N° 13,590 A.D. 1905

Date of Application, 1st July, 1905—Accepted, 23rd Nov., 1905

COMPLETE SPECIFICATION.

"An Improvement in Electric Switches for Coin Freed Mechanisms, Time Switches or the like."

We, SIEMENS BROTHERS & Co. LIMITED, of 12 Queen Anne's Gate, Westminster, in the County of London, Electrical Engineers, do hereby declare the nature of this invention (as communicated to us from abroad by Siemens Schuckertwerke G.m.b.H, of Askanischer Platz 3, Berlin, in the Empire of Germany, Electrical Engineers,) and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to an electric switch for coin-freed mechanisms, time switches or like apparatus as will be described with reference to the accompanying diagrams of which Fig. 1 shews the switch open and Fig. 2 shews it closed. Figs 3 and 4 are like views of a modification.

When the sliding handle *a* which is to be manipulated by the operator, is pushed in the direction of the arrow in Fig. 1 it turns the lever *d*, centred at *c*, against the tension of springs *f* and *e* until it comes to rest against the stop *g*, in which position it is held by the detent *h* under action of the spring *i* (Fig. 2). The lever *d* has two arms *k* and *l* which move with it and in the movement just described *l* is brought into a position in which it no longer presses against the detent *m* which is thereupon urged by spring *n* against the stop *o*. If the slide *a* is now moved in the direction opposite to that of the arrow either by hand or spring pressure, the nose *b* moves aside the detent *m*, which is returned by its spring to its former position against stop *o* as soon as the nose is past it. This position is shewn in Fig. 2, and it will be seen that so long as it is maintained the slide *a* cannot be moved again in the direction of the arrow. The slide can still be moved in the direction opposite to that of the arrow, however, and in such movement the nose *b* presses on the tail of the spring detent *p* until it bears against the stop *q*. When this has happened the lever *r* centred at c^1 is moved by the tension of spring *e* into the position shewn in Fig. 2, wherein the double pole switch fingers *s* and *t* have completed at *u* and *v* the electric circuit *w*. The slide *a* having been moved slightly in the direction of the arrow, the position of the parts remains that shewn in Fig. 2 until the detent *h* releases the lever *d* whereupon the spring *f* returns this lever to the position shewn in Fig. 1, and also the lever *r*, because the arm *k* bears against the lever *r* and the two levers move together. Towards the end of this return movement of lever *d* the arm *l* thereon pushes the detent *m* back to its position shewn in Fig. 1.

The movement of detent *h* to free the lever *d* may be effected in any of many ways, such as electro-magnetically by closing an auxiliary electric circuit, or mechanically by a falling weight or by clockwork. In the diagram there is shewn a switch *x* in an auxiliary circuit *y* which is operated by a clockwork or a counter, and when closed completes the circuit of the electromagnet *z* so that the armature h^1 is attracted.

In Figs. 3 and 4 the levers d^1 and r^1 are mounted to rotate on the same shaft a^1, which is capable of being turned through a certain angle by a crank

[*Price* 8*d*.]

or the like. When this shaft is turned to the right an arm b^1 which it carries pushes against a stop d^2 on the lever d^1 and turns it until it is caught by the detent h (Fig. 4). The springs f^1 and e^1 are thus extended and the bent arm m^1 which is pivotted at m^2 and normally rests on lever d^1, is pressed by spring m^3 to follow the lever d^1. When the shaft a^1 is turned to the left the bevilled end of arm b^1 rides against the arm m^1 and lifting it finally passes beneath it, whereupon the arm m^1 descends again and prevents the arm b^1 from being turned to the right again (Fig. 4). When further turned to the left the arm b^1 pushes against the pin p^2 on the detent p^1 and pushes the latter backwards, whereupon lever r^1 is liberated and the circuit is closed as described with reference to Figs. 1 and 2. When the armature h^1 of the detent h is attracted as already described in connection with Figs. 1 and 2, the spring f^1 brings back lever d^1 into its original position, the pin k^1 at the same time lifting the lever r^1 into its original position and the arm m^1 being lifted by lever d^1.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

In a switch for coin-freed mechanism, time switches or the like wherein a sliding or turning operating handle first puts the switch under the influence of an opening spring and a closing spring and then moves a detent to allow the closing spring to act, a device whereby the said handle is locked against return movement before it has moved the said detent and remains locked until the opening spring has been allowed to act, substantially as described.

