r than common soil. How wheat and other plants get nitrogen in such soil is yet to be shown.

A hybrid between wheat and rye, produced some years ago by Dr. Rimpau and since improved by Herr Behrens by repeated selection, now appears like remarkably fine wheat, the grain as well as the ears being much more like wheat than rye. It is not yet known whether it has the desired hardiness of rye, so that it can be grown where wheat does not flourish.

A new aluminum alloy, called vestadium, is credited with remarkable properties. It is claimed to weigh only a third as much as aluminum of the bulk,and to be the strongest of the ligth metals, and the most readily used. It is, moreover, rustless, resists sulphuric acid, takes a fine polish, never tarnishes, and requires no cleaning.

Three cases of lead boring by insects have come under the notice of Dr. L. O. Howard of the department of agriculture. In one case a Cossus larva bored its way through a large bullet, which was imbedded in the oak tree where the larva lived; in another, a coleopterous larva perced a lead pipe; and in the third, larva of the genus Lyctus—beetles—made holes in a lead tank.

A "breath figure" may be obtained by pressing a coin or like object against a plate of mashed glass for a few moments, and then bringing out the image by breathing upon the spot. During the visit of the czar of Russia to Paris, "magic glasses," showing the czar's portrait only when breathed upon,were sold on the streets. These were made by applying to the glass for a certain time a rubber stamp moistened with fluorhydrate of ammonia and fluorhydric acid, the glass being so slightly etched by this process that no trace is visible until moistened by the breath.

The lack of inventors in lands of constant sunshine doubtless accounts for the small use that has been made of a genius has now devised a sun-heated vast supply of energy. An Italian oven, which is simply a mirror-lined wooden box at the bottom of which is a small copper boiler receiving the rays concentrated by the mirrors. A glass cover serves to retain the haet in the boiler. With this apparatus any kind of food can be quickly boiled, stewed or baked, and any degree of heat desired may be reached by making the box of suitable size.

Legislation against finishing cloth with moisture-absorbing chemicals was urged by Mr. R. P. Carse at a recent meeting of British textile maanufacturers. With no sympathy with those who rail against filling cloth with harmless materials, he objected to the use of such ingredients—principally zinc, magnesia and epsom salts— as are being employed today for flannelettes and waste sheetings. While put in to give weight these materials have the peculiar properties of absorbing and retaining moisture and preventing mildew. They make the cloth as dangerous as a damp bed, and a manufacturer was quoted who, after declaring that he had been forced to fill his goods after trying vainly to sell them pure, said, "I would not sleep in a pair of my own sheets for a hundred pounds."

The stability of the solar system, demonstrated by Laplace from Newton's law of attraction, is shown by M. H. Poincare to be a mistaken inference, overlooking the modern conception of energy. Everywhere energy is being dissipated, work taking the form of heat, and instability is the law of all natural phenomena. Even the heavenly bodies do not escape the law tending toward final repose. Their energy is being slowly dissipated through the friction of the tides, and we are approaching a state in which the sun, the satellites and planets will all revolve with the same speed about a common axis. This condition cannot be permanent. Even if there is no resisting medium in space, the planet's magnetism will continue to have a retarding effect, and in the end all planets will fall to the sun.

There is good reason to believe that Australia may become a diamond producing country second only to south Africa. At present gold mining is more certain and profitable than the search for diamonds, but these stones are being continually found, especially in New South Wales, and every year considerable numbers, from Bingera, Inverell and other places, are sold in Europe at good prices. Some of the diamonds are of good size and color, others, on account of their unusual hardnes, are prized for diamond drills and like purposes. The true matrix has never been found, but the abraded appearance of the stones shows that they must have been transported a considerable distance by an ancient and now unknown river, and it is believed that their source will be discovered near the Great Dividing Range. Near this point the stones will doubtless be of larger size.

