The Court sustained the appeal and quashed the conviction appealed from.

Counsel for the Appellant—M'Robert. Agent—F. J. Martin, W.S.

Counsel for the Respondent—M'Lennan, K.C.—Haldane. Agents—Morton, Smart, Macdonald, & Prosser, W.S.

COURT OF SESSION.

Saturday, November 24.

FIRST DIVISION.

[Lord Dundas, Ordinary.

VAN BERKEL AND OTHERS *v.* R. D. SIMPSON, LIMITED.

Patent—Infringement—Validity of Patent for Combination of Old Parts—Master or Pioneer Patent.

In an action against an alleged infringer by the patentee of a machine for slicing meat by means of (*a*) a dish-shaped knife, (*b*) a reciprocating table, and (*c*) a transverse feed, used in combination, it was proved that all three elements were known and used prior to their combination in the patentee's machine.

Held that the patent was valid, the patentee having in designing his machine displayed inventive talent and skill in combining known elements so as to produce a new and useful result.

Taylor & Scott v. *Annand, &c.*, (1900) 17 R.P.C. 126, (1901) 18 R.P.C. 53, *followed.*

Patent — Infringement — Validity — Specification—Construction of Claims in Specification—Appendant or Independent.

The patentee of a machine for slicing meat by means of certain mechanical contrivances used in combination claimed in his specification (*first*) the combination as a whole, and (*second*) the various elements of the combination as used "in a machine of the kind described."

In an action at his instance against an alleged infringer, the latter maintained that the patent was invalid, in respect that the claims for the component elements—which were known and used prior to their combination in the patentee's machine—were bad.

Held that on a true construction of the specification, the subsidiary claims were not made as substantive claims (*i.e.*, as "subordinate integers"), but as "appendant" only to the principal claim, and that the patent therefore was valid.

British Dynamite Company v. *Krebs*, (1896) 13 R.P.C., *followed*; *Cassel Gold Extracting Company, Limited* v. *Cyanide, &c., Syndicate*, (1895) 12 R.P.C. 232; and *Kynoch & Co., Limited* v. *Webb*, (1900) 17 R.P.C. 100, *distinguished.*

Patent—Validity—Infringement—Mechanical Equivalents — Anticipation — Sufficiency of Prior Publication.

In an action by A against B for alleged infringement of a patent, B pleaded (1) that he had not infringed A's patent, and (2) that A's patent had been anticipated by the prior patent of C.

Held (1) that as any difference existing between B's machine and that of A consisted in the use by B of mechanical equivalents, B had substantially taken the substance of A's invention, and therefore infringed it; and (2) that as C's invention differed in an important point from that of A, and moreover had not been "disclosed to the public in a manner so clear as to enable educated men conversant with the subject to give instructions for its making," A's patent had not been anticipated by that of C.

King, Brown & Company v. *Brush Electric Light Corporation, Limited*, July 18, 1890, 17 R. 1266, 27 S.L.R. 963, April 5, 1892, 19 R. (H.L.) 20, *followed.*

Wilhelmus Adrianus Van Berkel of Rotterdam and Others brought an action of suspension and interdict against R. D. Simpson, Limited, 2 York Buildings, Edinburgh, whom the complainers alleged to have infringed certain letters-patent of which Van Berkel was the grantee.

The respondents, *inter alia*, pleaded—"(3) The complainers' letters-patent being invalid as condescended on, the note should be refused. (4) The complainers' letters-patent being invalid in respect, *inter alia*, that claims 2 and 3 and 4 and 5 are for devices well known at the date thereof, the note should be refused. (5) The respondents not having infringed any patent rights belonging to the complainers, the note should be refused."

The nature of the patent and the circumstances in which the action arose are stated by the Lord Ordinary (DUNDAS) in the following portion of his opinion—"The complainer Van Berkel of Rotterdam is grantee of Letters Patent No. 5567* of 1898 for 'an improved machine for slicing German sausages and the like.' The specification (amended in 1905) is in process. He complains that the respondents have been selling machines which infringe his patent, and a number of such sales are specified upon the record. The respondents admit the sales, but they deny infringement. They explain that the machines sold were supplied to them by Brinnhäuser of Nuremberg, as being articles protected by a German patent No. 164,981 of 1904 and a British patent No. 9648 of 1904. They aver that these machines are entirely different from the complainer's machine, and further, that the complainer's patent is invalid in respect (*a*) that it is for a combination of elements everyone of which was old and well known in 1898, and that there was no invention involved in his combination of these; (*b*) that the whole invention alleged to be

covered by the complainer's patent was anticipated by the U.S.A. specification of John L. Kolbe, No. 579,486 of 1897; and (c) that the complainer's whole patent is in any event bad, because it contains claims for certains ubordinate integers which are (the respondents maintain) invalid as matters of separate claim. The issues as to infringement by the respondents and as to the alleged invalidity of the complainer's patent overlap one another, and it will not be possible in what follows to treat them as entirely separate.

"The first matter is to see what the complainer's invention is described to be. His complete specification (amended) is for 'an improved machine for slicing German sausages and the like.' The essential features of the invention appear to be (1) a fixed rotating circular knife of dished form; (2) a reciprocating table working to and fro beside and in front of the knife, with a relatively slow-forward and quick-return movement; and (3) a slide moving on and at right angles to the motion of the table, upon which slide the sausage and the like is fastened, and is so fed up to the knife that a slice of any desired thickness is automatically cut off each time. These three separate movements are simultaneously effected by simply turning the handle of the machine. The dished form of the knife, which is expressly declared to constitute an essential feature of the invention, results in only its cutting edge coming in contact with the piece of meat. This obviates the disadvantages of dragging or tearing the meat, of dirtying it, and of friction (and consequently increased hand labour in turning the machine), which are involved in the use of a flat knife, the whole blade of which comes in contact with the meat. The reciprocating motion of the table is regulated so that the meat is subjected to the cutting edge of the knife by a relatively slow-forward movement, while the table is returned rapidly after the cut has been performed. The mechanism of and connected with the transverse slide enables the meat to be fed forward to the knife so that a slice of any desired thickness and of perfect uniformity is severed each time. The machine seems to me to perform its work with very great skill, rapidity, and precision."

