

COLONIAL FASTENER COMPANY, }
 LIMITED, AND G. E. PRENTICE }
 MANUFACTURING COMPANY } APPELLANTS;
 (DEFENDANTS)

1932
 *Dec. 12,
 13, 14.
 1933
 *April 25.

AND

LIGHTNING FASTENER COMPANY, }
 LIMITED (PLAINTIFF) } RESPONDENT.

ON APPEAL FROM THE EXCHEQUER COURT OF CANADA

Patent—Novelty—Matter covered by the invention—Infringement.

The judgment of Maclean J., President of the Exchequer Court, [1932] Ex. C.R. 89, in favour of the plaintiff in an action brought for alleged infringement of its patent, which was for an invention relating to a machine and method for producing straight and curved fastener stringers, was reversed, on the ground that, having regard to the prior art, the only invention disclosed by plaintiff's patent was a particular method and a particular mechanism for achieving a known result, which method and mechanism were not infringed by defendant's machine.

APPEAL by the defendants from the judgment of Maclean J., President of the Exchequer Court of Canada (1), in favour of the plaintiff in an action for alleged infringement of patent. The material facts of the case are sufficiently stated in the judgment now reported. The appeal was allowed, and the action dismissed, with costs throughout.

D. L. McCarthy, K.C., A. Geoffrion, K.C., and S. A. Hayden for the appellants.

O. M. Biggar, K.C., R. S. Smart, K.C., and H. G. Fox for the respondent.

The judgment of the court was delivered by

SMITH, J.—The respondent brought this action in the Exchequer Court for infringement by appellants of Letters Patent of Canada No. 210,202, dated 5th April, 1921, and obtained judgment (1) for an injunction with a reference as to damages.

From this judgment the appeal is taken.

*PRESENT:—Rinfret, Lamont, Smith and Crocket JJ., and Latchford C.J. (Supreme Court of Ontario) *ad hoc*.

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The invention covered by respondent's patent relates to a machine and method for producing straight and curved fastener stringers, such as shown in Letters Patent of the United States No. 1,219,881, and also the curved stringers shown in application for Letters Patent of Canada No. 219,986. These fasteners are commonly known as "Zipper" fasteners, and physical exhibits "E" and "F" are specimens of respondent's fasteners and exhibits 21 and 22 are specimens of appellants' fasteners.

The fastener consists of two lengths of cloth tape disposed on opposite edges of the opening to be fastened, each tape edge next the opening bearing a series of spaced metal units, the units on one tape being staggered in position with respect to the units on the other tape, all the units being so shaped as to interlock the series on one length with the series on the opposed length of tape, when brought together with a slider which envelopes the two interlocking edges, and is manually movable thereon. Each unit has jaws at one end to straddle and be compressed on the corded edge of the tape. The projecting interlocking end of each unit is formed with a projection on one side and a socket on the other, so that the opposing series of units are interlocked through the action of the slider by meshing the projection of each unit of one series in the socket of the adjacent unit of the other series.

The completed fastener of both appellants and respondent is the subject matter of a British Patent No. 14,358 of 1912, Exhibit "U," issued to Katharina Kuhn-Moos. The latter did not patent her invention in Canada or the United States, but the Sundback United States Patent, No. 1,219,881, seems to cover the same subject matter.

We are not, however, here concerned with the fasteners themselves, but with the machine for making them. In this machine we have a punch press for cutting out and forming the units from a flat strip of metal, which was the ordinary method of making the units long before the date of respondent's patent.

The problem that remained, after these small units had been made by a punch press, was that of getting the jaws astride the corded edge of the tape and compressing them there in succession with the correct space between each unit. A means of placing fastener units on the corded edge of a tape in succession with equal spaces between units

is disclosed in the Aronson Canadian Patent No. 107,456, dated September 17, 1907 (Ex. B.) There the units, after being made, are placed by hand in what is called a magazine, which is combined with a machine in such a manner that the jaws of the units are successively placed astride the corded edge of the tape held taut in the machine and moved along, step by step, each unit, as placed astride the edge of the tape, being compressed there by two reciprocating plungers. A method of clamping the units to the tape in succession in regulated spaces after getting the jaws of the units astride the edge of the tape, was therefore not the problem that required to be solved by Sundback. The problem was a means of carrying the units, when formed, automatically to a position where the jaws of each unit would be placed successively astride the corded edge of the tape, to be there automatically compressed, the space between units being regulated by feeding the tape along step by step, as shown in the Aronson patent.

Methods of cutting units with jaws from flat metal strips and automatically carrying such units on, so as to place these jaws astride a wire and compress them there with regulated spacing, were disclosed long before the date of respondent's patent, chiefly in connection with the manufacture of barbed wire.

It is at once argued that there is no similarity between the making of barbed wire and the making of these zipper stringers. It is, of course, plain enough that these stringers could not be made on a barbed wire machine without much change or modification of the machine. An examination, however, discloses that the principles involved in the working of the two machines have much in common. This was not overlooked by the inventor of respondent's machine, Sundback. His United States patent, No. 1,331,884, dated February 24, 1920, is, as the evidence discloses, for the same invention as the Canadian patent of respondent in question. In the specifications to the United States patent, he says:

The present invention is not limited in its broad aspects to the production of the particular fastener members referred to, nor to the setting of such members on tapes, but is of general application wherever it is desired to automatically and cheaply form large numbers of like parts, and to set them on a suitable carrier element.

