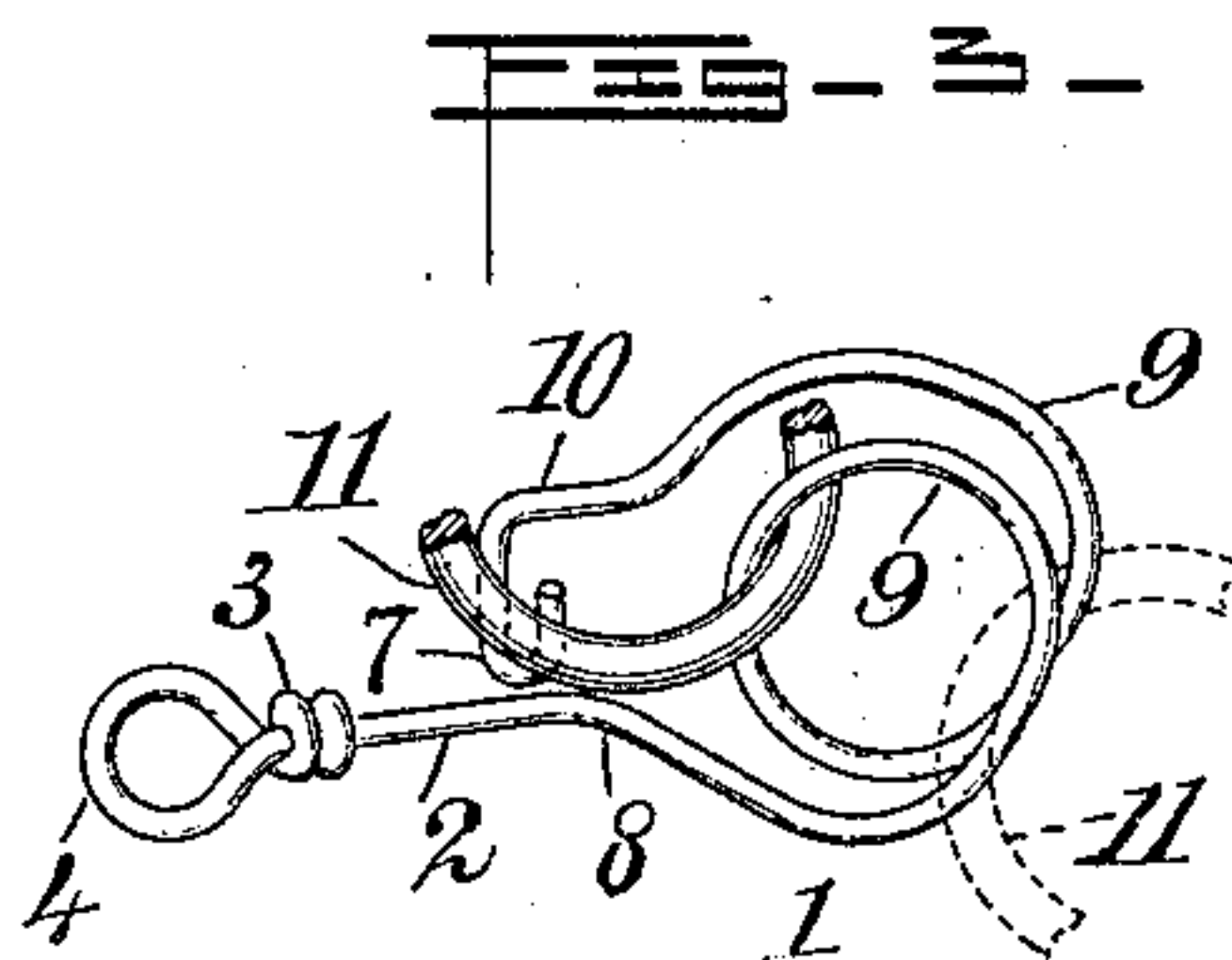
