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Mar. 22-26.
Aug. 5.

POPE APPLIANCE CORPORATION.....PLAINTIFF;

AND

THE SPANISH RIVER PULP AND PAPER MILLS, LTD. ..... } DEFENDANT.

Patents—Infringement—Commercial use—Patentability—Treaty of Peace, Germany, Order 1920, 11-12 Geo. V, c. 44.

Pope applied for a patent in April, 1919, which was granted in September, 1919. He did not make application therefor under the provisions of the Treaty of Peace (Germany) Order, 1920, or under chapter 44, 11-12 Geo. V, but under the Patent Act.

Held, that where a patent was not validated by any of the post war validating legislation respecting patents, but the patentee elected to exercise his rights under the Patent Act, a party sued for infringement thereof cannot invoke such legislation, and the fact that they commenced to use the infringing device prior to the enactment of chapter 44 aforesaid, did not confer upon them any right to continue such use regardless of the validity of the said patent.

2. That the commercial use of an invention in a plant, from which the public is usually excluded, is a "use" within the terms of the Patent Act.

3. Where a patent is but the adaptation to a new purpose of an old method or appliance which is analogous to the purpose to which it has already been applied, and that the mode of application is also analogous, and where the patent appears to be an effort to limit the use of inventions already given to the public, by patenting, not improvements or freshly invented means, but only alterations in the form or size of well known methods and appliances, they fall within the field of the mechanic rather than that of the inventor, and are not patentable.

ACTION for infringement of patent.

The action was tried at the city of Ottawa by the Honourable Mr. Justice Maclean, President of the Court.

R. S. Smart, K.C. and *J. L. McDougall* for plaintiff.

A. W. Anglin, K.C., and *J. J. Gibson* for defendant.

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The facts are stated in the reasons for judgment.

THE PRESIDENT, now this 5th day of August, 1926, delivered judgment.

This is an action for infringement of a patent, the invention of one Pope, the plaintiff's assignor. The invention is described as an improvement in methods and machines for making paper, and relates to a method or means for directing paper through a calendering machine. This is the last step in the manufacture of paper, and is designed to give the paper a smooth surface, and the operation is termed calendering.

The plaintiff also brought action against the Abitibi Power and Paper Co., Ltd., for infringement of the same patent, and that action was tried immediately following the conclusion of this one, the evidence in the one case being evidence in the other by agreement. Should I have occasion herein to refer to the second action I shall designate it as the Abitibi case.

It might be convenient first to describe generally a calendering machine and its operation. This machine consists of heavy steel rolls arranged in a vertical stack, one above the other and in close contact, and usually number from eight to ten. The rolls are rotated frictionally by driving the lowermost roll which is the heaviest of all. The paper ordinarily enters the stack between the top and second roll, passing downward first in one direction and then in the other through the rolls, until it has passed through them all, when it is wound upon a revolving reel and ready for market. The great pressure to which the paper is thus subjected gives it a smooth surface. Paper, in passing through the calender rolls of a modern high speed paper making machine travels at a very fast speed, anywhere from 600 to 1,000 feet per minute and it is said that the tendency is for the paper to follow upwards the top roll of the two through which it is at the time passing. Attached to the rolls is what is known as a " doctor," which is simply a scraping plate or blade, about 6 inches in width extending the full length of the rolls, and which scrapes against the upper roll with considerable pressure so as to prevent any paper passing beyond it and giving it a downward direction towards and around the lower roll. The

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doctor blade is rigidly held at either end in a plate or heavy angular frame attached to the standard or frame of the calender rolls and which is a part of the "doctor." It is agreed I think that without the aid of doctors, paper might possibly thread itself downwards through the rolls without any manual assistance, and it is also agreed that static electricity aids in some degree the paper to follow and adhere to the lower roll. In practice, however, men were required to assist with their hands the progress of the paper through the rolls until the full width paper web was perfectly formed, the men being stationed both behind and in front of the stack of rolls, and this practice was attended with some danger to such men. It is not the practice to introduce into the calendar rolls at the beginning a sheet of paper of the full width of the calender rolls, but by mechanical means which need not be here described, a narrow strip of paper called a "lead strip" about six inches wide is first formed, and this lead strip is first introduced into the end of any two of the calender rolls. While the lead strip is running through the calender rolls, the process of widening out the sheet of paper takes place until it becomes the full width and is running through the calender rolls. The doctors are retained against the rolls during the broadening out of the sheet of paper which takes but a few moments, but when this has been completely done and a continuous web of paper is passing through the rolls they cease to function and are mechanically removed a distance away from the rolls.

