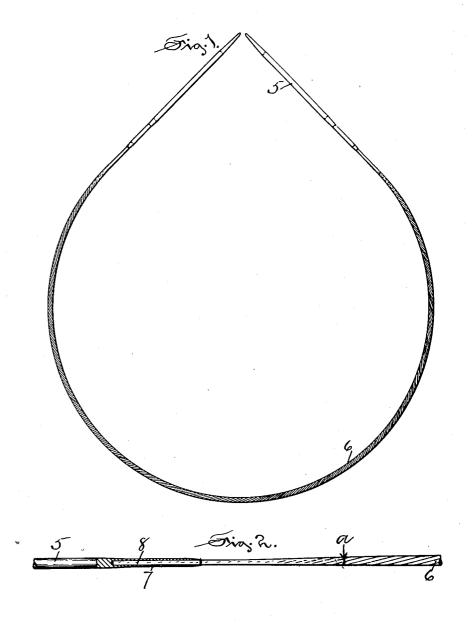
Nov. 3, 1936.

A. L. LE FEBVRE

2,059,968

KNITTING NEEDLE
Filed April 9, 1935



alfiel L. L. Febre. atthur Blicking, ATTORNEY

## UNITED STATES PATENT OFFICE

2,059,968

## KNITTING NEEDLE

Alfred L. Le Febvre, Hartford, Conn., assignor of one-half to Aubrey I. Nellis, West Hartford,

Application April 9, 1935, Serial No. 15,386

2 Claims. (Cl. 66-117)

My invention relates to the type of knitting needles which are joined by a flexible tie secured to the needles at the ends opposite the points and which are employed for circular knitting, and an object of my invention, among others, is to increase the life of the needles of this type by a construction that will disperse the bending points of the tie and prevent the localizing of such bending points.

One form of a knitting needle embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing in which

Figure 1 is a view of a knitting needle embodying my invention.

Figure 2 is a view partially in section showing the method of attaching the flexible tie to the

It is common practice at the present time in the art of knitting, and particularly in the knitting of garments of tubular form, to employ two needles which are joined by a flexible tie secured to the ends of the needles opposite the points. 25 Such tie is generally composed of braided or twisted wire which is inserted in a socket in the end of the needle, any suitable means for securing the wire in such socket being employed. In the knitting operation the movement of the 30 needles back and forth causes a bending strain of the wire to take place at the end of the needle and the mouth of the socket, and this continued flexing and bending of the wire causes such wire to become broken at this point after a compara-35 tively short time.

To overcome this objection I have constructed a pair of needles as shown in the accompanying drawing in which the numeral 5 indicates the needles and 6 the tie joining the needles. The needles may be of the usual form heretofore employed and the tie may be composed of braided or twisted wire as heretofore used. In effecting my purpose I create sockets 7 in the ends of the needles as heretofore, and the ends 8 of the tie 6 are fitted in to the socket and fastened therein in any suitable manner.

In order to disperse the bending point and prevent such point from being located close to the end of the needle I treat the tie 6 so that

the bending point is not localized at any one point but is removed from the end of the needle and may be located at different points from the end of the needle out to the point marked "a", the points of flexing of the tie depending upon the manner of application of force to the needles in the knitting operation.

As one means of carrying out my purpose I load the tie 6 from the end of the needle outwardly, say to the point "a", with solder or similar stiffening material, so that the tie will partake of substantially the same stiffness as that of the needles at a point near to the needles and this treatment will prevent the localizing of the strain at any one point. The solder may be so applied 15 that various degrees of stiffness will exist at different points from the needles outwardly. If this stiffness by the application of solder or similar material is uniform out to a certain point, as the point "a", and the flexing of the tie should take place at this point, such flexing at such point 20 will not be continued for the reason that the continued flexing action of the tie will gradually loosen the solder or similar material from the point "a" backwardly toward the needles and the result of such action will be that this point 25 of flexing will gradually work backwardly and will not be continued at any one point with a result that the life of the needles is greatly prolonged, and this causes satisfaction to the user where dissatisfaction has been caused in prior 30 needles in which the bending point has been localized at the end of the needles and the tie has therefore been of very short life.

I claim:

1. A knitting needle including a point of com- 35 paratively stiff material, a flexible tie connected to the end of the point, and means for stiffening the tie in proximity to the point sufficiently to avoid continued successive bending strains at any one point.

2. A knitting needle including points of comparatively stiff material, a flexible tie connecting said points, and means for stiffening the tie in proximity to the points sufficiently to avoid continued successive bending strains at any one 45

point.

ALFRED L. LE FEBVRE.