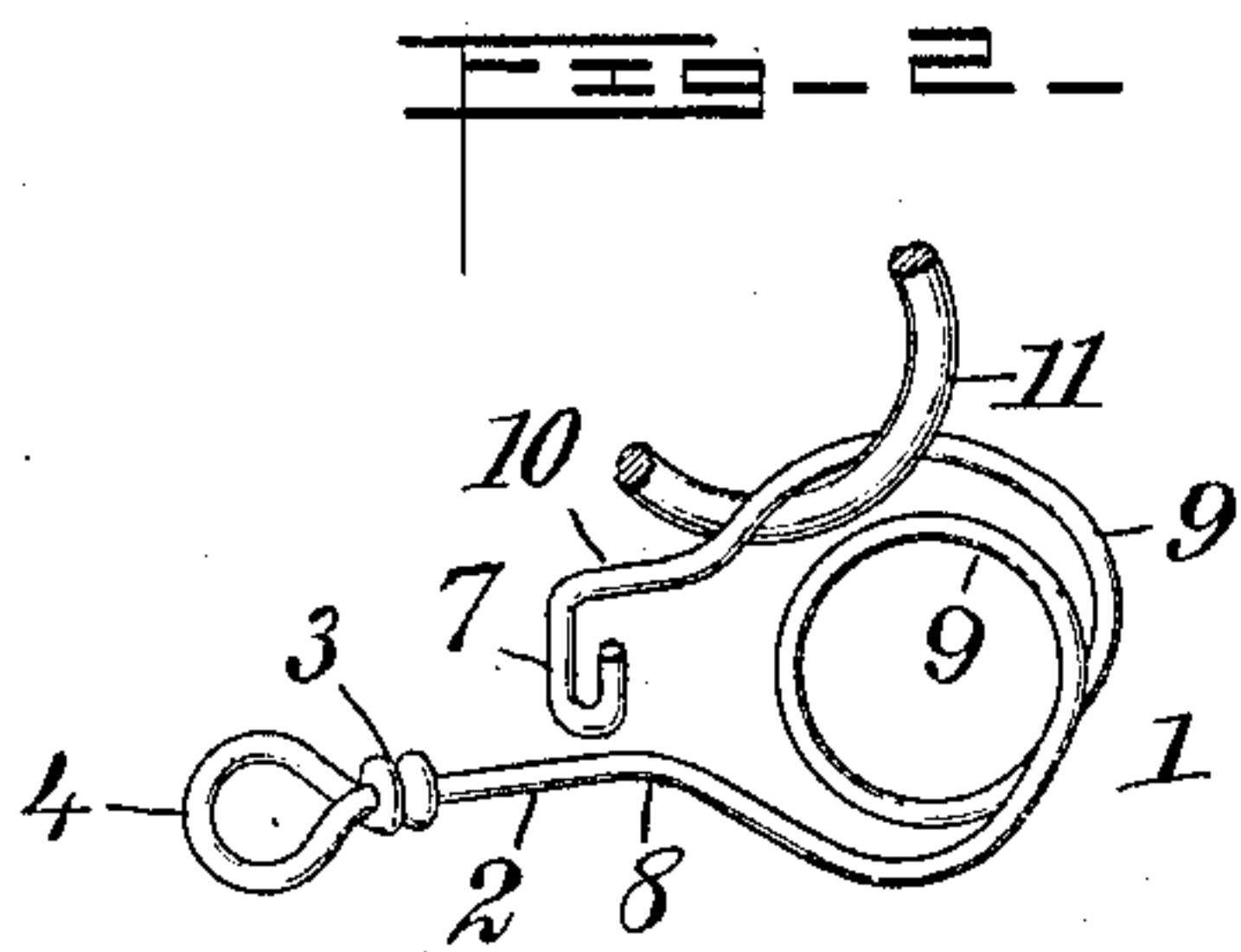