The patent in suit discloses a pneumatic device designed to facilitate and assure the passage downwards of the paper, after passing through any two rolls, so as to pass between the next two rolls in the opposite direction and so on through the remaining rolls, and the inventor claims that air under pressure directed against the upper roll will ensure this with certainty and without manual aid. The plaintiff's inventor takes the ordinary doctor frame, there being two well known and standard doctors known respectively as the Dillon and Warren, and through the horizontal part of the doctor frame he introduces a pipe which furnishes compressed air to a jet, or two parallel jets, and which air is directed against the upper roll and under the

doctor blade. The air entering this space goes in the general direction of the bite between any two rolls, the major portion it is said being above the bite where it develops pressure. It then flows downwards it is claimed, following the path of the lower roll, deflecting the moving paper downwards and keeping it in contact with the lower roll until it reaches the bite of the next series of rolls through which it passes when it meets on the other side another air current employed precisely in the same manner.

The claims in Pope alleged to be infringed by the defendant, are 13, 14, 15 and 16. Infringement of claim 17 was also alleged, but this was dropped at the trial. Claim 16 is typical of the other claims said to be infringed, and reads as follows:

16. In combination with the calenders of a paper machine, a doctor arranged to strip the paper from an upper calender and an air passage arranged to direct air substantially horizontally against such upper calender roll beneath the point of contact of said doctor therewith, so as to impinge on said roll and be directed against the paper passing between such upper calender and the next lower calender and press the paper against the same, and an unobstructed space beneath said doctor for the passage of the air and paper.

It is contended by the defendant that Pope has been anticipated. Beach was referred to not so much as a direct anticipation, but to indicate that as long ago as 1858 paper sheets were controlled and directed by air pressure. In all the prior art referred to by the defendant, there are five patents, Smith (three), Imray, and Schulte, that are particularly relied upon to constitute anticipation. Smith and Imray relate to pneumatic devices for leading paper through calender rolls. Schulte relates to the application of air in paper making machines for the purpose of assuring the continued course of paper upon felts after passing through rollers or cylinders, but at a stage prior to the calendering operation.

Smith, 1885, shows on the downward moving side of each roll in a calender stack, a semi-tubular sheet of metal called by the inventor a wind shield, which is concentric with the curvature of each roll, and closely blanketing the one half of the periphery of each roll to which it is adjacent. Each shield has a very sharp edge which may be a detachable portion and which acts as a doctor blade for

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scraping the paper web from the upper roll. In each shield is a series of conduits or pipes which are perforated, carrying the air under pressure to guide the paper web downwards through and around the rolls. The air projected from the pipes impinges upon the roll obliquely and it is said passes in the direction of the path of movement of the paper web. The doctor scrapes off the paper, and the air then directs and guides the paper web through and around the rolls. The patentee in describing generally the nature and purpose of his invention says:

> This invention relates to means whereby a continuous rapidly travelling paper web may be automatically induced to pass between and around the "calender rolls," so called, and thus in its passage to receive a smooth and finished surface and is thereby adapted for general commercial purposes.
>
> Hitherto in the process of calendering the paper web, as it passes continuously from the driers of the machine, has been conducted and guided through the stack of calender rolls by the fingers of the machine-tender, and serious accidents are continually occurring, in which the fingers of the operator get jammed and terribly bruised and the danger multiplied, since the paper web has to be restored every time its continuity is interrupted for any cause whatsoever. Moreover in the process of "mending up" a large amount of "broken" is produced, because the draft and tension across the paper web is not uniform, and folds or wrinkles are caused, which at once make a crack or break in the paper, and these continue until said tension is properly restored, the paper during this interval being rendered useless for commercial purposes.
>
> To overcome these objections, and to render the waste of paper less and make the effort of mending-up not so laborious to the operative, and reduce the danger to a minimum, I have constructed the following improvements, which embody the subject of my invention: First, in the employment, in combination with a series of wind cases or shields alternately arranged and disposed over one-half the periphery of each roll, of a current of air, steam, or gas (either pressure or suction) to guide the paper web through the stack; secondly, in the use of spring-actuated "doctors" so called to prevent the web from winding up around a roll in lieu of advancing down over its surface of the next adjacent lower roll, etc.

