1937

April 9.

Nov. 3.

BETWEEN:

VANITY FAIR SILK MILLS.....APPELLANT;

AND

THE COMMISSIONER OF PATENTS...RESPONDENT.

Patent—Invention—Prior publication—Subject-matter—Lack of novelty.

The invention is one which relates to hosiery, especially the provision in knit hosiery of a circumferential zone of greater elasticity than the basic fabric, and designed to function as a strain absorber to prevent garter runners and to give lengthwise stretch of the stocking at the knee when the knee is bent. Two claims in the application of appellant's assignor for a patent were disallowed by the Commissioner of Patents on the grounds of prior publication and want of subject-matter. The Court found that the process of manufacture described and claimed is but a slight variation of a prior patentee's idea, and lacks invention.

Held: That a patentee to uphold a patent must show novelty; it is not sufficient to show newness in the sense of doing a thing which has not been done before, but he must show newness in the shape of novelty by producing a thing which required some exertion of mind that could properly be called invention.

APPEAL by Vanity Fair Silk Mills from the refusal of the Commissioner of Patents to accept certain claims in the specification accompanying an application for Letters Patent for an invention relating to hosiery.

The appeal was heard before the Honourable Mr. Justice Maclean, President of the Court, at Ottawa.

W. A. MacRae for appellant.

W. P. J. O'Meara K.C. for respondent.

The facts and questions of law raised are stated in the reasons for judgment.

THE PRESIDENT, now (November 3, 1937) delivered the following judgment:

This is an appeal from the refusal of the Commissioner of Patents to grant a patent, in respect of claims numbered 3 and 4 in the application of Howard B. Snader, assignor

1937

VANITY FAIR SILK MILLS v. COMMISSIONER OF PATENTS.

Maclean J.

of Vanity Fair Silk Mills, the appellant, for letters patent for an alleged invention of new and useful improvements in Hosiery With Elastic Strain Absorber. The application, serial number 409,112, was filed on May 26, 1934. The two claims mentioned were disallowed by the Commissioner on the grounds of prior publication and want of subject-matter.

The invention is said to relate to hosiery, and more particularly, the provision in knit hosiery of a circumferential zone of greater elasticity than the basic fabric, and designed to function as a strain absorber to prevent garter runners and to give lengthwise stretch of the stocking at the knee when the knee is bent. A more specific object of the invention is said to be the provision of a stocking with a circumferential zone of covered latex thread, integrally knitted below the welt and designed to prevent the disintegration of the fabric by the strains just above referred to, at the knee. Another object of the invention peculiar to Snader's application is said to be the provision of the strain absorbing zone in the form of a plurality of narrow bands of knit latex thread, alternating with narrow bands of the knit basic fabric of the stocking, whereby, it is claimed, certain advantages are obtained.

It will not be necessary to quote at length from the specification, Snader's description of his invention, because its substance may, I think, be sufficiently expressed for our purposes here, in relatively short terms. The invention is concerned with knitted hosiery and consists in providing, below the welt of a stocking—that is the top of the stocking, and which is usually double the thickness of the body of the stocking—and above the knee, what the patentee calls "a strain absorbing zone," the said absorbing zone being integrally knit with the adjacent portion of the leg of the stocking and comprising a plurality of narrow bands, constituted alternately by courses of covered latex rubber thread, which may be called elastic yarn, and courses of relatively inelastic yarn, which latter yarn the patentee refers to as "the base fabric of the stocking," and which are of a gauge approximately that of the inleastic yarn. It is claimed that the stress created by pressure of the knee when flexed, "is referred to the said absorbing zone without substantially stretching the fabric in the region

contacted by the knee." The alternating bands of relatively elastic and relatively inelastic knitting are repeated a number of times until the desired width of the strain absorbing zone is built up.

The specification states that

the zone of knit covered latex rubber is extremely stretchable both circumferentially and longitudinally so that strains originating in the welt from the pull of the garter are absorbed by the elastic zone, and distributed laterally so that the fabric beneath the elastic zone is relieved from said strains and runners will not be incited.

and also that

the stretching of the front of the stocking when the knee is bent will be transmitted to the fabric of said elastic zone, relieving the basic fabric in the region of the knee from excessive strain and preventing runners from this cause.

The claims in question are as follows:

3. Stocking having a strain absorbing zone below the welt and above the knee, the adjacent portion of the welt and the adjacent portion of the leg of the stocking down to a point at least below the knee being knit from relatively inelastic yarn, said strain absorbing zone being integrally knit with the said adjacent portions and comprising a plurality of narrow bands constituted alternately by courses of covered latex rubber thread and courses of relatively inelastic yarn, whereby the stress created by pressure of the knee when flexed, against the relatively inelastic fabric, is referred to the said strain absorbing zone without substantially stretching the fabric in the region contacted by the knee.

