

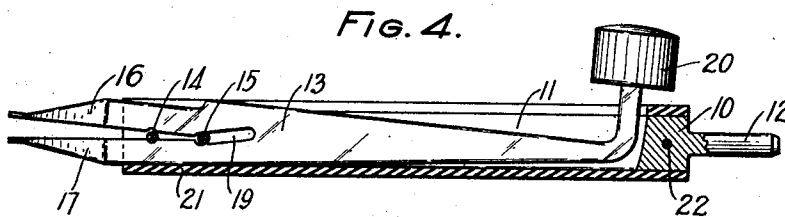
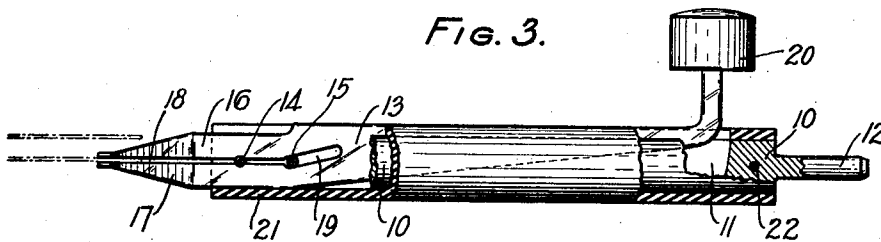
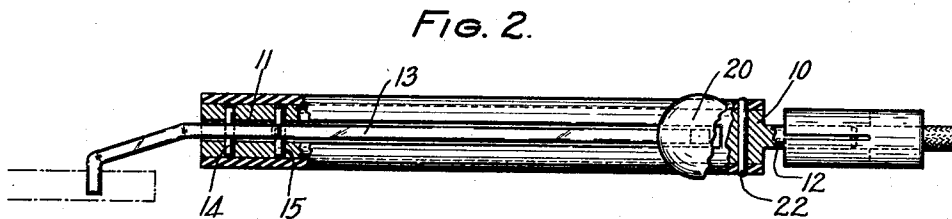
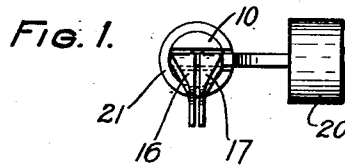
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ELECTRIC TEST CONNECTER

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ELECTRIC TEST CONNECTER

Application filed September 6, 1929. Serial No. 390,673.

This invention relates to electric test connectors and its object is to provide a connector of this type which may be connected to telephone apparatus, such as relay springs, in a convenient and positive manner and which will connect to a spring of a spring pile-up where a relatively small space is present without contacting with adjacent springs.

The test connector of this invention comprises a flat blade, preferably of tempered steel slotted at one end to provide jaw members, the end opposite the jaws preferably terminating in the form of a finger key. The slot in the blade is extended backward into apertures which are engaged by pins crossing through a shaft in the groove of which the blade is mounted. One of these pins serves as a pivot for the body portion of the blade and the other for retaining one of the jaws against movement upon pressure exerted on the key, this pressure being effective to flex the body portion of the blade and thereby to cause the operation of the free jaw. The resiliency of the body portion is effective to return the operated jaw toward the other jaw upon the release of the key to grip the spring to be tested. A sleeve of insulating material is mounted on the shaft or holder for electrically insulating the conductor from parts adjacent the terminal and the contact spring under test.

Referring to the drawing:

Fig. 1 is an end view of the connector;

Fig. 2 is a side view of the connector with portions cut away;

Fig. 3 is a view of the connector showing a number of parts in section and the jaws of the connector closed; and

Fig. 4 is a view of the connector showing the housing in section and the jaws of the connector in the open position.

Throughout the several figures, 10 represents a shaft having a longitudinally disposed groove 11. This shaft has at one end a reduced portion 12 shown in Figs. 2, 3 and 4 provided for connecting this end of the connector with the conductor cord of the testing apparatus with which it may be used. In the groove 11 is mounted a connector blade 13 which is retained in position therein by

pins 14 and 15. The connector blade 13 is provided at one end with a pair of jaw members 16 and 17 which are formed by the cutting of a longitudinally disposed slot 18. This slot extends into an aperture 19 which is obliquely disposed with respect to the longitudinal axis of the connector blade 13 and extends at a suitable distance from the outer edge of the blade 13 for controlling the elasticity of this blade and thereby the gripping pressure of the jaws on the spring to which the connector is attached. The end of blade 13 opposite the jaws 16 and 17 is bent at right angles and on it is mounted a key 20.

The shaft 10 is electrically insulated by means of a tubular housing 21 which is held in position thereon by a pin 22.

In operation when a pressure is applied on the key 20, for moving it from normal position, shown in Fig. 3 to the position shown in Fig. 4 the connector blade 13 tends to pivot bodily around the pin 15. The pin 14, however, prevents the movement of jaw 17 against the tension generated in the connector blade during the movement of the button, but permits the movement of jaw 16 bodily with the connector blade 13. Upon release of the button 20, the jaw 16 is returned to normal closed position through the medium of the tension of the connector blade for gripping the spring to be tested.

It is understood that the device of this invention could also be used for other purposes than establishing electrical connections and that minor changes could be made to suit particular requirements without departing from the scope of the appended claims.

What is claimed is:

1. An electrical connector comprising a slotted shaft, an insulating shell mounted thereon, a flat blade fitting the slot of said shaft and having a key at one end and a pair of normally closed jaw members at the other end, and means on said shaft whereby the movement of the key is effective to flex said blade to open said jaws.

2. An electrical connector comprising a holder, a flat steel blade mounted in said holder and having a key at one end and a pair of jaws extending from the other end, a pivot

for said steel blade mounted in said holder, and means in said holder for holding one of said jaws in position in the holder during the flexing of said steel blade for operating the other jaw, the resiliency of said steel blade being effective to return the operated jaw to closed position upon the release of said key.

3. A testing device comprising a flat steel blade having a slot in its front end extending backwardly into an aperture in the blade, a key on the other end of said blade, a holder in which said blade is positioned, said holder having a pair of pins projecting through said slot and aperture, one serving as a pivot for said blade when pressure is applied to the key and the other holding one of the jaws from movement in response to the pressure, the resiliency of the blade returning the moved jaw to normal upon release of pressure to cause the jaws to grip an object.

4. A tool comprising a substantially oblong shaped blade having a pair of normally closed jaws formed by a slit in one end thereof, a support for said blade, a stop for one of said jaws mounted on said support, and means at the other end of said blade for causing pressure to be applied to said blade to flex it for causing the operation of the other jaw.

In witness whereof, I hereunto subscribe my name this 29th day of August, 1929.

WILLIAM O. BECK.