In Smith, 1886, the method or means of applying the air in substantially the same as in the former patent though the doctor is somewhat changed, and it is claimed that the principal distinction between this and the first Smith is that the air is directed towards or in opposition to the motion of the rolls instead of obliquely. In Smith, 1893, the doctor is made hollow and supplied with compressed air through a conduit therein, or it might be said that the device consists of a tubular pipe to which a doctor or scraper is attached and into which pipe compressed air is

supplied. From the doctor blade or pipe is attached a series of vertical strips of pipes between the ends of the rollers, and perforated on the inside through which currents of air are directed so as to impinge against the sheet of paper passing around the lower roll, thus pressing it against the roll. I might here interpolate that as calendering machines became larger in size, the doctors came to be made stronger and more rigid as they are to-day.

Another important patent said to anticipate Pope is Imray (British), 1884. The first paragraph of this patent reads:

> The present improvements have for their object the better guiding of the paper while passing between and along the rollers of the calendering machine, and consist essentially of means for enabling the use of compressed air or steam for this purpose.

After stating that the paper may be in sheets or in continuous web, the inventor states that he arranges parallel to the rollers, which according to the drawings are alternately disposed upon opposite sides of the several rolls, a set of tubes or pipes having perforations or slits opposite to the rollers with currents of air supplied and forced through the perforations. There are four perforated tubes tied together, lying parallel with each other and the roll, and encircling the exposed face of the roll. The air issuing from the top tube is directed towards the lower portion of the upper roll and deflects the paper downward, while the air from the other three lower tubes presses the paper against the lower roll in its downward course until it enters between the next two rolls and so on. Imray has no doctor and everything is done by the air jets. The specifications state:—

> The paper passing under the first highest roller and having a tendency to adhere to it, is blown off it by the blast proceeding from the uppermost perforated tube, and is pressed against the second (lower) roller by the blast proceeding from the lower perforated tubes.

The next patent to which I shall refer is Schulte (German and British), 1905. In the claims and specifications there is disclosed the provision of tubes with slots or holes through which pressure air flows in connection with a doctor blade or scraper. The purpose of the air current in Schulte, and which was applied at various angles of incidence, was to transfer at different points, paper in the

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making and in its wet condition, from pressure rollers, drying cylinders, and transporting cloths and felts, and did not relate or apply to the process of calendering dry paper which, the plaintiff urges, entirely differentiates Schulte from Pope. Prof. Reeve, the expert witness of the defendant, saw applied the Schulte air device to a calendering machine at the Abitibi Mills at Iroquois Falls, and owned by the defendant in the other action. The calender to which the Schulte air device was applied, was a 160 inch machine and was moving 785 feet per minute. This air device was applied to a doctor found installed in the Abitibi Mills, but altered so as to conform so nearly as could be to the Schulte disclosure, and in such circumstances and under the observation of Prof. Reeve, paper was run through this calendering machine. The paper web was first broken and a fresh lead strip started and a full width web was duly formed. This was done fifteen times without failure. This witness stated that on the lowest roll of the calender stack, the doctor blade was arranged at a higher angle than in the others, the frame of the doctor being reversed so that the angle or L-shaped bar of the doctor frame turned up instead of down in order to give freer passage for the paper to go to the reel, while jets of air travelled along parallel with the doctor blade, impinging on the upper surface of the lower roll. According to Prof. Reeve, the air jet was applied in the case of the other rolls of the calender just as described in Schulte on the wet portion of the paper machine. Another witness said the air was applied at various angles. This device was still on the calendering machine at the time of the trial. Whatever the true value to be attached to the evidence of Prof. Reeve in connection with this experiment, I should perhaps here say that I readily accept his statements as to the results of the experimental application of Schulte to the calendering machine at the Abitibi mills. Mr. Buncke, in the Abitibi case also gave evidence regarding the application of Schulte to the calendering machine at the Abitibi Mills, and which was confirmatory of Prof. Reeve's testimony.

