and is provided with an additional pump by means of which it can fill its own tank, and the boiler is capable of supplying steam to direct-acting steam pumps, which may be fixed on a separate water cart, to be used in case of fire as a steam fire engine. A trial of its traction powers took place on Saturday last. The "elephant" drew a load of 14 tons 13 cwt, in two trucks, from the Britannia Works, along Cathcart-street, past the park entrance, up Manor-hill road to St. Aidan's College, and back again to the works, going up and down hill, turning corners, &c., with ease; and the inspectors expressed themselves perfectly satisfied with its capabilities, saying they had no doubt, from the manner in which it had performed its task, that it could have drawn a load much greater without any difficulty.—N.B. The gradient was afterwards taken by the inspector and found to be 1 in 14 ½ ths, and, making due allowance for the softness of ground consequent upon the heavy fall of rain for some days back and the smallness of truck wheels, was considered excellent work.—*Liverpool Mercury.*

THE NORTH ATLANTIC TELEGRAPH.—The late Arctic cruiser Fox, which is about to be despatched on survey service in connection with this undertaking, is now lying in the Southampton Docks for the purpose of undergoing the necessary refitment. She will be commanded by Captain Allen Young, and will be accompanied by an adequate staff of electricians, geographers, geologists, and surveyors, and a marine painter. The Danish Government takes a warm interest in the project, and will send out two commissioners in the Fox to report upon the survey. Captain Young was at Southampton on Tuesday, on business connected with her equipment for sea. The paddle steamer Bulldog, appointed by our Government to take the soundings, has already sailed on her mission, and it is expected she will be absent from three to four months. The Fox will be ready for sea about the middle of July. The Mayor of Southampton is making arrangements to give a grand banquet to Captain Allen Young in celebration of the departure of this expedition to commence the accomplishment of what is hoped and anticipated by a large body of nautical and scientific men will be a successful endeavour to unite the two worlds by a telegraphic communication. Invitations have been forwarded to Lord Palmerston, Lord Ashburton, the President of the Royal Geographical Society, and other persons eminent in science and literature.

Law Reports.

VICE-CHANCELLOR'S COURT, July 4.—(*Before Vice-Chancellor Sir W. P. Wood.*)

HILLS *v.* THE LONDON GASLIGHT COMPANY.

This suit is instituted by Mr. Frank Clark Hills against the London Gaslight Company to restrain the infringement of certain letters patent, dated the 28th of November, 1849, granted to Mr. Hills for an improved mode of manufacturing gas. The alleged invention, so far as material in the present suit, consists of two parts as follows:—1. The use of substances described as "precipitated or hydrated oxides of iron," for the purification of coal gas from sulphuretted hydrogen and other impurities; and 2, the renovation of the purifying material by exposing it to the air, the effect of the exposure being that the sulphuret of iron formed in the purifying material is decomposed by the oxygen of the air, and the sulphur of the sulphuret is set free in a natural state, and hydrated oxide of iron is reformed, so as to admit of the material being used over and over again. The validity of the plaintiff's letters patent has been established at law against the defendants, subject to an appeal now pending to the Court of Exchequer's Chamber, under the Common Law Procedure Act of 1854. The present suit came on before Vice-Chancellor Wood on the 6th of June last, upon a motion for an injunction. Upon that occasion the defendants alleged that the process of gas purification then in use by them at their works was not an infringement of the plaintiff's letters patent, but was a process patented by Mr. Frederick John Evans, under letters patent, dated the 27th of August, 1858, for an improvement applicable to gas purifying. Upon this the Vice-Chancellor put the defendants under an undertaking, and gave Mr. Hills leave to renew the motion upon the ground that Mr. Evans's process and the process actually in use by the defendants' company were an infringement of Mr. Hills's letters patent. The case now came on upon the renewed motion. It appeared that Mr. Evans in his specification—after stating that it was then the general practice to employ some preparation or natural compound of oxide of iron for the removal of the impurity known as sulphuretted hydrogen, and that these oxides had usually been obtained either from natural sources in the form of ochres or natural oxides, or from the decomposition of the sulphates or other salts of iron; but that all ochres or natural or native oxides were mixed with earthy matters, which, having no affinity for the impurities contained in gas, were inert and useless ingredients; and that the oxides obtained by the decomposition of the sulphates or other salts of iron were purer, but much more costly to obtain; and, although they admitted of being frequently revivified, yet their use formed a heavy annual item of expense—also stated that the object of his invention was to obtain a material which would be energetic in its action, easy of production, and inexpensive. To this end he took turnings, borings, and filings of iron, or scraps or small pieces of iron in the form of shot, and exposed them to gases or liquids, whether at ordinary or elevated temperatures, such as would insure their rapid oxidation. This process, upon the explanation of the defendants' witnesses, was understood to mean the exposure of the small pieces of iron to the action of air and water, producing hydrated oxide of iron. The question was whether the product was a precipitated or hydrated oxide of iron the use of which was claimed by the plaintiff under his letters patent.

Mr. Rolt, Q.C., Mr. Grove, Q.C. (of the common law bar), and Mr. Marten appeared for the plaintiff; Sir Hugh Cairns, Q.C., the Hon. George Denman (of the common law bar), and Mr. Druce appeared for the defendants.