In his specification (as amended) Van Berkel stated, after particularly describing the nature of his invention, that what he claimed was (the amendments are shown in italics):—"1. A machine for slicing German sausages or polonies and the like meat goods characterised by the arrangement of a revoluble circular knife *of spherical or dished form* and a table having a to and fro movement adapted to carry the polony or the like with it against said knife in the direction of cut whilst during the return of the table (*which is executed quickly relative to the forward movement*) the polony is moved forward on the table to the width of a slice, substantially as hereinbefore described.

"2. In a machine for slicing German sausages or polonies and the like meat goods, a cutter consisting of a revoluble circular knife having a spherical or dished form whereby only the cutting edge of the circular knife comes in contact with the polony or piece of meat during the slicing, substantially as and for the purposes hereinbefore set forth.

"3. In a slicing machine of the kind described the means for reciprocating the table in adjustable guides comprising a pin carried by a wheel operated by the crank shaft and a lever having a slot in which said pin engages in such a way that the forward movement of the table for the cut takes place slowly and the return movement quickly and whereby by the adjustment of the pin the movement of the table may be regulated, substantially as hereinbefore described.

"4. In a machine for slicing German sausages or polonies and the like, the means for feeding forward the polony or the like after each slicing, comprising an adjustable plate and a nut made in two parts mounted on a screwed spindle, the upper part of said nut being without a screw thread and firmly connected with the plate, whilst the under part of said nut, which is threaded, has a prolongation running in a slotted bar and is pressed on to the screwed spindle by means of a counterweight, so that by rotating the screwed spindle the plate and therewith the polony or the like carried thereby is moved forward, whilst by raising the counterweight and thus withdrawing the lower part of the nut from the screwed spindle an immediate release of the plate from the spindle is effected, which releasing may also take place automatically at the end of its course by means of an inclined or bevelled projection or stop, substantially as hereinbefore described.

"5. In a slicing machine of the kind described the means for producing the rotation of the screwed spindle for the pushing forward of the plate carrying the polony or the like after each slice, consisting of a ratchet wheel on the screwed spindle in combination with a double lever the one arm of which carries a pawl engaging with the ratchet and the other arm a roller which on the return movement of the table encounters a cam or inclined plane runs up the same and moves the rachet wheel forward by means of the pawl, the plate with the polony or the like being moved forward to the thickness of a slice, said cam being adjustable laterally according to the length of movement of the table and vertically for a thicker slice, substantially as hereinbefore described.

"6. In a slicing machine of the kind described the arrangement for holding the polony or the like firmly on the table consisting in providing the front edge of the table with sharp ridges or corrugations and that of the feed plate with points with the object of avoiding side slip, whilst for clamping down the polony or the like a cross bar having points is provided which engages over two vertical toothed bars mounted on the feed plate, one of said bars having an outwardly

pressing spring action, substantially as hereinbefore described.

"7. In a slicing machine of the kind described, the arrangement of the table with a feed oblique to the axis of the cutting knife, the connection of the feed plate with the nut and the screwed spindle being made by means of a pin on the upper part of the nut, which pin is located between bars on the underside of the feed plate, substantially as hereinbefore described.

"8. The general construction and combination of parts taken as a whole, forming the improved machine for slicing German sausages and the like, substantially as hereinbefore described and illustrated.—Dated this 6th day of December 1898."

On 10th January 1906 the Lord Ordinary (DUNDAS), after a proof, the import of which sufficiently appears from his Lordship's opinion, found that the respondents had infringed the letters-patent, that the letters-patent were not invalid, and granted interdict as craved.

Opinion.—". . . [*After narrating the facts as above quoted*] . . . The specification must of course be studied in the light of the common knowledge existing at its date. With the aid of that light one must endeavour to ascertain what was the field of invention open to the complainer in 1898, and whether or not he has succeeded with elements old or new in achieving a new and important result. Of the three essential features above referred to one at least was certainly old and well known at the date of Van Berkel's patent. The reciprocating table is worked by a mechanism substantially identical with what had for many years been familiar as the Whitworth movement in planing machines and the like. Nor was mechanism for the transverse feeding of meat or the like to a knife by means of a screwed spindle, threaded nut, ratchet, &c., unknown at the date of the complainer's patent. Something of the sort is shown, for example, in Turner's specification of 1897 for a 'meat-shaver,' and in Klapper's specification of 1891 for a machine for cutting sausages, &c. Knives of dished shape were in existence prior to 1898. They seem to have been used, for instance, as skinners' knives for scraping hides, for shearing paper in machines, as a sort of agricultural harrow, and so forth. A dished or at least a conical knife is also part of Richardson and Elliott's patent, No. 5468 of 1896 'for cutting tobacco leaves, paper, leather, and similar materials.' Its use, however—after the fashion of an ordinary saddler's knife—in dividing thin sheets of materials such as those specified, has no true or instructive analogy to the slicing of a bulk of meat; and it is clear from Richardson and Elliott's specification that the only purpose of dishing their knife was 'to make easy the operation of resharpening.' I think that there is no evidence that prior to 1898 a dished knife was used for slicing meat, or indeed for slicing anything in the proper sense of the word. A number of earlier patents for mincing, chopping, or hashing meat and like substances were referred to by the respondents, and I shall briefly recapitulate them now. Flockhart's specification, No. 1548 of 1895, for a 'bread and bacon slicing machine' appears to be truly a chopper. It has a flat knife shaped like a scimitar, pivoted at one end. Burrell and Maxwell's specification, No. 24,651 of 1895, for 'improved mechanism for use in cutting rashers of bacon, slicing bread, and for other such like purposes,' shows several long straight vertical knives working up and down in a frame by a rack and pinion movement, something like a vertical saw. In Keleher's specification, No. 9972 of 1895, for a 'machine for cutting meat or other food stuffs' there is a long straight flat knife working on a pivot. Mountford's specification, No. 703 of 1857, was for an apparatus for cutting or chopping loaf sugar, roots, &c., and seems to call for no remark. In Goodchild's specification, No. 2123 of 1876, for 'improvements in meat and vegetable cutting and apple paring and slicing machinery,' there are two knives neither circular nor dished, and the machine appears to be a hasher. Turner's specification, 586,403 of 1897, for a 'meat shaver,' has a rocking scimitar, flat and pivoted. Stress was laid by the respondents upon Karges' specification, No. 48,888 of 1889, for a meat cutting machine. But the drawings do not show, as I understand, a dished knife at all, but two half-moon shaped disc knives, probably designed for chopping or mincing, but which, according to the evidence, were incapable of slicing meat in the proper sense or in anything resembling the method of the complainer's machine. Of Kolbe's specification, No. 579,486 of 1897—with which I shall have to deal hereafter in another connection—it is sufficient here to point out that his 'device for cutting bread' has a flat disc blade with an irregular edge and could not slice meat. The last specification to be referred to is Klapper's, No. 59,869 of 1891, for a machine for cutting sausage, meat, and the like, which has a curious spiral knife and a slide moving obliquely to it. From the detailed review which I have made of the field of common knowledge as it existed in 1898, it appears to me to be proved that while no one of the essential elements of the complainer's alleged invention was in itself (subject to what has been said) new or unknown, the complainer's combination of them was certainly novel; and also that while patents or machines were known for chopping, mincing, or hashing meat and the like, no one of these contained a knife of dished form, or was intended to cut or capable of cutting clean and perfectly uniform slices.

