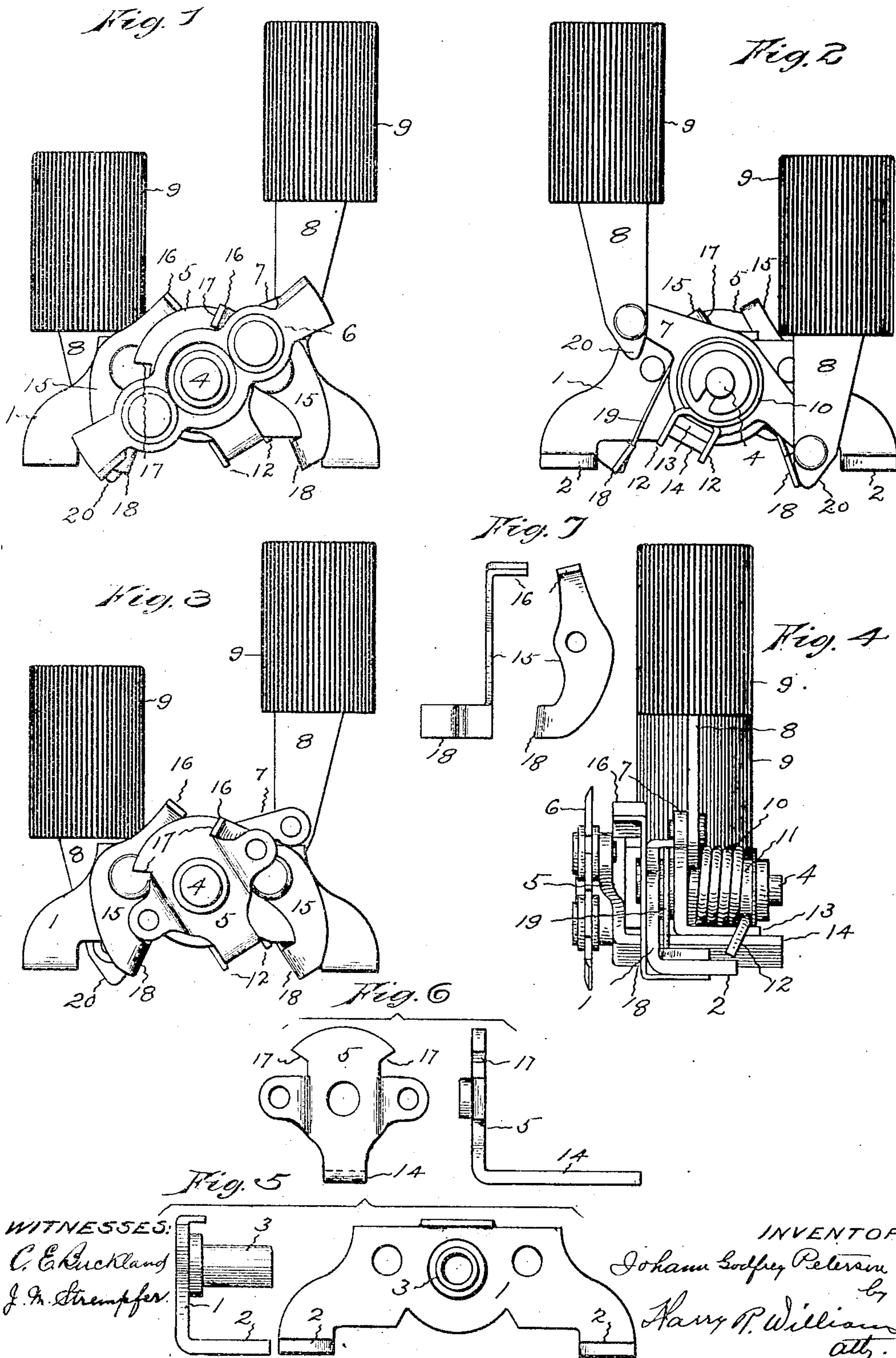


J. G. PETERSON.
 PUSH BUTTON ELECTRIC SWITCH.
 APPLICATION FILED SEPT. 16, 1908.

906,740.

Patented Dec. 15, 1908.



WITNESSES:
 C. E. Buckland
 J. H. Strempfer.

INVENTOR:

Johann Gudfrey Peterson
 by
 Harry P. Williams
 atty.

UNITED STATES PATENT OFFICE.

