

No. 769,084.

PATENTED AUG. 30, 1904.

W. A. W. E. HJORTH.  
CONTACT FOR TELEPHONE OR LIKE CIRCUITS.

APPLICATION FILED JULY 17, 1903.

NO MODEL.

Fig. 1.

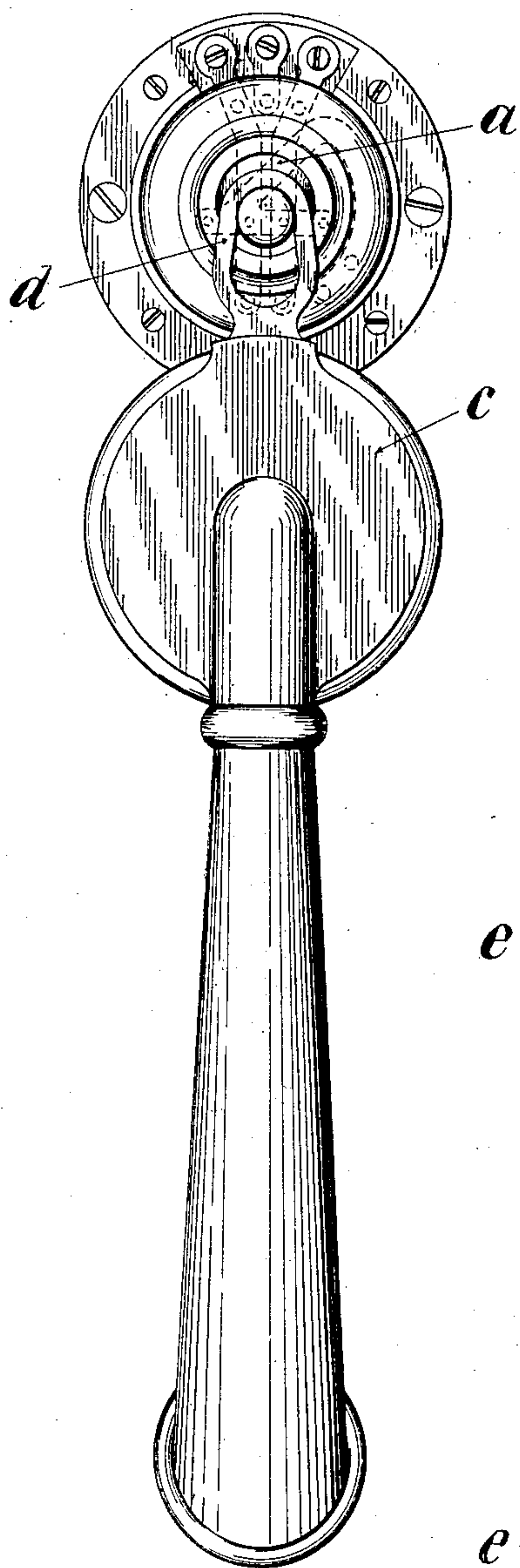


Fig. 2.

