

in finish and quality. We have recently noticed the india-rubber insulated wire of this firm, as well as their ebonite pole-insulators, which will be found with other telegraph appliances, in Class 13.

"Messrs. Warne and Co. exhibit several very novel and useful appliances of the material. Their "junction rubber" for piston rings, pump buckets, &c., made of soft and hard rubber combined, is a very ingenious and valuable application, as also their "patent screw shaft" "water-stop for ocean steamers, which prevents the necessity of stoppage for re-packing when at sea. This is effected by the inflation of two rings so arranged as to answer the end required, whilst the stuffing-box is being re-packed. They also show an elastic bath towel, having a rubber warp alternate with cotton; "red mineralised rubber;" "ferruginous "cement packing;" a very ingenious flesh brush, and their "aromatic bands," which are all worthy of notice as improved appliances of the material, as also an "Archimedean screw rifle cleaner." Messrs. Warne and Co. were the first to introduce the use of india-rubber for door-mats, samples of which they exhibit. These are formed of sections of tubes cemented together. They are well adapted to the purpose, and are extensively used. The whole contents of this case are well worthy the attention of our readers and the commercial public.

"On the opposite side, in the centre passage, will be noticed a very handsome case devoted to the exhibition of overshoes, hose, belting, &c., manufactured by the North British Rubber Company of Edinburgh. This firm, which, we believe, consists chiefly of Americans, possesses the advantage of the superior knowledge attained in that country, where the india-rubber trade has been so much more extensively developed than in England, and, consequently, their goods at once strike the eye as superior to what we have seen elsewhere. This is shown particularly in their overshoes, which, indeed, is a branch of the trade that has hitherto only been carried on in France and America. The shoes exhibited here, however, very far exceed in beauty of make and finish those of either of the other makers. This is not only apparent in shoes, but in the other three articles to which their manufacture is confined—valves, hose, and belting. In front of their case, let into the floor, is the largest valve which has every been made, being 6 feet 4 inches in diameter, and 1½ inches thick, made of pure rubber, in the manufacture of which no solvent has been used. In their hose there is a clearness of finish which must place it in favourable contrast with other makers.

"India-rubber hose must eventually supersede leather, as being more durable and cleanly, and for fire-engines certainly possesses advantages from its smoothness of bore, and consequent non-resistance to the passage of the water. The same advantages are possessed by india-rubber belting for machinery, which is daily superseding the use of other kinds.

"The belting shown by the North British Company is of remarkable strength, and yet possesses a requisite amount of elasticity. Numbers of the machines in the Western Annexe are driven by these bands, as well as the pumps of the large French fountains in the Horticultural Gardens. In the same case are shown combs manufactured by

another branch of the firm—the Scottish Vulcanite Company—which are very good specimens of the variety of patterns and shapes which may be produced in the material.

"Coming down the Annexe we find a cluster of smaller cases, each containing specimens of india-rubber manufactures. Chief amongst these we remark that of Messrs. P. B. Cow and Co., of Cheapside, which contains a most elegant collection and arrangement of useful appliances. Their water-proofed cloths, of every shade of colour and substance, are superior articles. Great care is evidently given to this branch of their trade, and their specimens deserve attention. Among other things they show a knapsack and haversack combined, which from its lightness, compactness, and general finish, would be invaluable to the tourist; also a ladies' yachting jacket, of fine but strong material, which must become an essential in the outfit, not only of yachting ladies, but all those who take long voyages. The floor of this case is covered with an inlaid pavement of hard rubber in various colours, which we should like to see tried practically in some position where its merits or defects could be ascertained. The effect is pleasing, and we should think, if not too expensive, the application is a good one.

"Mr. J. L. Hancock exhibits an ingenious "portable air-bed chair," for invalids which can be packed in a very small compass for travelling; Messrs. Tuck, their elastic steam packing; Mr. Wansbrough, his patent flocked cloth; Mr. Foster, of Streatham, various articles made from waste vulcanized rubber; Mr. Hodges, his excellent accumulators or springs; and Mr. Horsey, of Lambeth, a variety of small but useful articles for personal use.

"Mr. Hooper, of Pall Mall, and Messrs. Hall and Wells, exhibit specimens of their manufactures; the first in vulcanized sheet rubber, &c., and the latter in elastic braids and fabrics. Both these firms also exhibit, in Class 13, the application of india-rubber to the coating of telegraph wires for submarine and aerial purposes, as named in our recent article on telegraph apparatus. The india-rubber covered wires of Messrs. Hall and Wells exhibit excellent material and superior workmanship.

"Messrs. Spill and Co. have a large assortment of waterproof goods, as well as specimens of their vegetable leather made up in various forms. There are also several exhibitors of kamptulicon floor cloth, which is a compound of india-rubber and cork.

"Before leaving the Eastern Annexe there is one case to which we would draw the attention of those interested in the subject, and that is the one containing samples of "campticon, or india-rubber substitute," exhibited by Messrs. F. Walton and Co., of Chiswick. The high price which india-rubber has reached, and the greatly increased consumption, render the question of an economical substitute a great desideratum. The paper which was recently read before the Society of Arts by Mr. F. Walton, and which was published in the journal of that Society, very clearly describes the nature of the new material. It is made from oxidised oil, so treated as to remove all unctuous matter, and is formed into a semielastic resin, which for many purposes, such as steam packing, driving bands, and hose, is