The Vice-Chancellor, without calling for a reply, said that the plaintiff was clearly entitled to an injunction. There was substantially no conflict of evidence. Assuming that, as the defendants contended, the strict technical meaning of "precipitated" was restricted to the action of throwing down a substance from a state of solution, still it was clear that the term was used, even at the present day, in a larger sense, and was a convenient term of distinction in the sense in which it was used by the plaintiff in his specification. Without wishing to disparage Mr. Evans's process, it appeared to be a process for making rust in the way in which it was ordinarily made. But, whether this was so or not, the substance made was a member of the class the use of which was claimed by Mr. Hills, and therefore its use by the defendants was an infringement of Mr. Hills's letters patent. The case was so clear that there appeared to be no question for trial at law. The order would be as follows:—The Court, declaring that the process in use by the defendants and the purification of gas by the material described in Mr. Evans's letters patent is an infringement of Mr. Hills's letters patent, and the plaintiff undertaking to abide by any order of the Court as to damages, award an injunction in the terms of the prayer of the bill.

It was then arranged, with the consent of the plaintiff, that the injunction should take effect this day six weeks, the interval being allowed to enable the defendants to make the necessary changes in their works, and the defendants keeping an account in the meantime.

Our Weekly Gossip.

UNAVOIDABLY we are compelled to withhold, *protem.*, our promised illustrations of the Bronze Coinage.

The two sons of Louis Kossuth have obtained the first and second certificates of merit in the "Civil Engineering" class of University College. These young men likewise obtained certificates in all three divisions of the class in which "Philosophy of the Mind and Logic" are taught.

It is stated in the Naval Intelligence of the *Times* that of six additional gun-boats which have been hauled up for special inspection, two which were built by Mr. John Laird, of Birkenhead, have been found as sound and perfect as could be desired. We learn this with much pleasure, because we know that at the time the gun-boats were built Mr. Laird put himself to immense pains and trouble in order to do the best that was possible for the Government, regardless of expense or loss. He erected sheds over the ground on which they were built, lighted these sheds by gas at great cost, and appointed from among his best workmen a number of extra foremen, whose special duty it was to prevent all such abuses as the driving of short bolts, &c. As his loss upon the vessels was therefore very great, it is only fair that the conspicuous excellence of those built by him should be made known.

Mr. Manser, who was injured at the late accident on the Eastern Counties Railway Company, has obtained a verdict in the Court of Exchequer for £2,000 damages against the company, on the ground of insufficient care on their part. It appeared in evidence that the company, unlike most other railway companies, were unable from any written entries in books to show whence any particular wheels, tires, or axles came; nor could they show the distance that the wheels had travelled, nor how long they had been in use. The jury inspected the broken parts of the wheels with magnifying glasses, and had pointed out to them by two gentlemen on behalf of the plaintiff and defendants the precise place where the weld parted, and where, as it was said, no metallic union had taken place.

The report just presented to the British Association by the Kew Committee contains several facts of interest, some of which we give in another form elsewhere; others may be mentioned here. Those relating to the extended use of magnetic instruments are among the chief.—Application having been made through Padre Secchi, of the Collegio Romano, for a set of magnetic instruments, for both differential and absolute determinations, for the Jesuits' College at Havanna, the whole to cost 600 dollars, or about £150, Gen. Sabine obtained, at a reasonable price, the three magnetometers that had formerly been employed at Sir T. Brisbane's Observatory at Makerstoun, and also an altitude and azimuth instrument. With these instruments it is expected that the application from Havanna Observatory can be met within the sum named; the instruments are now in the hands of the workmen, and will be ready early in July.—A set of magnetical instruments, consisting of a dip-circle, an azimuth compass, and a unifilar, previously used by Capt. Blakiston, have been re-examined, and have been taken by Col. Smythe, of the Royal Artillery, to the Feejee Islands. The sum of £179 12s. 6d. has been received from the Royal Society, to defray the expense of erecting a model house for the reception of the instruments for Colonial Magnetic Observatories.

A Report has been completed by the Superintendent of the Kew Observatory on the results of the Magnetic Survey of Scotland and the adjacent islands in the years 1857 and 1858, undertaken by the late Mr. Welsh.

Prof. W. Thomson (of Glasgow) having expressed a desire that the practical utility of his self-recording electrometer should be tried at Kew, his wish has been acceded to and the instrument received, and it is expected that it will shortly be in operation under his direction.

The official Report of the Aberdeen Meeting of the British Association for the Advancement of Science has come to hand. Of the communications read at the meeting, six have been selected for publication entire. Of these Mr. Atherton's paper on "Steam Transport Economy" takes the post of honour. The others are, Mr. Fairbairn's on "Breaks for Railway Trains," Mr. J. P. Harrison's on "Lunar Influence upon Temperature," Mr. A. Thomson's on "Industrial Schools," Mr. De la Rue's on "Celestial Photography," and Professor Owen's on "Classification of Reptiles." On the whole, the mechanical section (G) makes but a poor show, most of its communications being published in abstract only. We hope this year's proceedings will be more worthy of *our* profession.

A Bill is now before Parliament of considerable public interest all over London, for regulating the supply of gas to the metropolis. This measure, which was reprinted on Monday, as amended by the Select Committee of the Commons to which it was recently submitted, recites that all the leading gas companies in the metropolis (enumerating them), instead of supplying gas, as now, by several mains in the same district, have agreed, as far as possible, each one to confine its supply to a separate district, in order to economize capital and avoid the too frequent opening of the public streets. The Bill is intended to give a legislative sanction and practical effect to that arrangement, and is to apply to all persons already or hereafter supplying gas within the metropolis, with some inconsiderable exceptions. It assigns the districts to be supplied by each of the companies, and subjects those districts to a triennial revision by the Home Department. The Secretary of State is empowered to appoint gas inspectors in the public interest, who are to hold periodical meetings and hear complaints that may be preferred against any gas company by