Welch Perrin & Co Pty Ltd v Worrel [1961] HCA 91

HIGH COURT OF AUSTRALIA

DIXON CJ, KITTO & WINDEYER JJ

DIXON CJ, KITTO AND WINDEYER JJ:

These are an appeal and a cross-appeal from a judgment of *Menzies* J. in a patent action in which the respondents, Richard Milton Worrel and Bamfords Limited, were plaintiffs and the appellant, Welch Perrin and Company Proprietary Limited, was defendant. The respondents are the grantee and licensee of Australian Letters Patent 139,923 bearing date 29th September 1947. By their statement of claim the plaintiffs sought an injunction to restrain the defendant from infringing claims 1, 2, 3, 11, 22 and 23 of the specification and the usual consequential relief. At the trial they abandoned their contention in respect of claim 11 and proceeded only in respect of the other five claims. The appellant, the defendant, admitted selling machines as alleged by the plaintiffs; but denied that these were infringements and asserted that the claims relied upon were invalid. The grounds of this objection were: first, the specification did not comply with s. 40 of the *Patents Act 1952 Cth*: s. 100 (1) (c); secondly, that the invention as claimed in the said claims was (a) obvious and did not involve an inventive step, having regard to what was known or used in Australia on or before 29th September 1947: s. 100 (1) (e); (b) not novel on the priority date: s. 100 (1) (g); and (c) not useful: s. 100 (1) (h).

His Honour held that claims 1 and 2 were valid and had been infringed; that claims 3 and 22 were not infringed; that claim 23 was invalid. He granted an injunction restraining the defendant appellant from infringing claims 1 and 2 with an inquiry as to damages and other relief. He did not revoke the patent so far as it relates to claim 23. Revocation was not asked for. He certified that the validity of claims 1 and 2 had come into question. The appellant appeals against the whole of this order on the grounds that his Honour was in error in finding that claims 1 and 2 were infringed and in finding that they are valid. The respondents by notice of cross-appeal disputed his Honour's finding that claims 3 and 22 were not infringed and also his finding that claim 23 was invalid. But on the hearing of the appeal they did not pursue the matter in respect of claim 23. In the result, although his Honour in his judgment said that that claim was invalid, no formal order has been made in respect of it, and its validity is not in issue on this appeal. The appeal thus turns on the validity of claims 1, 2, 3 and 22 and on whether

any of them is infringed by the appellant's machine, which is known commercially as a Bisley Finger Rake.

The patentee, who is a citizen of the United States of America, is the assignee of the actual inventor. The invention seems to have an American origin; but the patent is not a convention patent.

The letters patent and the specification describe the invention as a "side delivery hay rake". The specification states: "This invention relates to agricultural implements and more particularly to side delivery rakes". It goes on to say that it "is further adapted for use as a cultivator and is advantageously employed as such for the combing of weeds and roots from the soil, as in the preparation of plowed (*sic*) sod for planting". The primary use of the invention is, however, as a hay rake. Before considering in any detail the questions that arise in this case, it is convenient to state, in general terms, what the evidence shows was the state of the prior art.

Mechanical hay rakes are now commonly drawn by tractors. They were formerly usually drawn by horses. A well known early type of mechanical rake is the dump rake. This is a machine that can be set to gather up mown hay from the ground, and when a quantity is gathered to release it as required. Release is effected by the operation of a lever, so that, by thus successively gathering and dumping, windrows can be formed. These dump rakes simply gather hay that lies in their path and dump it where the operator chooses. They do not deliver it to the side, and they require continuous manual operation. Side rakes were a big improvement. They seem to have first come into use in or about 1935. The first side rakes were bar rakes. That is to say the tines of the rake were mounted on bars. These were operated mechanically by a geared mechanism, which was either actuated by the rotation of the wheels of the machine as it was drawn forward over the ground, or driven by power transmitted from a power driven tractor or prime-mover. There were several types of bar rakes. In all of them the hay was carried to one side by the movement of the raking bars as the machine was drawn forward. It appears from the evidence that in such a machine the bars are not at a right angle to the axis of advance but, it was said, at about thirty degrees thereto. The next development of importance after bar rakes was the introduction of finger wheel rakes. These seem to have first come on the market in Australia in about 1954 or 1955—certainly after the date of the patent. What is, in effect, claimed by the respondents is that their patent is for a finger wheel rake; that it is their

