A CHINESE PATENTEE.

We herewith introduce the first Chinese patentee to the American public. He is a resident of San Francisco, Cal., and his invention is a pair of overalls, the novelty of which consists in forming a gusset or triangular lap upon the piece of material which comes opposite the corner of the pocket or other termination of a seam, and then sewing the lap or gusset down across the seam.

A represents a pair of overalls. In order to fasten the corners of the pocket and the termination of other seams in the overalls, a triangular or other shaped piece of cloth, *b*, is left projecting from the piece of cloth opposite the corner of the pocket, and this small piece, *b*, is lapped over the corner of the pocket or seam, and sewn down firmly all around, so that it will form a gusset for strengthening the corners of the pocket, and prevent them from ripping or being torn by any ordinary strain that may come upon them. This piece, *b*, is formed in the proper place when cutting the cloth for the part, so that it forms a permanent part of one of the pieces of the overalls, and is, therefore, much stronger and more durable than if it were a separate piece sewn on over the seam. This form of fastening, says the inventor, also gives the overalls a much neater and more durable appearance; and the re-enforcing lap, instead of being a separate and independent piece of goods sewn to the garment, is a part and parcel of the body of the garment, and cut in one piece with it, thus not only avoiding the necessity of a separate re-enforcing piece, but also avoiding one seam, which would be necessary to secure a gusset as usually cut.

For further particulars address the inventor as above.

CHEANG QUAN WO'S OVERALLS.

Sir Goldsworthy Gurney.

With regret we record the death, at the age of 82, of Sir Goldsworthy Gurney, a man of considerable eminence as an inventor. He was the son of Mr. John Gurney, of Trevorgus, in Cornwall, and was born in 1793. He was educated for the medical profession. He gave lectures on chemical science at the Surrey Institution in London. But his career was invested with peculiar interest for engineers, by his connection with steam locomotion on common roads. He constructed a little locomotive, which worked successfully with ammoniacal gas, and the results of his experiments were so satisfactory that he subsequently built a steam road carriage. In 1826 he ran this carriage several trips in the neighborhood of London, ascending Highgate Hill without difficulty. A description of this carriage will be found in the seventh edition of "Lardner on the Steam Engine," published in 1840. In 1831 a carriage built by Gurney, for Sir Charles Dance, ran regularly between Gloucester and Cheltenham, for four months, four times a day, during which time it carried about 3,000 passengers, and ran 3,564 miles. Generally the distance, nine miles, was run in 55 minutes. Gurney invented the oxyhydrogen or Bude light, so called from his Cornish residence, in 1825. He carried out several improvements in connection with his system of lighting, among which was an arrangement of reflectors for dispersing the light in gradually diverging rays from the lantern, and a ventilating chandelier, which was also so contrived as to evaporate small quantities of water for the purpose of keeping the atmosphere of the room in a salutary condition. The Bude light was tried for the first time in street illumination on the 10th of January, 1842, at the crossing in Pall Mall at the bottom of Waterloo place. It is said to have illuminated the whole of the open space in which stands the Athenæum Club very powerfully, and to have caused the gas lamps to look as dim as at that time the old lamps at the end of Gower street did to the gas lamps when established. Gurney likewise devised the well known stove which goes by his name, and a method of mine ventilation, which consisted in taking high pressure steam down the shaft and then allowing it to escape in an upward direction through a number of jets. In his youth he was associated with Davies; Giddy, and Trevithick, and no doubt imbibed from them much of his love of mechanical science. Sir Goldsworthy Gurney was a magistrate for the counties of Devon and Cornwall.

Doing up One's House.

The principal reason, according to the *Saturday Review*, why so many people dread having their houses done up, is that the object of each tradesman employed seems to be to make work for some other tradesman. The whitewasher forgets to cover up the steel grate in the drawing room when he is doing the ceiling. The housemaid is so busy flirting with him, and listening to the words of the last comic song which he is trying to teach her, that she neglects to remove the fender and fire irons. Grate, fender, and fire irons are completely spoiled, and have to be sent away and repolished at considerable expense. The whitewasher also manages to clog the bell wires so that the bells will not ring. The bell-hanger must therefore be sent for. He leaves dirty finger marks upon the cornice where he has loosened the cranks, and round the china handles where he tries the bells. Perhaps he breaks one of the handles. It cannot be matched, so two new ones must be bought, and another tradesman brought in to put them on. The paper hanger possibly uses bad size on the wall, and makes his paste of damaged flour; consequently, when the room is again inhabited, it has a mysterious but most offensive smell. Perhaps he does not take the trouble to remove the old paper before putting on the new one, in which case pastiles may be burnt and windows opened, but all in vain—the smell will remain. The painter does not sufficiently rub down or burn off the old paint before he puts on the new. He sometimes even covers the old doors with size to save himself trouble and make a surface. He is almost always careless with his first coat—a carelessness he cannot afterwards repair. It is not uncommon, as soon as the new paint is quite dry, and has been under the influence of either sunshine or a hot fire, to see it starting off in pieces at the slightest touch, and leaving the light under color visible. If not carefully watched, the painter will put his pots on one of our best tables, making on it a fine confused pattern of circles great and small. In consequence of his carelessness, the polisher has to be called in. The painter is quite satisfied, having done his part towards the encouragement of trade. In giving the hall door a fresh coat, he lets drops fall on the step which no French polisher or English housemaid could, with any quantity of fuller's earth, whiten or remove. He walks up and down the oil cloth in the hall with nailed boots, and gives it the appearance of having recently recovered from a severe attack of small pox. His sympathies are with the makers of oil cloth, not the buyers thereof, so he is rather pleased. It is not uncommon for a bill to be sent in charging for four coats of paint when only two have been put on; perhaps in some cases there may have been three thin paintings and a little chalk mixed with the white lead. Common oak varnish will be charged as best copal, and the bad cotton rope with which the window sashes are mended as best hemp line. Strange to say there are people who honestly love the house painter and his paint, who like to be constantly redecorating their rooms. Men of supposed taste still have their hall doors grained in a bad imitation of oak or maple, and prefer paint on their stairs to stained and varnished wood. The reason why builders so love paint and varnish is that it hides bad wood, and insures to them and their successors work for ever. If some substitute for whitewash on ceilings could be found which would wash, they would lose thousands a year. They set their faces against the varnished papers which some people have adopted, and which are certainly a help to cleanliness at small cost, as they bear washing. They detest marqueterie floors with rugs, as there are not then heavy carpets to take up and nail down, and tear also, as we know to our cost.