"In these circumstances one must determine whether this new combination was one for producing merely an improvement in an old and known result or an entirely new and important result. The complainer maintains the latter alternative. He says that the essence of his invention is the application for the first time of a fixed

rotating dished knife, in the combination referred to, to the slicing of sausages and the like, and that his patent is accordingly a master or pioneer patent for the achievement of a perfectly new result. Professor Hudson Beare, the chief witness for the respondents, agrees that 'there is novelty in its' (*i.e.*, the dished knife's) 'use as a meat slicer, and that the novelty consisted in applying a dished knife to a new purpose, with the result of enabling the slicing to be done better than any slicing done before.' But while conceding 'a very important improvement in the machine' he does not find 'a sufficiently radical change in the working of a meat slicing machine to constitute an invention.' He further says, 'What he' (the complainer) 'did, in my view, was to give a dished shape to his knife, and the object he had in view was to facilitate the cutting. (Q) In other words, he adapted this device of a dished knife to perform the business of slicing meat?—(A) Yes. (Q) With the result of producing a better slicer than anybody had ever done before?—(A) I quite admit it is a better slicer than any previous machine.' But he concludes, 'Certainly there was ingenuity, but I do not consider the ingenuity shown was sufficient to make it worth calling an invention.' The evidence thus frankly given appears to me to go very near to establishing the complainer's case. It is impossible to disregard the volume of uncontradicted evidence as to the great practical utility of the complainer's machine, and the manner in which it has captured the market wherever it has been introduced. The facts that a patented article is very useful, that it supplies a long-felt public want, and that it came into large public demand when it appeared on the market, are good (though not conclusive) evidence of invention—*Taylor*, 1900, 18 R.P.C. 53, *per* Lord Halsbury, L.C. 63; *Brooks*, 1897, 15 R.P.C. 33, *per* Smith, L.J. 48; *Thomson*, 1889, 6 R.P.C. 518, *per* Lord Herschell, 527, 528. It has, no doubt, often been laid down that there is no sufficient invention in merely applying an old contrivance or thing in a manner or to a purpose analogous to the manner or purpose in or to which it has been previously applied. 'It would be a very extraordinary thing to say that, because all mankind have been accustomed to eat soup with a spoon, a man could take out a patent because he says you might eat peas with a spoon—*per* Lord Abinger in *Losh*, 1838, 1 Webster P.C. 203, 208; see also *Harwood*, 11 H.L.C. 654; *Rickmann*, 1897, 14 R.P.C. 105, *per* Lord Davey, 121. But it is also, I apprehend, well settled that the amount of invention necessary to support a patent need not be very great. Nor does the apparent simplicity of the thing prevent there being invention—*Rickmann*, *sup. cit.*, *per* Lord Halsbury, L.C., p. 115; *Vickers*, 1890, 7 R.P.C. 292, *per* Lord Herschell, 304, 305; *Penn*, 1866, 2 Ch. 127, *per* Chelmsford, L.C., 136. The patentee's answer, as explained by Lord Esher, M.R. (in *Lyon*, 1893, 10 R.P.C. 334, at 343), always is 'The thing was wanted; there was a thing which would not do what was wanted; by finding out some small addition I have found out the thing which would do.' Now Mr Van Berkel's own evidence, which narrates his unsuccessful attempts in making machines with flat-bladed knives, and his subsequent successful introduction of the dished knife appears to me precisely to entitle him to take up the position indicated by Lord Esher. I think that, looking to the surrounding circumstances and the state of existing knowledge, the complainer's application of a dished knife, in the combination claimed, to the purpose and with the result of the perfectly uniform slicing of sausages and the like, was an invention, and entitled him to a master patent. I refer upon this point, by way of illustration merely, to the cases of *Proctor* v. *Bennis*, 1887, 36 Ch. Div. 740, and *Brown* v. *John Hastie & Co., Limited*, 1904, 7 F. 97. In the former of these cases, although, as Fry (L.J.) observed (p. 768), 'putting fuel upon a fire is of course an act, if not as old as Adam, I suppose as old as the time when Tubal Cain wrought in metal, or when Prometheus introduced fire to mankind,' a master patent was sustained, the object of which was 'the automatic placing of coal on a fire by intermittent radial action.' In *Brown's* case the patent under discussion was held to have introduced into the region of economising steam in steering engines the new purpose and effect of excluding steam from the control valve casing when the engine was not working but at rest.