invention. At this point it is enough to say that, according to both a witness called for the plaintiffs and a witness called for the defendant, the characteristics of a finger wheel rake as distinct from a bar rake are that: in a finger wheel rake the tines are mounted on wheels, from the rims of which they project; and these wheels are not driven by power, but revolve merely as a result of the machine being pulled forward while the tines on the wheels are in contact with the ground, or with hay lying on the ground. The result of having a series of wheels following one another—the diameter of each wheel being at an angle other than a right angle to the axis of advance, and all the wheels revolving as the machine goes forward—is that the hay is affected simultaneously by two directions of motion and thus moved out to the side of the rake as the rake progresses.

Most of the argument before us centred upon the construction of the specification and, as in every patent case, it is necessary to determine from it what exactly is the invention it describes and for which a monopoly is claimed, before proceeding to consider objections to the validity of particular claims: *Electrical and Musical Industries Ltd. v. Lissen Ltd.*[1] The appellant's counsel in a forceful argument insisted that when the matter is thus approached the specification emerges as muddled and ambiguous and as failing altogether to make clear what it is that the inventor says he has invented. The Act provides in s. 40 that: "(1) A complete specification—(*a*) shall fully describe the invention, including the best method of performing the invention which is known to the applicant; and (*b*) shall end with a claim or claims defining the invention. (2) The claim or claims shall be clear and succinct and shall be fairly based on the matter described in the specification". These requirements of the present Act, that is the Act of 1952, differ in terms from the corresponding provisions in the present *English Act*, the *Patents Act 1949*, s. 4, and from the corresponding provisions of the former *Australian Act*, the *Patents Act 1903-1950*, s. 36. This patent was granted in 1947 under the Act now repealed. But the present Act is by s. 5 (2) made to apply to and in relation to patents granted under the repealed Acts. What differences there may be between s. 40 of the present Act and s. 36 of the repealed Act are probably of no importance. At all events so far as the present case is concerned, the differences in language may be disregarded. The main requirements are that the specification shall fully describe the invention and the manner in which it is to be performed and shall end

[1] (1938) 56 R.P.C. 23, at p. 39.

with a claim or claims. The function of the claims of a specification has long been well established in patent law; and the appellant's objection based on non-compliance with s. 40 may be considered as if the relevant parts of s. 40 have the same effect as the corresponding requirements of the former law.

If it is impossible to ascertain what the invention is from a fair reading of the specification as a whole, that, of course, is an end of the matter. But this objection is not established by reading the specification in the abstract. It must be construed in the light of the common knowledge in the art before the priority date. The general principles governing the construction of specifications are well known, and no lengthy reference to them is necessary. It is, however, fitting that we remind ourselves of the criterion to be applied when it is said that a specification is ambiguous. For, as the Chief Justice pointed out in *Martin v. Scribal*[2], referring to Lord *Parker's* remarks in *National Colour Kinematograph Co. Ltd. v. Bioschemes Ltd.*[3], we are not construing a written instrument operating *inter partes*, but a public instrument which must, if it is to be valid, define a monopoly in such a way that it is not reasonably capable of being misunderstood. Nevertheless, it is to be remembered that any purely verbal or grammatical question that can be resolved according to ordinary rules for the construction of written documents, does not, once it has been resolved, leave uncertain the ambit of the monopoly claimed (see *Kauzal v. Lee*[4]). The specification must be read as a whole. But it is a whole made up of several parts, and those parts have different functions. Courts have often insisted that it is not legitimate to narrow or expand the boundaries of monopoly as fixed by the words of a claim by adding to those words glosses drawn from other parts of the specification. Similarly, if a claim be clear it is not to be made obscure simply because obscurities can be found in particular sentences in other parts of the document.