Dated this 1st day of July 1905.

ABEL & IMRAY,
Agents for the Applicants.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1905.

A.D. 1905. JULY 1. N° 13,590.
SIEMENS BROS. & CO.'S [LTD.] COMPLETE SPECIFICATION. (3 SHEETS)

SHEET 1.

Fig. 1

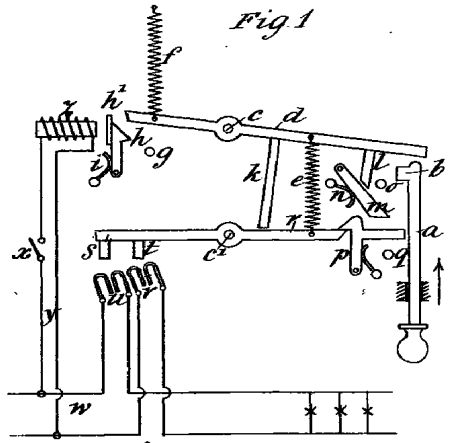
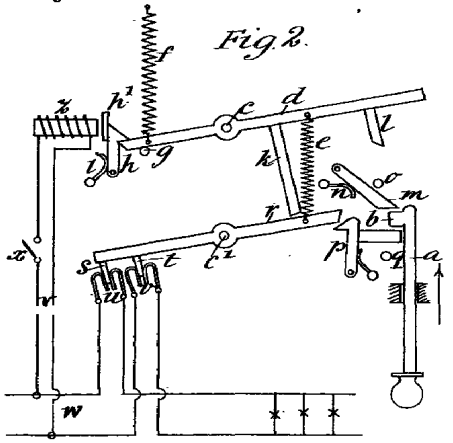
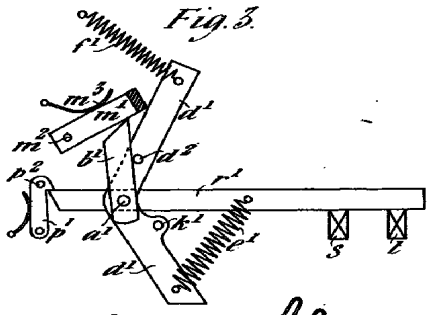


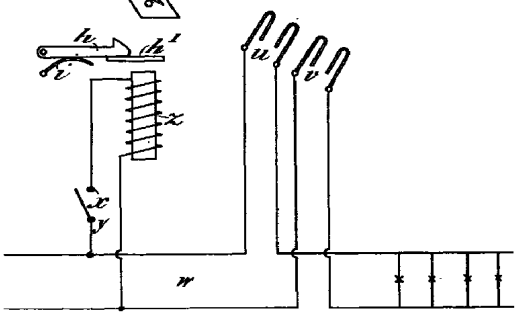
Fig. 2.



SHEET 2.

Fig. 3.