British India, the best known large area in the torrid zone, embraces tropical islands and hot plains as well as the snow-covered peaks of the Himalayas, fall—600 inches—with arid sands where rain is sometimes unknown for years in succession. Great diversity of animal and plant life is to be expected. The Indian government has undertaken to give information concerning this, and has just completed the "Flora of British India," in seven octavo volumes, and the vertebrate section of the "Fauna of British India," in eight volumes. The "Flora" includes only the flowering plants—14,500 species. The "Fauna" gives 402 species of mammals, 1,618 of fishes. Of the invertebrate section, five volumes also have been published, describing the moths (5,618 species) and the bees and the wasps (995 species). Europe, with more than twice the area, has less than two-thirds as many flowering plants, less than half as many mammals, about a third as many birds, and only an eighth as many reptiles.

A GRAND DEMONSTRATION.

New York, Aug. 20.—New York and the nation have fitly today signalized the appreciation of the republic of her victorious fleet. An imposing naval pageant of warships has been received in the harbor of the largest city of the country with acclamations of delight and admiration, and the ovation from shore and from the great flotillas of all sorts of craft on the water has significantly given to the returning heroes some idea of the esteem and admiration in which they are regarded by the people.

Long before sunrise guns were fired at Castle William, Governor's island, the people were astir about. Crowds were hurrying to the river to be early on the scene. The New York and New Jersey shores were crowded with the people. The river and bay were literally alive with craft and the craft alive with people, all cheering and good natured. An impressive scene was when the flags were hoisted on the forts and flagships.

As the starry banners were raised aloft the bands of the forts and on the flagships played "The Star Spangled Banner," and the shores rang with patriotic cheers.

There was very little friction in carrying out the program, and no more delay than was to be expected. The citizens' committee left the foot of Cortland street on the steamer Glen Island and proceeded down the bay followed by a long retinue of all sorts and description of craft.

At Tompkinsville the mayor and committe of ten debarked and boarded the police boat Patrol. The patrol then headed for the flagship with colors flying and bands playing. Staten Island shores were literally lined with people, and they joined in the general acclamation with the people on the myraids of boats. Welcoming ceremonies were short but impressive.

The ceremones over, amid the hoarse shrieking of steam whistles and the hosannas of the thronged shores and water the mayor and the committee returned to the Glen Island.

Then came the event of the day. There was considerable wigwagging on the gray battleships, and the police boats formed in line. Then came the Glen Island, and then the battleships began to slowly move up the bay.

There was a salve of cannon and cheers of people and the toots of thousands of whistles made an indescribable din.

Soon the monster pageant was in line. First came Admiral Sampson's flagship New York, followed by the other magnificent machines that have made Uncle Sam's name respected the world over, and after them a moving mass of all sizes and descriptions, with flags waving and people cheering. The great battleships moved slowly and majestically.

As Governor's island was passed there that did so much execution at Santiago that did so much executio nat Santiago and Guantanamo. The people on shore and afloat were wild. They yelled and screamed, waved flags and jumped up and down in patriotic fervor.

And so it was all the way up to Gran's tomb, where there was a final demonstration of patriotoic fervor, such as New York has never witnessed before. The pageant was viewed and cheered by hundreds of thousands of people. It was a significant and indescribable scene, and one never to be forgotten.

New York, Aug. 28.—The flagship New York led Admiral Sampson's fleet into New York this morning, passing the Hook at 8 a.m. She was followed by the Iowa and Indiana. Then came the Brooklyn and Massachusetts, the Oregon guarding the Rear.

The fleet was lost sight of shortly after passing the Hook, the thick haze covering the bay and ocean at the time. The entire population of Sandy Hook was on the beach and clustered on the tops of the batteries of Fort Hancock, shouting and swinging their bats and caps. Flags and bunting were in sight everywhere. The men on board the vessels crowded the decks, all looking neat, dressed in white duck clothing. Signals were made frequently from the flagship to the following squadron.

Since leaving Guantanamo on Sunday morning, no incidents of an unusual nature, exept a temporary breakdown on the part of the Indiana have marred the homeward progress of Admiral Sampson's fleet. Few ships were passed.

Smooth seas and fa.. winds made the passage pleasant. There was occasional change of formation. Heading out from Cuba the armor clad ships came in single column, the New York leading.