This specification is at first sight a formidable and difficult document, but on analysis it becomes apparent that it is not so obscure or uncertain as the appellant's argument suggested. Its basic structure does not depart far from the form now usual in English specifications, as described in Halsbury's Laws of England 3rd ed., vol. 29, p. 6. Its seeming complexities are

[2] (1954) 92 C.L.R. 17, at p. 59.
[3] (1915) 32 R.P.C. 256.
[4] (1936) 58 C.L.R. 670, at p. 685.

mainly the result of the detail in which the patentee has described particular embodiments of his device. It was not seriously disputed that it is for a combination, in the sense that word bears in patent law. That is to say, what is described is a machine, the elements of which are all well known and simple mechanical integers, but combined so that they are not a mere collocation of separate parts, but interact to make up a new thing. As is now customary, the specification begins, after the title, with a preamble stating the subject to which the invention relates. This paragraph is as follows: "This invention relates to agricultural implements and more particularly to side delivery rakes. The present invention is further adapted for use as a cultivator and is advantageously employed as such for the combing of weeds and roots from the soil, as in the preparation of plowed sod for planting. It will be obvious as the description progresses that certain features of the invention have their greatest utility in raking operations, but it will also be observed that the same machine or parts thereof may be employed for cultivation and combing operations. For convenience in description, I will first describe the machine in connexion with the raking of hay."

It goes on—this again accords with common forms—to set out the disadvantages of what it calls "conventional side delivery hay rakes", and, by stating the objects of the invention, to show in what ways it is claimed to be in advance of what was previously known. The passage may be quoted in full:

> Conventional side delivery hay rakes are not able to adapt themselves to uneven terrain. As a result, hay is lost because it is not gathered efficiently and damage to the hay rake occurs when its rigid construction is subjected to the various stresses imposed thereon by movement over uneven ground. Conventional rakes tangle and shatter the hay as it is rolled to the side. Said rakes are slow in operation, are capable of being turned only one direction while operating, and are only slowly and tediously transported from place to place. Further, their many gears, sprockets, driving chains, and other and intermeshing parts have provided many points of wear and sources of maladjustment.
>
> Objects of my present invention are, therefore, to provide an improved side delivery hay rake adapted to adjust itself to uneven terrain over which it is operated.
>
> Another object is to provide an apparatus for raking hay into rows with a minimum of tangling and shattering of the hay.
>
> Another object is to provide an apparatus conducive to the speedy and efficient raking of hay.
>
> Another object is to provide a side delivery hay rake that may be turned either way during operation.
>
> Another object is to provide a conveniently transportable rake.
>
> Another object is to reduce wear and maladjustment incident to the many moving and

> intermeshing parts in conventional side delivery hay rakes.
>
> Another object is to provide *ground driving means* for side delivery hay rakes.
>
> Another object is to eliminate the necessity frequently encountered in conventional hay rakes for turning inside irrigation basins to avoid checks, ridges and the like.
>
> Another object is to reduce friction and other impeding influences encountered in the operation of conventional hay rakes.
>
> A further object is to provide a combination hay rake and cultivator adapted to comb roots, trash and the like from soil.
>
> Further objects are to provide a rugged, efficient, and economical combined hay rake and cultivator and to provide improved elements and arrangements thereof in a device of the character and for the purposes set forth.

