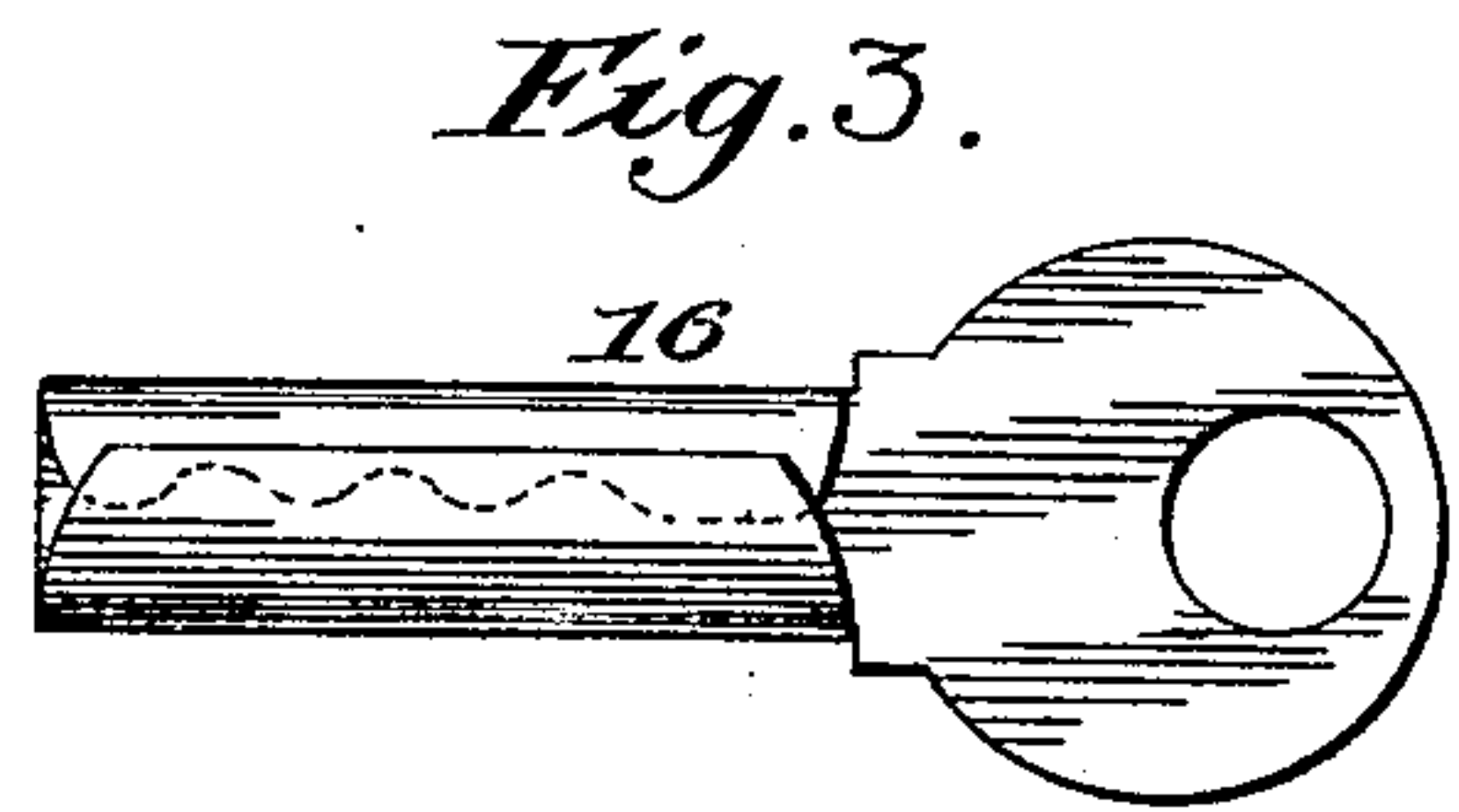