"Apart, therefore, from the question as to the alleged anticipation of the complainer's whole invention by Kolbe, I am of opinion that his patent is a valid pioneer or master patent. If this view is correct, it of course gives the complainer a strong position in regard to the issue of infringement, with which I come to deal. In the case of a master patent for a combination the complainer is not held so strictly as he would otherwise be to his own description or combination, but the doctrine of mechanical equivalents comes into play, and the true issue is, whether or not the alleged infringer has taken the substance of the complainer's invention—*Proctor*, *sup. cit.* Applying this view to the facts, I come without much difficulty to the conclusion that the sale of these machines by the respondents is an infringement of the complainer's patent. The general appearance of Brinnhäuser's machine is strikingly similar to that of the complainer's machine. Brinnhäusers specification states,—'From this description it will be seen that during the turning of the wheel the following movements take place simultaneously—1. Rotation of the knife. 2. Reciprocation of the slide parallelly to the plane of the knife. 3. Intermittent forward movement of the plate in a direction perpendicular to the plane of the knife.' It was conceded that the knife in the two machines is substantially identical. The reciprocating movement of the table as described in Brinnhäuser's specification is not identical with the complainer's movement, nor with that of Whitworth. The slow-

forward and quick-return motion is not nearly so marked as it is in these latter mechanisms. Still it is there to some extent, although the skilled witnesses differ as to the exact extent. It is also noteworthy that Brinnhäuser's German specification does refer to the advantages of having the forward motion of the table slower than the backward one. The respondents cannot, so far as I see, claim that their differentiation in this respect is of any practical advantage or utility. The mechanism is, in my judgment, a mere mechanical equivalent of that of the complainer. This view is further fortified by this, that it appears that if the desired object were to achieve absolute equality between the forward and the backward movement of the table that might have been obtained by a very simple arrangement and without the interposition of an oscillating lever at all. As regards the mechanism for the transverse feed movement, the devices used in the two machines are not identical, but they both contain a screwed spindle, a threaded nut (or half nut) and a ratchet, and it is sufficient to say that, upon the best consideration which I have been able to give to the matter I agree with the witnesses for the complainer in thinking that the respondents' apparatus consists of purely mechanical equivalents of that of the complainer. My opinion therefore (still assuming that the complainer's patent was not anticipated) is in his favour upon the issue of infringement.

"But the respondents' counsel maintained that the complainers' whole invention, if it was one, has been anticipated by Kolbe's patent, the publication of which in this country, 'on view in Patent Office, London Library, 26th May 1897, is admitted by the parties. No reference to Kolbe's patent appeared on record down to the morning of the first day of the proof, when a minute of amendment was tendered. I thought it right to allow the amendment, reserving as to expenses, but I allowed the complainer a proof in replication in regard to the new matter, which was accordingly led. Kolbe's specification is certainly a somewhat curious document. The complainer's counsel presented a vigorous argument to the effect that the specification and drawings cannot be held to anticipate the complainer's invention, because they are utterly unintelligible and incapable of being put into practical effect—*Betts* v. *Menzies*, 1881, 10 H.L.C. 117, Lord Westbury, L.C., 154. No evidence is produced that one of Kolbe's machines was ever made. It appears from the specification that no model accompanied the application. Many of the detailed criticisms made upon Kolbe's patent struck me as very forcible. Professor Hudson Beare frankly admitted that the drawings are very bad, and that here and there a workman would have to exercise some degree of independent intelligence in order to carry out Kolbe's idea. But in this question the test is not whether the specification and drawings are sufficient to enable a workman to make the machine, but whether the invention was disclosed to the public in a manner so clear as to enable educated men conversant with the subject to give instructions for its making—*Brush Electric Light Corporation*, 17 R. 1266, *aff.* 19 R. (H.L.) 20. Professor Beare and Mr Fitzpatrick have accordingly considered this test (as they are fully competent to do) with reference to Kolbe's specification. The former gentleman is much more confident than the latter as to the possibility of finding complete material for the instruction of workmen within its corners, but even he admits—'I should have to exercise a certain amount of ingenuity in interpreting this specification.' But I need not press this matter to a conclusion, because it appears to me that, upon the most favourable consideration which could be accorded to it, Kolbe's invention is clearly not an anticipation of the invention of Van Berkel if I have rightly understood the nature of the latter. His combination, while resembling Van Berkel's more or less closely in some particulars, differs from it, as I think essentially, in that his knife is a flat knife of irregular edge, neither intended to perform nor capable of performing the meat-slicing operation of Van Berkel's dished knife. The respondent's counsel put it in argument that if Kolbe should choose to fit a dished knife into his machine and use it to slice sausage meat he could not be interdicted by Van Berkel as an infringer of his patent. The point is not before me, but I confess that I do not at present see why such an interdict should not be granted under the circumstances postulated. But as matters stand it seems to me to be clear that Kolbe's specification does not anticipate what I conceive to be the true substance and object and result of Van Berkel's invention.

"There remains for consideration an argument which was pressed upon me by the respondent's counsel with ability and earnestness, to the effect that certain of Van Berkel's claims—particularly claims 2, 3, and 4 respectively—are put forward by him as subordinate integers; that they are each and all invalid as substantive matters of claim for want of proper subject-matter and by reason of anticipation; and that the whole of the complainer's patent is therefore invalid—*Murchland*, 20 R. 1006. If, as I am prepared to hold, these claims are not, as matter of fair construction, made as subordinate integers, but as appendant only to his principal claim for the invention, it is unnecessary to consider to what extent all or any of them would upon a contrary hypothesis be open to successful attack. The specification and claims must, I apprehend, be read together as a whole, and fairly construed with the view of determining what the inventor's true meaning and intention are—*Tubes Limited*, 1903, 20 R.P.C. 77, *per* Lord Halsbury, L.C., 96. The Court must not, as Lord Davey pointed out in *Kynoch* v. *Webb*, 1900, 17 R.P.C., at p. 116, 'put a forced construction on the specification as not intending to claim something that is old because it was foolish or suicidal to obtain it;' and 'if a really independent claim of something which is