At this point in a modern specification one might expect to find a general description of what the inventor asserts his invention consists of, commonly called a "consistory clause". This, however, is not an essential part of the body of a specification. It is not required by the Act. Its purpose may be quite well met by the claims themselves: *United Shoe Machinery Corporation's Application*[5]. Indeed, the usual practice in England is now to use in the consistory clause the wording of the broadest of the claims: see Mr. *Blanco White's* book, Patents for Inventions 2nd ed. (1955) p. 34n. The present *Australian Act* expressly requires the claim or claims to define the invention: s. 40. In a patent for a combination, such as this is, the most important function of the body of the specification is to show what are the mechanical means which, operating together, produce the result claimed; and how they so operate. This specification does this by referring at once to the drawings, and by describing in elaborate detail the machine depicted in them and the way in which its various parts work to attain this result. But it also emphasizes that this reference to a particular embodiment is by way of illustration and explanation of the invention and is not a definition of it. It refers, among other matters, to what is called "a plurality of floating raking means individually elevated or depressed in response to uneven terrain over which it (*scil.* the rake) may be drawn". This element—and it is an important element in the machine—is designed to achieve the first of the stated objects of the invention, namely "to provide an improved side delivery rake adapted to adjust itself to uneven terrain". The specification describes and illustrates a method of mounting the raking

[5] (1939) 57 R.P.C. 71.

wheels to that end. It also depicts, and under the heading "Raking Wheel Mounting Modification" describes, an alternative method. And similarly, under the heading "Raking Teeth Modification" there is a description, again by reference to the diagrams, of an alternative form of tines (called "raking teeth" or "spikes"), with a suggestion that, for some purposes, such as cultivating, the teeth should be more robust, and for other purposes, such as raking, more resilient.

So far, the body of the specification describes the components of the combination and shows in close detail what the inventor calls "the most practical and preferred embodiments"—that is to say what the 1952 Act calls the best method of performing the invention that is known to him, with certain alternative constructions to meet particular requirements. Then follow, under the heading "Operation", paragraphs introduced by the statement: "The operation of a combined hay rake and cultivator constructed as described is as follows". It is not necessary to set out these paragraphs in full. They complete the description of the invention and the manner in which it is to be performed, for they show the interaction of its several components. They also state, by reference to the diagrams, how a machine in the form there illustrated may, it is said, be set and adjusted for either hay raking or cultivation. They point out, too, certain incidental advantages that it is said a machine constructed according to the details of the diagrams has: e.g. ease of turning, and how its raking wheels can be fixed above ground level when it is being moved from place to place on its running wheels. This part of the specification does more than point out particular advantages. It explains accurately the principle on which a finger wheel rake works, using the term "raking means" for the wheels, with their projecting tines or spikes, actuated by ground contact. What it says is: "As the teeth encounter hay and/or the ground, the raking means are caused to rotate by the drag imposed on the teeth. Because of the angular relationship existing between the planes of rotation of the raking means and the direction of movement of the rake, each tooth has a component of movement toward the side of the rake during hay engagement. Thus, each raking means rakes the encountered hay to the side, where it, in turn, is encountered and continued to the side by each successive rearward raking means."

The appellant put much emphasis on one sentence that precedes the claims. It is as follows: "Although I have herein shown and described my invention in what I have conceived to be the most practical and preferred embodiments, it is recognized that departures may be made therefrom with the scope of my invention, which is not to be limited to the details disclosed

herein, but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and systems". This seems to mean no more than that the invention is not to be regarded as restricted to machines made exactly as described, but that any machine covered by the words of the claims is to be considered as within the scope of the invention. This is little more than a cautiously introduced assertion of the doctrine that a mere substitution of known mechanical equivalents will not suffice to avoid infringement. But the appellant put forward a different view of this sentence and based on it an argument that, briefly stated, ran as follows: it is not possible to spell out from the body of the specification what is the invention as distinct from the particular embodiment of it described: an incomplete description of an invention may sometimes be completed by filling in gaps in the body of the specification by reference to the claims: but that can only be done if the gap which has to be filled is filled by some feature appearing in all the claims. For this proposition the decision of *Morton* J., as he then was, in *United Shoe Machinery Corporation's Application*[6], was relied upon. It was said that here the claims are so diverse that they could not be treated as by reference completing an incomplete description. This argument was not accepted by *Menzies* J. He said that in this case "it is possible upon a consideration of the specification as a whole, including the claims, to find a description of the invention; and that, in so far as any claim does not claim that invention, it is itself invalid, but its inconsistency with the general description of the invention does not totally destroy the specification"[7]. His Honour was, we think, perfectly right in this. The words on which the appellant relies do not really operate to incorporate into the description of the invention in the body of the specification matter which appears for the first time in the claims, and Lord *Morton's* propositions referred to above are therefore not applicable.