Preparation of Washing Blue.

Twenty lbs. white potato starch, twenty lbs. wheat starch, twenty lbs. Prussian blue, two lbs. indigo carmine, and two lbs. finely ground gum arabic are mixed in a trough, with the gradual addition of sufficient water to form a half fluid, homogeneous mass, which is then poured out on a board with strips tacked to the edges. It is then allowed to dry in a heated room until it does not run together again when cut. It is next cut, by a suitable cutter, into little cubes, and allowed to dry perfectly. They are finished by being placed in a revolving drum, with a suitable quantity of dry and finely pulverized Paris blue, until they have a handsome appearance. The cost is about 12 cents per lb.

The Modern War Ship.

Mr. John Scott Russell, in a recent paper before the Institution of Naval Architects, says: "My personal opinion and experience have grown steadily towards the conviction that we should consider a modern war vessel as a mere tool or instrument of destruction, not a ship (in the eyes of the sailor, quite unworthy of the name), a mere floating gun carriage, a mere floating spear propelled by steam and meant first to place an explosive shell in the enemy, and second to run into his side and sink him. If I am right in supposing that what I say truly represents modern naval opinion, then we come to a very simple practical conclusion. Let us take one big gun, let us give it the largest bore, the largest shell, the highest penetrating speed we know how. Let the vessel herself be considered in the light merely of a floating gun carriage. Let this one large gun occupy the chief place in the vessel in front of her engines and boilers and propellers. Let it be as small a ship as is consistent with high speed, let it be propelled by high engine power, let it show very little above water, and let it have a short, strong, ugly stem to strike the enemy and sink him.

Not only high speed but admirable dexterity, and quickness of movement or manœuvring, are indispensable to this sort of vessel; she must be low in the water, nearly unsinkable, all her decks perfectly closed, waves must break over her without harm, she must be steady, quick, and sure.

It may be said that such a ship is hard to find and hard to make and hard to handle. Certainly she is hard to work; but is not all great, noble work hard, and are not victories always hard to win?

If you agree with me in regarding this one gunboat as the type of an effective instrument of naval destruction, the next question which naturally arises is this: When we want two guns, shall we have a two-gunboat or two one-gunboats? The arguments on this point are the following: In many practical cases of experience we find it prudent to have duplicates; we may have two pumps where one would do, we may have two cylinders where one would do, two screws where one would do, two boilers where one would do. My answer is that duplicates are useful in little things; we cannot afford them in principals, though we can in subordinate things. My personal opinion is that two large guns in two small gunboats are better than two large guns in one small gunboat. To this rule, however, I know of exceptions in these two cases: the large many gunned man-of-war, with central battery and central armor coating, and the small single great gunner. I have taken extremes, because I think both of these inevitable and indispensable to England. There is a third fleet of indispensables—I mean the cruiser. She must be an ocean steamer, large, long, fast, large gunned, many gunned, long ranged, steady, easy, good sea boat, carrying large store of coal and other stores. She must have great destructive power, great endurance, great manœuvring power, and with high speed, power to choose her own enemy, and her own time and place, and manner of action. Only she cannot be covered with armor. Also, she can, if not absolutely secured, be comparatively well protected by certain precautions which may be well considered. Let us consider these. 1. Let us put all that wants protection well under water; let us give protection by armor, if necessary, in small quantity near the midway armor line; let the whole ship be in celluiar watertight divisions of convenient, and even somewhat inconvenient, smallness, but judiciously arranged so as to be conveniently accessible for good, and conveniently inaccessible for harm. By these and many similar precautions, which I will not here enumerate, the ocean cruiser may be made the queen of the seas.

Here then are three classes of ships or fleets about which we need be in no doubt as part of the fleet of the future.

1. *The Man-of-War.*—Large, fast, enduring, many and large guns, central battery, perfectly shot-proof, engines, boilers, and magazine perfectly protected; possessing also all the protecting precautions of the cruiser, but slower and heavier; enduring, a hard hitter, and hard to hit.

Have we a fleet of these? How many have we—want we?

2. *The Single Great Gunboat.*—Long, narrow, low, fast quick, clever, ugly, and sharp, unsinkable. Of these we want, not a mere fleet, but a multitude, not numbers, but swarms, clouds.

Have we swarms of these?

3. *The Many Large Gunned Ocean Cruiser.*—Long, wide, deep-sided, fast, enduring, quick in her manœuvring, with destructive power, and small protection, able to do great harm and ready to run great risks.

Have we fleets of these ready for each of the oceans in which we have colonies, and are certain to have war?

The Suez Canal.

Late reports from Egypt state that the usefulness of the Suez canal has become much impaired through the quantity of sand blown into it at certain places, and which, if not systematically removed, will soon fill it completely. Already large vessels cannot pass each other, but are compelled to wait at the mouths of the canal until the channel is clear. It is probable that high walls will eventually be built along the banks of the canal as barriers against the sand storms which are so common.