

**HEATON AND BESSEMER PROCESSES.**—An eminent iron master in France, reporting on these two methods of refining iron, concludes that the Heaton, though inferior to the Bessemer for the manufacture of steel, is the best hitherto invented for the purification of ordinary cast iron. This process consists essentially in the addition of nitrate of soda to the melted metal, by which all the impurities, such as carbon, sulphur, &c., combine chemically with the nitrate and pass off with a loud deflagration, in the form of vapour, leaving the metal in an extraordinarily pure state.

**POISON FOR MICE.**—A preparation of one part calomel, five parts wheat flour, one part sugar and one tenth of a part of ultra marine, mixed in fine powder and placed in a dish, is said to be a most efficient poison for mice.

**THE SELF-PURIFICATION OF RIVERS** has recently attracted the attention of scientific men in England. It has been demonstrated that the oxidation of animal organic matters in sewage proceeds very slowly. Supposing a river polluted by 10 per cent of sewage receives for 186 miles no further contamination, it will have lost only two thirds of its injurious and offensive properties. Hence no stream which supplies cities and towns with water can be regarded as even approximately pure, unless the emptying into it of all sewage and manufacturing refuse be prohibited.

**CENTENNIAL EXHIBITION.**—An International Exhibition, as a Centennial of American Independence, is to be held under the auspices of the Government of the U. S., at Philadelphia,

in 1876. A commission of one delegate from each State and Territory is to be appointed by the President to make all necessary regulations.

**SEWAGE IRRIGATION.**—Dr. Spencer Cobbold, of England, has microscopically shown the presence of thousands of entozoa in pork fed on the produce of land irrigated with sewage. The introduction into the human system of entozoa, through the medium of cattle fed upon grass irrigated by sewage, is regarded as a new danger to the public health. Dr. Cobbold is of opinion that thousands of cattle in England are thus rendered unfit for food.

**GREAT AMERICAN DESERT.**—Dr. Sternberg, of Kansas, finds this "Great Desert" admirably adapted to stock raising and dairy enterprise. He keeps 130 heads of cattle, which find ample subsistence from the natural grasses, except for about three weeks in the year.

**KOUMISS** is an article of food recently introduced into England. It is of Tartar origin, is made by fermenting milk, agitating it during the process. The result is a mixture of alcohol, carbonic acid, lactic acid, and finely divided caseine and butter, with the residue of the sugar and salts of the milk, resembling a mixture of champagne and cream in taste, and supposed to be conducive to health and a preventive of pthisis.

A large deposit of **BORAX** has been discovered in Juyo Co., California. It is found in beds, slightly impregnated with saltpetre and said to be of superior quality.

A TABLE OF THE NUMBER OF DAYS FROM ANY DAY IN ONE YEAR TO THE SAME IN ANY OTHER.

	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
January - - -	365	31	59	90	120	151	181	212	243	273	304	334
February - -	334	365	28	59	89	120	150	181	212	242	273	303
March - - -	306	337	365	31	61	92	122	153	184	214	245	275
April - - -	275	306	334	365	30	61	91	122	153	183	214	244
May - - -	245	276	304	335	365	31	61	92	133	153	184	214
June - - -	214	245	273	304	334	365	30	61	92	122	153	183
July - - -	184	215	243	274	304	335	365	31	62	92	123	153
August - - -	153	184	212	243	273	304	334	365	31	61	92	122
September -	122	153	181	212	242	273	303	334	365	30	61	91
October - -	92	123	151	182	212	243	273	304	335	365	31	61
November -	61	92	120	151	181	212	242	273	304	334	365	30
December -	31	62	90	121	151	182	212	243	274	304	335	365

**EXAMPLE.**—To find the number of days from the 10th May to the 10th October following. Find May in the first column, and then in a line with that under October, is 153 days. If from the 10th May to the 25th October it would be 15 days more, or 168 days;

but if from the 10th May to the 1st October, it would be 10 days less, or 143 days. In leap-year, when the last day of February is included between the two dates, there will be one day more than by the table.