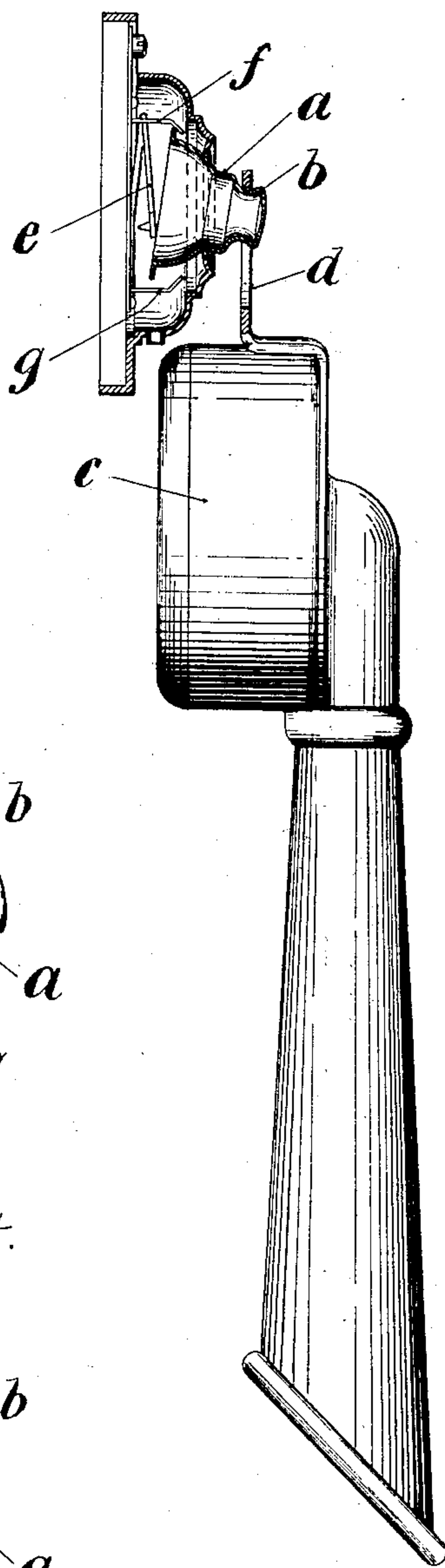


Fig. 3.