SHEET

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Fig. 1

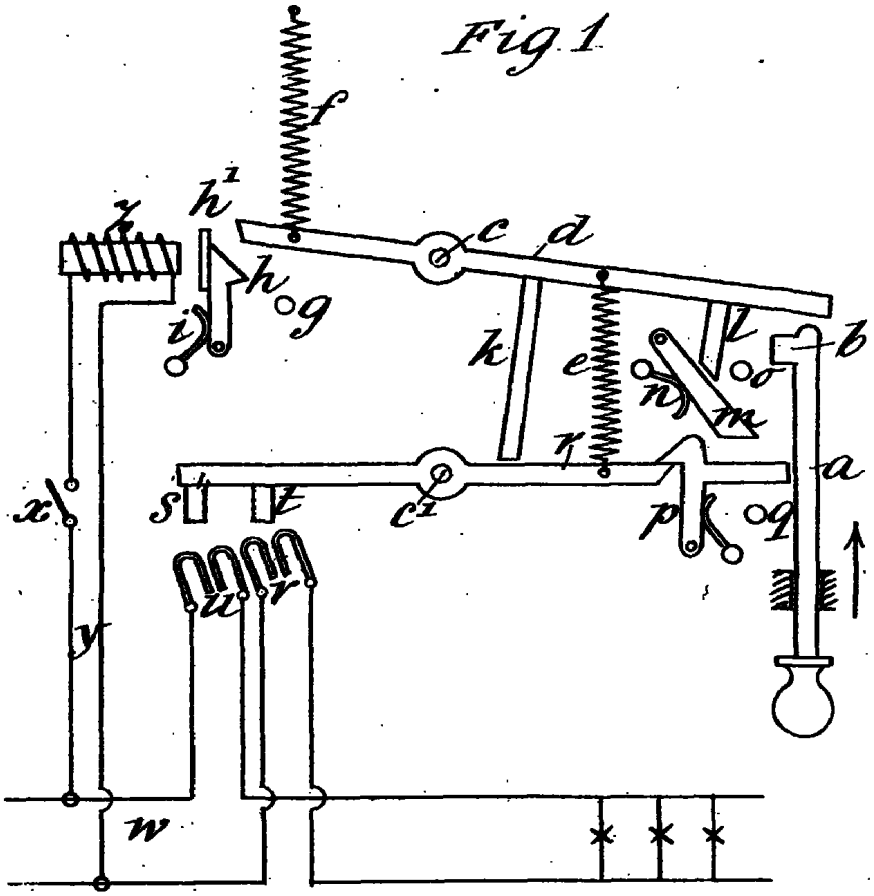


Fig. 2.