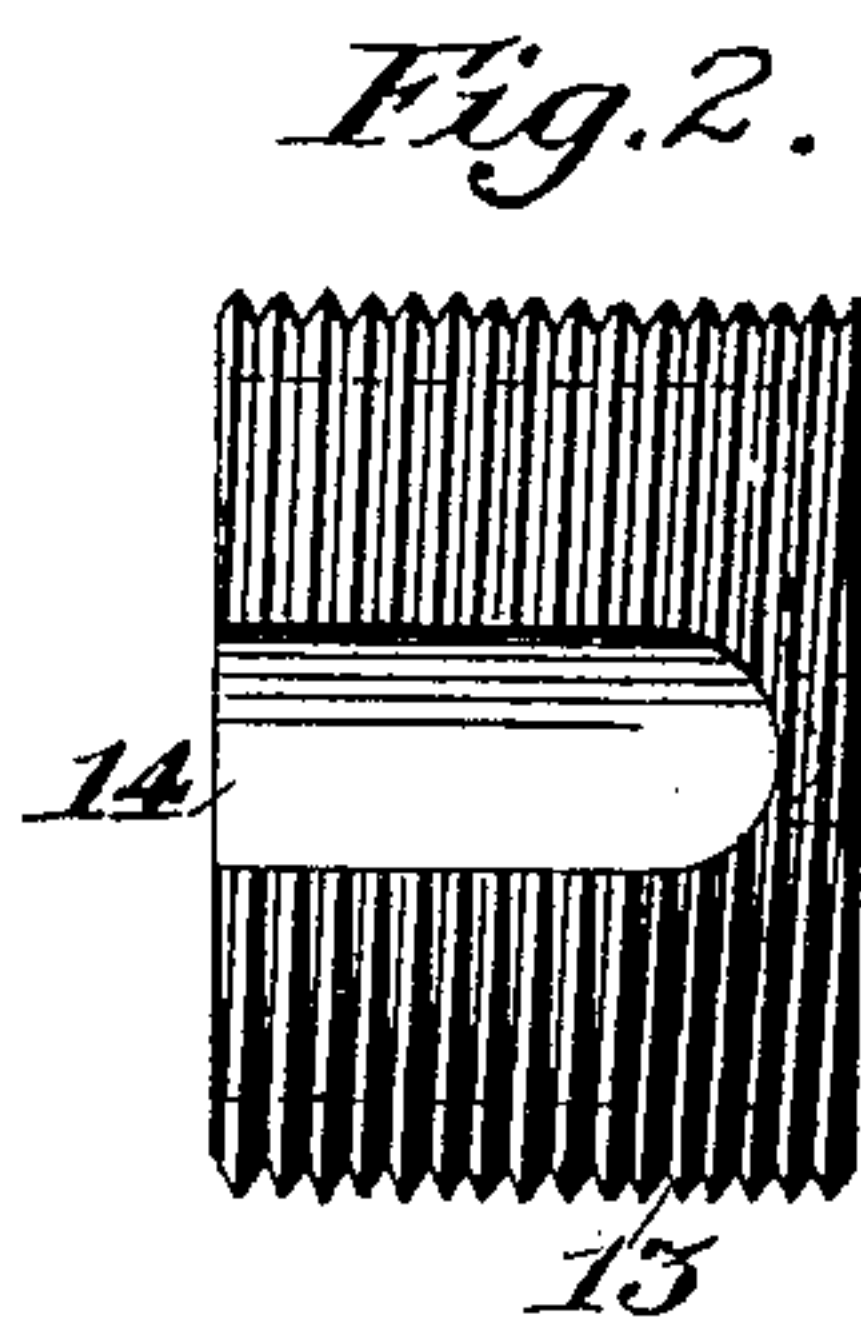