The product of the machine, therefore, need not be fasteners at all, the units need not be fastener units, and

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the carrier need not be a tape, but may be any suitable carrier element.

Looking, then, at Brainard's wire-working machine, Patent No. 292,467, dated January 29, 1884, we have a suitable strip automatically fed into a punch press, from which the barbs, each with two jaws, are formed and cut out successively. The carrier element, a strand of wire, is automatically fed into the machine from a spool, and passes under the barbs between the jaws, and a punch presses the barb down on the strand and into the concave sides of a channel, so that the jaws are made to clasp the strand tightly. The strand is automatically fed along step by step, so that a barb is fastened at each step with regulated spacing.

The Stover United States Patent No. 240,477, dated April 19, 1881, is practically the same as the Brainard patent, except that the carrier element is a flat metal tape, instead of a round wire. There is also a necessary variation of the mechanism for compressing the jaws on the metal tape.

Speaking generally, therefore, there was nothing new in devising a machine to form automatically and cheaply large numbers of like metal units and to set them on a suitable carrier element with regulated spacing.

The problem remaining to be solved was the devising of a means by which, when the particular fastener units here in question were successively cut and formed from the metal strip, they would be automatically carried on and placed with the jaws astride the corded edge of the tape, to be there compressed on the tape, as disclosed in the Aronson patent, thus avoiding the tedious and expensive manual operation necessary in the Aronson process for placing the jaws of the units astride the edge of the tape.

Sundback solved this problem as shown in respondent's patent by constituting the metal strip the means for carrying the units to the desired position. This object is attained by first punching out in the punch press from the metal strip automatically fed into the machine the piece of metal from which the unit is to be formed, and replacing the piece so cut out automatically back into the space from which it was cut out, and carrying it on, as the metal strip is fed along, for the next operation, where it is firmly held in position by compressing the edges of the metal strip, while

a punch and die form the unit. Then this unit, still held in position in the metal strip, is carried by that strip, as it is stepped on, to a position where the jaws of the unit are placed astride of the corded edge of the tape, and is there compressed on the tape by plungers, which compress the edges of the metal strip, and thus compress the jaws of the unit on the tape, as shown in the Aronson patent.

The specification of respondent's patent dwells on the novelty whereby the punching for the jaw member is completely severed from the blank metal strip and then immediately replaced therein, so that it can be further fed for the subsequent forming and cutting operations while at the same time being protected from tool marks. By this means, it is claimed, it is possible to apply pressure to the punching through the blank so as to hold the punching firmly during the shaping operation, and then, by a further side punching operation through the blank, to compress the jaws firmly on the carrier element or tape without leaving any tool marks upon the jaw members themselves. This avoidance of tool marks is claimed to be a great advantage, since it cheapens subsequent finishing operations.

The appellants' method of forming and severing the completed units from the flat strip of metal and then carrying these completed units in succession to a position where the jaws are placed astride the corded edge of the tape, is entirely different from the method employed as disclosed in respondent's patent just described. The appellants in their machine do not first punch from the metal strip a piece subsequently to be formed into a completed unit; but first, by punch and die, form the projection and socket of the unit in the metal strip, and then, by a subsequent punching operation, complete the making of the unit by cutting it out of, and thus severing it from, the metal strip. They do not constitute the metal strip a means of carrying the units successively to the position where the jaws are placed astride of the corded edge of the tape. They do not, by plunger, compress the edges of the metal strip and thus compress the jaws of the unit on the tape, and so prevent tool marks on the unit.

The method in the appellants' machine, in my view, is radically different. The unit is formed in the metal sheet and during the process of formation does not require to

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be held firmly by the pressure on the edges of the strip as specially provided for in respondent's patent. When completely formed by being cut from the metal strip by the second operation, the completed units are placed successively by the action of the cutting-out punch on a plane or table, where they are at once successively pushed by another operating part of the machine to a position where the jaws are placed astride of the corded edge of the tape. This method, and the form and operation of the machine by which the result is brought about, seem to me to be entirely different from the respondent's method, and from the form and operation of respondent's machine.

The method adopted in appellants' machine resembles less the methods adopted in respondent's machine than the methods disclosed in various other patents, such as the Brainard and Stover patents already referred to, and the Major United States Patent No. 525,914, dated September 11, 1894. The latter patent has reference to a machine for automatically making hooks and eyes and attaching them in spaced relation in groups, with gaps between groups, to a cardboard strip or tape by U shaped staples. The staples are formed and cut from a wire fed into the machine step by step, and are automatically brought to the proper position in relation to the hook or eye for fastening the latter to the cardboard strip or tape. The hook and eye are also made on the machine, and automatically brought to the proper position on the cardboard strip or tape, to be fastened there by the staples. The staple and hook or eye having thus been brought to the proper position, the staple is pushed through the loops of the eyes and cardboard, and clinched by contact of the staple ends at the other side of the cardboard in the ordinary method of stapling, so well known as not to require description, the patent states. The cardboard strip is fed along step by step until the desired number of hooks and eyes are attached, with regular spacing, and then is fed by a long step, so as to commence a new group.