I might here state that in the Abitibi case, Mr. Buncke gave evidence regarding an experimental application of Imray to a paper machine in the Abitibi Mills. The actual

device constructed was made an exhibit in that case. Buncke states that the air blasts coming from the upper pipe were directed against the bottom of the upper roll, while the air blasts from the other three pipes were set at the angle shown in Imray, there being no doctor. This witness states that such experiments or tests were all successful in carrying the lead strip through all the calenders by using the upper pipe alone, and as well by using the whole four pipes shown in Imray, and that the lower pipes did not interfere with the paper. I have no reason for declining to accept fully the evidence of Mr. Buncke in this regard.

Two patents granted to Pope in Canada prior to the patent in suit are also invoked by the defendant as an anticipation of the latter. I shall refer to one only, and that is patent No. 159,959 granted on January 5, 1915, and which relates to methods and means of preventing paper web from following the upper of two press rolls and carrying it to the felt which moves between the rolls. The specifications clearly describe the invention and its purpose a part of which is as follows:

> In paper-making machines, the felt passes between the first one or more sets of press-rolls and the web is carried between the press-rolls with and by the felt, and the tendency is for the web, when leaving the bits of the said rolls, to follow the cylindrical surface of the upper press-roll, thus being removed from the felt, and winding upon said press-roll.
>
> In starting the machine after a break has occurred or after it has been stopped for any other reason, the web always or almost always, sticks to the upper press-roll and follows it around to the usual doctor by which it is scraped from the roll and on which it masses in a huge pile of waste until a highly skilled operative is able to remove the web by hand from the press-roll and stick it to the felt so that it will move with it. When this has been done successfully the pull of the web will ordinarily be sufficient to overcome the tendency for the web to stick to and wind upon the press-roll and thereby cause the web to follow the felt, so as to be moved with and by it. Whatever effort may have been made to cause the web to leave the roll by other than manual means, have not been sufficiently successful to displace manual methods.
>
> The difficulty is increased in proportion to the speed of the machine. At the present time machines are often run at a very high speed and efforts are being made constantly to increase the speed, with the result that the taking off of the web from the press-roll and carrying it to the felt, by a manual operation, notwithstanding the skill of the highly trained operator, is a serious problem. A machine cannot be run faster than it is possible to do this work.
>
> This invention involves a novel method of taking off the web from the press-roll and carrying it to the felt; and also involves means for

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carrying out said method, which means is associated with the upper press-roll and is arranged adjacent to the felt by which the web is taken off of said roll and carried to the felt, and the well-known manual operation thereby dispensed with.

In the embodiment of my invention here shown for illustration, means are provided for forcibly delivering a thin sheet of air substantially tangential to the cylindrical surface of the press-roll, which is directed downwards or towards the felt, thereby to take off the web from the press-roll (in case it should have a tendency to adhere thereto or to wind thereon) and carry it to the felt. The pneumatic take-off device here shown by which such thin sheet of air is delivered may consist of a hollow shell or case, more or less triangular in longitudinal vertical section, having converging upper and under sides and inclosed ends and having a narrow slot or passage at the apex of the triangle which is extended across the width of the shell or case, and said shell or case is supported by suitable means adjacent the press-roll with its apex pointed in a direction substantially tangential to the cylindrical surface thereof, so that a thin sheet of air which issues, when desired, from the slot or passage, is directed substantially tangentially against said cylindrical surface and in a direction towards the felt, thereby to take off or blow off the web from the roll, so that it will pass to the felt. Said shell or case will be connected with any suitable air-forcing device by which the air will be delivered thereto under a suitable pressure, in order that it may be caused to forcibly issue therefrom.

Two of the claims in this patent, typical of the others, might be referred to.

12. In a paper-making machine, the combination with rotatable press-rolls and a web-carrying felt passing between them, of a pneumatic device arranged to direct a thin sheet of air between the upper press-roll and a web in contact with said roll, to prevent the web from winding on said roll and to direct it towards the felt on which it is carried, said device being movable whereby the direction of issuance of the current of air may be varied and means for adjusting the force of the current of air, substantially as described.

