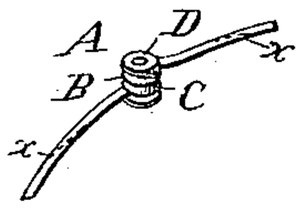
(No Model.)

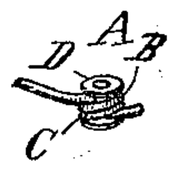
I. B. KLEINERT.

HINGE.

No. 355,827. Patented Jan. 11, 1887.

Fig. 1.





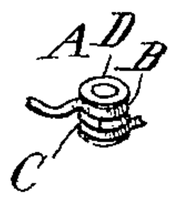


Fig. 2.

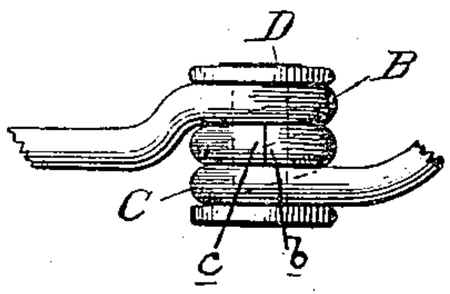


Fig. 3.

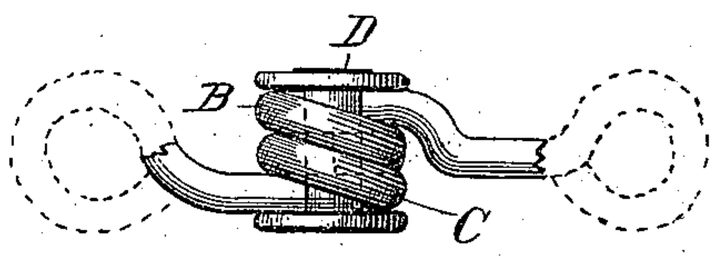
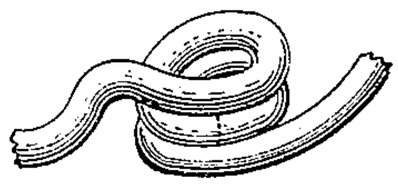


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC B. KLEINERT, OF NEW YORK, N. Y.

HINGE.

SPECIFICATION forming part of Letters Patent No. 355,827, dated January 11, 1887.

Application filed September 27, 1886. Serial No. 214,644. (No model.)

To all whom it may concern:

Be it known that I, ISAAC B. KLEINERT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hinges, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a perspective view of three of my hinges in the position they would occupy if applied to an ear-muff; Fig. 2, an enlarged detail showing the front or stop part of the hinge; Fig. 3, a similar view of the other side of the same, and Fig. 4 an enlarged perspective view of one mode of making the hinge.

This improvement relates more particularly to a hinge formed of wire, and especially stop-hinges, or, in other words, hinges which will allow of a movement of the parts until a certain point is reached, when no further movement is permitted; and the invention consists in the peculiar combinations and the construction and arrangement of parts, hereinafter more fully described, and then definitely pointed out in the claims.

Referring now to the details of the drawings, A represents the hinge as a whole, consisting of two pieces of wire, B C, having their ends coiled in opposite directions and connected by a rivet or pintle, D, of any approved form, on which the coils of the wires are free to turn until their extreme coil ends *b c* come in contact, as shown in Fig. 2, when said ends *b c* act as stops, and thus prevent any further movement in that direction. If the hinge is not to be provided with stops the contiguous ends of the coils should be dressed or tapered off, so as to make a flat joint between them.

The hinge thus formed will be found very useful for many purposes, and is particularly adapted to ear-muffs, as shown in Fig. 1.

The separate parts of my hinge may be made integral with the parts of the bow, or the ear-muff frames and the bow, as the case may be; but it is evident that the hinge may be made of separate pieces of wire soldered to the bow-wires or the ear-frame, in which case they may be joined to the bow-wire at the points indicated in Fig. 1 by the dotted lines at *x x*.

If the hinges are to be used for boxes or similar purposes, the ends of the wires may be coiled, as shown by dotted lines in Fig. 3 to allow of the passage of screws or nails through the coils to hold them in position.

This construction of hinge will be very useful for many purposes, for, independent of the cheapness of manufacture, it is, considering the weight of metal in it, a very strong hinge, and the coils will form a spring which will allow of a certain amount of elasticity in the joint which will be found to be of much utility under many circumstances, as, instead of breaking the hinge under unusual stress, the coils will spring slightly under the extra strain and then return to their original shape after the unusual strain has been removed.

I do not intend to limit myself to a hinge formed of two pieces of wire, as the hinge may be made by coiling a single wire, as shown in Fig. 4, and then cutting the same apart at the dotted line on the center coil thereof.

I am aware that two wires have before been coiled round the pintle of a spring-hinge, as shown in the English Patent No. 4,114 of 1879, and make no claim to any such construction.

What I claim as new is—

1. The combination, in a hinge, of two wires and a pivot or pintle, the wires having their ends coiled around the pintle and the lower coil of one wire resting on the upper coil of the other, substantially as described.

2. The combination, in a hinge, of two wires and a pivot or pintle, each wire having a coil surrounding said pintle, and its extreme end arranged to contact with the extreme end of the coil of the other wire, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 24th day of September, 1886.

ISAAC B. KLEINERT.

Witnesses:

JOS. S. MICHAEL,

JOSEPH B. LYMAN.