

of obtaining gold and silver from ores and other compounds, consisting in dissolving them out by treating the powdered ore or compound with a dilute solution containing a quantity of cyanogen or a cyanide, or cyanogen-yielding substance, the cyanogen of which is proportioned to the gold or silver or gold and silver substantially as hereinbefore described." The nature of the invention was thus described by the learned Judge: "The invention claimed in the patent is a very simple one, and the claim very comprehensive. It is for the application of a solution containing cyanogen, so as to dissolve the gold and silver in powdered ores. The gold—for I need not further distinguish the silver—is then to be recovered from the solution by any of the well-known ways. The kind of solution to be used as the solvent is described by the specification very broadly. It is to be any solution containing cyanogen or any cyanide soluble in water (such as cyanide of potassium), or any other substance or compound containing or yielding cyanogen. No special apparatus or machinery or device or scheme of any kind is required. The solution is simply to be poured on the ore. You may stir the ore about in the solution if expedition is required; or, if you choose, you may let the solution rest so as gradually to solve the gold in the ore. In fact, the patent really is for an alleged discovery that a solution containing cyanogen can be used to dissolve out the fine gold in powdered ore." The plaintiffs appealed.

Sir R. E. Webster, Q.C., Mr. Moulton, Q.C., Mr. Bousfield, Q.C., and Mr. A. J. Walter were for the appellants; Sir Edward Clarke, Q.C., Mr. Neville, Q.C., and Mr. Goodeve were for the defendant company; Mr. Goodeve and Mr. Wright-Taylor were for the defendant Pielsticker; the defendant Bowick appeared in person.

It was stated by Sir Richard Webster, in the course of his speech, that, by the use of the plaintiffs' method, gold to the amount of £2,000,000 has been already extracted which could not have been extracted by the former methods of extraction, and which would have been entirely wasted.

At the conclusion of the arguments on the 22nd February last their Lordships reserved judgment, which was delivered this morning, affirming the decision of Mr. Justice Romer, and dismissing the appeal, with costs.

Lord Justice A. L. Smith read the following written judgment of the Court: Messrs. MacArthur and Forrest's patent, for the infringement of which this action is brought, bears date the 16th July, 1888, the provisional specification having been filed on the 19th October, 1887, and it is for improvements in extracting gold and silver from their ores by means of what, for the present, we will take to be the application to the ore of a small quantity of cyanogen-yielding substances in solution. We shall hereafter for brevity call these substances cyanide of potassium. The defendants denied the infringement, and also asserted that the plaintiffs' patent was invalid—first, by reason that the discovery as claimed contained neither novelty nor invention; and, secondly, by reason of prior anticipation. A further point was raised, which is that, if the specification is to be read as the plaintiffs read it, the defendants contend that there is such disconformity between the complete and provisional specification as to be fatal to the plaintiffs' claim. The defendants do not deny the utility of the plaintiffs' invention, but they dispute the great commercial importance claimed for it by Sir R. Webster for the plaintiffs. As regards the infringement, the defendants during the first five days of the trial strenuously insisted that their patent, which was said to be an infringement of the plaintiffs' patent, was for the extracting of gold from its ore by means of the conjoint operation of electricity and cyanide of potassium, and was therefore no infringement of the plaintiffs' patent, the electricity which they used being a material part of their invention. When, however, their witness (Mr. Herbert) was being cross-examined, and they were challenged to refer to independent experiment and trial whether their electricity, as used, was not in reality a myth, they refused to do so, and admitted they were infringers of the plaintiffs' patent, and thus this point became disposed of. In considering the question of want of novelty and invention it is necessary to state what we find to have been established in this case. It was proved that for many years prior to the patent in question it was common knowledge that cyanide of potassium would act as a solvent of gold in a finely-divided or precipitate condition in the same way as many other solvents would act, of which perhaps the strongest is *aqua regia*. There is no dispute as to this, and it is common ground. It was also, in our judgment, proved that prior to the plaintiffs' patent it was not known that cyanide of potassium would act as a solvent so as to extract gold from its ore. We leave out silver, for it has nothing to do with this case. The way in which gold had theretofore been extracted from the ore in which it was contained had been by subjecting the ore which had been crushed and which contained the gold to a process which is called the amalgamation process; and then by again subjecting that ore to a second process, called the chlorination process, further gold was obtained. These two processes, however, left a residuum of gold in what are termed the tailings, and this residuum could not by any known process at the date of the plaintiffs' patent be commercially obtained, and it went to waste with the tailings, and was lost. That a large amount of gold which otherwise would have gone to waste has been recovered by means of the plaintiffs' patent, in conjunction with another patent which they took out prior to the filing of their complete specification herein, when applied, at any rate, to the tailings of South African ore, has been clearly established, and, indeed, there is no evidence to the contrary. The object which the plaintiffs had in view, and which they attained by their two patents, was by the first to extract the gold from the crushed ore by getting the gold into a state of solution by means of the application of a solution of cyanide of potassium, and then, by their second, which was for an improvement in precipitation of gold by zinc, which was then well known, to extract the gold theretofore brought into solution out of it. It is well known that ore which contains gold also contains baser metals—such, for instance, as copper, iron, lead, and other metal—and the problem which had to be solved was how to extract gold out of the crushed ore and get it into a state of solution without at the same time getting into that solution the other baser metals, or, in other words, how to extract gold from its ore and get it into a state of solution commercially free of the baser metals. That the