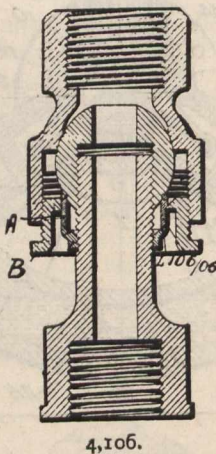




British Houses of Parliament.

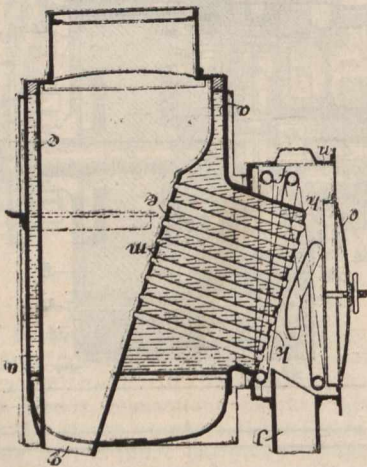
## GREAT BRITAIN.

**Ball and Socket Joints for Pipes.—Windemuller.—4,106.**—A ring A bears against a ball and extends through an annular nut B screwed into the fixed portion of the joint, the



arrangement being such that when the nut is tightened up the packing material situated in the stuffing chamber is compressed, but the ring is unacted upon.

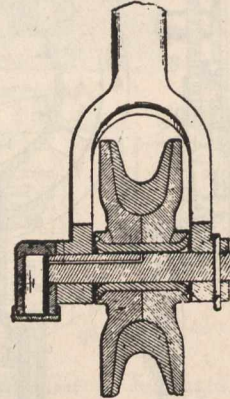
**Boilers.—Beyer, Peacock, and Co., and H. A. Hoy, Manchester.—11,874.**—This invention relates to fire-tube boilers of a type which is partly on the lines of a locomotive and partly on the lines of a vertical boiler. This boiler is specially intended for use in supplying steam to steam-engines employed for driving self propelled vehicles. The barrel *a* encloses the steam and water space of the boiler, and is provided at its lower end with the fire-box *c*. A flattened part *e* is formed at one side of the fire-box, which flattened part can act as a tube-plate. The barrel at the opposite side has a projection *f*. The end of this projection is closed by a dished plate *h*, which also forms part of the sides of the projection.



The plane of the flat end *k* of this plate is arranged parallel to the flattened part *e* of the fire-box. This flat end *k* is circular, and forms a tube-plate, from which fire-tubes *m* extend to the flattened part *e* of the fire-box. A smoke-box *n*, preferably of cylindrical form, is arranged round the flange of the dished plate *h*. This smoke-box is provided with a suitable chimney *j*, and has a vertical door which can be opened for inspecting the tubes or for cleaning or other purposes. Fuel can be fed on to the grate through the opening *q* provided at the top of the fire-box; and through this opening,

which is normally closed by a door, the whole of the grate can be inspected. The inner-end of the fire-tubes can also be seen from this opening. The smoke-box door *o* can be readily opened when desired for inspection or cleaning of the tubes.

**Trolley Wheels, or Collectors for Electricity.—Richardson.—19,691.**—The trolley wheel comprises a pair of metal discs, peripheral flanges and hub, as well as a tubular bushing extending through the openings of the hub portions, and



having grooved wear annulus, whose outer sides snugly fit and reliably hold the discs together, the whole combination, as shown in the illustration, being such as to readily remove the portions subjected to wear.

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## INDUSTRIAL NOTES.

The Dominion Tar and Chemical Company shipped six hundred barrels of pitch to South Africa.

It is announced that the Locomotive & Machine Company, of Montreal, (Limited), will expend over a million dollars in improvements to their works at Longue Pointe.

The Temiskaming and Northern Ontario Railway Commission, at a meeting held recently, considered, but did not definitely dispose of three requests referring to projected smelters in the north. One of these was from a firm in Germany, which is prepared to take any site that the crown will give.

Tenders are asked, up to August 13th, for the supply of all material and the construction of eight concrete piers and two abutments for a traffic bridge over the Saskatchewan River at Battleford, Sask. About 5,000 cubic yards of concrete will be required in the work. Address T. J. Robinson, Public Works, Regina, Sask.

A rich oil field has been discovered in Alberta, and already several good wells have been struck, according to reliable reports. Distinct surface evidences of the existence of petroleum can be found all along the eastern slope of the Rocky Mountains, also oil indications on the sloughs and creeks. Natural gas is also escaping from the ground in many places.

The Stromberg-Carlson Telephone Mfg. Co., of Rochester, N.Y., reports having closed contracts for switchboards at the following places:—Knox, N.D.; Lowville, N.Y.; Adams, N.Y.; Paola, Kans.; Fort Wayne, Ind.; Camillus, N.Y.; Superior, Wis.; Holloway, Minn.; Pine Bluff, Ark.; Sioux City, Ia.; Chicago, Ill.; Louisville, Ky.; Ravenswood, W. Va.; Dundas, Ill.; New York City, N.Y.; Kansas City, Mo.

The Montreal Reduction and Smelting Co., have purchased sites at North Bay for the erection of a smelter, and have applied to the Toronto and Northern Ontario Railway Commission for construction of sidings in connection with their works. Another firm with wide experience in the south-western States and Mexico, and with large interests in Arizona, have also interviewed the Commission with regard to the establishment of a smelting plant at Cobalt, which they purpose shortly to undertake. Their experience has been with arsenical and silver ores, and they are impressed with the suitability of Cobalt for such an enterprise.