not new, however inadvertently or carelessly it be made, is in fact made on the face of the patent, the Court is bound to hold that the patent is therefore objectionable'— *per* Brett. L.J., in *Plimpton* v. *Spiller*, 1877 6 Ch. Div. 402, at p. 433. On the other hand, mere surplusage of language is not fatal, and 'it is the duty of the Judge to construe a specification fairly, with a judicial anxiety to support a really useful invention if it can be supported upon a reasonable interpretation of the patent; a judge is not to be astute to find flaws in small matters in a specification with a view to overthrow it'—*per* Jessel, M.R., in *Plimpton*, *sup. cit.*, p. 422; see also *Hinks & Son*, 1876, 4 Ch. Div. 607, 612; *Wegmann*, 1879, 13 Ch. Div. 75, 77; *The Electric Construction Co., Limited*, 1900, 17 R.P.C. 537, at p. 548, 549; *Cropper*, 1884, 1 R.P.C. 81, 89. I think that, upon a fair and natural reading of the language used by Van Berkel, the claims referred to are not intended to be made, and ought not to be held to have been made, as subordinate integers, but are appendant only to the main claim. The matter must of course be decided purely upon the language of this particular specification, but I may refer as instances where a similar result was arrived at upon a construction of specifications not I think dissimilar to the present to *British Dynamite Co.* v. *Krebs*, 1896, 13 R.P.C. 190; and *Parker*, 1901, 18 R.P.C. 299.

"Upon the whole matter the complainer has in my judgment made out his case, and is entitled to interdict with expenses."

R. D. Simpson, Limited, reclaimed, and argued—(1) The Lord Ordinary was wrong in thinking that Van Berkel's was a master-patent. It was nothing more than a method of using well-known tools in combination to produce an obvious result. That was not a patentable invention. The fallacy in the respondents' argument lay in confounding "useful discovery" with "patentable invention." The patentee had merely added a dish-shaped knife to a known mechanical process. That would not entitle him to a patent unless great ingenuity had been displayed, or serious difficulty overcome in adaptation—*Harwood* v. *Great Northern Railway Company*, (1864) 11 H.L.C. 654; *Ralston* v. *Smith*, (1865) L.R. 20, C.B. (N.S.) 28, 11 H.L.C. 223; *Bailey* v. *Robertons*, June 21, 1878, 5 R. (H.L.) 179, 15 S.L.R. 748; *United Horse Shoe and Nail Company* v. *Swedish Horse Nail Company*, (1889) 6 R.P.C. 1; *Murchland* v. *Nicholson*, July 19, 1893, 20 R. 1006, 30 S.L.R. 857; *Acetylene Illuminating Company, Limited*, v. *United Alkali Company Limited*, (1904) 22 R.P.C. 145; *Brown* v. *Hastie & Company, Limited*, November 8, 1904, 7 F. 97, 42 S.L.R. 52, *rev.* March 30, 1906, 43 S.L.R. 671. The mere application of old things to "analogous uses" was not a patentable invention—*Tatham* v. *Dania*, (1869) Griffin's Patent Cases, 213; *Patent Bottle Envelope Company* v. *Seymer*, (1858) 5 C.B. (N.S.) 164; *Gadd & Mason* v. *Mayor of Manchester*, (1892) 9 R.P.C. 516, at p. 524, referred to (*sub nom. Fox* v. *Kensington Lighting Company*) by Lord Davey in *Acetylene Illuminating Company* (*cit. supra*) at pp. 155-56. (2) Claims 2, 3, and 4 of Van Berkel's specifications were for well-known devices, and if any one claim in the specification were bad the whole patent fell. In order to be valid a subordinate claim must constitute an independent invention, unless the claim were merely an "appendant" one. Here the subordinate claims were not "appendant" but independent ("subordinate integers"), and not being in themselves valid, the whole patent fell—*Foxwell* v. *Bostock*, 1864, 4 De G. J. & S. 298; *Neilson* v. *Betts*, (1870) L.R., 5 E. & I. App. 1; *Clark* v. *Adie*, (1875) L.R., 10 Ch. App. 667, *aff.* (1877) L.R. 2 A.C. 315; *Plimpton* v. *Spiller*, (1877) L.R. 6 Ch. D. 412; *Gwynne* v. *Drysdale & Company*, March 5, 1886, 13 R. 684, 23 S.L.R. 465; *Cassel Gold Extracting Company, Limited* v. *Cyanide Gold Recovery Syndicate*, (1895) 12 R.P.C. 232; *British Dynamite Company* v. *Krebs*, (1896) 13 R.P.C. 190; *Kynoch & Company, Limited* v. *Webb*, (1900) 17 R.P.C. 100; *Electric Construction Company* v, *Imperial Tramways Company, Limited*, (1900) 17 R.P.C. 537; *Parker & Smith* v. *Satchwell & Company, Limited*, (1901) 18 R.P.C. 299. As to the meaning of "subordinate integers" see *Clark* v. *Adie* (*cit. supra*). The question at issue really depended on a construction of the specification. The "broad" as opposed to the "narrow" construction was a misleading distinction. The specification was to be read fairly and as a whole. If any one claim was invalid, either from anticipation, or inutility, or insufficient description, the whole patent fell. The Lord Ordinary was in error in holding that claims 2 to 7 were appendant claims, and that it was immaterial whether they were valid or invalid. If they could be infringed independently of claims 1 and 8, then they were separate claims; if not, they were merely surplusage, and would be held *pro non scripto*—*British Dynamite Company* (*cit. supra*), *Electric Construction Company* (*cit. supra*), *Cassel Gold Company* (*cit. supra*). (3) Van Berkel's specification had been anticipated by three others, viz., those of Flockhart, Turner, and Kolbe. If a prior specification disclosed enough to enable an expert to make a better machine, the improvement so made was not a patentable invention—*Edison & Swan Electric Company* v. *Holland*, (1889) 6 R.P.C. 243. Claim 1 was clearly anticipated by Kolbe. Claim 2 had also been anticipated, for dish-shaped knives were in use prior thereto. Claim 3 was also anticipated, for the Whitworth mechanism was known and in use prior thereto. Claim 4 had also been anticipated.

