(No Model.) 2 Sheets—Sheet 1.

H. KONIGSLOW.

ATTACHMENT FOR TELEPHONES.

No. 405,420. Patented June 18, 1889.

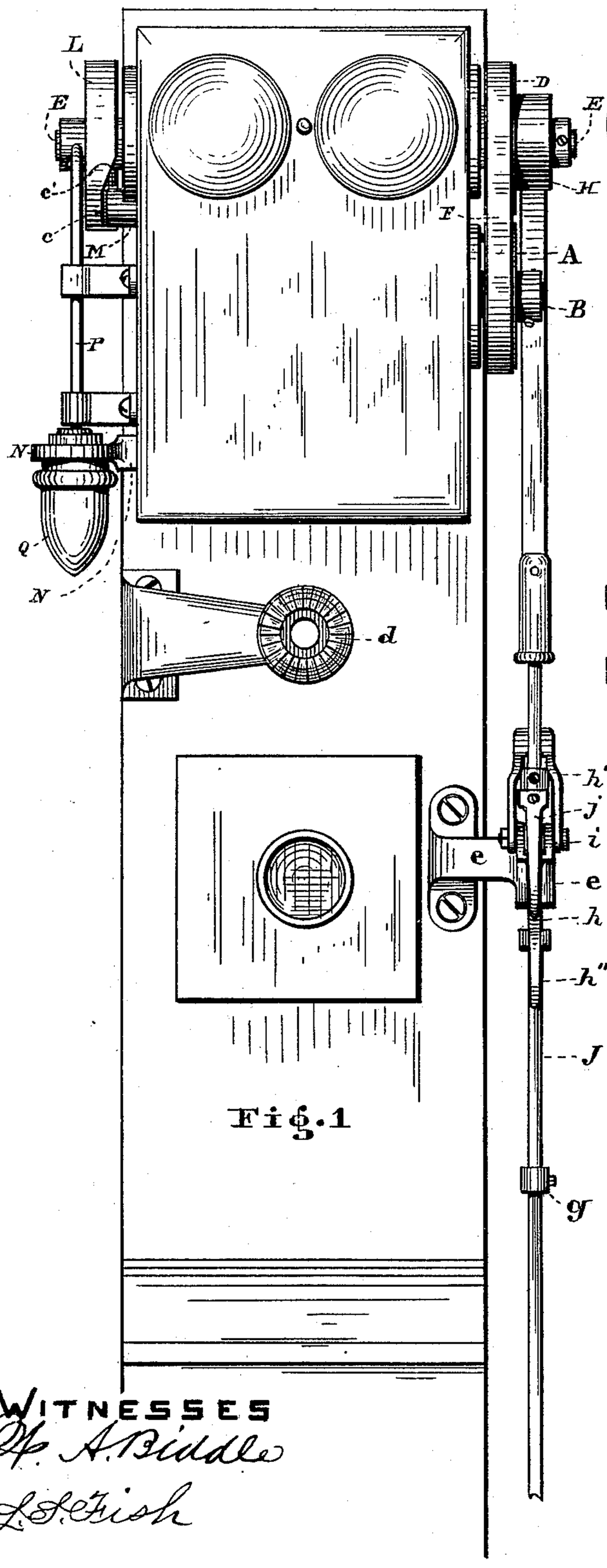

Fig. 1

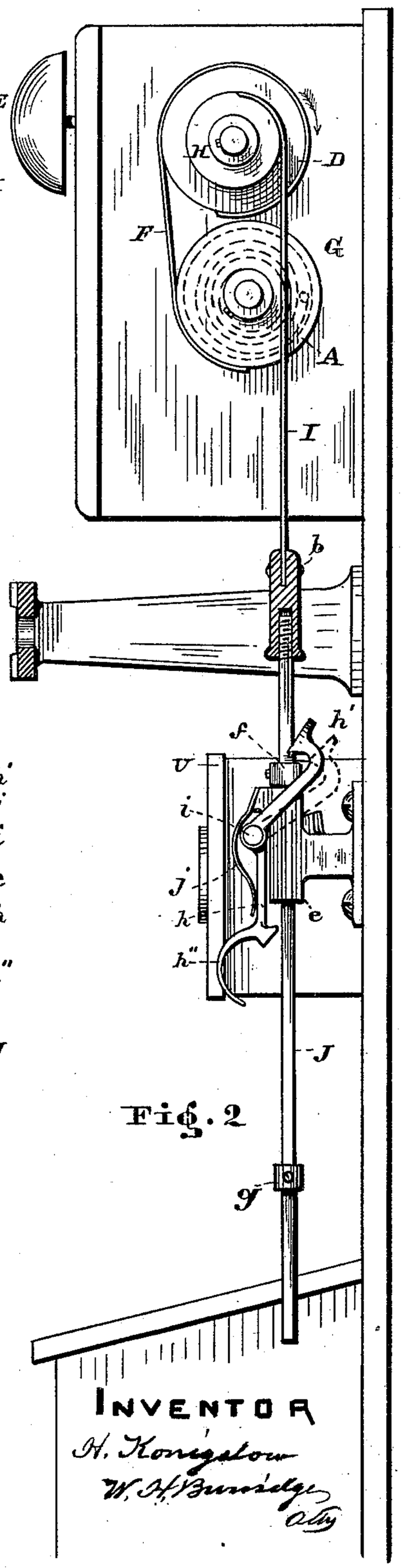

