July 4, 1933. W. REICHMANN 1,916,489

LINK CHAIN FOR ELECTRIC ILLUMINATION

Filed Oct. 10, 1930

Fig. 1.

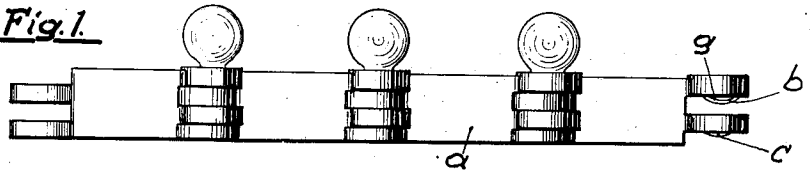


Fig. 2.

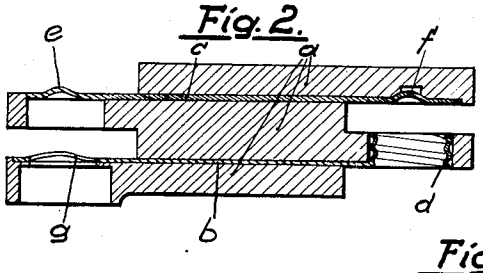


Fig. 3.

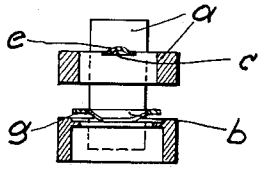


Fig. 4.

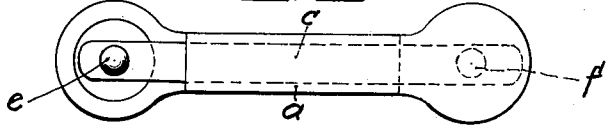


Fig. 5.

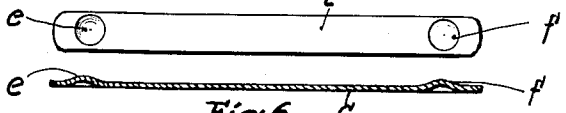


Fig. 6.

Fig. 7.

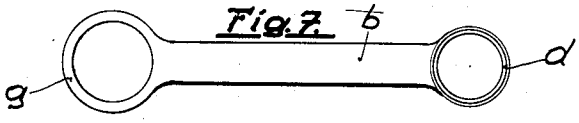


Fig. 8.

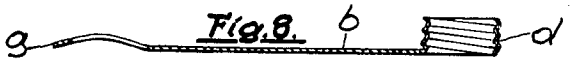
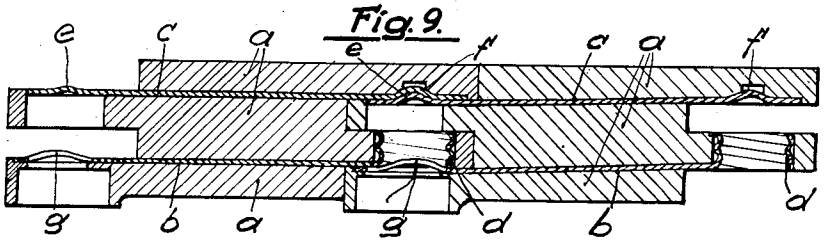


Fig. 9.



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UNITED STATES PATENT OFFICE

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LINK CHAIN FOR ELECTRIC ILLUMINATION

Application filed October 10, 1930. Serial No. 487,884.

The present invention relates to a link chain of the type employed in electric illuminations and advertising.

The existing kinds of link chains of this class suffer from the drawback that the bulbs are connected in series so that the current has to pass through all units of the chain and the latter will be extinguished if one of the units becomes defective or burns out or is loosened by the action of wind, etc. Furthermore, there is no chance of leaving out one or several lamps to obtain special lighting effects, since that would involve an interruption of the current. Besides, in series connection the last as well as the first link of the circuit must be continuously and directly connected to the source of current by auxiliary lines which, if used in the open air, must be carried in lead-covered cables in accordance with the safety regulations adopted by most countries. It is evident that electric lighting arrangements containing lead-covered cables or having them wound around them do not make a good impression in show-windows, for example, or in electric advertising designs, aside from the fact that such lines raise considerably the cost of the outfit, require special mounting and cause numerous troubles.

Another defect of the known link chains is that in order to establish mechanical connection between the links a bulb has to be screwed in and that, if the bulb gets loose, the entire chain will fall into pieces.

The invention eliminates the defects mentioned by embedding in the links two or more current-carrying conductors, each of which touches one lamp contact. For example, if a bulb is put in, it is inserted between two conductors, i. e., connected in parallel, and mechanical connection between the links may be established, for instance, by recessing the embedded current-carrying parts so that they snap into each other. Furthermore, the spring-actuated contact plate engages, for example, at a contact point a corresponding recess of the correlated link. Therefore, mechanical connection is established independently of the lamp socket and supported thereby. It would, therefore, be possible to arrange the lamp socket in the center of the link.

The invention is illustrated by way of example in the accompanying drawing, in which Figure 1 is a view of a chain; Fig. 2, a longitudinal section; Fig. 3, a cross section of a chain link; Fig. 4, a top view of a link; Figs. 5 to 8 represent the current-carrying parts; and Fig. 9 is a longitudinal section of two connected links.

Referring to the drawing, in a body *a* made of insulating material or the like and consisting of one or several parts two conductors *b* and *c* are embedded, one of which connects the sockets *d* of all bulbs and the other one, their center contacts. The center contact parts may for instance be recessed at *e* and *f* and provided at the same points with corresponding elevations or knobs which elastically engage the recesses when the links are put together, current being transmitted to the sockets by an elastic contact plate *g* which engages a recess of the body *a*. The lamp socket is preferably arranged in the axis of rotation of two links, though it may be positioned in the center of the links without the least trouble.

The employment of parallel connection affords also an opportunity of providing angular, cross and T-pieces and, contrary to existing chains, of producing any lettering and form of chain in a manner resembling pipe laying. For example, an angular unit is made exactly like a standard one, but provided with two cast-on lateral rectangular webs, in which, starting from the center, contact pieces are embedded.

Compared with the existing kinds of chains, the chain according to the invention will accommodate all sorts of lamps, such as, for instance, lamps for direct current supply, low voltage lamps in connection with a transformer or converter, etc.

I claim:—

1. A link chain for electric illuminations and advertising comprising a plurality of links of insulating material and metallic conductors connected in parallel, each link being in the form of an elongated block having passages therein for the metal conductors and at

least one loop at each end, thereby forming an independent and self-acting link and the loops at the ends forming a pivotal connection with adjacent links; means whereby the links are mechanically snapped together in electrical contact with each other; and a lamp socket for each link in electrical contact with at least one of the metal conductors, said socket being provided in the axis of its respective link.

2. A link chain for electric lamp illuminations and advertising comprising a link composed of a pair of metal conductors and an insulating material, one conductor having a pressed recess forming a knob at each end thereof and the other conductor being in contact with a lamp socket at each end thereof whereby they may be snapped to adjacent links by the knob and recess connection of the first-mentioned conductor and the socket contact of the other conductor.

In testimony whereof I affix my signature.

WILHELM REICHMANN.