Argued for the respondents—The Lord Ordinary was right—(1) Van Berkel's combination was a patentable invention; (2) the claims in his specification other than claim 1 were appendant or subordinate claims, not for separate inventions; (3) there had been no anticipation; and (4) infringement had been proved. (1) Van Berkel had produced a new combination of old parts, and found thereby a practical solution of the problem of slicing meat. Mere ideas as to effecting the same result were

not enough to anticipate a working machine. In its production lay the invention; and the novelty and usefulness of the machine here in question was proved by its at once taking the market by storm. It combined for the first time (*a*) a dish-shaped knife, (*b*) a reciprocating table, and (*c*) a transverse feed. That was a patentable combination—*Taylor & Scott* v. *Annand, &c.*, (1900) 17 R.P.C. 126, *aff.* (1901) 18 R.P.C. 53; *Brooks* v. *Lamplugh*, (1898) 15 R.P.C. 33. The present case was *a fortiori* of *Proctor* v. *Bennis*, (1887) 4 R.P.C. 335. (2) The claims other than that for the whole machine were appendant, and as such were good. The specification was to be read as a whole—*Edison, &c.*, v. *Woodhouse & Rawson*, (1887) 4 R.P.C. 99; *Kynoch* v. *Webb* (*cit. supra*); *British Dynamite Company* v. *Krebs* (*cit. supra*); *Parker & Smith* v. *Satchwell & Company* (*cit. supra*). There was no such machine in existence before Van Berkel's. He had discovered a really useful invention, and therefore his specification was entitled to the "broad" or "benevolent" construction. Claims 2, 3, and 4 were all dependent on the main claim. They were claims for inventions as used "in a machine." A patent for the dish-shaped knife, or for the reciprocating table, was not claimed; what was claimed was one for their use in the machine described. (3) There had been no anticipation. Kolbe's patent was for cutting bread, and was not adapted to cutting meat. Its specification further was unintelligible. That being so, there had been no prior publication. The test of prior publication was not whether enough had been disclosed to enable an expert to make the machine in question, but whether there was enough to enable educated men conversant with the subject to give instructions for its making—*King, Brown & Company* v. *Brush Electric Light Corporation, Limited*, July 18, 1890, 17 R. 1266, 27 S.L.R. 963, *aff.* April 5, 1892, 19 R. (H.L.) 20. Richardson & Elliott's knife and Karge's knife were mincing knives. (4) The reclaimers had appropriated the substance of Van Berkel's invention. They had merely substituted mechanical equivalents, and that was infringement—*Moore* v. *Thomson*, (1890) 7 R.P.C. 325; *Brown* v. *Hastie* (*cit. supra*), *Krebs* (*cit. supra*), *Parker* (*cit. supra*), *Fawcett* v. *Homan*, (1896) 13 R.P.C. 398.

At advising—

LORD M'LAREN—[His Lordship's opinion was read by LORD KYLLACHY, who was presiding in the Division at the advising.]—This is an action of suspension and interdict at the instance of a patentee, Van Berkel, to restrain the respondents from infringing his patent for a meat-slicing machine of his invention. The case was heard and decided by Lord Dundas, and is now before us on a reclaiming note against his Lordship's interlocutor. Three questions are raised—1st, the merit and originality of the invention; 2nd, the validity of the invention; 3rd, the question of the infringement. I shall consider these in their order.

The working of the complainer's machine may be described in general terms as follows—(1) The piece of meat to be cut into slices of any required thickness is attached to a travelling frame, and is slowly pressed against a circular knife which rotates on its axis and cuts off a slice. (2) When the travel of the frame carrying the meat is completed, and the slice is completely severed, the frame is quickly returned to its first position by automatic mechanism. (3) By means of a rack and screw properly adjusted, the travelling frame is moved forward to the extent of the thickness of a slice, and the cutting process is then ready to be repeated. This last movement is, of course, at right angles to the direction in which the frame travels during the cutting operation, and its effect is to expose a new section of the meat to the action of the circular knife. The elements of the mechanism by which these movements are effected are not new; but this is an observation which may be made with reference to every machine, however complicated and however ingenious, and therefore I am not disposed to give much weight to the argument against the novelty of the invention in so far as founded on the fact that the patentee has made use of known mechanical elements in building up his machine. I think it might just as well be urged against the originality of a book that all the words and a large proportion of the phrases contained in it are to be found in works of earlier date. I think it is generally understood and acknowledged that a mechanical invention may be new in the sense of the patent laws if it is directed to the attainment of a result which has not hitherto been accomplished, or not so well accomplished; and if in designing the machine the patentee has made use of inventive talent and skill in the selection, combination, and arrangement of known elements to produce a convenient and efficient machine adapted to the purpose in view.

I proceed to consider, so far as necessary to our decision, the mechanism by which the slicing operation, which is the subject of this patent, is effected. The most important feature is the "dish-shaped" rotating knife. This knife is geometrically a section of a spherical surface, or, to speak strictly, a section of a thin hollow sphere having a circular boundary. But as the portion of the sphere used is relatively small, and the concavity is slight, the name "dish-shaped" will sufficiently indicate its form. The concave side of the knife-plate is towards the meat, and the cutting edge only comes in contact with the meat, and thus a clean cut is effected, Without quoting from the evidence, I may say that it is established, and indeed is no longer in dispute, that a flat disk like an ordinary circular saw would be useless for the purpose, because the flat rotating disk being in contact with the surface of the meat would tear the fibre and crush the material instead of slicing it. Mr Van Berkel, it seems, had thought out the matter by himself, and supposed that he was the inventor of the dish-shaped or

concave-knife. But there is evidence that concave circular knives were previously known and used, and therefore he can only claim priority as for the application of such knives to the cutting of soft substances like meat, and to this extent I am of opinion that his machine has the merit of novelty. The next feature of the invention is the mechanism for delivering the piece of meat to the cutting edge by a slow uniform motion, with a quick return to the first position after the severance of the slice. This is effected by a form of link-work known as the Whitworth mechanism, which was first successfully applied by Mr Whitworth to machines in the iron and steel industry in which alternate slow and fast movement was desired. I do not understand that the patentee makes any claim to originality in respect of this mechanism, except as to the use of skill and intelligence in selecting the best known and available method of obtaining an alternate slow and rapid motion and adapting it to the uses of his machine. Perhaps I may add, but only for the purposes of illustration, that it is a known fact in science that the most complicated movements may be effected by means of link-work, but only the simpler forms would stand the strain of being used in a machine, and I am disposed to think that in the present state of mechanical knowledge link-work may be regarded as an element of mechanism which could not be claimed by itself, but which might properly enter into the construction of an original and patentable machine.