15. That improvement in the art of making paper which consists in directing a thin sheet of air with considerable velocity, tangential to the cylindrical surface of the press-roll, and towards the felt which is in moving engagement with said press-roll, thereby to cause the web to maintain its engagement with the felt and prevent it from winding on the press-roll.

This case is not without its complications, and the defence has raised many formidable questions. One point raised by Mr. Anglin may first be disposed of and that is, that the defendant commenced to use the infringing air device on calender machines prior to the enactment of chap. 44 of the Statutes of Canada, 1921, and that it thereby acquired the right to continue such use regardless of the validity of the plaintiff's patent. After reading over the evidence and the argument of counsel upon this point,

I find myself quite unable to appreciate exactly upon what ground this point was taken, and I hope I am not overlooking any of the reasons urged by Mr. Anglin in support of his contention. Pope applied for his patent on April 7, 1919, and it was granted on September 16, 1919. He consequently did not make application for his patent under the provisions of the Treaty of Peace (Germany), Order, 1920, or under chapter 44 of the Statutes of Canada, 1921, or any other special statute, but under the provisions of the Patent Act, chap. 69, R.S.C., 1906, and the plaintiff so pleads. I am of the opinion that none of the post war enactments regarding patents have any bearing upon this case whatever, they are not I think available to the plaintiff, nor are they open to the defendant to validate any user it may have made of any of the subject matter comprised within the patent in suit. The patent in question was not validated by any of such enactments, nor does its validity rest upon such enactments. They were never invoked by Pope in any way so far as I can see. He elected to exercise his rights under the Patent Act, and not having taken advantage of, or in any way relied upon, any post war validating legislation respecting patents, I do not see how others seeking to void his patent can invoke such legislation. The user by the defendant of the infringing air device was subsequent to the issue of Pope, and this user by itself cannot in any way disturb the validity of the patent. I think therefore this contention fails.

The evidence disclosed that Pope applied the invention here in issue to a paper machine in a mill of the Great Northern Paper Co. in Maine, U.S.A., sometime between March and June, 1917. The defendant contends that this was a public use under sec. 7 of the Patent Act, chap. 69, R.S.C., 1906, and Pope not having applied for a patent in Canada till April, 1919, more than one year after such public use, his application therefore was void and the grant as well. It was an employee of Price Bros., of Quebec, who was permitted to see Pope's air appliance in this mill, and which was against the customary practice of that mill. The use as of that date was admitted by one or more of the plaintiff's witnesses at the trial. I am satisfied that the commercial use of an invention in a plant from which

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the public is usually excluded, as was the case in this instance, is a use within the terms of the statute, and just as much as if it had been made openly in public. The statute was never intended to make an exception of such a use, and such a contention is not I think entitled to consideration. That, however, is not meant to be exclusive of the point. Inasmuch as this defence was not substantially contested, I do not feel justified in voiding the plaintiff's patent upon that ground. The evidence supporting the point came unexpectedly I think. The user in the mill in Maine may well have been experimental, or Pope may have patented his invention in the United States prior to that time, and if so he would have had one year from the date of issue in the United States to apply in Canada for a patent. No evidence one way or the other was tendered respecting these two points. Upon the evidence before me, I do not feel warranted in holding the plaintiff's patent void upon this ground. Possibly the defence did not lay greater stress upon this point because of the contention that Pope had been validated by the legislation to which I have already referred.

The defendant also contends that the patent in suit is void by reason of anticipation and want of subject matter; that it is the application of a well known and understood thing to an analogous use; and further that the most that can be successfully claimed for Pope is that it is a particular method of applying air against the upper roll only, which the defendant claims it does not do, but instead directs the air against the doctor blade.