Fig. 2

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Atty

(No Model.) 2 Sheets—Sheet 2.

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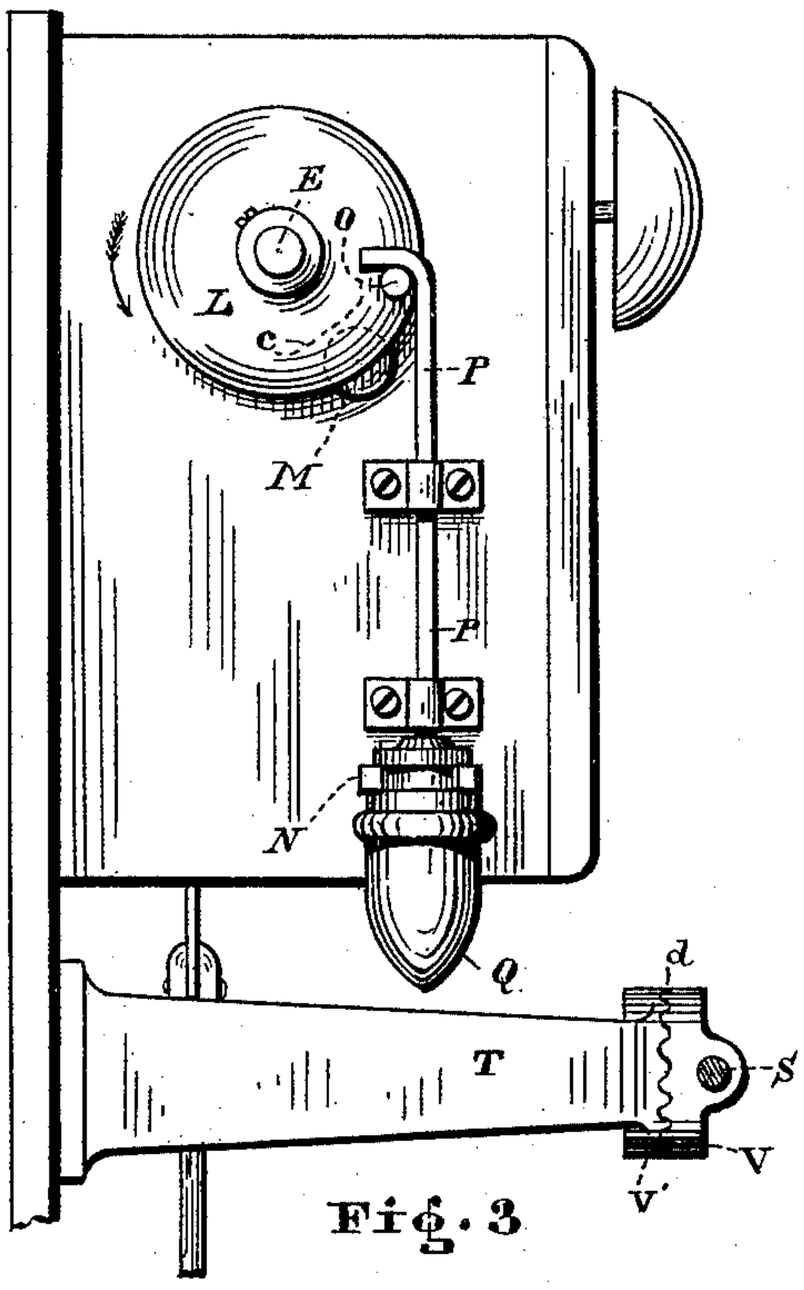