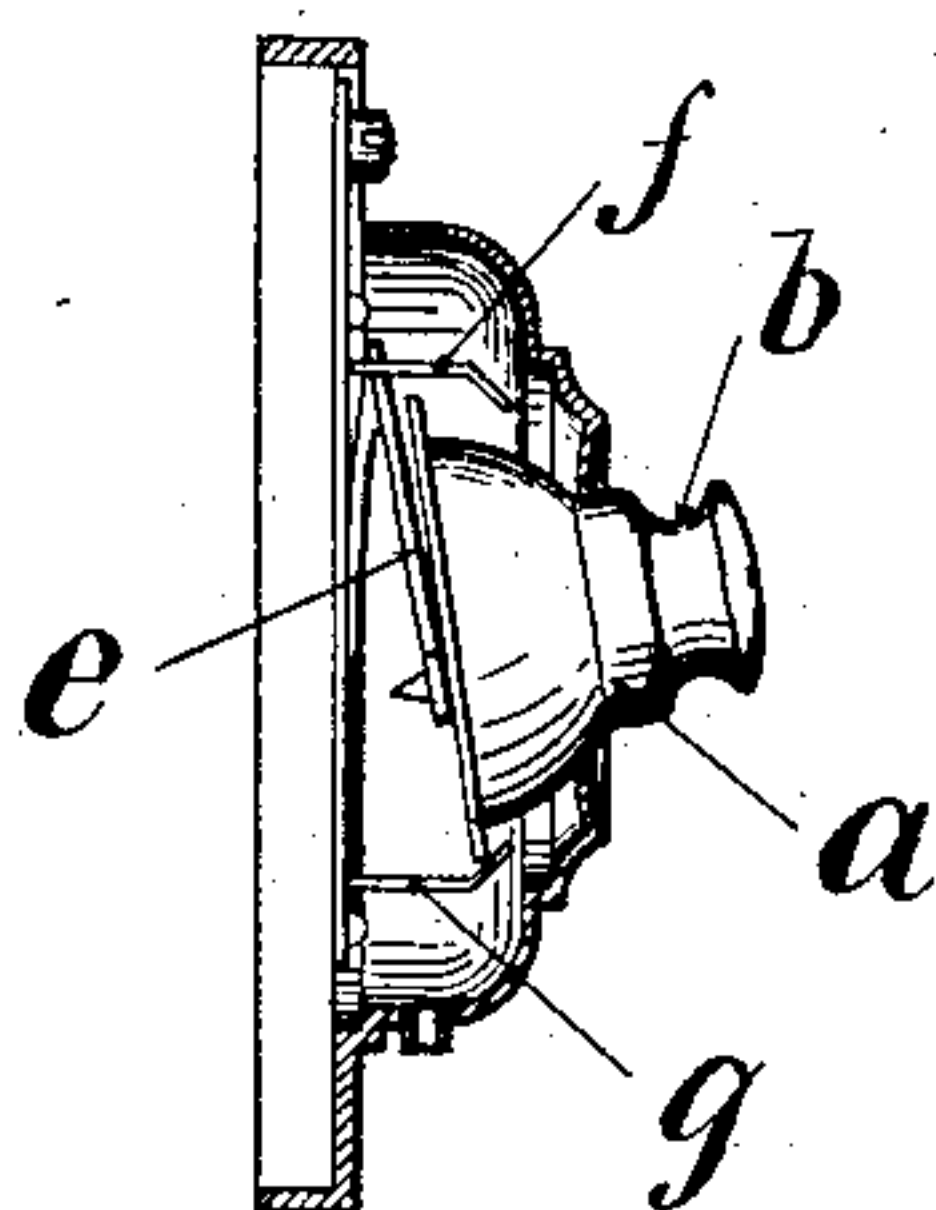
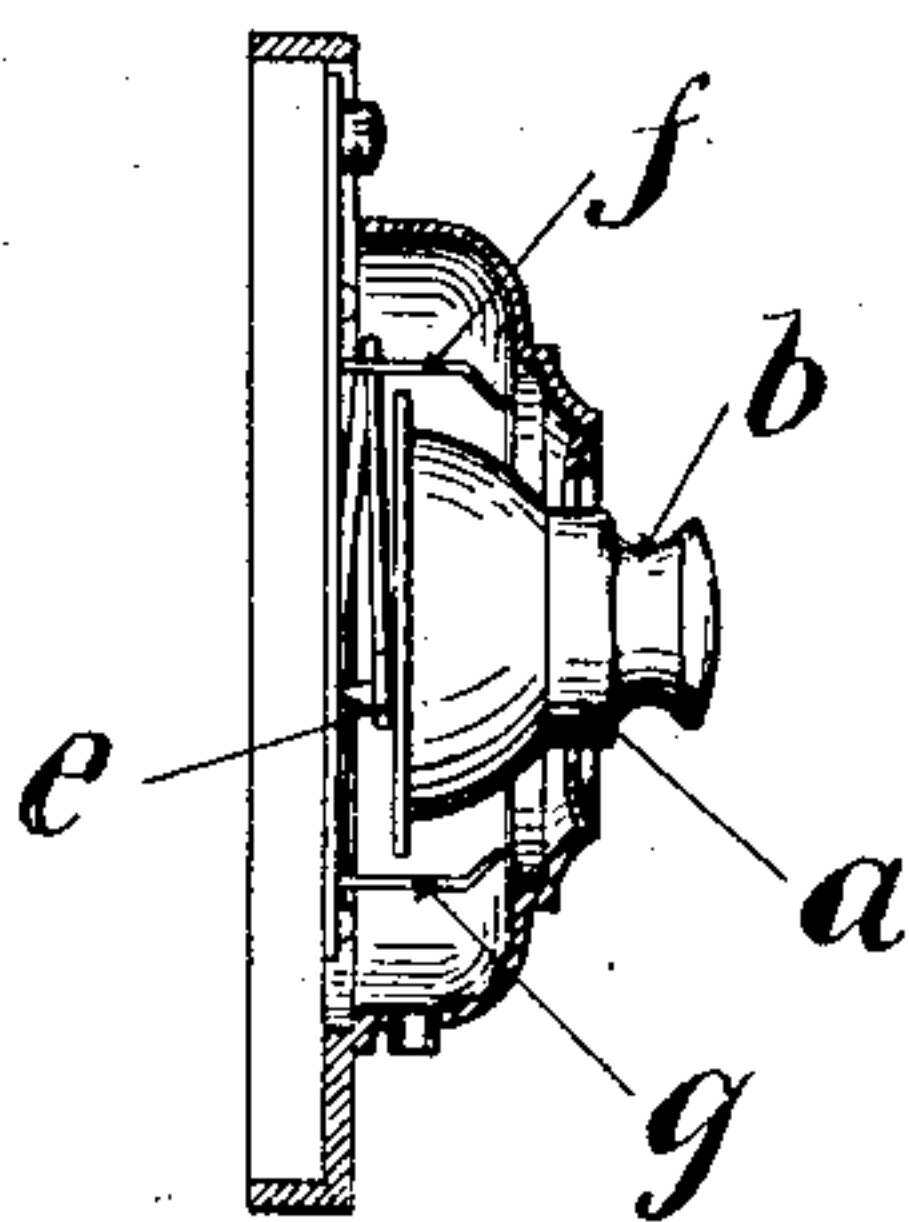


Fig. 4.



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## CONTACT FOR TELEPHONE OR LIKE CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 769,084, dated August 30, 1904.