Turning now to the claims. There are twenty-three in all. The scheme of them is complicated, but on analysis they become clear. Numbers 1 to 10 each commence with the words "In a side delivery hay rake having a forwardly movable draft frame" (or "having a draft frame" or "employing a forwardly movable draft frame"). Then follow words descriptive, with varying degree of particularity and detail, of various mechanical integers. Numbers 11 to 23, on the other hand, each commence with the words "A side delivery rake comprising a mobile frame"

[6] (1939) 57 R.P.C. 71.
[7] (1960) C.L.R., at p. 598.

(or in some cases "comprising an elongated mobile frame") followed by words describing various mechanical integers.

The principal distinction between the two groups of claims may therefore be stated as follows. In the first group what is claimed is a mechanism (described by reference to its several integers with differing degrees of particularity), such mechanism being a component of a side delivery hay rake having a forwardly movable draft frame as described. In the second group what is claimed is not a mechanism forming part of a hay rake. It is a side delivery rake itself (not necessarily in these cases a hay rake) comprising a mobile frame (not necessarily a draft frame) having certain characteristics, they being the presence of the same integers as, generally speaking, go to make up the mechanism referred to in the former group of claims. These differences in verbal definition between the two groups of claims have this result: in the first group the invention claimed is a component of a hay rake to be drawn: in the other case it is a rake made up of described components, and this rake could be either drawn or driven, that is to say propelled.

When the claims are further examined it becomes apparent that, although they are not arranged in any obvious sequence, there is a plan in them. They employ both broad terms of small connotation, and thus extensive denotation, and descriptions having a large connotation and, thus, lesser denotation. This is the result of an attempt to state the nature of the integers of the combination in both wide terms and also to describe several particular forms of some of the integers (being those shown in the embodiment and the several modifications of it illustrated and described). And the claims reflect an attempt to make various combinations of integers thus broadly and narrowly stated. The result is a great deal of repetition of language. This makes the claims, as a whole, seem turgid; but it does not necessarily create an ambiguity in individual claims. It is unnecessary to set out all the claims in dispute. They may be found in the judgment appealed from. It suffices at this point to set out the first and second claims. They are as follows:

> (1) In a side delivery rake having a forwardly movable draft frame having a direction control means operably associated therewith, a plurality of rotary raking means arranged in echelon in substantially parallel, erect planes angularly displaced from the normal direction of movement of the frame, and mounting means borne by the frame and individually mounting the raking means for floating movement in their respective planes in response to depressions and elevations in terrain traversed.
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> (2) In a side delivery hay rake having a forwardly movable draft frame having a direction control means operably associated therewith, a plurality of rotary raking

> wheels arranged in echelon in substantially erect, parallel planes angularly related to the normal direction of movement of the frame, the rearward portion of each rotary raking wheel except the rearwardmost of said wheels overlapping the forward portion of its rearwardly adjacent raking wheel, means borne by the frame mounting the raking wheels for rotation in their respective planes and for individual elevational movement, and resilient means individually connected to the mounting means and resistive to weight imposed thereon whereby the raking wheels lightly engage terrain over which the rake is drawn and independently rise and fall in response to depressions and elevations in the terrain traversed.

This language, if read apart from the rest of the specification, seems to have no positive meaning; but when read using the body of the specification and the illustrations as a dictionary of the jargon, the meaning of these claims becomes clear and the invention sufficiently defined.

