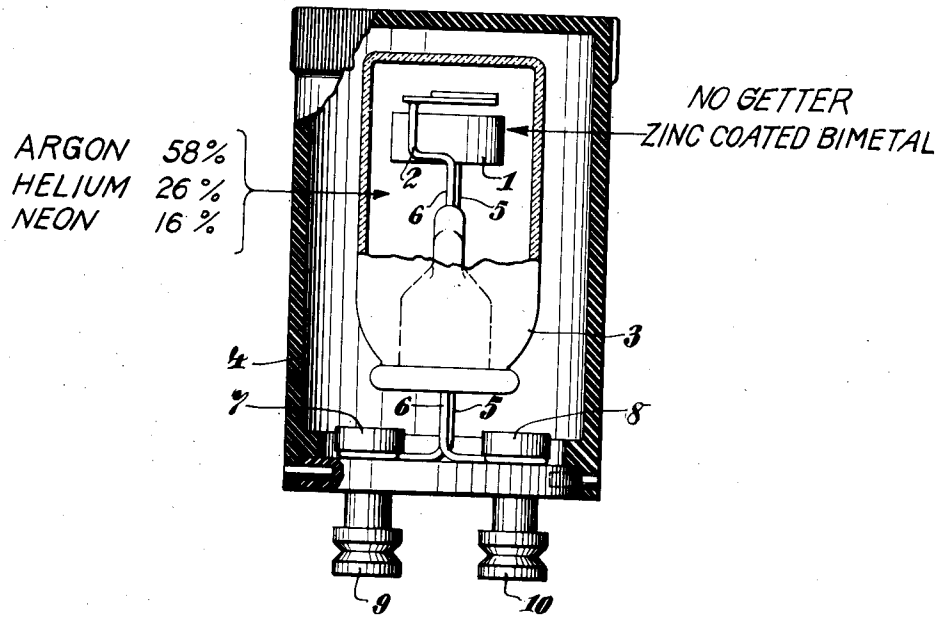
May 20, 1941. C. CHIRELSTEIN 2,242,902

STARTER SWITCH

Filed Jan. 16, 1941



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Patented May 20, 1941 2,242,902

UNITED STATES PATENT OFFICE

2,242,902

STARTER SWITCH

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Application January 16, 1941, Serial No. 374,614

4 Claims. (Cl. 250—27.5)

This invention relates to starting switches for gaseous discharge devices, similar in general purposes to those covered in corresponding patent applications, Serial No. 342,213, filed June 25, 1940; Serial No. 352,986, filed August 17, 1940, and Serial No. 347,613, filed January 16, 1941.

Special objects of the invention are to provide a starter or glow switch of quick acting low voltage operating characteristics and which will be thoroughly reliable and dependable over long periods of usage.

Other desirable objects and the novel features of the invention will appear as the specification proceeds and are hereinafter set forth and broadly claimed.

The drawing accompanying and forming part of this specification illustrates one simple commercial embodiment of the invention. Some features of the invention, however, may be modified and changed as regards this particular disclosure, all within the true scope of the invention, as will appear from the following specification and claims.

The single figure is a broken part sectional view of one of the switch units.

The switch shown comprises, as in the prior applications above identified, cooperating relatively movable and fixed contacts 1 and 2 sealed within an envelope 3 mounted within a "can" or housing 4.

The switch contacts are shown as carried by or formed as part of the wires or rods 5, 6 which, extending to the outside of the envelope, are connected with buttons or studs 7, 8, which at the outside of the case are formed as terminals 9, 10 for cooperation with the contacts of a socket or receptacle to receive the unit.

The thermostatic switch contacts preferably are unlike metals, the stationary contact 2, for example, being of nickel and the movable or bimetal contact 1 being made up of strips of steel-nickel alloy and iron-nickel-chromium alloy, as disclosed in the patent applications above identified.

In the present invention, however, the bimetal is zinc coated.

Also, as distinguished from the prior structures, no getter is necessary and, usually, with the zinc coated bimetal, no getter material is used.

Another important feature of the present invention is that the gaseous filling in the envelope is composed of a mixture of argon, helium and neon. While proportions may vary to some extent, the best results thus far have been attained with approximately 58% argon, 26% helium and 16% neon.

The pressure of the gases may be relatively low. At present a pressure within the range of from 1 to 6 centimeters is found the most practical.

The zinc coated bimetal in the argon-helium-neon atmosphere provides a quick acting switch and particularly one which will insure fast starting at reduced voltages and at reduced temperatures. The latter feature is particularly important as providing a starter which will operate at the reduced temperatures existing in refrigeration plants and the like.

What is claimed is:

1. A starting switch for gaseous discharge devices, comprising cooperating thermostatic switch elements of unlike metals, a sealed envelope containing said thermostatic elements and an atmosphere of approximately 58% argon, 26% helium and 16% neon sealed in said envelope.

2. A starting switch for gaseous discharge devices, comprising a bimetallic switch element and a coacting switch element, said bimetallic element having a coating of zinc, a sealed envelope in which said elements are located and an atmosphere of argon, helium and neon sealed in said envelope.

3. A starting switch for gaseous discharge devices, comprising companion switch elements, one of bimetallic construction, a sealed envelope in which said switch elements are located, an atmosphere of rare gases in said envelope and including a major portion of argon, a lesser portion of helium and a still lesser portion of neon.

4. A starter switch for gaseous discharge devices, comprising an envelope, a zinc coated bimetallic switch element sealed in said envelope and an atmosphere containing argon, helium and neon sealed in said envelope.

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