

strictest principles of the law of *murru*, which alone can determine the right of ownership. Should a great misfortune overtake a man, such as the death of a favourite child, his relatives are allowed to dispossess him of all his goods, and, if need be, of the house in which he lives. He must pay a penalty for his misfortunes; but, strictly speaking, he does not regard the loss of his earthly possessions as a misfortune, but looks upon it as a great honour and a great blessing. He is considered to be favoured both by gods and men. If everything he possessed is taken from him, he is treated with the most profound respect, and becomes a man of great importance in the community in which he lives. If a man's wife or child should be burned to death, and the accident prove unavoidable, everything is taken from him, his goods, his food, clothing, spears, mats, boats, in fact all his earthly possessions, and in order to favour him still further, he is severely beaten with clubs, and usually left on the ground in a bruised and bleeding condition. It is, however, against the law of *murru* to kill him. He is duly warned of the process of the law, and a messenger is despatched to inform him of the approach of the law officers. He is expected to defend himself with a spear or club until overpowered, but it is against the law for him to strike the officers too hard. As soon as the first blood is drawn he must stop, but sometimes a very stubborn resistance is made, and the fight is carried on in earnest. Though the victim knows that he is doomed, he does not wish it otherwise, for to be victorious would be against the law of *murru*.

IMPROVEMENTS OF THE ROMAN CAMPAGNA.

Her Majesty's Vice-Consul at Rome says that the sanitary amelioration of the Campagna was determined upon and decreed by a law passed on the 11th December, 1878. It was ordered as a work of public utility that the marshes and ponds existing in the Campagna, should be drained, and in addition, the collecting of the springs and the regulating of the soil by means of a complete canal system of all the waters, comprising the under-ground waters. By virtue of a law recently passed, the work is to commence by improving, agriculturally, a zone of ground within a radius of about six miles from the centre of Rome. The total area of the Agro Romano is 525,316 acres; that included in the circle of six English miles is about the seventh part of this surface, or 77,647 acres, which are subdivided thus:—Town, 3,546 acres; rivers, 1,043; vineyards, gardens, parks, or villas, and intermingled roads and streams, 18,611. The remaining 54,447 acres are now used for pasture, wood, and quadrennial sowing, and to that surface is specially applied the agricultural amelioration which becomes obligatory on all the landowners. The Italian Government desire to

attain their object without infringing on the rights of property, and they express their intention of leaving to proprietors a certain liberty in the choice of the works to be executed, and of the cultivation best adapted to the soil. The proprietors are invited to present a report in which should be indicated the agricultural improvements which they intend carrying out on their own account, and which should specify the quality and extent of the proposed cultivation of trees, plants, and herbs, and the roads and buildings for workmen and horses. A special agricultural commission will examine and modify these propositions, and will decide for those proprietors who have made no proposals which are the best improvements to adopt, and the estimated time and expense. In case the improvements are not effected, the Government will have the right of expropriating and at once occupying the land, with indemnity according to the general law on expropriation, and will have power to let the land on lease or to alienate it; and the obligation to execute the improvements will, in this case, devolve upon the tenant or purchaser, under pain of the devolution of the land. Those who construct any buildings in any part of the Campagna within or beyond the zone formed by the circle of six English miles, will enjoy exemption from taxation for ten years, and the increase of income which will be obtained by the agricultural improvements of the land comprised in the zone will be exempt from land tax for twenty years; and equal exemption will be conceded to the proprietors of the Campagna anywhere beyond the zone, if they execute at their own expense the agricultural improvements. Vice-Consul Franz says that "the future will show if these means are sufficient to execute the enterprise, which, in the opinion of the Government, has become a national obligation, to endeavour to deliver the capital from the tyranny which the *malaria* and the deserted country exert round Rome, and in changing the Agro Romano into a fertile and flourishing region."

MANUFACTURE OF GLASS BEADS.

The above manufacture includes turned massive beads, pressed, drawn, and blown descriptions. The first named kind was first manufactured in Venice, and about 200 years ago was introduced into the Fichtelgebirge district of Bavaria. At first the beads for rosaries were the principal articles made, and they are still produced in Bavaria, whence they are exported in quantities to Spain, Portugal, &c. The manufacture is, however, less important than formerly. As an illustration of the scale of production, it is remarked that a workman can make of some kinds of beads as many as 36,000 per day.