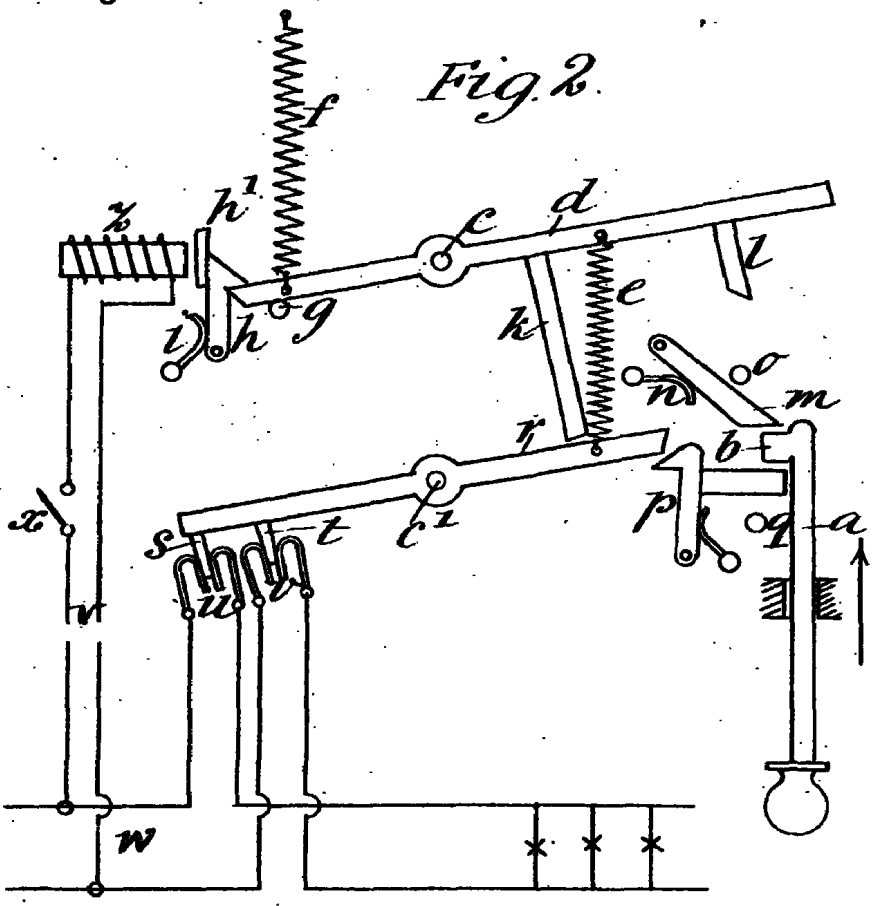
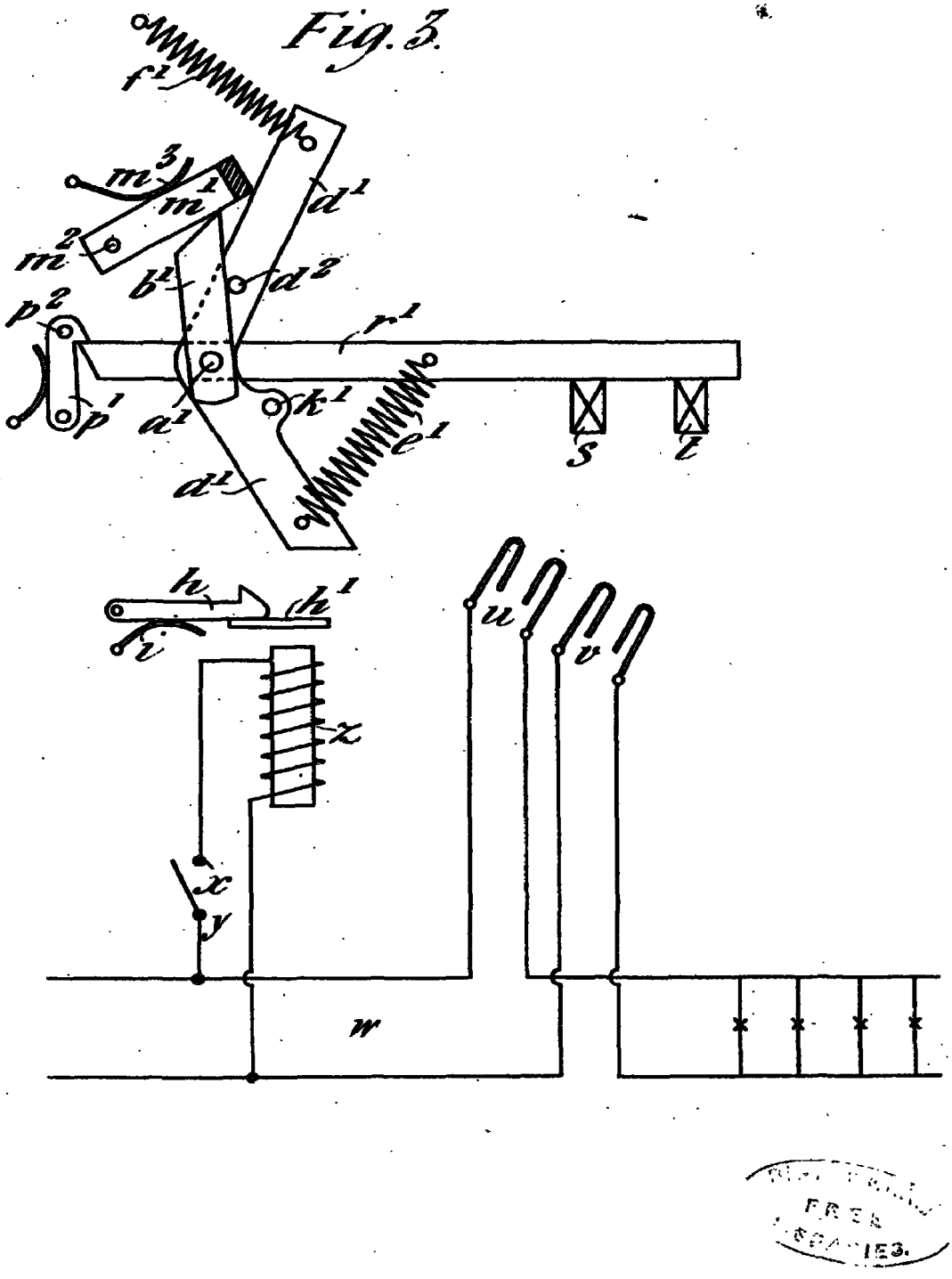


