4069. To Thomas Barnes and Robert Chalk, both of Accrington, in the county of Lancaster, for the invention of "improvements in the con-

struction of fire grates."

4071. And to John Henry Johnson, of 47, Lincoln's-inn fields, in the county of Middlesex, Gentleman, for the invention of "improvements in oscillating cylinder engines."-A communication to him from abroad by Albert Schmid, of Zurich, Switzerland, Engineer.

On their several petitions, recorded in the Office of the Commmissioners, on the 10th day of December, 1873.

4073. To John Lightband Thomasson, of Old Corn Market, Worcester, House Decorator, for the invention of "an improved portable grate for greatly economising the consumption of fuel and largely increasing the amount of heat radiated thereby."

4075. To Charles William Siemens, of No 3, Great George-street, Westminster, in the county of Middlesex, for the invention of "improvements in the production of iron and steel, and in furnaces and apparatus connected therewith."

4077. To Frederic Henry Brady, of Birmingham, in the county of Warwick, Hardware Merchant and Manufacturer, for the invention of "improvements in apparatus for econimizing fuel in fire grates."

4081. To Joseph Potts the younger, of Sunderland, in the county of Durham, Architect, for the invention of "improvements in the perma-

nent way of railways."

4083. To Pierre Paul Egide Marie Koch, of Anvers, in the Kingdom of Belgium, at present residing at the Charing Cross Hotel, in the county of Middlesex, for the invention of "improvements in preserving meat and other articles of food."

4085. To Stephen Alley and James Baird Handyside, both of Glasgow, in the county of Lanark, North Britain, Engineers, for the invention of "improvements in fastenings for connecting and strengthening the ends of rails for railways or tramways, and in apparatus for applying the same."

4087. To John Augustus Ball, of Oakland, in the county of Alameda, State of California, United States of America, Engineer, for the invention of "improvements in dredging and excavating machines."

4091. And to Nicholas Demetrius Spartali, of Liverpool, in the county of Lancaster, Steam Ship Agent, for the invention of "improvements in the construction and arrangement of land and marine steam boilers and furnaces."

On their several petitions, recorded in the Office of the Commissioners on the 11th day of December, 1873.

PATENTS WHICH HAVE BECOME VOID.

LIST of the Letters Patent for Inventions which have become void by reason of the non-payment of the additional Stamp Duty of £50, before the expiration of the third year from the date of such Patents, pursuant to the Act of the 16th Vict., c. 5, sec. 2, for the week ending the 13th day of December, 1873.

3212. Edward Kitchin and Matthew Kitchin, both of Leeds, in the county of York, for an invention of "improvements in 'jiggers or dummy' machines used in the manufacture of leather, artificial or otherwise."—Dated 7th December, 1870.

3213. Henry Hammond, of Manchester, in the county of Lancaster, Mechanical Engineer, for an invention of "an improved apparatus for mixing soils, chemical manures, and other substances, either separately or together, and for mixing dry with semi-fluid substances, liquids, or air."-Communicated to him from abroad by Frederick Tolhausen, of 149, Boulevard Magenta, Paris, France.—Dated 7th December, 1870.

3214. Alexander Melville Clark, of 53, Chancery lane, in the county of Middlesex, Patent Agent, for an invention of "improved life preserving clothing."-Communicated to him from abroad by Clark Spencer Merriman, of Vallisca, county of Montgomery, State of Iowa, United States of America. - Dated 7th December, 1870.

3215. Alfred Vincent Newton, of the Office for Patents, 66, Chancery-lane, in the county of Middlesex, Mechanical Draughtsman, for an invention of "an improved construction of cartridge box."-Communicated to him from abroad by Henry D. Cooke, junior, of Washington, in the District of Columbia, United States of America.—Dated 7th December, 1870.

3217. Frederick Joseph Howard, of Kingston Vale, in the county of Surrey, Farrier, for an invention of "improvements in the manufacture of horse shoes."-Dated 7th December, 1870.

3218. William Henry Maitland, of Thurloe-square, in the county of Middlesex, for an invention of "an improved fabric suitable for carpet linings and other purposes, and improved machinery for manufacturing the same."-Dated 7th December, 1870.

3229. John Wright, of St. Martin's, Stamford, in the county of Northampton, for an invention of "an improvement in water and other closet seats."—Dated 8th December, 1870.

3235. John Blakey, of Leeds, in the county of York, Boot and Shoe Manufacturer, for an invention of "improved means and apparatus for utilizing small pieces of leather in the manufacture of boots and shoes."-Dated 9th December, 1870.

3237. Thomas Read, of Malton, in the county of York, for an invention of "improvements in the construction of reaping and mowing machines."—Dated 9th December, 1870.

3238. John Fletcher, of Winterton, in the county of Lincoln, Machine Maker, for an invention of "an improved mill or machine fer grinding corn or grain or other substances of a like nature."-Dated 9th December, 1870.

3239. William Denny Ruck, of East Greenwich, in the county of Kent, for an invention of "improvements in the manufacture of paper pulp."

-Dated 9th December, 1870.

3241. John Boyns, of St. Just, in the county of Cornwall, for an invention of "improvements dressing, crushing, and amalgamating metallic ores, and in apparatus employed for these purposes."—Dated 10th December, 1870.

3245. Geminiano Zanni, of the City-road, in the county of Middlesex, Electric Telegraph Engineer, for an invention of "improvements in magnetic and electric telegraph apparatus."-Dated 10th December, 1870.

3249. John Hosking, Engineer, and John Morrison, Mechanic, both of Gateshead Iron Works, Gateshead, in the county of Dnrham, for an invention of "improvements in steam boilers."

-Dated 12th December, 1870.

3250. John Clayton Mewburn, of 172, Fleetstreet, in the city of London, Patent Agent and Consulting Engineer, for an invention of "treating lichens or moss in order to obtain sugar or saccharine matter and spirit there-