Application filed July 17, 1903. Serial No. 165,999. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER AXEL WILHELM EMANUEL HJORTH, a subject of the King of Sweden and Norway, and a resident of Tegnérsgatan 6, Stockholm, in the Kingdom of Sweden, have invented certain new and useful Improvements in Contacts for Telephone or Like Circuits, of which the following is a specification, reference being had therein to the accompanying drawings.

In combined electric signaling and telephone systems hitherto employed the contact device for the bell or signaling device is usually provided with a special hook or fork in which the telephone-receiver is hung and which effects the necessary connections with the conductors for conversation and signaling, respectively. Proposals have been made to provide the contact device with a jack with which the conductors of the telephone are connected when the same is to be employed.

This invention relates to an improvement in such apparatus; and it consists in using the button as a support or carrier for the receiver or the combined receiver and transmitter in such a manner that when the telephone is hung on the button its position is changed and the necessary connections are effected. The construction of the button and necessary contact-pieces for attaining the said object may evidently be modified in many ways without departing from the essential spirit of the invention.

A simple and suitable construction is shown in the accompanying drawings, in which—

Figure 1 is a front view, and Fig. 2 a vertical sectional view, of a contact device with a telephone-receiver hung on the button. Figs. 3 and 4 are vertical sectional views of the push-button, showing the button in two other positions.

The button *a* is provided with a groove *b*, from which a hook *d*, fixed on the telephone-receiver, or other weight *c* (in this instance a combined receiver and transmitter is shown) can be hung, Figs. 1 and 2. The said button *a* is mounted in its casing in such a manner that it can be moved not only forward and

backward, as usual, but also into other positions which are controlled by the removal and replacing of the telephone-receiver. The said movements or others of the button *a* and its connections which can thus be effected form the essential feature of the invention. In the form shown in the drawings the button *a* is arranged to swing or move in inclined directions. This swinging is effected by the arrangement of a spherical projection on the button *a*, stamped out from a single piece and which bears against the edges of the opening in the casing, which in this manner suitably guides the button. A leaf-spring *e* in the casing bears against the back of the button and moves the same from the position shown in Fig. 2 into the position shown in Fig. 3 when the telephone is removed from the button. In said movement the button is brought out of contact with a spring *f* and into contact with a spring *g*, thus effecting an alteration of the connection with the lines. When the telephone is again hung on the button, the latter will return to the position shown in Fig. 2. The button can be moved also into the position shown in Fig. 4 for signaling or other suitable purposes.

The device operates as follows: The movement of the button forward and backward may as usual be made to open and close the circuit of a galvanic bell. The swinging of the button may be employed in such a manner that the button in one of its positions—for instance, when the telephone-receiver is removed, Fig. 3—connects the telephone with the line, and when the receiver is hung on the button the latter has such a position, Fig. 2, that the telephone is disconnected from the line and the signaling device belonging to the telephone apparatus is connected with the same. Even when the receiver is hung on the button the latter can easily be employed like an ordinary push-button for electric signaling. The invention can evidently also be applied when the transmitter is separated from the receiver, in which case the latter is hung on the button and removed from the same.



Any suitable means can be substituted for the spring *e* for bringing the button into the position shown in Fig. 3. In the drawings the shifting of the button is effected by the  
5 combined receiver and transmitter in combination with the spring *e*; but of course the button may be arranged to be shifted manually.

10 In the practical execution of the invention the arrangements shown in the drawings may be modified in many respects without exceeding the limits of the invention defined in the claims.

15 Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

20 1. A switch for electric circuits, comprising a contact device having a laterally-rocking button and provided with lateral contact-terminals in addition to the ordinary contact-terminal of the device, said button being put

into contact with the respective lateral terminals by a rocking movement of the button.

2. A switch for combined signaling and telephone systems comprising a contact device 25 having a laterally-rocking button and provided with lateral contact-terminals for the signaling device and the telephone apparatus in addition to the ordinary contact-terminal of the device, said button serving as the car- 30 rier of the telephone and being put into contact with the respective lateral terminals by the hanging up and the removal, respectively of the telephone apparatus.

In witness whereof I have hereunto signed 35 my name in the presence of two subscribing witnesses.

WALTER AXEL WILHELM EMANUEL HJORTH.

Witnesses:

ERNST SVANGVIST,  
ROBERT APELGREN.