Fig. 3

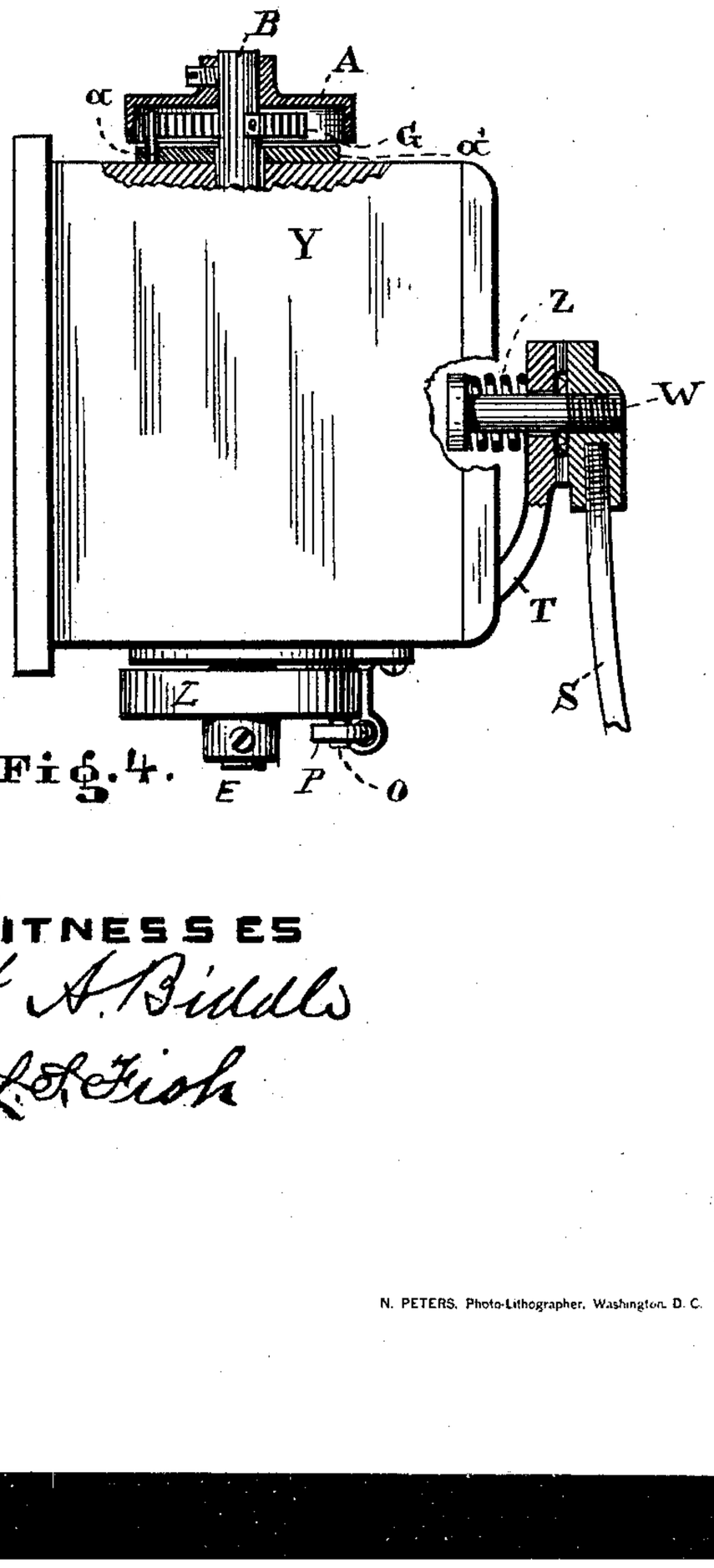


Fig. 4.