As it emerges from a fair reading of the specification, the essence of the invention is the mounting in the frame of a hay rake of an arrangement of raking wheels (or a "plurality of raking means"), these being substantially parallel—one behind the other in echelon—standing upright—each set at an angle (other than a right angle) to the line of forward movement of the machine—and each mounted in such a way that it is kept in contact with the ground, but is free to rise and fall referably to the frame—so that notwithstanding any unevennesses in the ground each wheel maintains contact with it with the degree of pressure upon it necessary to ensure that all the wheels revolve and move hay lying on the ground to one side as the machine moves forward. The obvious intention is that the raking wheels should revolve because of their contact with the ground without needing any mechanical aid. That they are to do so determines, without the need for any precise statement, the angle at which—or range of angles within which—they must be set so as to revolve and move the hay sideways.

Some of the phrases used in these claims were subjected to much careful criticism. But once the nature of the invention has been appreciated it is not to be demolished by finding that particular phrases used could, out of any context, or in other contexts, be ambiguous. It is not necessary to go through all of these criticisms in order to reject them. But some must be mentioned. The reference to wheels "arranged in echelon" and to the overlapping of the wheels described in claim 2 was objected to, mainly because in military parlance an echelon is a formation in which several bodies of troops are drawn up in parallel lines, the front of each being to the rear and to a flank of (that is, clear of) the one ahead. But the word originates simply in the likeness of such a formation, shown diagrammatically, to a step ladder. It cannot be said that a formation of separate bodies in that way would cease to be an echelon simply

because some part of a rearward body was covered by the body in front. Moreover, the specification is addressed to hay rakers, not to drill masters; and the illustrations, figures 1 and 2, make plain what is meant by wheels arranged in echelon and overlapping as stated in claim 2. The term "floating movement" was said to produce ambiguity. If there were no context for it, there might be some force in this criticism. But, clearly the term is used, not as a scientific statement of a physical phenomenon, but as a picturesque description of such a mounting of the wheels that they severally maintain contact to the right degree of pressure upon the ground, rising and falling as they encounter depressions and folds in the hay field.

A more substantial criticism was that directed to the phrase "a forwardly movable draft frame having a direction control means operably associated therewith". In claims 1 to 10 this is not said to be an element comprised in the invention but the thing in connexion with which the invention is to be used. But a meaning must be given to it in these as well as in other claims, for it is a factor in determining the scope of the monopoly claimed. It was suggested that the expression "a direction control means operably associated therewith" was limited to something in the nature of the fixed rear wheel that is shown in the diagram of the frame in the illustration of the preferred embodiment. Such a wheel in a frame constructed in accordance with the drawings would maintain the direction of the frame when attached to a tractor. And in some of the claims such a wheel in such a frame is stated as an element of the invention claimed. But, as we have said, the scheme of the claims is that in some of the claims a particular integer is described in general terms, in others what is stipulated is that it should be the particular form of that integer adopted in the preferred embodiment. There is, therefore, no reason at all for construing the generality in one claim as if it were limited by the particularity in another. All that seems to be necessary is that the frame of the rake should, when it is moved forward, maintain its direction, and not swing or yaw. That is because the raking wheels must, as the rake moves, remain at a proper and fixed angle to the line of forward movement. Anything that, when the rake is in operation, is associated with it so as to achieve this result would answer the description. It could, it seems, be either some element on the frame, such as the fixed rudder wheel, or the manner of attaching the frame to whatever source of motive power is associated with it to draw or impel it forward.

Turning now to claim 3. It is cast in a more particular and more narrow form than the two preceding claims. This merely reflects the common practice of those who draft specifications of descending to more and more particularity in later claims in the hope that, if the earlier be

said to be too wide, the later will be valid and effective to catch some infringers. Two statements in claim 3 were made the subject of special attack.

