, 3. The strength of materials, and the principles of con

struction, so as to make the proper adjustment of strength and strain in every part of a machine, edifice, or structure of any kind. Statics therefore furnish us with what may be called ***a theory of carpentry,*** and give us proper instructions for framing floors, roofs, centres, &c.

4. Statics comprehend the whole doctrine of the pressure of fluids, whether liquid or aeriform, whether arising from their weight or from any external action. Hence therefore we derive our knowledge of the stability of ships, or their power of maintaining themselves in a position nearly up right, in opposition to the action of the wind on the sails. We learn on what circumstances of figure and stowage this quality depends, and what will augment or diminish it.

STATIONARY, in ***Astronomy,*** the state of a planet when, to an observer on the earth, it appears for some time to stand still, or remain immoveable in the same place in the heavens. For as the planets, to such an observer, have sometimes a progressive motion, and sometimes a retrograde one, there must be some point between the two where they must appear stationary.

STATISTICS. The term statistics naturally sug gests the object to which the science applies. It is derived from the word state, or, according to others, the German word ***Staat,*** signifying a body of men living together in social union ; and it comprehends all the details connected with their condition. There cannot be a more interesting subject of speculation than the structure of society ; and if we are anxious to trace, by laborious research, the laws of the material world, no less important is it to ascertain the moral laws by which society is upheld, and on which de pend the character, condition, and happiness of man. But neither this nor any other branch of philosophy can be ex plained without a suitable collection of facts. In those sciences which regard merely the properties of matter, experiments can be made at pleasure, and facts abundantly obtained. But we cannot make experiments on society ; and we must therefore rely on observation for the facts by which principles are to be illustrated. As the astronomer, in deducing the laws which regulate the solar system, patiently surveys the structure and movements of the heavens, in like manner the political philosopher must watch the progress of society, under all its various aspects of prosperity and decay, of happiness and misery, from the stagnation of trade, from famine, from disease, or any other of the long catalogue of evils to which man is subject. We cannot expound by ***a priori*** reasonings the wonderful economy of human society ; we cannot find our way through those intricate speculations without the light of facts ; and hence the importance of this science, which does not consist in reasoning, but in collecting materials for reasoning, which it is the business of the philosopher to arrange under general principles, and thus to place every fact in its just place in the great system of knowledge. Facts are the only true foundation of philosophy. This is the true mode of philosophising by experiment recommended by Bacon, or by observation, which, to the political inquirer, must supply the place of experiment. Those sketches of society which are merely speculative, however ingenious and amusing, carry no conviction to the mind, and may be supported by other theories equally plausible. But no sophistry can shake the solid array of facts, and their legitimate conclusions, of which all valuable knowledge may be said to consist. Hence the importance of statistics, which supply the raw material, to be afterwards fabricated by the delicate hand of science into those fine but not flimsy speculations, which give importance to the most trifling circumstances, by shewing how they bear on great principles; and hence, by the un expected analogies which they often disclose in the practice and policy of nations, a new light is reflected on the history of mankind.

It is not, however, from a mere barren collection of facts that instruction can be derived. The statist must be so far trained in the school of philosophy, as to be able to cull out what is instructive, and cast aside what is useless. He must not be a mere collector of unconsidered trifles. There are many uninteresting facts from which no conclusion can ever spring. A collector of information is not in this view merely a pioneer to the philosopher. He must be qualified for his task by previous knowledge. He must know what questions to ask, into what useful channel to guide his re searches, otherwise he would waste his labour in the vain accumulation of useless details, which would rather be an incumbrance than an aid to scientific inquiry. A brief enuraeration of the chief facts connected with the different subjects of political science may serve more clearly to explain our views. Every subject to which the statist directs his attention has its appropriate facts. Thus, the ratio in which population and subsistence respectively increase, and the condition of the people in different countries, can only be illustrated by an accurate census at different periods, by the proportion of marriages to the whole population, and of births to deaths; and the same facts will indicate the healthiness or unhealthiness of the different countries; the population slowly increasing where the deaths are few, and being renewed more rapidly by frequent marriages, where there is a greater mortality.

In giving an account of the commerce of a country, the facts sought after must chiefly be, the amount of its exports and imports ; the general rate of wages ; a copious list of prices ; the state of the currency ; of what it consists, whether of gold, silver, or of paper ; and if of the latter, the number of banks, the amount of the circulation, the price of gold and silver, and such other facts as may throw light on the difficult subject of those mercantile convulsions, and of other causes, with which we are now unfortunately so fa miliar.

In an investigation of the revenue, its amount fora series **of** years must be ascertained ; the different taxes, with the annual products of each ; the time when they were imposed ; their increasing or decreasing amount ; by which a judgment may be formed **of** their productiveness, and of the condition of the country in which they are imposed.

The state of a community in respect to crime is a subject of deep importance; and the facts naturally sought after must be the number of criminals tried, the nature of their offences, the number condemned, the punishment inflicted, the state of the prisons ; whether there are any penitentiaries, and by what rules conducted ; by which the inquirer, be he statesman or philosopher, will be able to appreciate the influence of the penal code on the morals of the country, and whether it tends to one of its great ends, namely, the refor­mation of the criminal, as well as his punishment.

The produce of the soil, in all its various departments, with the laws by which it is distributed among the other classes of the community, opens a wide field of inquiry ; and the facts which throw light on these subjects are of great value, and must chiefly be, the amount of the produce in different years, whether scarce or abundant ; the prices in these different years, and the amount of importation or exportation, with the fluctuations of price that may occur in different periods of the same season.

The mineral riches of a country, its fisheries, either on the shores or in the rivers, its climate, the diversity of its surface, and the variety of its vegetable produce on the moun tains and in the plains, are all the legitimate subjects of statistics, which, it will be thus seen, has a wide range, and is connected with various sciences; 1st, with mineralogy, chemistry, and mechanics, because of the importance of those sciences in the extraction of metals from the earth, in re­fining the ore from the dross by the most economical modes, and in protecting those subterranean regions from the inun