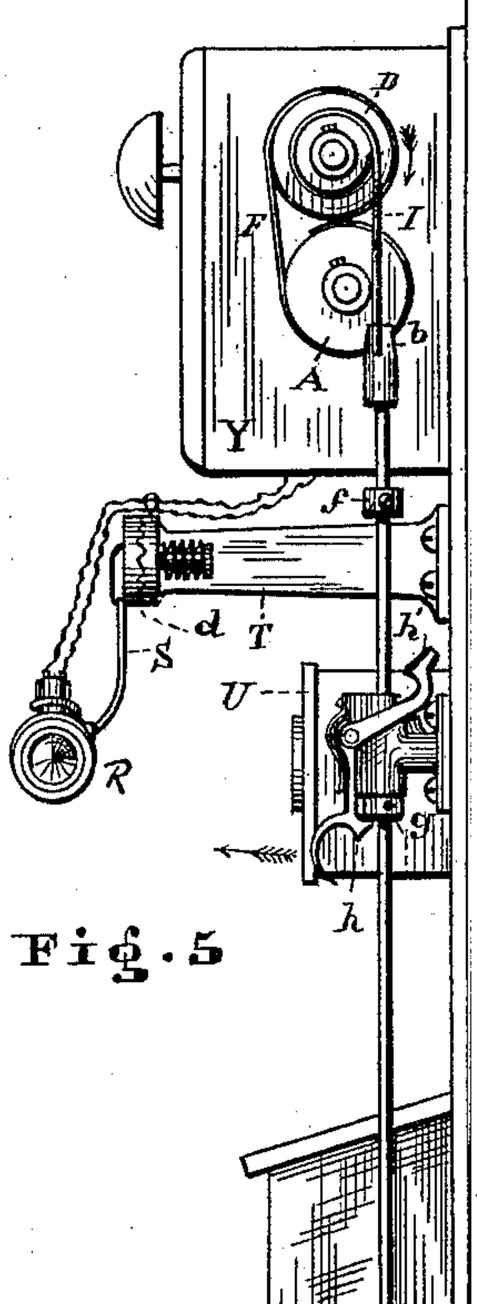
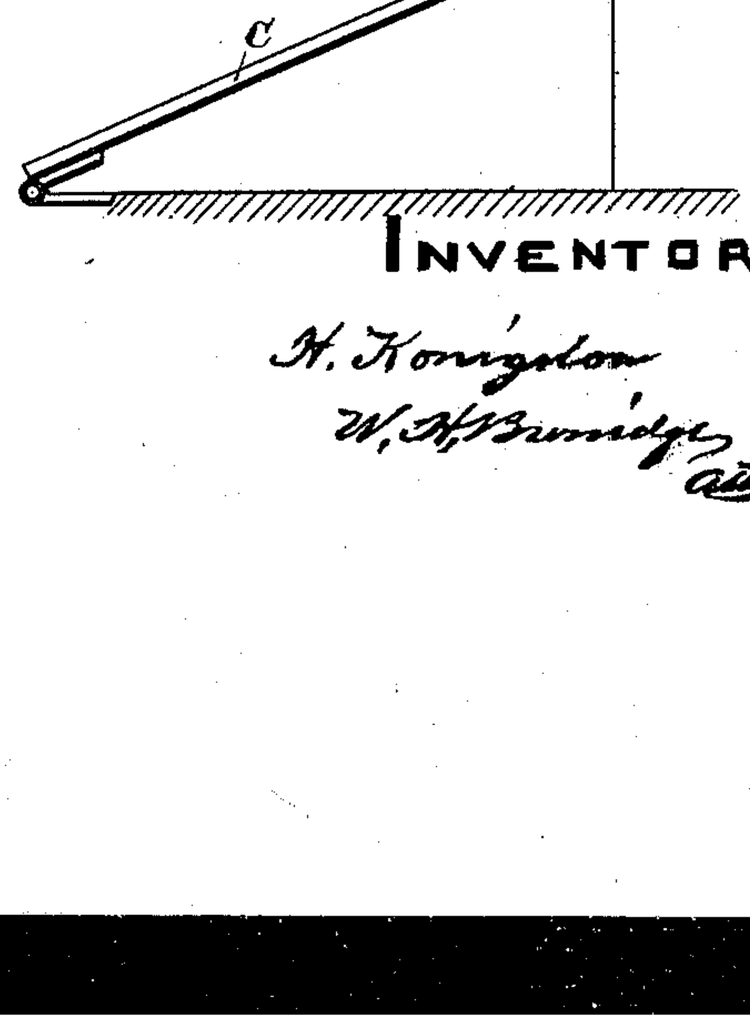


