to the American Line, now incorporated in the International Navigation Company, they were named the "New York" and the "Paris." They were in active service during the Spanish-American war as government scouts, work for which their large coal canacity and high speed rendered them very serviceable. Shortly after the conclusion of the war, when they were again in the Atlantic service the "Paris" ran ashore on the south coast of England and remained on the rocks for several months. Ultimately she was floated by a German salvage company, and taken to an English shipbuilding yard, where her bottom, which had been badly broken up, was entirely rebuilt, the hull generally strengthened, and new engines and propellers put in place, the old triple-expansion engines being replaced by modern quadruple-expansion engines, and new batteries of boilers, carrying much higher boiler pressures, installed. The vessel was re-named the "Philadelphia;" and as the result of these changes, not only has an additional knot an hour been added to the speed, increasing it from a sea speed of 19 to 20 knots, but the increased speed has been gained with a considerable reduction of coal consumption.

About eighteen months ago the sister ship "New York," which forms the subject of our illustration, was taken in hand by the John N. Robins Company at the Erie Basin drydock, Brooklyn, for a similar overhauling and reconstruction. By the courtesy of Mr. W. D. Dickie, the general manager, we are enabled to present the accompanying illustrations and particulars of this interesting work. Two of our illustrations show the structural changes which have been made in the stern and propellers of the ship, one of them representing the vessel when she was first put in drydock, and the other being taken when the work was completed, and shortly before the vessel was floated. The first step was to remove the plating and frames over that portion of the hull which is indicated by the zigzag white line in our engraving. It will be seen that, as originally constructed, the vessel was fitted with a balanced rudder, which was carried entirely below the water line, the sternpost being built out astern and the structure of the ship being here swelled out to admit the rudder head and permit the placing of the steering gear within the swelled-out portion and below the water line; this being done because the vessels were built with a view to use by the British government as armed cruisers, the government requirements calling for below-water steering gear. After the removal of the plating and framing the heavy steel castings of the spectacle frame and the stern frame, weighing together some 70 tons, were put in place; the frames which, in their lower portion, were curved out to form the housing for the propeller shafting, were set up; the structure was plated in; the massive rudder, which is a single steel casting, was hung; the rudder head bolted on; and the job, as far as the stern was concerned, was completed. Under the old arrangement the tail shafts were exposed, and their weight and that of the propellers was supported on heavy shaft-brackets, a system of construction which was in vogue when the vessels were first built. Now, as will be seen from the engraving, the shafting is completely inclosed up to the propeller hubs, and a much stronger construction is secured, while the shafting is protected from the water, and may be at any time inspected from the interior of the ship. Each propeller-hub weighs 13.500 pounds, and the three blades weigh 28.300 pounds.

At the same time a vast amount of new steel work was built into the hull itself, the total for the whole ship reaching 2,200 tons. The hull was carefully gone over, and the butt straps were replaced by new ones. An entirely new engine foundation was constructed, the arrangement of the decks was altered, some of them being almost entirely rebuilt, and new water tanks were put in. The new propellers, it should be mentioned, are placed one foot six inches nearer to the center line of the vessel than the old propellers. They are also somewhat smaller in diameter, and a higher rotative speed will be used with the new quadruple-expansion engines. At the completion of the repairs the vessel was floated out of drydock and towed to the Cramp's shipyard, Philadelphia, where the engines and boilers will be installed. It should be mentioned that when she leaves the Cramp's yard she will differ materially in appearance from the old "City of New York," the three funnels which were a conspicuous feature in the vessel being removed, and two single funnels of greater height being put in their place. It is interesting to note that this is considerably the largest job of the kind ever undertaken at the port of New York, and its successful completion serves to indicate the material progress that is being made in shipbuilding construction in this neighborhood.

Charles L. Murray, a San Francisco fireman, has a claim against the city for the use of a draught-regulating device for use on vehicles which are drawn by three horses. The City Attorney has rendered a decision supporting his demand for remuneration. The apparatus is in general use in that city.

Legal Notes.

NEW COMBINATION OF OLD ELEMENTS.—A suit was recently brought by the Emerson Electric Manufacturing Company against the Van Nort Brothers Electric Company (116 Fed. Rep. 974) to restrain the infringement of certain claims of letters patent for an improvement in lubricating bearings designed especially for use in connection with electric ceiling-fan motors. The usual defense of want of novelty and non-infringement was set up. The patent in question covers a combination of devices, the principal one of which is a spiral groove in the hub of the armature, opening into an oil-cup at its lower end, and extending up the bearing to a reservoir at its upper end in such a way that when the fan is in motion the oil is forced up the groove from the cup on the principle of the Archimedean screw, lubricating the shaft. The excess is discharged into the reservoir.

Defendant's counsel conceded the merit of this device and likewise its patentability generally. He contended, however, that the patentee was not the original and first inventor. It was this contention that presented the main question for determination. It was conceded by the court that the elements were all old. Yet it was held that despite the lack of novelty in the elements, their combination in the peculiar manner provided for by the patentee was new and produced a useful result. The court proceeded to analyze the patents cited by the defendants and showed that they did not anticipate the natent under which complainant manufactured. The court cited the case of Bates vs. Coe (98 U. S. 31, 48), in which it was remarked: "Where the thing patented is an entirety, consisting of a single device or combination of old elements incapable of division or separate use, the respondent cannot escape the charge of infringement by alleging or proving that a part of the entire thing is found in one prior patent or printed publication or machine, and another part in another prior exhibit, and still another part in a third one, and from the three, or any greater number of such exhibits, draw the conclusion that the patentee is not the original and first inventor of the patented improvement."