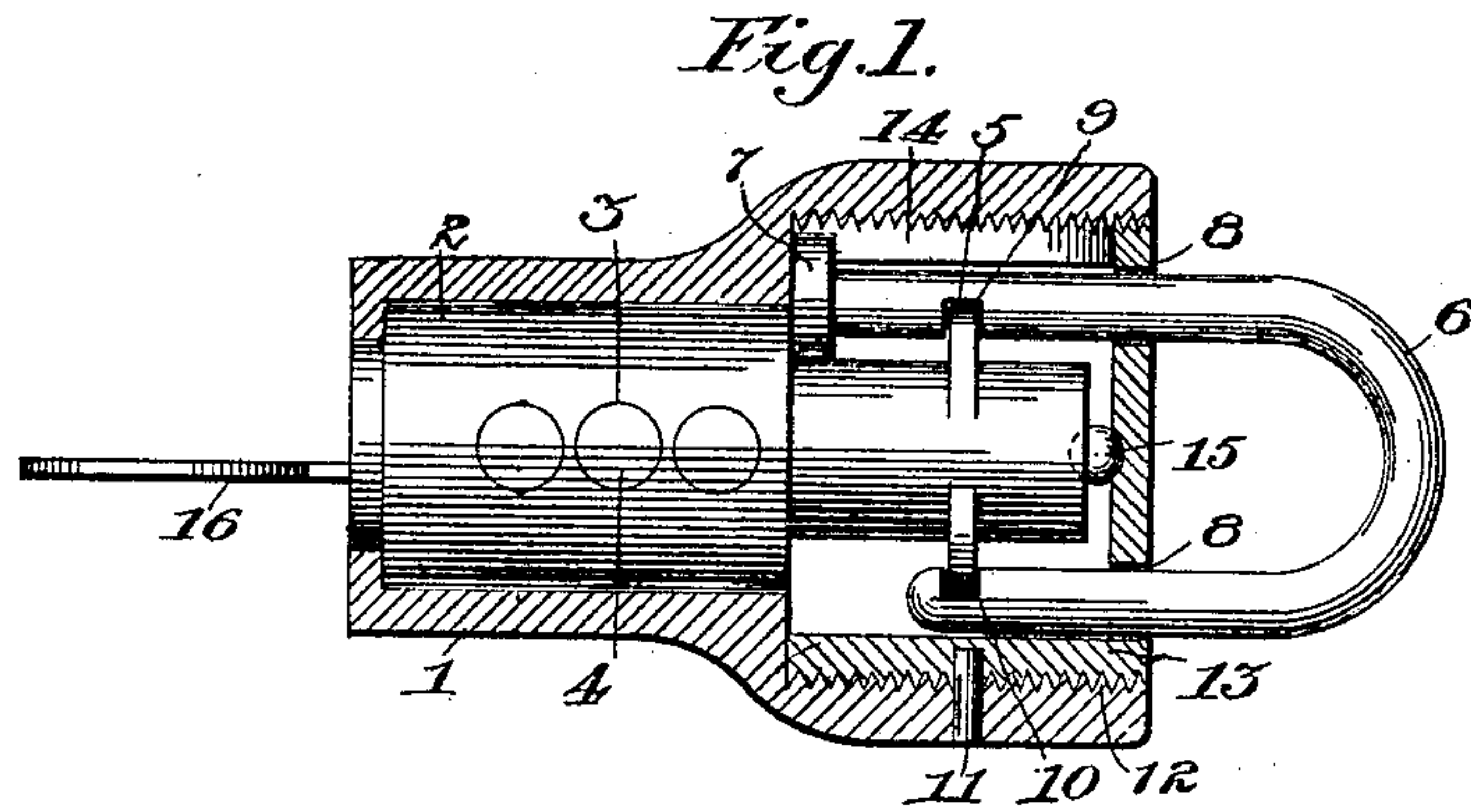