The first is the description of the raking wheels (here called "a plurality of substantially uniform rotary raking wheels") as "each including a substantially cylindrical rim concentrically disposed the wheel adapted to ride over encountered hay and the like and slightly to compress the same downwardly against the earth and outwardly extended raking teeth borne by the rim for hay engagement". This is, we consider, meant to describe, and is a reasonably apt description of, the essentials of the particular method of fixing flexible tines to raking wheels that is described in detail in the specification under the heading "Raking Teeth Modification" and illustrated in the diagrams by figures 7, 8 and 9. In this method, resilient tines made of spring steel are wound on to and project from a member forming an outer circumference of the wheel. This member is called "a hollow cylindrical support element" in the body of the specification, and it is hollow in the illustration. This claim, in attempting to define the inventor's device for a particular method of fixing raking teeth, does so by stating that the member to which they are attached is to be substantially cylindrical which, we take it, means, in common language, roller shaped, whether the roller be solid or hollow. And, as in this respect the claim is a narrow one and relates to a particular form or embodiment of the combination, we think the monopoly claimed by it should be confined to what is thus particularly described: *Walker v. Alemite Corporation*[8]; *Shave v. H. V. McKay Massey Harris Pty. Ltd.*[9]; *Radiation Limited v. Galliers & Klaerr Pty. Ltd.*[10] It was further suggested that the whole phrase quoted above, when grammatically read, means that the rim is "to slightly compress the hay" and the teeth to engage it. But the words following "adapted to" refer, we thing, to the raking wheel as a whole, that is, with all its components.

The other part of claim 3 that was much debated was the requirement that there be "means borne by the frame mounting the said raking wheels for rotation and independent elevational movement in their respective planes, and resilient means interconnecting the frame and the individual mounting means and urging the individual raking wheels upwardly with a force less

[8] (1933) 49 C.L.R. 643.
[9] (1935) 52 C.L.R. 701.
[10] (1938) 60 C.L.R. 36, at p. 52.

than the weight of said wheel". This phraseology seems almost to labour to produce obscurity. Yet, despite the efforts of the draftsman, what is meant emerges. It is that each wheel must be mounted on the frame by a mounting so constructed that the wheel will go round, and that the wheel must be so sprung or counter-balanced that it will ride over the ground in the way required. The distinction in this respect between claims 2 and 3 is that different forms of springs are envisaged (although no particular form is insisted on). Claim 2 is drawn having in mind a mounting for the wheels, such as illustrated in figure 2 of the diagrams, in which the wheels are suspended from helical springs. In claim 3 the modified form of raking wheel in mind is illustrated in figures 5 and 6; and in this a compression spring is employed to keep the wheel in the required adjustment to the ground.

Turning now to the last of the claims in question on this appeal—claim 22. It is of a different order from the others and must be set out in full: "A side delivery rake comprising a mobile frame, means for connecting said frame to a prime-mover, means attached to said frame supporting said frame for ground traversing movement, direction control, means on said frame for resisting forces tending to shift said frame angularly from the line of travel of said prime-mover, rotary raking means mounted on said frame in echelon arrangement, said raking means comprising wheels each including a flat treaded rim and teeth extending a fixed distance radially from said rim, and a hub and axle vertically shiftable relative to said frame, the axis of said hub and axle being disposed at an angle to the said line of travel, and a counter balance element operatively associated with the hub and axle partially reducing the effective weight of said wheel on ground encountered by said wheel".

Much was said about the meaning of the words "direction control, means"—it is agreed that the comma after the word "control" is a mistake—"on said frame for resisting forces tending to shift said frame angularly from the line of travel of said prime-mover". But here again all that is demanded is some means on the frame to correct the natural tendency of the machine, when it is moved forward, to swing into line with the raking wheels revolving on the axis of its forward movement instead of at an angle thereto.

The words in claim 22 "raking means comprising wheels each including a flat treaded rim" also came in for much discussion. This expression is certainly clumsy. It seems to mean no more than that the rim of the raking wheels from which the teeth project is to be flat on its outer surface—that is to say, the part that in an ordinary wheel would be called the tread is to be flat,

not curved. There is no justification for reading the word "treaded" as meaning having indentations such as are in the rubber tyres of a motor vehicle. Why the claim should require a flat treaded rim is not apparent. Probably this is the result of an attempt to describe the precise form of the wheel depicted in figure 2 or figure 4 without distinguishing accidentals from essentials. The statement that the wheel must have "a hub and axle vertically shiftable relative to said frame" seems to be merely alternative jargon to that previously used to mean that the wheels can go up and down. Notwithstanding the quite unnecessary use of much pseudoscientific phraseology, none of the claims in dispute is so obscure that it cannot be said to define an alleged invention and to do so consistently with the body of the specification. Before going to the objections to the validity of the claims, it is convenient, now that their proper construction has been considered, to go to the question of their infringement, taking the claims in the order 1, 2, 3, 22.

