

4778. To Thomas Mitchell Eccles and William Walker, both of the firm of Thomas Eccles, Sons, & Co., Cotton Spinners & Manufacturers, of Walton-le-Dale, in the county of Lancaster, for the invention of "certain improvements in machines for sizing yarn."

4780. To Edward Caney, of the city of Worcester, Clerk, for the invention of "a new box riddle for cinder sifting and other useful purposes."

4782. And to John Harrison, of Liverpool, in the county of Lancaster, for the invention of "improvements in and appertaining to steam steering apparatus which improvements as a whole or in part are applicable to other motive power engines."

On their several petitions, recorded in the Office of the Commissioners on the 14th day of December, 1877.

4784. To Henry Conradi, of 8, Lower James-street, Golden-square, in the county of Middlesex, for the invention of "an improved potato digger and raiser or elevator."—A communication to him from abroad by William Schwarz, of Königsberg, and August Binder, of Langenhagen, Germany.

4786. To Joseph Lee, of Vale House, Hampstead Heath, London, for the invention of "improvements in the manufacture of fern and other transplanting trowels."

4788. To George Parfitt, of the firm Parfitt and Jenkins, Tubal Cain Iron Works and Hayes Foundry, Cardiff, in the county of Glamorgan, for the invention of "improvements in street and like gratings."

4794. To Dugald Drummond, of Cowairs, via Glasgow, in the county of Lanark, for the invention of "improvements in railway wheels."

4796. To John Bryce, Manager of Engraving Department to Messieurs Zechariah Heys and Sons, of South Arthurlie Print Works, Barrhead, in the county of Renfrew, North Britain, for the invention of "improvements in pentagraphic engraving machines."

4798. To William Lafayette Hubbell and Frederick Ochs, both of the city and State of New York, United States of America, for the invention of "improvement in boxes for matches, tobacco, and other articles."

4800. To Richard Cardwell Robinson, of the Albert Works, Preston, in the county of Lancaster, Engineer, for the invention of "improvements in apparatus employed in the manufacture of socketted pipes of plastic material."

4802. To James Howard, of Bedford, in the county of Bedford, Agricultural Engineer, and Edward Tenney Bousfield, of the same place, Engineer, for the invention of "improvements in sheaf-binding machinery."

4804. And to James Hardinge, of Sittingbourne, in the county of Kent, Oil and Chemical Manufacturer, for the invention of "improvements in lubricators."

On their several petitions, recorded in the Office of the Commissioners on the 17th day of December, 1877.

4808. To John Cairns Wilson, of the Ardee-street Brewery, Dublin, for the invention of "improvements in the process of brewing, and in apparatus used therein."

4810. To George Barker, of 27, Colmore-row, Birmingham, in the county of Warwick, Consulting Engineer, for the invention of "improvements in furnace grates."

4812. To Charles Burrell, junior, and Robert Edwards, both of Thetford, in the county of

Norfolk, for the invention of "improvements in locomotive and traction engines."

4814. To John Malin, of Sheffield, in the county of York, Engineer, for the invention of "improvements in cramps."

4818. To James Elliott, of Coventry, in the county of Warwick, Machinist, for the invention of "a new or improved rocking saddle for bicycles and other like travelling carriages."

4820. To Henry Willis, of Camden Town, in the county of Middlesex, Organ Builder, for the invention of "improved means for supplying air to organs."

4822. And to Thomas Kendrick, of Birmingham, in the county of Warwick, Manufacturer, for the invention of "improvements in furniture castors."

On their several petitions, recorded in the Office of the Commissioners on the 18th day of December, 1877.

4826. To Alexander Oldham, of Dukinfield, in the county of Chester, for the invention of "improvements in the manufacture of spring rings for pistons and pump buckets."

4828. To James Robertson, of Springfield Mills, Lasswade, in the county of Midlothian, North Britain, for the invention of "a new or improved apparatus for giving warning of the fracture of the web in paper-making and other machines, and for cutting off the wet or broken ends."

4830. To Samuel Richard Smyth, of Manchester, in the county of Lancaster, Civil Engineer, for the invention of "improvements in apparatus for the manufacture of iron and steel."

4832. To Henry Simon, of No. 7, St. Peter's-square, Manchester, in the county of Lancaster, for the invention of "improvements in the process and apparatus for developing bromine."—A communication to him from abroad by Dr. Adolf Frank, of Charlottenburg, in the German Empire.

4834. To Peter Jensen, of Chancery-lane, London, for the invention of "improvements in hollow projectiles."—A communication to him from abroad by Hermann Emil Albert Hellhoff, of Mayence, Germany.

4836. And to John Chisholm, of Oldham, in the county of Lancaster, Machinist, for the invention of "certain improvements in mules and twiners for spinning and doubling."

On their several petitions, recorded in the Office of the Commissioners on the 19th day of December, 1877.

4838. To William Currie, of the Caledonian Rubber Works, Edinburgh, India Rubber Manufacturer, for the invention of "improvements in the manufacture of golf balls."

4840. To James Nicoll, of Dundee, in the county of Forfar, North Britain, Manager of Jute Spinning Mills, for the invention of "improvements in bearings and lubricating apparatus for the upright spindles of spinning and winding machinery."

4842. To John Weir, of Elderslie, in the county of Renfrew, North Britain, and Robert Weir, of Paisley, in the county aforesaid, for the invention of "new or improved apparatus for preventing waste in doubling, finishing, and singling yarns and threads."

4844. To William Robert Lake, of the firm of Haseltine, Lake, & Co., Patent Agents, Southampton-buildings, London, for the invention of "an improved apparatus for preventing fraud by tramway and omnibus conductors and other collectors or receivers of money."—A communi-