Fig. 5



WITNESSES

H. A. Biddle

L. L. Fish

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UNITED STATES PATENT OFFICE.

HERMANN KONIGSLOW, OF CLEVELAND, OHIO.

ATTACHMENT FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 405,420, dated June 18, 1889.

Application filed January 7, 1889. Serial No. 295,711. (No model.)

To all whom it may concern:

Be it known that I, HERMANN KONIGSLOW, a resident of Cleveland, in the county of Cuyahoga and State of Ohio, a citizen of the United States, have invented certain new and Improved Attachments for Telephones; and I do hereby declare the following to be a full, clear, and complete description thereof.

My invention relates to telephone attachments; and the improvement consists in certain appliances to facilitate the use of telephones.

It is well known that in the use of the telephone as heretofore employed several manipulations are essential before the instrument is in operative voice-connection. With my improvement these manipulations are reduced to a simple and easy condition, as is hereinafter fully shown in the specification and annexed drawings, in which—

Figure 1 is a face view of a telephone provided with the improvements above referred to. Fig. 2 is a right-hand side elevation of the same. Fig. 3 is a left-hand side view of the magneto-bell only and a part of the improvements seen from that side. Fig. 4 is a plan view of Fig. 3, and Fig. 5 is a side elevation of the telephone and the improved appliances.

Like letters of reference refer to like parts in the drawings and specifications.

For illustration, the appliances above referred to are attached to a telephone which primarily required the turning of a crank-handle on one side, an inward pressure of a knob on the other side of the magneto-bell, and the aid of one arm or hand to remove and hold the receiver to the ear before communication of speech could be obtained. To accomplish this requires time and a wearisome position, as the receiver must be held for some time in communication for an answer. Having finished the conversation, the receiver then has to be replaced, said knob again depressed, and the crank-handle turned in order to put the telephone in ready condition for subsequent use.

With my improvements one step upon a treadle in connection with the ringing apparatus is all that is required to enable a person to be in telephonic communication in answer to a call. The moment said treadle is depressed the apparatus is automatically reconnected with the exchange-office and ready for use.