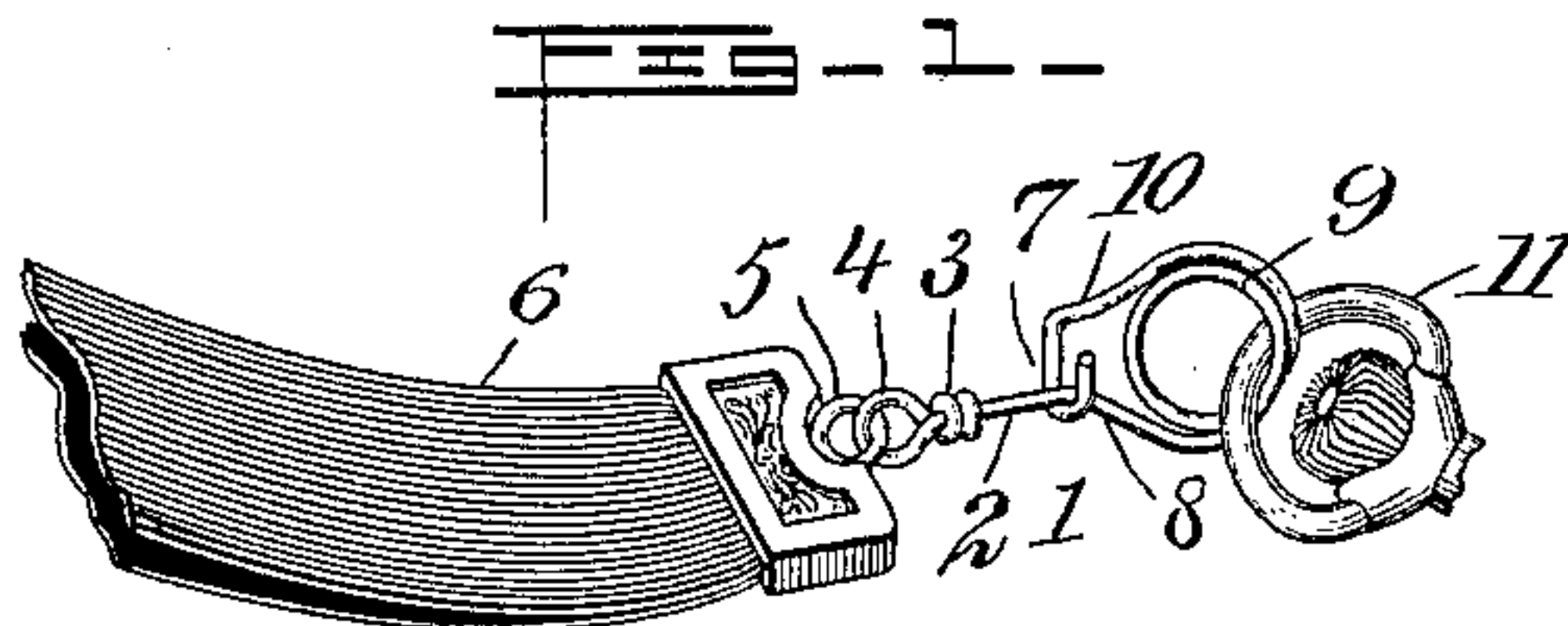