Let me refer now to the last point. The defendant says that all that Pope describes in his specifications, all that is set forth in his claims, is that the air is to be applied against the upper roll, and that the field for the inventor being narrow in any event the patent must be narrowly construed, and at the most all that Pope is entitled to upon the construction of his patent is a grant for the method of directing a blast of air against the upper roll alone. It is true that Pope with particularity insists upon the application of the air to the upper roll in his drawings, specifications and claims. The defendant claims that in its device the air is directed against the doctor blade and the evidence

is that way, and that there is therefore no infringement. I quite recognize the force of the contention. That the patent must be narrowly construed, that I think is unanswerable, and possibly one might be justified in holding that Pope having unequivocally tied himself to a blast of air directed against the upper roll, it is not infringement by the same or equivalent means to direct the blast of air against the doctor blade. In each case the air deflects the paper downwards, but to say that there is a distinction because the precise point of application of the air blast is different, is a refinement upon which I would not care to determine the issue between the parties. I think the effect of the air blast is the same in one case as the other, and the evidence is not to the contrary. Inventors are not always expected, I know, to fully understand their inventions, and I doubt if Pope understood scientifically the effect of his air blast, though he doubtless realized the practical results. To find a distinction between Pope and the defendant's device, based upon the exact direction of the air blast, or as to whether it first strikes the upper roll or the doctor blade, would not seem to be a satisfactory or proper solution of the issue, and therefore I prefer to deal with the case upon what I think are more substantial grounds.

The patent in suit clearly does not involve a new principle, and means for applying a new principle, I do not understand it to be claimed, and therefore I need not discuss it upon that basis. There is much to say, however, in support of the view that in describing the air blast as one to be applied to the upper roll only, that a claim to a principle is made and nothing else. But whether Pope be a method, principle, process or combination mechanism, it is in the means or the combination of means for applying the air where is to be found the invention, if any there be. Considering the prior art, including Pope's earlier inventions, I cannot conclude there is invention in the particular means or combination or means here described and claimed by Pope. His device has utility and perhaps novelty, but in order to support a patent utility and novelty must be *de jure* as well as *de facto*, that is there must be invention. It is the utility evidenced by the general adop-

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tion of Pope by paper mills in Canada and the United States either under license or without license, and the saving of labour thereby that gives me most concern and is the strong point in the plaintiff's case, but the question remains to be answered, does Pope represent invention. The means in any of the prior art or in Pope does not mean intricate mechanism. The dominant element in each is the effect of the air when applied as in each described. Having the idea or principle many slightly different means are doubtless available for applying the air in combination with the rolls and doctor blade, but in the end all such means must have great similarity and must in principle, though not in form, be substantially the same. The compressed air must be carried in a pipe, and from there it must be directed through a nozzle or a perforated tube or pipe which acts as a nozzle or their equivalents.

The apparent distinction between the cited prior art and Pope is what might be called an improvement in the means in that in the latter the appliance is simpler, more convenient and less costly. It is not however an improvement that is claimed. The idea is the same, the result to be attained is the same. The beginning and the end mechanically, so far as the means is concerned, are the same. It is in the intermediate area that is between the compressed air pipe and the nozzle or jet directing the air, where the distinction in the appliances between the prior art and Pope is to be found. Having the idea, can it be said that the adoption of a single nozzle or air jet instead of a perforated pipe or series of pipes constitutes invention, and such as to warrant a monopoly to Pope. The conversion or alteration of the prior art, and particularly of Pope's senior inventions to the patent suit, could hardly require inventive skill. Alterations in the size or form of the apparatus or device for applying the air should show distinct novelty, particularly where all the known prior devices or means embody the same principle. The prior art and Pope involve so much of the same general idea or principle and such little difference in the particular ideas of means, that it is difficult to distinguish between them. In the very nature of things, any means adopted for preventing paper from following the upper of two rolls by