The means by which this improved arrangement is accomplished consists of the following-described mechanism, which is operated in the manner hereinafter described.

The pulley A, Figs. 1 and 2, is attached to the shaft B of the ringing apparatus in place of the crank-handle, which is set in direct connection with the treadle C by means of the pulley D of the shaft E. Wound around a part of the circumference of each of these pulleys is a flexible band, chain, or cord F, as seen in Fig. 2, and inside of the pulley A is arranged the coiled spring G, one end of said spring being attached to the shaft B and the other to a fixed stud *a*, located within the area of the pulley A and secured to the plate *a'*, as seen in Fig. 4, which figure shows a horizontal section of said pulley and spring.

With the extension H of the pulley D is connected another flexible band I, Figs. 1 and 2. At *b* said band is coupled to the connecting-rod J of the treadle C, Fig. 5. Thus by stepping upon said treadle the rod J will draw on the band I and cause the pulley D to turn in direction of the arrow, Fig. 5. The rotation of the pulley D is imparted to the pulley A by means of the band F, and also to the disk L by means of the shaft E, to which said disk is secured at the other side of the magneto-bell casing. The disk L performs two functions, which are the "pressing in" of the knob M and the lifting of the lever N, Figs. 1 and 2.

When the apparatus is not in use, the knob M is extended into a depression of the inner face side of the disk L, as seen at *c*. The interchange from this depression *c* to the actual inner face side of the disk is gradual, as seen at *c'*, to enable an easy yielding of said knob when the disk L is turned by stepping on the treadle C. This depression *c* extends also far enough around the circumference of the disk L to receive and thereby relieve the pressure on the knob as soon as the treadle is drawn to its lower position, in which it is to remain as long as conversation is maintained. At the close of ringing of the apparatus the lever N is lifted upward, as seen in Figs. 1 and 3, by

means of the stud O of the disk L, Figs. 1, 2, and 4, and the rod P, connecting with said lever. The upper end of said rod is bent toward said stud O, so as to be within reach of said stud when turning in direction of the arrow to lift the lever, as before stated, which forms a connection with the telephone at the opposite end. With the rod P is connected a weight Q, which causes the descent of the lever N as soon as the telephone is disused and the foot is removed from the treadle. In telephones as heretofore used this movement of the lever N was effected by the removal and replacement of the receiver R, for which now independent means are provided for supporting the same in the required position, according to the height of the person using the telephone. As seen in Fig. 5, the receiver R is connected to the arm S of the clutch-bracket T, and thus supported in front of the transmitter U. The arm S is adjustable, in connection with the clutch-bracket T, by means of the corrugated faces *d* of the clutch-bracket and the plate V, to which the arm S is secured. The bolt W extends through said bracket-plates, and is threaded into said plate V, as seen in Fig. 4, in which figure a part of the box Y is broken away to enable a full view of said connection. The spring L, interposed between the head of said bolt W and the rear of the clutch-bracket T, draws the corrugated faces of the plate V into those of the bracket-plate V′, as seen in Figs. 1, 3, and 5, thus retaining the arm S in whatever position it is set. A slight pull on said arm, however, will allow of adjustment in the desired position when so required. In Figs. 1 and 2 said arm and plate V are removed from the bracket to enable a full view of the corrugations *d*. In connection with the rod J is arranged a locking device, as seen in Figs. 1 and 2, which comprises the guide *e*, the collars *f* and *g*, and the hooks *h* and *h′*, said hooks being hinged to the front side of the guide by means of a pin *i* and the spring *j*, acting upon the hook *h*. The collar *g* is so set as to be under control of the hook *h*—that is, before the treadle can be drawn downward, a slight pull in direction of the arrow 1 on the handle *h″* is necessary to relieve the collar *g* from engagement of the said hook *h*.