JOHANN GODFREY PETERSON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE ARROW ELECTRIC COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PUSH-BUTTON ELECTRIC SWITCH.

No. 906,740.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed September 16, 1908. Serial No. 453,233.

To all whom it may concern:

Be it known that I, JOHANN GODFREY PETERSON, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Push - Button Electric Switch, of which the following is a specification.

This invention relates to an oscillating snap push button electric switch.

The object of the invention is to provide a mechanism for locking and releasing the pole plate, which is so simple and compact that the operative part of the switch can be mounted in a receptacle which is much shallower than the receptacles of the switches in common use, thereby cheapening the construction and the cost of transportation, storing, and installing.

Figure 1 of the accompanying drawings shows an elevation, on enlarged scale, of one side of the operative mechanism of a push button switch that embodies this invention. Fig. 2 shows an elevation, on the same scale, of the opposite side of the same switch mechanism. Fig. 3 is a view similar to that shown in Fig. 1 with the movable pole plate omitted. Fig. 4 shows an edge view of the switch mechanism. Fig. 5 shows an edge view and a face view of the frame that supports the operating mechanism of this switch. Fig. 6 shows a face view and an edge view of the lock plate. Fig. 7 shows an edge view and a face view of one of the locking levers which engage and hold the lock plate while the throwing spring is being made tense.

The supporting frame 1 is preferably stamped from steel with perforated feet 2 extending outwardly from the lower edge for mounting it on the bottom of the receptacle. This frame has a tubular hub 3 which, projecting from one side, supports the spindle 4 upon which the lock plate 5 is mounted. The movable contact or pole plate 6 is fastened to and carried by, but insulated from the lock plate.

Mounted upon the frame hub 3 is the yoke 7, to which the shanks 8 of the push buttons 9 are pivoted. A spring 10 is coiled about a sleeve 11 on the hub, and its ends 12 are bent outwardly so as to extend on opposite sides of the lug 13 that projects from the yoke plate and the lug 14 that projects from the lock plate.

Pivoted on the back of the supporting frame plate are a pair of locking levers 15, the upper ends of which above the top edge of the frame are bent outwardly to form fingers 16 which are designed to engage the shoulders 17 of the lock plate. The locking levers at their lower ends beneath the lower edge of the frame have feet 18 which are engaged by the ends of a spring 19 that is looped about the hub of the frame in such manner that the feet are normally forced from each other and the fingers held in contact with the upper edge of the lock plate, until the feet are engaged by the tips 20 of the shanks of the push buttons and the levers rocked against the pressure of the spring.

When one push button is depressed and the yoke rocked, the yoke lug, engaging with one end of the actuating spring, places the spring under tension, the other end of this spring being retained by the lug that projects from the lock plate that is held by one of the levers mounted on the frame until the tip of the shank of the push button engages the foot of the lever that is holding the lock plate and moves that lever so as to disengage the finger at its upper end from the locking shoulder of the lock plate, allowing the spring to throw the lock plate and the pole plate carried by the lock plate.

This mechanism is the same for a single or double pole push button switch. But one pole plate is shown in the drawings, the other lug being omitted from one end of the spindle to simplify the drawings.

The construction illustrated and described herein is simple to manufacture for the frame, levers and several plates can be stamped to final shape, and the action is positive and sure for the locking levers are strong and of such length and are so engaged by the tips of the push button shanks that they rock easily and readily free themselves from the locking plate. And yet the construction is such that the height of the actuating mechanism is quite low allowing it to be placed in a very shallow receptacle.

The invention claimed is—

A push button switch mechanism having a supporting plate, a spindle supported by said plate, a lock plate mounted upon said spindle, levers pivoted on the supporting plate and adapted to engage the lock plate, a spring carried by the supporting plate and

engaging the lower ends of the locking levers and adapted to hold the upper ends of said levers in engagement with the lock plate, a yoke mounted on the spindle, push buttons
5 connected with the yoke, an actuating spring with its ends engaging lugs projecting from the yoke and the lock plate, and feet projecting from the lower ends of the locking levers into the path of the tips of the push

button shanks whereby the levers are disengaged from the lock plate when the spring is under sufficient tension, by the engagement of the tips of the push button shanks with the feet, substantially as specified. 10

JOHANN GODFREY PETERSON.

Witnesses:

HARRY R. WILLIAMS,
JOSEPHINE M. STREMPFER.