As to the third movement, whereby the travelling frame is automatically adjusted to the position for cutting off slices of meat in succession, I find from the evidence that this is effected by known mechanism, but in regard to this also there is room for a certain amount of inventive skill in arranging the gear and connecting it with the motor axis to produce a compact and serviceable machine working smoothly and not liable to go out of order. In the course of the discussion one of the complainer's machines was shown to us in action, and if we are entitled to take notice of what was shown, I am bound to say that the working of the machine was to all appearance most satisfactory. But indeed there is abundant evidence that the meat-slicing machine has been a commercial success, and that it is in large demand both in this country and in Holland, where it was designed by Mr Van Berkel.

It may also be taken as proved that Mr Van Berkel's machine, when designed and patented, was the only known and workable meat-slicing machine. Other designs had been described and patented, but were found not to be effective. I should therefore, in the absence of authority to the contrary, come to the conclusion that, taken as a whole, Mr Van Berkel's machine is a new invention entitling him to the protection of a patent.

I may say that this is not a case which can be decided in all its aspects without reference to previous patent cases. Of these a large number were brought under our notice, and I have examined all that were cited. But on the point now under consideration the decisions are only useful in so far as they lay down principles. The nearest case that I can find to the present is *Taylor* v. *Annand*, a patent for a device for printing late news to be inserted in late editions of a newspaper in a blank space left for the purpose. There was nothing new in the mechanical arrangements, but the mechanism was serviceable and useful and supplied a desideratum of the printing industry. There were two actions, the second of which went to the House of Lords, where the patent was upheld, perhaps not without difficulty. Lord Halsbury put the difficulty that they had to start with the proposition that all the elements were old (18 Pat. Ca. 62), but this consideration was outweighed by the fact that the invention accomplished a new and useful result. I may also refer to *Cassel Gold Extracting Company* (12 Pat. Ca. 233) on the value of a new application of a known chemical reaction, though in this case the patentee failed on the objections to the specification, and *British Dynamite Company* v. *Krebs* (13 Pat. Ca.), especially Lord Cairns' opinion, page 193.

I consider that the principles laid down in these cases support the conclusion I have come to in favour of the validity of the complainer's patent, and I may add that as far as I am able to judge from the report of the first-mentioned case, there is much more invention in the meat-slicing machine than there is in the "late-news" arrangement which was the subject of decision in *Taylor* v. *Annand*.

I pass to the second branch of the case, the objection to the specification. The substance of the objection is this—that while the first claim is for a machine consisting of the different parts and performing the different movements which I have described, this is followed by other heads of claim under which it is argued that each part or movement is separately claimed. Now, if this were the case of a patentee who only professed to be the inventor of a part of the machine which he described, and who nevertheless claimed the whole, or did not in his claim distinguish the new work from the old, I do not think we could support the specification. This was the ground of decision against the specification in *Kynock* v. *Webb*, 17 Pat. Ca., or as it is put by Lord Davey, "It is elementary that a man cannot introduce some variation or improvement . . . into a known apparatus or machine and then claim as his invention the whole apparatus." But in the present case the invention put forward is the arrangement of parts constituting a new machine to perform what has not been done by machinery before, and therefore I think the patentee rightly claims the machine as described by him. It would be altogether inconsistent with the generality of his claim that he should also claim the several parts which he does not profess to have invented. I think the tendency of

the later decisions, particularly those of the House of Lords, is towards an indulgent reading of the specification where the process described is a true invention and a proper subject of a patent.

In this case I think the special claims, when fairly read, mean only the use of the separate parts in connection with the other parts of the combination. It is as if he said I claim A in combination with B and C; I claim B in combination with A and C, and so on. This is mere repetition, because he has already claimed the three things in combination to produce a definite result. But it is not a ground for invalidating a specification that it claims the same thing over again in different language.

In the case of *British Dynamite Co.* v. *Krebs*, already referred to, the patentees claimed the mode of manufacturing the dynamite, or "safety-powder," &c., "and also the modes of firing the same by special ignition." The modes of firing there described were not new, but the patent was upheld. It was in this case that Lord Cairns drew the distinction—"He does not claim the means of ignition in gross, but only as appendant to dynamite." I think that this distinction is sufficient to save the specification, though I cannot commend the specification as a piece of intelligent drafting.

On the third branch of the case, the question of infringement, I am satisfied that the respondent's machine is in fact an infringement of the complainer's patent-right. But I do not propose to add any observations of my own on this subject, because I agree with all that the Lord Ordinary has said in his opinion, and on this question of fact I accept the view of the Judge before whom the evidence was taken.

LORD KINNEAR—(LORD KYLLACHY stated that Lord Kinnear concurred in the opinion of Lord M'Laren.)

LORD PEARSON—The complainer holds letters-patent for a meat-slicing machine, which were issued in 1898 and amended in 1905. The invention, as the specification bears, has for its object a machine for slicing German sausages and the like meat goods, in which a rotating circular knife of spherical or dished form is arranged for cutting the sausage.

The complainer seeks to have the respondents interdicted from selling machines which infringe his patent. The respondents deny the infringement, and further they attack the validity of the complainer's patent itself on various grounds. It is convenient to consider first the latter group of questions.

