice, it is desirable to hold the wire for a limited time, and this may be facilitated by means of an independent improvement. (Clearly shown in Figs. 2 and 6.) As there shown, a longitudinally-movable pin O is positioned in the lower arm b of the lever B, so that as the said lever B is moved away from the extension f of the end of lever F the pin O may be raised to contact with the lever F and hold the parts in the position in which they were when the ear of the operator presses said arm in a position to operate the device. Upon moving the arm a slight distance farther gravity will cause the loose pin O to fall to the position shown in Fig. 2, which releases the parts, as before stated.

One strikingly-important advantage secured by the construction thus far described is the fact that the controlling-support K may be operated by its own mechanism without obstruction and in the usual manner. This advantage is secured by the construction and mode of operation of my lever E, spring D, and bell-crank lever G, which may be partially balanced, as shown. It is obvious, however, that this function may be sacrificed by securing a positive connection of the end of lever E with the arm B—such, for example, as shown in Figs. 10, 11, 12, and 13. As shown in Figs. 10 and 11, a button X or equivalent means is secured to the arm B in such a position that it will insure a positive movement of the lever E when the arm B is pressed back. The button may be turned, as shown in dot line, Fig. 11, so as to remain out of contact with the lever, and the device so constructed may be operated either way at will. As shown in Fig. 12, the lever E is provided with an extending part E' , adapted to contact with the arm B as it is operated. In the form shown in Fig. 13 a part E^2 , corresponding with the lever E, is formed integral with the arm B and moves therewith. The forms shown in Figs. 12 and 13, while satisfactorily operated, are not preferred for the reasons previously set forth.

Where in the claims I refer to the lever E, I wish to be understood as meaning the lever thus designated or its equivalent for the purpose named, whether said lever be wholly disconnected from the arm B, as shown in the first nine figures of the drawings, arranged to positively connect therewith, as shown in Figs. 10, 11, and 12, or formed as an integral part of said arm. It is obvious that other immaterial modifications may be made without departing from the spirit of my invention. Hence I do not wish to be understood as limiting myself to the exact form shown.

After having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the kind described, an arm

pivotally supported to oscillate in a horizontal plane and constructed to support a telephone-receiver, and means for resiliently holding the said arm in its normal position, in combination with a stop carried by the arm and arranged to temporarily hold said arm against the tension of its holding means; substantially as described.

2. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and means for resiliently holding the arm in its normal position, in combination with a lever E, pivotally supported at a point between its ends in line with the pivots of the arm and controlled by the movement of said arm, and intermediate mechanism controlled by the lever and constructed to extend from the lever to the circuit-controller of a telephone, substantially as described.

3. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and a spring arranged to hold the arm in its normal position, in combination with a pivotally-supported lever E, normally retained in its position by said spring, and constructed to be released from the action thereof by the movement of the arm, and intermediate mechanism controlled by the lever E, and constructed to extend from the lever to the circuit-controller of the telephone, substantially as described.

4. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and a spring D, arranged to hold the arm in its normal position, and having its end *d* extended as described, in combination with a lever E pivotally supported at a point between its ends and adapted to move in a horizontal direction, normally retained in position by the end *d* of said spring, and intermediate mechanism controlled by the lever E, and constructed to extend from said lever to the circuit-controller of the telephone, substantially as described.

5. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and an approximately vertically disposed coiled spring D, arranged to hold the arm in its normal position and having its end *d* extended as described, and a bell-crank lever G, having its arm *g'* extended to control the circuit-controller, of a telephone, in combination with a lever E pivotally supported at a point between its ends, normally retained in position by the end *d* of the spring extended in line with the movement of said arm, and a rod H, extending from the end of the lever E, to the end *g*

of the bell-crank lever, substantially as described.

6. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and means for resiliently holding the arm in its normal position, in combination with a lever E, controlled by the movement of said arm, intermediate mechanism controlled by the lever E, and constructed to extend from the lever to the circuit-controller of a telephone, and means for cushioning the reverse movement of the arm beyond its normal position and returning it into its normal position, substantially as described.

7. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and means for resiliently holding the arm in its normal position, in combination with a lever E, controlled by the movement of said arm, intermediate mechanism controlled by the lever E, and constructed to extend from the lever to the circuit-controller of a telephone and resilient means acting as a cushion to prevent the reverse movement of the arm beyond its normal position, substantially as described.

8. In a device of the kind described, a part adapted to be secured in a fixed position, an arm pivotally supported thereby and constructed to support a telephone-receiver, and means for resiliently holding the arm in its normal position, in combination with a lever E, controlled by the movement of said arm, intermediate mechanism controlled by the lever E, and constructed to extend from the lever to the circuit-controller of a telephone, and the lever F, resiliently maintained in its normal position and provided with an extension against which the arm in its reverse movement contacts, substantially as described.

9. In a device of the kind described, the pivotally-supported arm B, in combination with a lever F, resiliently maintained in its normal position and having one end extended to contact with the arm B, on its reverse movement, when it reaches its normal position.

10. In a device of the kind described, the arm B, pivotally supported to oscillate in a horizontal plane, provided with an extension L, pivotally supported thereon to oscillate in a vertical plane, and means for adjusting the parts relatively to one another, in combination with means for counterbalancing the extension L comprising a spring interposed between and connected at its ends respectively to the arm B and the extension L, substantially as described.

11. In a device of the kind described, the arm B pivotally supported to oscillate in a horizontal plane, provided with an extension L, pivotally supported thereon to oscillate in

a vertical plane, and means for adjusting the parts relatively to one another, in combination with a counterbalancing-spring M, interposed between and connected at its ends respectively to the arm B and the extension L, substantially as described.

12. In a device of the kind described, the arm, pivotally supported to oscillate in a horizontal plane, constructed to support a telephone-receiver, and means for resiliently holding the said arm in its normal position in combination with a stop arranged to temporarily hold said arm in a retracted position, at will, substantially as described.

13. In a device of the kind described, the pivotally-supported arm B, the spring D having its end *d* extended in the path of the movement of said arm, the lever F having a part extended to contact with the reverse side of said arm B when on the reversed movement, the end *d'* of said spring being arranged to resiliently hold said lever F, in its normal position, and a stop O, constructed to be positioned behind the lever F, when the arm B, is retracted to hold the same in such retracted position, substantially as described.

14. In a device of the kind described, the part A, adapted to be secured in a fixed position, the arm B, pivotally supported thereto and constructed to support a telephone-receiver, the lever E, spring D and lever F, in combination with the bell-crank lever G,

and rod H, extending from one end of the bell-crank lever to the lever E, substantially as described.

15. In a device of the kind described, a pivotally-supported arm B provided with a slot *b'* in combination with the extension L, secured thereto by a bolt or pin *m'* positioned within said slot, and a counterbalancing-spring N, extending from the arm L to the arm B, substantially as described.

16. In a device of the character described, an arm pivotally supported to oscillate in a horizontal plane and constructed to support a telephone-receiver, and means for resiliently holding the said arm in its normal position, in combination with a vertically-movable stop arranged to temporarily hold said arm in a retracted position, at will; substantially as described.

17. In a device of the kind described, an arm supported to oscillate in a horizontal plane and constructed to support a telephone-receiver, and means for retaining the said arm in one position, in combination with a stop for temporarily holding the arm against the tension of said retaining means; substantially as described.

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