

required experiment to find that out?" A.—"I think not. I think it was a chemical fact that was generally known." It will be noticed that, even under this pressure, he does not venture to say that he knew it, though he says he thought it was a chemical fact that was generally known. Again, Professor Attfield, called by the defendants, was also asked by the learned Judge: Q.—"Do you think, in the beginning of 1887, any invention was required to discover that a solution of cyanide of potassium could be practically applied to dissolve gold and silver in crushed ore?" A.—"I do not." Which answer, it will be seen, by no means pledges himself that he knew it. Both of these witnesses' answers are matters of opinion, and nothing more; and when we find such men as Professor Dewar, Professor Crookes, and Sir Henry Roscoe stating that they did not know it, and coupling this with the fact that it never had been used for commercial purposes for so doing, we cannot doubt that the fact was not known in the chemical world, and we come to the conclusion that there was novelty in the plaintiffs' discovery; and we adopt what Sir Henry Roscoe stated: that, taking the specifications and everything as a chemist, he certainly did not find any indication that cyanide of potassium, if used alone, would be sufficient to do the work. Novelty and utility being established, it goes some way, at any rate, towards carrying invention. To see if there was invention we turn to Mr. MacArthur's evidence (it is the first time we have attended to it, simply because he is a party to the cause, though it is most important upon many parts of the case), where he describes the researches he made before he hit upon that for which he was seeking. Professor Dewar points to the fact that in nature the conditions are so complex that the question could only be solved by experiment and trial, and Lord Kelvin gave evidence to the like effect. Mr. Mactear, called by the defendants, under cross-examination as to the properties of cyanide of potassium, said: "Cyanide-of-potassium solution is of such a peculiar nature that I do not think any chemist in the present day knows its composition, or knows the reactions taking place within it, and that the knowledge of it is purely experimental," which is entirely in accord with the plaintiffs' evidence upon this point. We would point out that the invention consists, not merely in discovering that cyanide of potassium can be used to extract gold from its ore, but in showing the public the best practical method of doing it, by leaving the baser metals behind, which had never occurred to any one before. We cannot doubt that, upon the evidence given in this case, of which we have only given typical extracts, if the plaintiffs' specification is to be read as contended for by them, there is ample novelty and meritorious invention in their discovery. As to its having been anticipated by the prior specifications, it will be remembered that from not one of them has any commercial result ever been obtained. The law applicable to paper anticipation, which all these are if anticipations at all, is clear, whether you take what Lord Westbury said in *Hill v. Evans*, in *De Gex, F. and J.*, p. 299; or Lord Esher, in *Otto v. Linford* (46, "Law Times Reports," p. 39); or Lord Justice Cotton, in *Erlich v. Thlee* (3, "Patent Cases," 437); or, indeed, any other of the cases upon the subject. It is this: that to constitute a paper anticipation the description in the prior specification must be such that a person skilled in the matter reading it would find it in the invention which is sought to be protected by the patent, and unless this can be found in the writing itself it is not an anticipation at all. In our judgment, the existence of a chemical patent wherein the combined effect of two or more chemicals is claimed in order to bring about a desired result does not by any means constitute an anticipation of a subsequent discovery that by the use of one of the named chemicals the desired result can be obtained, and *a fortiori* where the compound of the two or more has failed to do so; for, as stated by Professor Mills, there "are any number of cases known in chemistry where two things when put together act very differently from what they do apart"; and we entirely agree with an answer of the defendants' witness, Mr. Vautin, that, where the public are told to use a compound of two chemicals, such information certainly does not disclose the fact that either of the two alone will suffice. We are of opinion that neither Simpson's specification nor any of the other four are anticipations of the plaintiffs' invention. We now come to what appears to us to be by far the most formidable part of the case, as regards the validity of the plaintiffs' patent. It is this: Upon the true construction of the plaintiffs' specification have they or not claimed for the use of any cyanide of potassium in solution, no matter what, for the extraction of gold from its ore? If they have, we agree with Mr. Justice Romer that the patent is bad, and it is upon this that the learned Judge has, as it appears to us, mainly based his judgment; for it is then a claim, not only to apply a well-known substance to another well-known substance without stint or limitation, and thus to deprive during the continuance of the patent the public from using what they were theretofore entitled to do, but it is also a claim for that which is of no utility, for, as before stated, unless cyanide of potassium be used in the limited manner the plaintiffs, by their specification and second claim, state it is to be used, it brings into solution the baser metals conjointly with the gold, and no beneficial result is attained. If in the specification there had but been the second claim alone—i.e., for the dilute solution containing the small quantity of cyanide of potassium as therein substantially described—there would not, in our judgment, have been any real difficulty in this case, and we should have been of opinion that this was a good patent; and a passage in the judgment of the Court of Exchequer, delivered by Mr. Baron Bramwell, in *Hills v. London Gaslight Company* (5, H. and N., at p. 369), is very pertinent to this point. The learned Baron, who was dealing with a patent for the purification of gas by the application of hydrated oxides, says this: "Then it is said that the mere application of the hydrated oxides to absorb the sulphuretted hydrogen from coal gas is not the subject of a patent, that property of it being previously well known. With that we do not agree. The answer is that the question is not properly stated. The application of the hydrated oxide is a principle. If a man were to say, 'I claim the use of hydrated oxide of iron for the purification of coal gas,' without saying how it is to be applied, it is possible the objection might be well founded; but here the plaintiff says, 'I claim it in the manufacture of gas in the way I have described,' and he shows how it is to be used. Therefore this objection fails." In our judgment, the plaintiff's invention, as claimed by his second claim, has novelty, invention, and utility; it has not been anticipated, and it has been infringed. The point as