The first ground of attack on the complainer's patent is that the subject-matter of it was not patentable, it being a combination of well-known elements without any invention or ingenuity being involved either in the combination itself or in the application of it to the new use. In my opinion this objection to the patent is not well founded in fact. The combination itself, regarded in its essential features, was a new combination, involving both a new idea and a new and most valuable result. The evidence shows that other inventors had been trying to produce an effective machine for the purpose and had failed. and Mr Van Berkel describes the efforts which he himself made before he produced this machine. Professor Hudson Beare puts it I think rightly as a question of degree, and he admits that the complainer's machine shows ingenuity, though not in his view sufficient ingenuity to support a patent. In my view the selection of the essential features and their combination in one compact machine actuated with ease by a single handle shows sufficient inventiveness to satisfy the requirements of patent law under that head. Such a machine was wanted, and while there had been attempts to solve the problem, there is no evidence that meat was ever sliced by a machine before, or that meat could have been effectively sliced by any existing machine. Certainly no machine having all the complainer's essential features had been put on the market, nor any machine which solved the difficulties of the problem practically and commercially. It is not conclusive, but it goes a long way to support the complainer's case, that his machine at once took and held the market, and has from the first been a commercial success.

The next objection raises an important question on the construction of the complainer's specification and claim. Primarily the patent is for a combination. But as is often done, though never without some risk to the validity of the entire patent, the draftsman, after formulating his claim as a whole, has gone on to select certain leading parts of the combination, and has set them forth one by one as being to some extent and effect claimed by him. The question is, to what extent and effect; and that is a question to be determined on the construction of the specification and claim as a whole. If these minor claims are (as the respondents maintain) intended to be separable and to stand each by itself, then if any one of them is open to the objection of want of novelty, the whole patent is challengeable as it stands. On the other hand, these minor claims may be inserted merely for the purpose of making it clear what the inventor regards as the important parts of his combination, and not as substantive claims to have invented those parts. That is quite a legitimate way of framing a claim; and, as I have said, the document must be construed fairly, and as a whole, in order to determine as to each subordinate claim whether it is an independent claim for an invention, or whether it relates back to the leading combination claim and is a mere pendant to that. I must say I think this a somewhat narrow question upon the construction of this specification; but my opinion on it is in favour of the complainer. I acknowledge the difficulty arising from the circumstance that the first head of claim was amended, and that prior to that amendment the shape of the circular knife (as being "of spherical

or dished form") appeared in claim 2 and not in claim 1; and further, that Mr Van Berkel holds to it that the dish-shape of the circular knife was an original invention of his own, and that he was not aware that it had been used in other trades for cutting other substances. The record distinctly puts forward the dished knife used by the respondent as being an infringement of the complainer's machine. But in my opinion he had no intention of claiming, and did not claim, the dish-shaped knife generally and apart from the purposes of his machine. His provisional specification and his unamended complete specification both bore on the face of them that the invention was a combination which included a circular knife of that particular shape; the subject-matter of the invention being described as a machine for slicing meat goods in which a rotating circular knife of dished-form is arranged for cutting the meat. This being so, one does not expect, after reading the specification, to find the knife claimed separately as an independent invention in claim 2, any more than to find the Whitworth lever claimed separately as an invention in claim 3. Accordingly in each clause of the claim there is a distinct reference back to a "machine for slicing German sausages and the like"; and I read the expression "substantially as and for the purposes hereinbefore set forth," occurring at the end of claim 2, as applying to and conditioning the whole of that claim. I hold with the Lord Ordinary that these and the other minor claims "are not, as matter of fair construction, made as subordinate integers, but as appendant only to his principal claim for the invention."

Then it is said that assuming the validity of the complainer's patent the invention was anticipated by Kolbe's patent, published in 1897. Kolbe, however, missed what is by far the most important member of the combination, namely, the dish-shaped knife; and I think it is a just inference from the proof that his machine was (as the Lord Ordinary says) not intended to perform nor capable of performing the meat-slicing operation of the complainer's patent. I am satisfied with the way in which the Lord Ordinary has dealt with this part of the case.

The complainer's patent being thus supported on all points, it is further incumbent upon him in this application to show that it has been infringed by the respondent's sale of the Brinnhäuser machine. I think he has shown this quite clearly. Not only are the two machines very similar in appearance, but they are in great part substantially identical in arrangement and design; and where Brinnhäuser's differs from the complainer's the differences consist in the use of mechanical equivalents to serve the same purposes, but not always to serve them so well.

I am therefore of opinion that the interlocutor should be affirmed.

The LORD PRESIDENT was absent.

The Court adhered.

Counsel for Complainer and Respondent—Dean of Faculty (Campbell, K.C.)—Clyde, K.C.—Graham Stewart. Agents—Hutton & Jack, Solicitors.

Counsel for Respondents and Reclaimers—Solicitor-General (Ure, K.C.)—Sandeman—Ballingall. Agents—Paterson & Gardiner, S.S.C.

Thursday, November 29.

SECOND DIVISION.

CAIRNS' TRUSTEES *v.* CAIRNS AND OTHERS.

Succession—Vesting—Vesting Subject to Defeasance—Conditional Institution of Issue.

"Where in a will or settlement a gift, either of a legacy or a share of residue, is so expressed that, notwithstanding a postponed term of payment or distribution, there is at the testator's death no obstacle to immediate vesting except the existence of contingent interests, either prior or subsequent, conceived in favour of issue (either the legatee's issue or the issue of some other person—*e.g.*, a liferenter), the contingency thus affecting the legatee's right is presumed to constitute not a suspensive but only a resolutive condition, operating a divestiture if the issue exist and survive, but otherwise not operating at all."

A testator by his trust-disposition and settlement gave a liferent of his estate to his wife in the event (which happened) of her surviving him, and directed his trustees "on the death of my said wife, if she shall survive me, or on my death should she predecease me," to make over and convey his whole estate to his four children *nominatim* "equally among them, share and share alike, the issue of any predeceasing child taking equally among them their parent's share."

Held that the share of each child vested in it *a morte testatoris*, subject to defeasance in the event of its predeceasing the liferentrix leaving issue.

Process—Special Case—Competency—Question whether Premature.

Under a trust-disposition and settlement the liferent of a testator's estate was payable to his widow, and upon her death the trustees were to divide the capital equally among the testator's four children, the issue of any predeceasing child taking the parent's share.

After the testator's death, but during the life of the widow and four children, a special case, in which all parties interested were represented, was submitted to the Court for the purpose of determining the question whether the testator's children had a vested interest