The defendant's machine, the Bisley Finger Rake, has raking wheels. They are arranged in echelon, substantially parallel, erect and angularly displaced from the normal direction of movement of the rake when in operation. They are individually mounted on members borne by the frame, enabling them individually to rise and fall in response to depressions and elevations in the ground. They revolve as a result of contact with the ground. The angle at which they are set relatively to the direction of movement results in the hay being delivered to the side of the rake. The only question is whether these integers, so arranged and combined, are "in a movable draft frame having direction control means operably associated therewith". They are in a movable draft frame. That frame has, as *Menzies* J. pointed out, means for attaching it to a tractor so that the attitude of the rake to the tractor will be determined and that, when in operation, the rake will follow the tractor held in that attitude. His Honour's conclusion that this was sufficient was, we consider, correct. We would add only that the suggestion that the means of attachment for coupling the rake to the tractor might be described as part of the tractor instead of as part of the rake, could make not the slightest difference.

Claim 2 is also infringed. Claim 3 is not infringed. The raking wheels of the defendant's machine have outer rims from which raking teeth or tines extend, but the rims are not "cylindrical" in the sense in which the claim uses that term: and, as we have said, the inventor has, perhaps needlessly but quite explicitly, made this a requirement. Furthermore, the wheels of the defendant's rake move the hay by the action of long resilient tines. They can hardly be

said to be "adapted to ride over encountered hay and the like and slightly to compress the same downwardly against the earth".

His Honour held that claim 22 was not infringed. He considered that the raking wheels of the defendant's rake have not "a flat treaded rim and teeth extending a fixed distance radially from said rim". He also thought the hub and axle of the raking wheels in the defendant's rake are not "vertically shiftable relative to said frame", because they go up and down in an arc. And the spring, he thought, was not a "counter balance element operatively associated with the hub and axle". The tines are bent backwards and therefore do not, throughout their lengths, extend radially in a strict geometrical sense, but we think that only by an immaterial variation do they depart from that description. The rim, that is the outer rim, is flat on the side of it which would be the tread of the wheel if the tines were not attached. As to the phrase "vertically shiftable", we think it means no more than that the hub and axle go up and down relatively to the said frame and that they could be brought to a position vertically above their lowest position. That in going up and down they describe an arc does not, we think, matter. The spring in the defendant's machine does have the effect of a counter-balance of the wheel, and it does so by its operation upon a projection from a member, part of which forms the axle. On the whole we think, therefore, that claim 22 is also infringed.

The next questions that arise are whether or not any of these claims 1, 2 and 22 which we have held to be infringed, is invalid because it was obvious or not novel. It is enough to say that in considering these issues together we are not to be taken as expressing any opinion concerning the view that has been put forward that since the *Patents Act 1952* all former distinctions between novelty and subject matter are obliterated or that alleged paper anticipations stand in the same position as matters of common knowledge. We think that it is clear from the whole of the evidence that in 1947 the basic idea of the plaintiffs' invention was far from obvious. And as to the several matters put forward as anticipations, his Honour carefully examined these. We agree in substance with what he has said about them and do not think it necessary to add anything. We agree that a fair reading of them leaves the impression not of anticipation but rather that, if they represent the closest that the prior art got to the plaintiffs' invention, that invention was a considerable step forward. There is no doubt that the invention is useful in the sense that word has in patent law.

For these reasons the appeal should be dismissed and the cross-appeal allowed so far as to declare claim 22 to be valid and infringed.