No. 824,593.

PATENTED JUNE 26, 1906.

F. W. SCHROEDER.  
PADLOCK.

APPLICATION FILED NOV. 15, 1905.



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# UNITED STATES PATENT OFFICE.

FREDERICK W. SCHROEDER, OF LONDON, ENGLAND.

## PADLOCK.

No. 824,593.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed November 15, 1905. Serial No. 287,499.

*To all whom it may concern:*

Be it known that I, FREDERICK WILLIAM SCHROEDER, a subject of the King of Great Britain, residing at London, England, have  
5 invented certain new and useful Improvements in Padlocks, of which the following is a specification.

This invention relates to padlocks.

The object of my invention is to provide a  
10 padlock with the means for locking both the front and heel ends of the shackle.

With this object in view the invention consists in certain novel features of construction and combination, as will be more fully hereinafter described, and pointed out in the  
15 claims and accompanying drawings, forming a part of this specification.

Like reference-numerals are used throughout the specification to designate like parts.

20 In the accompanying drawings, Figure 1 is the longitudinal sectional elevation of the lock illustrating my improvement. Fig. 2 is an elevation of the hollow removable plug. Fig. 3 is an elevation of the key.

25 In the drawings, 1 represents the casing, which is open at both the top and bottom, in which a barrel or cylinder 2 is concentrically and removably inclosed. The barrel is provided with sockets 3, in which are supported  
30 tumblers 4. The barrel 2 has lugs 5 constructed integral therewith. A shackle 6, having a flanged end 7 and provided with grooves 9 and 10, is adapted to engage the lugs by projecting through holes 8 of the hollow removable plug 13 into the interior of the  
35 casing 1.

The pin 11 secures in position the plug 13, which is provided with threads corresponding to the threads 12 on the casing. A longitudinal slot 14 extends through the side of  
40 the plug and permits of the insertion or removal of the shackle 6 from the said plug after its removal from the casing or shell 1 at will. For example, if it is desired to insert  
45 the shackle 6 in the position shown in Fig. 1 the shackle is inverted and the front or free end of the shackle is passed through the groove 14, as shown in Fig. 2, thence through the adjacent hole 8 and as far beyond the  
50 plug as flange 7 will permit. The shackle is then turned to the position shown in Fig. 1, and the front or the free end is then inserted through the other hole 8 in the end of the hollow plug and into the position embracing  
55 the plug, as shown in Fig. 1.

15 represents a ball-bearing or other suitable antifriction-bearing between the end of the cylinder 2 and the end of the removable plug.

16 represents the key which is preferably  
60 used in this lock and which forms the subject-matter of the copending application, Serial No. 284,983, filed October 30, 1905.

In operation the key having been inserted and the tumblers withdrawn to the exact  
65 point which the proper key will retract the same, the barrel 2 is then free to rotate, and thus projections or lugs 5 may be thrown out of engagement with the slots 9 and 10 in the ends of the shackle. The front end of the  
70 shackle may then be withdrawn entirely from the casing; but the flange or projection 7 acts as a stop to prevent the withdrawal of the heel end of the shackle. Obviously the  
75 lugs or projections may be carried by or integral with the ends of the shackle, and the cylinder 2 may be provided with suitable slots to engage the same, in which case it would be  
80 necessary to cut away the holes 8 in the end of the plug to permit of the withdrawal of the projection on the front end of the shackle. The assembling of the padlock disclosed in  
Fig. 1 is obviously very simple, since into the empty casing is first placed the cylinder 2.  
85 The hollow plug 13, having a shackle inserted therein, as already described, and with the shackle withdrawn as far as possible, so as not to interfere with the threading of the  
plug into the casing or shell, is then screwed  
90 in so that it assumes the position shown in Fig. 1, following which the pin 11 is inserted to lock the plug into position.

Having thus described my invention, I claim—

1. In a padlock the combination of a  
95 shackle, a projection on the heel end of the shackle of a diameter greater than the diameter of the shackle, a relatively movable and concentrically-arranged shell and barrel, a removable hollow plug fixed in the end of the  
100 shell having openings adapted to receive the ends of the shackle and a longitudinal slot extending through the side of the plug whereby the shackle may be readily removed, substantially as described.

2. In a padlock the combination of a  
105 shackle, a removable plug, means for securing the plug in a fixed position, the plug being provided with openings adapted to receive the ends of the shackle and a longitudinal slot  
110



extending through the side of the plug whereby the shackle may be readily removed, substantially as described.

3. In a padlock the combination of a  
5 shackle, having a projection on the heel end of the shackle of a diameter greater than the diameter of the shackle, a relatively movable and concentrically-arranged shell and barrel, a removable hollow plug fixed in the end of  
10 the shell having openings in the end of the same adapted to receive the ends of the shackle, an exterior thread on the plug adapted to engage with a corresponding thread of the shell, a longitudinal slot extending  
15 through the side of the plug whereby the shackle may be readily removed, tumblers carried by the barrel and a ball-bearing inter-

mediate the end of the barrel and the plug, substantially as described.

4. In a padlock, the combination of a 20 shackle, a relatively movable and concentrically-arranged shell and barrel, locking means carried by one of the said members adapted to engage with the shackle, tumblers carried by the barrel, there being op- 25 posed recesses in the ends of the barrel and the casing constituting the seats of a ball-bearing; substantially as described.

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

FREDERICK W. SCHROEDER.

Witnesses:

EUGENE C. BROWN,  
PHILIP F. LARNER.