When the telephone is at rest, as seen in Fig. 5, the lower hook *h* is pressed in under the collar *g* by the action of the spring *j*, and in order to make a call said hook *h* must first be drawn from the collar before the treadle can descend. Thus the telephone cannot ring off if a person should accidentally step on the treadle until said treadle is released, as stated. The collar *f* affords engagement with the hook *h′*, if so desired. Ordinarily said hook *h′* will drop in a position by its own gravity, (indicated by the dotted lines in Fig. 2,) for the reason of being loosely hinged to the pin *i*. In that position the collar *f* will pass by the hook. Thus on withdrawing the foot from the treadle C no obstruction is presented by the collar *f* to the raising of the treadle, owing to the resiliency of the spring in the pulley A; hence the telephone will ring off automatically, and the liability of leaving it without ringing off is avoided. Should it, however, become necessary for the person speaking to leave the telephone before finishing his communication, the hook *h′* is then drawn onto and over the collar *f*, as seen in Fig. 2. On removing the foot from the treadle the resiliency of the spring G will assure a contact of the collar *f* and hook *h′* and prevent the latter from leaving it. On returning to the telephone to continue conversation the person will again step upon the treadle, and in consequence thereof the pressure of the spring G will be removed from the hook *h′*, allowing the latter to drop in the position as shown by the dotted lines in Fig. 2.

Having closed communication, the person operating the telephone may leave it without giving any attention to the parts to insure the ringing off of the instrument for reconnection with the exchange-office. The ringing is done automatically by the action of the spring G; hence in no instance can the telephone be left unconnected, but by simply drawing the hook over the collar *f* the use of the instrument may be suspended and resumed without making connection with the exchange-office, as before stated.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a telephone, the pulley A, secured to the shaft of the magneto-bell, the pulley D, and disk L, of a shaft transversing the said bell-casing, a flexible band connecting the said pulleys, a treadle having a rod and flexible attachment with the pulley D, the disk L being arranged to control the movements of the button M and provided with means to lift the lever N, a weight Q to depress said lever, and a spring on the magneto-bell shaft to raise the treadle, constructed and arranged substantially as and for the purpose described.

2. In a telephone apparatus, the combination, with a connecting-rod, of a treadle for turning the shaft of a telephone magneto-bell, the guide *e* for said rod, the hook *h*, hinged to said guide, and the spring *j*, bearing upon said hook, and a collar attached to said rod to arrest the movement of said treadle, constructed and arranged substantially as and for the purpose specified.

3. In telephone attachments, the combination of the pulleys A and D, a band connecting said pulleys, a volute spring G within the pulley A and attached to the shaft thereof, a band I on the extension of the pulley D, for connection with the rod of a treadle, a collar *f* on said rod, the guide *e* for said rod, and the hook *h′*, arranged in relation to said collar, for the purpose described, and substantially as shown.

4. With a telephone, the combination of

the knob M, rod P, and revoluble disk L, the inner face side of said disk arranged to receive and depress the knob M, the outer face side provided with a lug O to lift the rod P and lever N, in the manner as and for the purpose described.

5. The combination, at the side of the telephone, of the knob M, rod P, and disk L, said disk having a tapering depression in the inner face side, and a lug projecting from the outer face side thereof to operate simultaneously in depressing the knob M and lifting the rod P of the lever N, substantially in the manner as described and shown.

6. With a telephone, the combination of the shaft B, the pulley A, pulley D, and treadle C, the pulley A being secured to the shaft B and the treadle C to an extension H of pulley D, the pulleys A and D connected with a band F and the pulley H with the treadle by means of the band I and rod J, constructed and arranged substantially in the manner as set forth, and for the purpose specified.

7. In combination with the shaft B, the pulleys A D, with bands F and I, connected to a treadle for turning said shaft, and a spring attached to said shaft and the side of a telephone for reverse rotation of said shaft, constructed and arranged substantially as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HERMANN KONIGSLOW.

Witnesses:

W. H. BURRIDGE,

B. F. EIBLER.