4. Stocking having a strain absorbing zone below the welt and above the knee, the adjacent portion of the welt and the adjacent portion of the leg of the stocking down to a point at least below the knee being knit from relatively inelastic yarn, said strain absorbing zone being integrally knit with the said adjacent portions and comprising a plurality of narrow bands constituted alternately by courses of covered latex rubber thread of a gauge approximately that of the relatively inelastic yarn, and courses of relatively inelastic yarn, whereby the stress created by pressure of the knee when flexed, against the relatively inelastic fabric, is referred to the said strain absorbing zone, without substantially stretching the fabric in the region contacted by the knee.

Prior publications, to which I was referred, disclose many proposals for forming whole stockings, or parts of stockings, of elastic material, india rubber threads, or a yarn with an elastic core of rubber thread, exclusively or as an alternating yarn, for the purpose of avoiding the necessity of a separate garter, for example, a stocking knitted with a broad band in the upper portion of the stocking, at the extreme top or below that, of a desired width, to function as a garter, to hold up the stocking: Garon, United States patent no. 1,373,880, granted April, 1921; Michaelis, British patent no. 2668, granted March, 1894; Werm, United States patent no. 1,213,047, granted January, 1917. Mutch-

1937

VANITY FAIR SILK MILLS v. COMMISSIONER OF PATENTS

Maclean J

ler et al., in their United States patent, no. 1,890,299, dated January, 1917, which related particularly to ladies' silk stockings, proposed knitting one or more tight courses, then automatically modifying the movement of the needles so as to knit one or more courses of loose stitches, then automatically varying the needle control means to again knit the desired number of tight courses and so on through the stocking, or throughout the particular part of the stocking, being knitted in this special manner. The object of this, it was said was to provide greater stretch or give throughout the sheer or leg portion of the stocking, or in the welt, or in the foot portions, or to provide such greater stretch or give only at the knee or upper part of the stocking, where the maximum stretch horizontally or vertically is desirable so that the stocking may readily adapt itself to limbs of varying thickness. Thus, they said, they provided a stocking having the necessary body and cling, and providing the desired stretch or give.

The patents to which I have just referred do not describe a zone, comprising alternate bands of elastic yarns, and inelastic yarns, and this was emphasized by Mr. MacRae. He described the general suggestion of this prior art as "built in garters," and he urged that Snader's "absorbing zone," comprising alternate narrow bands as explained, was structurally different from these prior disclosures, and was adapted to distribute strains over a relatively wide area in comparison with anything disclosed by any of this prior art, for example, Mutchler. Mr. MacRae also urged that the practical significance of Snader would be at once recognized when one considers the substantial stress placed upon the delicate fabric of the sheer modern hose when the wearer bends the knee; and he said that if "runs" were to be avoided the pull exerted by the garter must not be borne by the few warp threads of the fabric directly engaged by the clasp of the garter. It is the distribution of the strain effected through the "absorbing zone" of Snader upon which the claim to invention really rests, if I understand correctly the argument of Mr. MacRae. I am not disposed to place reliance on the citations of prior art just mentioned, as prior publications, in disposing of a proceeding of this kind, though, I think, they narrow the field in the art which Snader purports to invade.

I was referred to the United States patent to Adamson which relates to elastic yarn suitable for use in the manufacture of various textile fabrics and articles. This patent, which seems relevant here, was applied for on June 11, 1931, and was granted on September 8, 1931, which long antedates Snader. And the appellant concedes that it uses the Adamson yarn in manufacturing hosiery according to Snader. Describing his invention Adamson states:

Elastic yarns as heretofore marketed have been relatively large and unsuitable for the manufacture of knit articles They have been made from cores of vulcanized rubber composition wound with one or more yarns and in one or more layers The cores were of relatively large size cut square in cross section. The fibrous covering yarns have been relatively coarse and have substantially augmented the dimensions of the core. Because of these factors and because also of the lack of uniformity in the built-in elongation of the core and of the covering operations, the old elastic yarns were not employed in knitting machines, especially those of fine gauge. Such old elastic yarns were used largely in the manufacture of woven fabrics such as elastic straps for girdles and for stocking supporters and of such articles as garters, bandages, and the like. Furthermore, the old elastic yarns, as heretofore utilized in making articles, generally, if not invariably, imparted a capacity to stretch in one direction only In other words, they were practically only used for making articles which resisted a one-direction pull or which exerted a constrictive force in one direction.