The invention under consideration is the combination in one device of elements alleged to have been all shown by prior patents so as to produce a new and useful result, or at least to produce the old result in a more facile, economical and efficient way. If the combination produces such results by the joint and cooperative action of the elements combined, even if they are old, it is invention within the meaning of the patent law, notwithstanding the fact that each of the elements separately considered, or in other combinations, were old and well-known in the art.

The record in the case showed that considerable progress had been made in the art of lubricating vertical shafts before complainant's patent was granted. One inventor had discovered the utility of the revolving oil cup; another had odiscovered the utility of the ball-bearing; another had discovered the utility of the spiral groove: and these different elements had been separately employed, or one had been combined with another in such a way as to produce certain results. But in the court's opinion no one had discovered the combination covered in the claims in this case, prior to complainant's patent. That patent gave the finishing touch to former crude beginnings. The inventor brought success out of comparative failure, produced a combination not only practically new in itself, but produced new and very beneficial results. A decree was entered for the complainant.

The Weston Electrical Instrument Case.—The Weston Electrical Instrument Company brought an action in equity against J. F. Stevens and Elmer P. Morris of the Keystone Electrical Instrument Co. to restrain the alleged infringement of letters patent granted to Edward Weston for electrical measuring instruments. Judge Coxe in the United States Circuit Court of the Southern District of New York, before whom the case was heard, gave it as his opinion that there were certain fundamental propositions which, if not admitted, could not be successfully disputed. Mr. Weston was the first, he thought, to make a successful commercial voltmeter for measuring alternating currents.

Strictly speaking, there was no prior art. If the invention be confined to alternating current devices, it can be said with confidence that there were no practical commercial instruments prior to Weston's. Hence, there were no instruments entitled to be considered as anticipations. There were two or three instruments which, as scientific possibilities, could, it is true, reach accurate results; but as every-day working devices they were of little value. The most satisfactory of these were, perhaps, the Thomson balance, invented by Lord Kelvin, the Siemens dynamometer, and the Cardew hot-wire voltmeter. There

were other instruments, but they were no nearer to the invention than those referred to. As Judge Coxe expressed it, "they have about the same relation to the Watson device as a medieval crossbow has to a modern repeating rifie." In the Court's opinion, infringement was clear. The defendants copied the patented instrument even in its minute details. The only difference entitled to notice is the substitution of a V-shaped spring for the upper fiat spiral spring of the patent. The two springs are unquestionably equivalents. This was a case where upon undisputed testimony the inventor had accomplished something. which has been of unquestionable benefit. "In an art crowded with indefatigable and brilliant enthusiasts, he has made the only successful alternating current voltmeter in use at the present day." The claimant was granted the usual decree for an injunction and an accounting.

LIMITATION OF CLAIMS BY LANGUAGE USED.—In delivering his opinion in the case of Schreiber and Conchar Manufacturing Company vs. Adams Company (117 Fed. Rep. 830), on appeal, District Judge Lochren showed how claims should be construed and limited. The subject matter in dispute was the validity of the Farwell patent for an adjustable stove-damper. The evidence showed that the business of making adjustable stove-dampers, to be used in repairing stoves and renewing disabled dampers, was so considerable that many devices were invented and in use, some of which were patented. In all, the object was to provide a damper which, without the exercise of special skill, could be fitted and adjusted to any ordinary cooking stove. The Farwell patent was granted for its peculiar combination of constituent parts. These parts separately considered were old. Prior patents showed in many respects similar devices. but the Farwell patent was limited, not only by the prior art, but by the specific language of its claims, to a damper with a rod having two grooves in it. one on each side, extending nearly its entire length. The damper invented by Ohnemus and Sanner, and made by the defendant, performed the same functions as the Farwell device and in substantially the same way. The defendant's rod had no groove in it. It may be that Farwell's invention would have entitled him to take a broader claim than he did; but his patent makes no such broad claim. The language employed in the Farwell patent, as well in the specifications as in each of the claims, makes the rod of the peculiar form described, with two grooves an important and essential part, or the element of his combination. The defendant did not use a rod with grooves. and was therefore held not to have infringed.

CONTRIBUTORY INFRINGEMENT.—The case of Palmer vs. Landphere (118 Fed. Rep. 52) is interesting for the example which it contains of contributory infringement.

The letters patent, upon which the suit was based, were two, issued on December 9, 1884, to Frank L. Palmer and William H. Palmer for quilting machines. The defendant contended that after he had left the employ of plaintiffs he had a right to enter the employ of a rival and to equip its plant with the patented machines. He further maintained that he could continue shifting his employment, and in each case of new service furnish his personal knowledge in defiance of the patents sued upon. The Court found that the defendant was without question selling the different articles which entered into the construction of the infringing machines, at a profit.

During his original employment he learned the details of the quilting business, and with that knowledge he went forth into the world. Starting with a place of business of his own, the Court found that he left marks of his unfair methods behind, in various places. The Court declared that he was retailing at a profit separate parts of an infringing machine which he was employed by the purchaser to set up, and cannot avoid liability as a contributory infringer on the ground that he was merely selling his labor as a skilled workman.

The Patent Office has decided that President Roosevelt's name should not be used as an advertising trademark. In the opinion of the Commissioner of Patents a living celebrity is entitled to protection from the use of his name for the purposes of trade by others, and this is specially true in the case of the President of the United States.

Oral Agreements to Sell Patents.—In the case of Cook vs. Sterling Electric Company (118 Fed. Rep. 45), District Judge Baker held that an oral agreement for the sale of an invention, founded on a sufficient consideration, made pending an application for a patent, is invalid in equity and constitutes a good defense to a suit in equity, for infringement, brought by the inventor against the purchaser, after the issuance of a patent.