the application of air blasts are bound to be much the same. The adoption of the lead strip in paper making would suggest a limitation in the size and form of the device supplying and applying the air, and the lead strip is not claimed in the patent in suit. Pope had done practically the same thing in the way of applying air in his earlier inventions, though the application was at an earlier stage in the process of manufacturing paper. I am not impressed with the contention about the weight of calender rolls, speed, the force of the air blasts, the presence or absence of carrying felts, economy in the use of air, or the distinction between dry paper and wet paper. The effect of air blasts is not influenced by such considerations, though they may suggest or require minor variations in the mode and means of application. There is nothing in the evidence that I can recall, which would justify the conclusion, that special difficulties obtain in applying air blasts to calender rolls as compared with other rolls in a paper machine. Look at it how one will, we find in the prior art the principle or idea that compressed air will control the movements of paper if properly applied, and that the air must be applied through a nozzle, jet or slot, or something of that kind, in the appropriate direction. It is to be assumed that Pope was conversant with all the prior art. To apply to calender rolls what Pope had already applied to other rolls in a paper machine, to transform Smith, Schulte, or Imray to Pope, did not I think require that amount of skill and ingenuity which might be called invention, but only experiment and ordinary mechanical skill. He finds the rotating calender rolls and the doctor blade and doctor frame all ready for his purposes. He did not discover the principle of the application of the air against stationary or rotating bodies. He knew of the influence of compressed air upon paper when applied in the region where paper was passing between two rolls. The pipe carrying the compressed air to the side of the calendering machine of course was old. He then introduces a nozzle to direct the air from the pipe against the upper roll. In shape and size this nozzle is different from the corresponding devices disclosed in the prior art, but I do not think it required invention to make the change. The patent in question looks too

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much like an effort to limit the use of inventions already given to the public, and to control at every turn in a continuous manufacturing process by patenting not improvements or freshly invented means, but only alterations in the form and size of well known methods and appliances, and which fall within the field of the mechanic rather than that of the inventor.

It is perhaps the application of the doctrine of analogous use that is most appropriate to a disposition of this case. It is a well settled principle of law that the application of a well known thing to a new and analogous use is not the subject matter of a patent unless there is invention in the application or the mode of application. See *Harwood* v. *Great Northern* (1); *Morgan* v. *Windover* (2); *Elias* v. *Grovesend Tinplate Co.* (3). Lord Westbury in the first-mentioned case laid down the principle that you cannot have a patent for a well known mechanical contrivance, merely, when it is applied in a manner and to a purpose which is not quite the same, but is analogous to the manner or the purpose in or to which it has been hereto notoriously applied. Lord Herschell in the same case said that the mere adaptation to a new purpose of a known material or appliance, if that purpose be analogous to a purpose to which it has already been applied, and if the mode of application be also analogous so that no inventive faculty is required, and no invention is displayed in manner in which it is applied, is not the subject matter of a patent. Again Lord Halsbury in *Morgan and Co.* v. *Windover Co.* said:—

> When so applied "speaking of the invention in that case," it may well be for what I know to the contrary (indeed I will assume in favour of the patentee that it is so) that they have the useful effect which is attributed to them. But if it is simply the application of a well known and well understood thing to an analogous use, although it may be true it is accompanied by advantages not thought of or practised before, that will not save him from the fatal objection that there is no invention.

It seems to me that Pope's device falls within the principles to which I have just referred. Taking alone the earlier Pope Canadian patents, it does not appear to me that one can say that the new application laid so much out of the track of the former as not to suggest itself to

(1) [1864] 11 H.L.C. 654. (2) [1890] 7 R.P.C. p. 131.
(3) [1890] 7 R.P.C. p. 455.

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Maclean J.

a person turning his mind to the subject, which in this case Pope did. As was said by Lindley L.J. in *Elias* v. *Groves-and Tinplate Co.*, it is impossible to say that here there is absolutely no ingenuity, no novelty, no invention, there is a little of everything, but so little when you come to look at it, it is reduced to this: taking an old idea and applying it to a similar purpose to that which the old idea has been applied before. The old idea was a means to prevent paper following the upper roll, whether a press roll or a calender roll, and with a blast of air with or without the aid of a doctor blade, to deflect it downwards to the next roll or to a felt. The physical outline or form of the appliance or means might differ, but in each case there was the pipe carrying the compressed air to a nozzle, jet, or perforated pipe, and therefrom forced in the direction calculated to consummate the end in view. In view of the knowledge disclosed in the prior art, in view of the similarity of purpose and mode of application between Pope and others, including Pope himself, it seems to me that the patent in suit is but the adaptation to a new purpose of a known method or appliance which is analogous to the purpose to which it has already been applied, and the mode of application is also analogous, and that no invention is displayed in the manner in which it is applied. It would not seem reasonable to me to exclude the whole world from doing the same thing, and that is what it would mean if Pope is a valid patent. Upon this ground I think the plaintiff must also fail.

Altogether the plaintiff's action for infringement fails. The defendant will have its costs of action.

Judgment accordingly.