In contrast to the heavier Bavarian descriptions, come the Venetian productions. These are mostly beads for embroidery. The process of manufacture

a curious one. The glass is drawn into thin tubes and then cut up. The beads are afterwards placed in heated drums, where the sharp corners are rounded off. After being rubbed in chalk and charcoal, they are strung together. In Bohemia a kind of bead for trimming is made in a similar manner.

In making the blown, or so-called lamp beads, a bellows is employed, with which a paraffin or gas flame is brought to a blowpipe flame. In this process, as carried out in Venice and Thuringia, drawings are made on the glass balls or beads with pointed implements made of glass, and these designs are burnt in by the flame. The deadening process so extensively employed is both chemical and mechanical in its character. In the chemical operation, hydrofluoric acid is used, by means of which the surface of the glass is removed. There was formerly another process used in France which was a secret. A German workman, however, found it out by accident. This is the sand process, which is now used in Thuringia for the operation of deadening.

The manufacture of pressed beads is effected by pincers, of suitable form. The glass is heated on a moderate fire and brought into the mould. In this manner beads and buttons are produced in very effective styles, both plain and coloured. Of course the beads have to pass many times through the workman's hands before completion. To this branch belong the amulets, which are sent to the Gold Coast, and are used in various sizes according to the rank of the wearer. Originally these amulets were made of agate, but as this substance is eight or ten times dearer than glass, the latter material has been adopted.

The Central German Society of Industrial Art has lately been giving attention to this subject, on which a lecture was delivered by Herr Bettmann, of Frankfort, himself a manufacturer of the articles in question:

General Notes.

COAL IN FRANCE.—The two coal-fields of the North of France yielded 10,051,461 metric tons or tonnes in 1883, as contrasted with 9,594,942 tons in 1882, or an increase of 4·7 in 1883 over 1882. Nearly the whole of this increase is due to the output in the Pas-de-Calais, which was 423,625 tons more in 1883 than in 1882.

ANTWERP INTERNATIONAL EXHIBITION, 1885.—The Lords of the Committee of Council on Education have received, through her Majesty's Secretary of State for Foreign Affairs, a communication from the Belgian Minister at this Court, stating that the Executive Committee of the Antwerp Exhibition have decided to fix the 1st August, 1884, as

the limit of time for receiving applications for admission to that Exhibition.

INDUSTRIAL STATISTICS OF GERMANY.—In June, 1882, the population of Germany amounted to 27,287,860, of which 11,712,485 may be regarded as the bread winners. The latter are divisible into the six classes following:—

	Men.	Women.
1. Agriculture, the rearing of animals, gardening, forestry, hunting, and fishing	3,462,268	1,230,080
2. Mines, works, and construction	3,065,218	585,408
3. Trade and commerce ..	766,127	145,579
4. Work for salaries and daily wages	160,640	118,283
5. The church, law, army, and liberal professions ..	526,549	60,661
6. Undeclared	352,431	353,064
	8,333,233	2,493,075

Among the 11,712,485 bread-winners, 1,788,679 engage in 1,916,035 subsidiary occupations, in addition to which, 399,244 of those returned as devoting themselves to household cares are also engaged in subsidiary occupations.

BRIAR-ROOT PIPES.—The following note on the so-called briar-root pipes is from a report on the trade and commerce of Leghorn, quoted in the *Gardeners' Chronicle*:—An interesting industry has been started here within the last three years by a Frenchman from Carcassonne, for the export of material for the manufacture of wooden pipes. Similar works are also to be found at Sienna and Grosseto. Selected roots of the Heath (*Erica arborea*)—preference being given to the male variety—are collected on the hills of the Maremma, where the plant grows luxuriantly and attains a great size. When brought to the factory, the roots are cleared of earth, and any decayed parts are cut away. They are then shaped into blocks of various dimensions with a circular saw set in motion by a small steam engine. Great dexterity is necessary at this stage in cutting the wood to the best advantage, and it is only after a long apprenticeship that a workman is thoroughly efficient. The blocks are then placed in a vat, and subjected to a gentle simmering for a space of twelve hours. During this process they acquire the rich yellowish-brown hue for which the best pipes are noted, and are then in a condition to receive the final turning and boring, but this is not done here. The rough blocks are packed in sacks containing 40 to 100 dozen each, and sent abroad, principally to France (St. Cloud) where they are finished into the famous G. B. D., or "Pipes de Bruyère," known to smokers in England under the name of "Briar root pipes." The production of this article is considerable, four hands turning out about sixty sacks per month. Consignments are also made to England and Germany, but at present the demand is said to be rather slack.