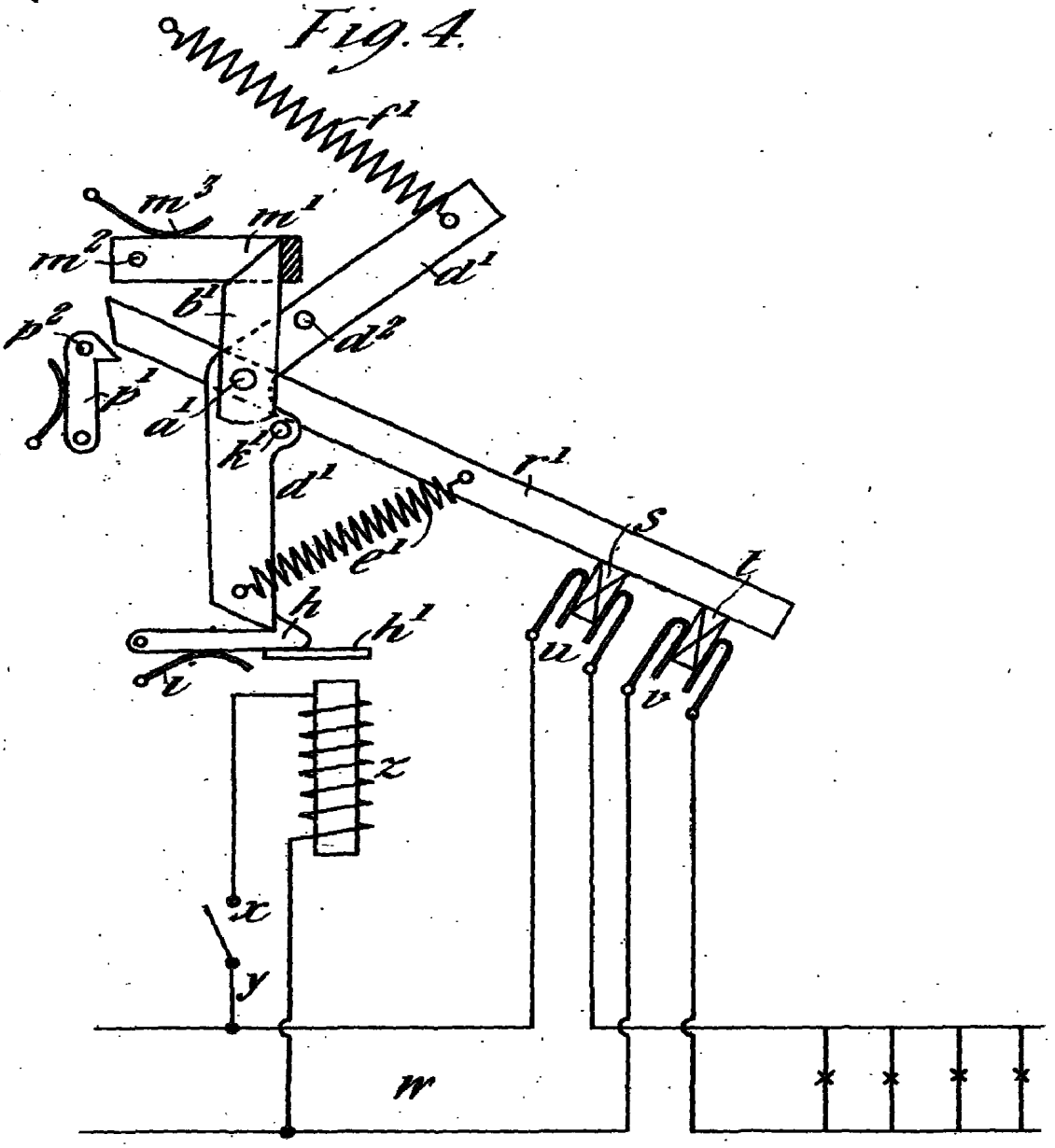
Fig. 3.



Malby&Sons, Photo-Litho.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 4.



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