The present invention aims to provide a new and useful type of elastic yarn which has characteristics adapting it to be utilized in knitting machines of fine gauge—as fine or finer than cylindrical knitting machines of a diameter of 3½ inches having 176 needles. With it a large variety of articles having new and improved qualities long desired in the art may be manufactured. The capacity of the elastic yarn for knitting in modern fine gauge knitting machines at high speed enables it to be utilized with existing equipment, without substantially increased labour or handling costs, and without great reduction, if any, in the speed of the machines. It enables articles to be fabricated with a capacity to stretch or yield in any direction rather than merely in one direction whereby the grip of the article on the body or portions of the body is distributed and made comfortable to the wearer without sacrifice of holding or sustaining capacity.

With the elastic yarn of the present invention it is now practical to manufacture hosiery for men, women, and children of fine gauge with an integral garter-like portion for effectively sustaining the hose in a comfortable manner, to manufacture corsets, foundation garments, brassieres, bathing suits, surgical bandages, etc , all with a capacity to enhance the lines of the human figure in a comfortable manner and with a position retaining capacity not heretofore attained, and to manufacture so-called surgical stockings which are comfortable and efficacious to those afflicted with varicose veins, etc. Many other articles with superior qualities, as those skilled in the art will appreciate, may be made of this new elastic yarn. It has already aroused great interest among garment manufacturers, particularly the hosiery and underwear trade, and great activity has followed its disclosure.

1937

VANITY FAIR SILK MILLS v. COMMISSIONER OF PATENTS.

Maclean J.

According to my invention, a core of any suitable elastic material uniformly elongated is covered with relatively inelastic fibrous material holding it stretched. In the manufacture of a particular elastic yarn the elongation uniformly given the yarn is so adjusted with respect to the covering yarn that the finished yarn has a predetermined and limited capacity to stretch. During the covering operation whatever tension is applied to the core should be applied uniformly and evenly throughout the covering operation. The capacity to stretch of the finished elastic yarn may be anything desired but preferably, at least for use on fine gauge knitting machines, should be in the neighbourhood of 150%, ie., 1" of normal elastic yarn should stretch 2½". To obtain the best speed in the operation of the finest gauges of knitting machines the capacity to stretch is desirably made somewhat less and more in the neighbourhood of 100%. Of course the stretching capacity of the elastic yarn should also be suited to the use to which it is put, and may vary from those percentages which are illustrative.

* * * * * *

From the foregoing the nature of the invention will be apparent to one skilled in the art. The elastic yarn may be employed in knitting machines in the manufacture of all or part of knitted articles, and either as a substitute for the ordinary non-elastic fibrous knitting yarns, or jointly therewith in so-called "plating." The elastic yarn may also be used on sewing machines for stitching purposes. It may also be used as a substitute for the old elastic yarns where it is desired to obtain a finer product. Woven or knitted into bandages the universal elasticity of the fabric enables an end of the bandage to be tucked under a convolution and anchored by its own inherent gripping properties. Incorporated in articles of wearing apparel such as corsets, brassieres, or bathing suits, desirable figure-enhancing effects may be attained. Golf knickers and socks may be improved by its use. Great improvements in many old articles of manufacture and in many new articles are attending its introduction and disclosure. A few courses of elastic yarn incorporated in women's stockings immediately above the knee will minimize runs In such cases, and generally in knitting, it is advisable to relieve the elastic yarn of tension so that when the garment is completed the portion thereof constituted by the elastic yarn, will not contract or narrow in such way as to objectionably detract from its appearance and this may be done by leading the yarn directly from the source of supply to the knitting needles instead of through the usual tensioning devices.

Adamson, it will be seen, relates to an elastic yarn suitable for use in the manufacture of various textile fabrics and articles, and he describes its manufacture, its chief characteristics, and some of the uses to which it may be put. For example, he states that it will stretch or yield in any direction rather than in one direction, according to the degree required, and the use to which it is to be put; it may be used in the manufacture of hosiery with an integral garter-like portion, to sustain the hose in a comfortable position; it may be employed in knitting machines in the manufacture of all or part of knitted articles and as a substitute for the ordinary non-elastic yarns, or jointly

therewith, whereas the old elastic yarns were not usually thus employed, but rather in the manufacture of woven fabrics, such as stocking supporters, garters, bandages and the like. He points out that a few courses of his elastic yarns incorporated in women's stockings immediately above the knee will minimize runs, and, showing that this observation was a considered one, he directs that in such a case it was advisable to relieve the elastic yarn of tension so that when the stocking was completed the portion thereof constituted by the elastic yarn would not contract or narrow in such a way as to detract from its appearance, and he suggests that this be done by leading the yarn directly from the source of supply to the knitting needles instead of through the usual tensioning devices. The purpose and value of this will be quite obvious to any one, and it rather indicates to me that he had done experimental work in this direction, and I have no doubt that knitting according to this direction would tend to minimize runs. He does not state that it will absolutely prevent runs, and it was prudent and proper to make the statement in that guarded way; Snader states, in one place in his specification, that his invention will not "incite runs" which I assume would be an accurate statement, while in another place he states that it will "prevent" runs caused by excessive strains at the knee, which statement is probably not absolutely accurate.