It will thus be seen that the practice of forming and cutting units from a metal wire or strip fed step by step into the machine, and in the same machine automatically carrying the units successively as formed to a position where they are successively clamped or clinched to a tape or other carrying element in spaced relation in groups of pre-

determined length, was not new at the date of the respondent's patent, and that the most that can be covered by respondent's patent is the particular method and the particular mechanism by which the result is achieved, and cannot cover all methods and all mechanisms by which that result is brought about. *Tweedale v. Ashworth* (1); *Miller v. Clyde Bridge Steel Co.* (2).

It is argued for respondent that there is some novelty in respondent's method of clamping the units to the tape by feeding the tape step by step to attach a desired number of units with equal spacing and then, by a long step, to divide the units into groups, with a blank space on the tape between groups. Aronson attained this precise result, not by means of the tape being advanced by the long step, but by leaving blanks in his magazine—that is, spaces without units.

The Shipley United States patent, No. 85,249, dated December 22, 1868, relates to a feed-motion for machines for cutting the teeth of metal combs, and discloses a means of feeding a metal strip into a machine, step by step, so that the desired number of teeth are cut with equal spacing. Then the metal strip is advanced by a long step, so as to form groups of teeth of the desired number, with gaps between the groups. This is secured by means of the co-operation of two ratchet wheels and one pawl.

Major secured the same result by co-operation of a single ratchet wheel and two pawls. In respondent's machine the Major device is used, and in appellants' machine the Shipley device of two ratchets and one pawl is adhered to. Both machines use the Shipley method of feeding the metal strip into the machine step by step, but in that part of the operation no long step is required.

Many years before respondent's patent, Prentice made and used extensively a machine for fastening on tape the "Securo" fastener, in regularly spaced groups with gaps between groups, using a single ratchet wheel.

There seems, therefore, to be nothing new in respondent's ratchet feed of the tape step by step with long gaps at required intervals to form separated groups. Neither is there anything novel in obtaining tension on the tape by wrapping same on a knurled roller, as this was a well

(1) (1892) 9 R.P.C. 121, at 128. (2) (1892) 9 R.P.C., 470, at 479.

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known method of obtaining a grip on fabric without pinching the fabric so tightly between rollers as to cause injury. The use of roughened rollers to get a better grip on the tape is disclosed in the Olm patent, No. 1,114,177.

There is nothing new in respondent's use of plungers to compress the edges of the metal strip and, through them, the jaws. Aronson used plungers for this purpose, applied directly to the jaws. In any case, the appellants do not use plungers at all for this purpose, but adhere to a common practice disclosed in the patents already referred to, of pressing the jaws between or against inclined planes. These planes, in appellants' latest design, are pivoted at one end in such a way that, when the unit is pressed between them, they swing on the pivots and close at the point of contact with the unit, thus lessening friction. They constitute no infringement of respondent's plunger device, which in itself was not new.

Respondent, at the trial, relied on Claims 1, 2, 3, 7, 8, 10 and 19.

Claim 1 has reference to any machine for making fasteners, regardless of the method by which the machine produces them, which has means of feeding fastener members into position to be compressed on to the tape and means for compressing the fastener members thereon. This makes no claim to any particular mode of making the fasteners in the machine, but purports to cover any and all means in such a machine of feeding the tape step by step, feeding fastener members into position, and compressing these on the tape. Fastening Aronson's machine to any ordinary punch press arranged to form fastener units would infringe this claim. The claim, as already stated, is too wide, and must be limited to the particular means disclosed.

Claim 2 would cover all the machines previously used for making fasteners, unless it is confined to the particular means used for cutting out the material to be used for the unit and replacing it in the place from which it was cut, and then forming it into the unit. This means is not used by appellants, and is not infringed.

Claim 3 also must be confined to the particular means described, and is not infringed by appellants, who use an entirely different means.

Claims 7 and 8, as already stated, cover nothing that was new.

Claim 10 covers an ordinary old-time punch press operation, without novelty.

Claim 19 is exactly covered by the Aronson patent.

There is no new invention in respondent's machine, except the particular mode of carrying the units, after being formed, automatically to the position where the jaws are set astride the corded edge of the tape. Various mechanisms for doing this very thing with metal units are disclosed in the other patents of prior date referred to. The general idea of a machine for making and cutting metal units and automatically placing those in succession where they were attached to a suitable carrying member with regular spacing, in separated groups, was old at the date of the respondent's patent, and the only invention disclosed by respondent's patent is, as already stated, the particular method of carrying the units, after being formed, so as to place the jaws astride the tape; and this method, and the mechanism by which it is accomplished, are not infringed by appellants' machine.

The appeal should be allowed, with costs; and the action dismissed, with costs.

Appeal allowed with costs.

Solicitors for the appellants: *McCarthy & McCarthy.*

Solicitor for the respondent: *Harold G. Fox.*

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