No. 763,813.

PATENTED JUNE 28, 1904.

D. L. TROYER.  
SAFETY HOOK OR RING.  
APPLICATION FILED FEB. 26, 1904.

NO MODEL.



WITNESSES:

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INVENTOR

*Daniel L. Troyer*

BY

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

DANIEL L. TROYER, OF SHANESVILLE, OHIO.

## SAFETY HOOK OR RING.

SPECIFICATION forming part of Letters Patent No. 763,813, dated June 28, 1904.

Application filed February 26, 1904. Serial No. 195,355. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL L. TROYER, a citizen of the United States, and a resident of Shanesville, in the county of Tuscarawas and State of Ohio, have invented a new and Improved Safety Hook or Ring, of which the following is a full, clear, and exact description.

This invention relates to safety hooks or rings; and it consists, substantially, in the improvements hereinafter particularly described, and pointed out in the claims.

Though adapted to various uses or purposes, the device is intended more especially as a safety hook or ring for connecting the ring of a watch, charm, locket, or the like to a chain, fob, guard, or similar contrivance; and one of the principal objects of the invention is to overcome numerous disadvantages and objections common to many other structures hitherto devised with similar ends in view.

A further object is to provide a device of the character referred to which is exceedingly simple and strong and comparatively inexpensive to manufacture, besides being thoroughly effective and reliable for its purposes and possessing the capacity for long and repeated service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a view in perspective representing the employment of my improved device as a connector between the ring of a watch or locket and the end of a chain or fob. Fig. 2 is a perspective view, partly in section, illustrating one manner in which the ring of a watch or the like may be first applied to my improved safety hook or ring for the purpose of effecting a connection between the two; and Fig. 3 is a similar view illustrating the ring of a watch or the like as having been moved or passed around one of the coils or convolutions of my improved safety hook or ring to a position or point at which it begins to pass into or become engaged with both coils or convolutions thereof.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown the said safety hook or ring is preferably constructed of a single piece of wire of proper size and strength, one end portion of which is formed into a shank or stem terminating in a loop for connection with, say, the end of a chain or fob and the other end portion of which is formed into a hook for engaging with said shank or stem, the intermediate portion of the wire being bent or shaped into preferably two (or more) substantially concentric coils or convolutions around and through which may be passed the ring of a watch or other contrivance for the purpose of establishing the desired connection therewith. I have herein illustrated my improvements in a certain selected embodiment; but it will be understood, of course, that I am not limited to the precise details thereof in practice, since immaterial changes therein may be resorted to coming within the scope of my invention.

Specific reference being had to the drawings by the designating characters marked thereon, 1 represents my improved safety hook or ring as an entirety, the same being constructed, preferably, (though not essentially,) of a single piece of wire, or other material having resiliency, shaped or formed at one of its end portions into a shank or stem 2; the extremity of which is bent around and twisted at 3 to form a loop 4 for connecting with the ring 5 of a watch chain or fob. (See Fig. 1.) The other end portion of the wire is bent or shaped into a hook 7 for engaging with the shank or stem 2, preferably a short distance only from the point 8 of intersection of the latter with one of the coils or convolutions 9, into which the portion of the wire intermediate of the hook and shank is formed, since in this way considerable strength is derived with less liability to breakage or distortion of the shank under excessive strains imposed on the structure in use. The hook 7 intersects with the remaining coil or convolution 9 in practically a straight portion 10 of the wire, thus bringing said hook to a position to enable the same to be readily pressed toward and forced into engagement with the shank, as is apparent.



The section 10 is of a length usually less than the diameter of the coils and is preferably disposed to extend approximately parallel with the shank 2 when the hook is open.

5 From the construction explained it will be seen that the greater the strain (within reasonable limits) imposed upon the structure the stronger will the engagement between the hook and shank become, due, as it were, to  
10 the tendency of the coils or convolutions to straighten out under such circumstances.

The ring 11 of the watch or other device is held within the coils or convolutions, as indicated in Fig. 1, one manner of applying or attaching the same being clearly illustrated in  
15 Figs. 2 and 3 and already explained in the short description relating to these figures. It is thought the advantages of my improved device will be fully understood without further  
20 elucidation, although it may be added that the same is also admirably adapted as a key-ring, as well as a connector for belts, cables, &c.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

25 1. A safety hook or ring, comprising a piece of wire having a portion bent to form spiral

coils, integral straight portions approximately parallel with each other at the termination of said coils, one of said portions being longer than the other to form a shank, the shorter  
30 portion having a right-angle bend near its end, said bent portion extending in the direction of said shank and terminating in a transverse hook for engaging the shank, the shank being formed near its end into a closed loop. 35

2. A safety hook or ring comprising a piece of wire having a portion bent to form spiral coils, integral straight portions approximately parallel with each other at the termination  
40 of the coils and intersecting the same, one of said portions being longer than the other to form a shank and provided at its end with a loop, the shorter portion having a bend near its end terminating in a hook extending toward the shank and engaging the same. 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL L. TROYER.

Witnesses:

AARON T. MILLER,

BENJAMIN R. HARTMAN.