As I have already stated, the claim to invention in Snader is the provision of a circumferential zone below the welt, knitted in the manner already described, having greater elasticity than the basic fabric, giving lengthwise as well as circumferential stretch, and functioning as a strain absorber; and particularly it is claimed that this construction will "prevent," or will "not incite," garter runners by reason of the lengthwise stretch at the knee, when the knee is bent. The functioning of Snader's construction is attributable to the employment of an elastic yarn which I do not think Snader can possibly claim to have invented, and I may point out, that Snader's assignee, the appellant, uses the yarn manufactured according to Adamson's specification. One of the advantages claimed by Adamson is that his yarn will stretch horizontally and vertically and in

1937

VANITY FAIR SILK MILLS v. COMMISSIONER OF PATENTS.

Maclean J.

all directions, it may be used as a substitute for the ordinary non-elastic yarns, or jointly therewith, and to illustrate the latter use he says that a few courses may be incorporated in women's stockings immediately above the knee, circumferentially of course and which means below the welt, and this he states will minimize runners; this must be because his yarn has a capacity to stretch or flex in all directions, which of course means it will absorb strain. Adamson does not claim invention for this particular application of his yarn in the knitting of a stocking because, I assume, he believed that this would be apparent to any person conversant with the art. It is obvious, I think, that an elastic yarn, which will stretch in all directions, if knitted into a fabric or stocking in a sufficient quantity, will absorb strain. I think it is obvious also that a band of strong elastic yarn knit into a stocking above the knee will tend to minimize runs. Now, it seems to me that Adamson not only invented a new elastic yarn, but he had in mind, as one of the uses to which it might be put, the same idea as Snader had in mind, and there would be little purpose in inventing a yarn unless it had a use or uses. That being so, it seems to me that the difference in the method described by each for employing an elastic yarn, to give stretch in a stocking and thus minimize or prevent runs, is not so great as to warrant a grant of monopoly to Snader. Snader suggests a "zone" comprised of bands, knit alternately with elastic and non-elastic yarns, while Adamson suggests a few courses, which might be called a "zone," of elastic yarns above the knee to prevent runs; it is plain enough that the reason Adamson suggests his courses of elastic yarns above the knee was because he recognized the fact that the knee of a stocking was particularly subject to strain. I do not think any distinction can be drawn between an absorbing zone "below the welt," and one "immediately above the knee." There is nothing before me to indicate that the one position is better than the other. I think that is all a matter of choice, to be determined finally by trial and error, but the idea or principle is the same. In neither case is there any prescribed width for the "zone" or "courses,"—which would be determined by experience and experiment—and the fact that Snader suggests alternating, in

his zone, the elastic yarn with the inelastic yarn, is not, I think, a patentable distinction.

It appears to me that what Snader describes is but a slightly varied application of Adamson's idea; the difference did not call for that degree of ingenuity which merits the acknowledgment of invention, and even if it effected some improvement, or showed some skill, it would not necessarily follow that there was invention. A patentee to uphold a patent, must show novelty, not merely newness in the sense of doing a thing which has not been done before, but he must show newness in the shape of novelty by producing a thing which, it may be presumed, required some exertion of mind that could properly be called invention. The theory and reason for Snader's suggested process of manufacture is amply disclosed, I think, in Adamson's described use of his yarn, and Snader's variation of it, or the step from one to the other, is not invention. Snader did not discover any hidden virtue in what Adamson had disclosed. If one wishes to vary either the method of Snader or that of Adamson for supplying flexibility at the knee of a stocking for the purpose of absorbing strain, I have no doubt that might be done in many slightly different ways, but the essence of the method or process of manufacture, and the object and result as well, would all be the same, in the patent sense.

It seems that the British application of Snader for letters patent for the same invention, after being allowed subject to some amendments of the specification, by the Superintending Examiner, was on appeal refused by the Patents Appeal Tribunal. The reasons for refusing the application I have not seen, and accordingly I cannot well draw any inference from that refusal. On the other hand, Snader's application for patent in the United States was allowed.

I am of the opinion therefore that the claims in question here were properly refused by the Commissioner of Patents, and I therefore dismiss the appeal and affirm the action of the Commissioner of Patents. On the settlement of the minutes I shall determine the matter of costs.

Judgment accordingly.