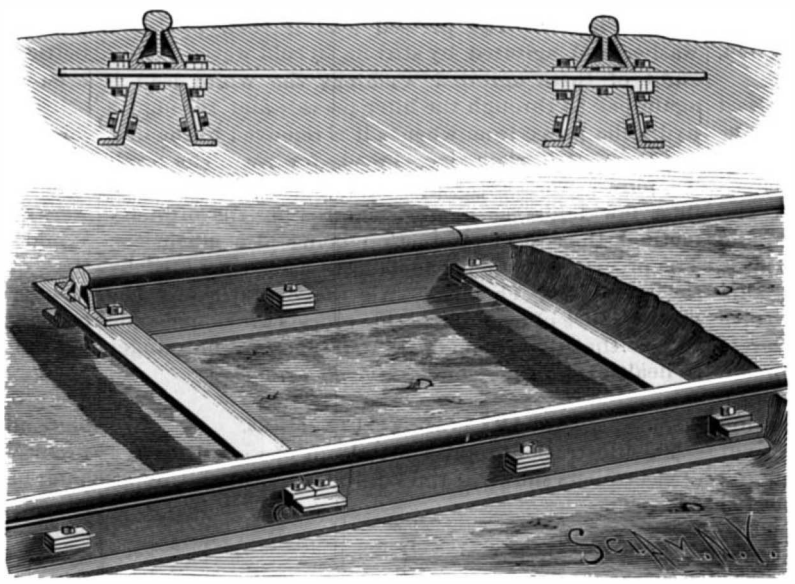
AN IMPROVED RAILROAD TRACK.

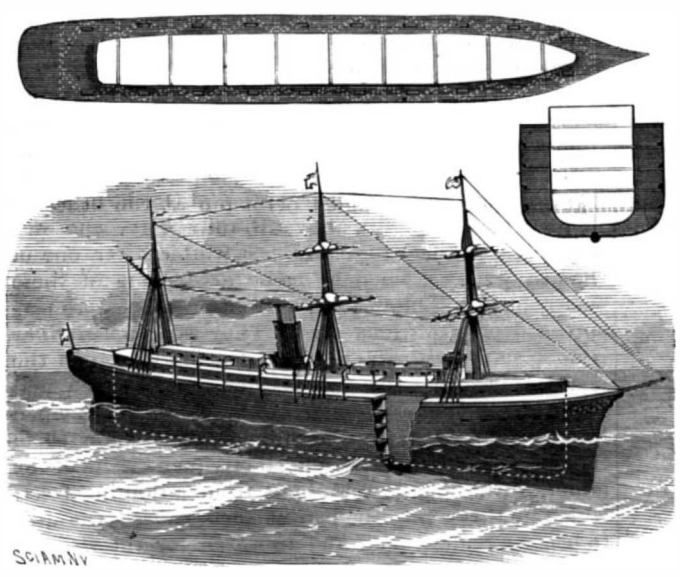
The accompanying illustration represents a railroad track which is designed to be easily laid and repaired, and is so constructed as to prevent the spreading of the rails. It has been patented by Mr. Stewart J. Morse, of St. James, La. The track is wholly of metal, and has two longitudinal sleepers supporting the rails, the heads of which only project above the sleepers. Each of the sleepers, as shown in the sectional view, is made of two upright plates slightly inclined toward each other to form a narrow slot, and to engage the under side of the head of the rail, the lower edges of the plates having outwardly bent flanges or feet. At suitable distances apart in each sleeper are transverse openings to admit a key plate having downwardly extending bosses on its outer ends abutting against the outside of the sleeper plates. On this key plate rests the tie, projecting beyond the sleepers, lugs being formed on each of the sleeper plates directly above the lugs or bosses of the key plate, and the tie being secured in position by bolts passing through the top and bottom lugs and the tie. To further hold the sleeper plates in position, short plates and key-plates are employed between the ties, and secured by bolts, by which means the ties can be placed farther apart. At the junction of two sleeper sections a tie is used preferably double the width of the others and fitting into slots formed in the adjacent ends of the sleeper plates. Tracks thus made are designed also to prevent the easy tearing up or misplacing of the rail by mischievous persons, as to do this it would first be necessary to remove the earth in which the sleepers and ties are embedded.



MORSE'S RAILROAD TRACK.

A PROPOSED PLAN FOR NON-SINKABLE SHIPS.

The illustration represents a plan of building vessels with practically two hulls, one within the other, the space between the inner and outer hull being sufficient to receive a portion of the cargo, but so proportioned to the whole capacity of the vessel that the total filling of the outer hull with water, as it might be in case of collision, would not cause the vessel to sink. It is a patented invention of Mr. George Shone, of East St. Louis, Ill., and our engraving shows plan, sectional, and perspective views. In a 10,000 ton boat the difference in beam from present standards is designed to be about twenty feet, ten feet on each side separating the inner from the outer hull, while in length the difference would be from thirty-five to forty feet, the greater portion of this intervening space being at the bow. The bottom of the central hull is also raised above that of the outer one, and its top is carried above it. Bulkheads are used partly to strengthen the ship and partly to divide it into compartments, these bulkheads also extending across the space between the hulls, but here they are preferably not made water-tight, but have small openings by which the side compartments will be connected with each other, so that any water admitted into one of these compartments may flow gradually, not rapidly, into all the others. This provision is made so that the ship, if the hull is stove in, will not be dangerously depressed at the point where damaged, but may be kept trim. By means of suitable water-tight decks the space between the hulls can be divided horizontally, freight being introduced thereto by means of suitable water-tight hatchways. The decks are braced with diagonal beams, by means of which the structure is considerably strengthened, and in war vessels the sides would be strengthened on the truss plan all around the ship, the construction being thus designed as a protection against torpedoes and ramming. It is claimed that with this construction the capacity of the ship will not be materially diminished, while, should the vessel become waterlogged throughout its whole outer chamber, it would still be kept afloat.



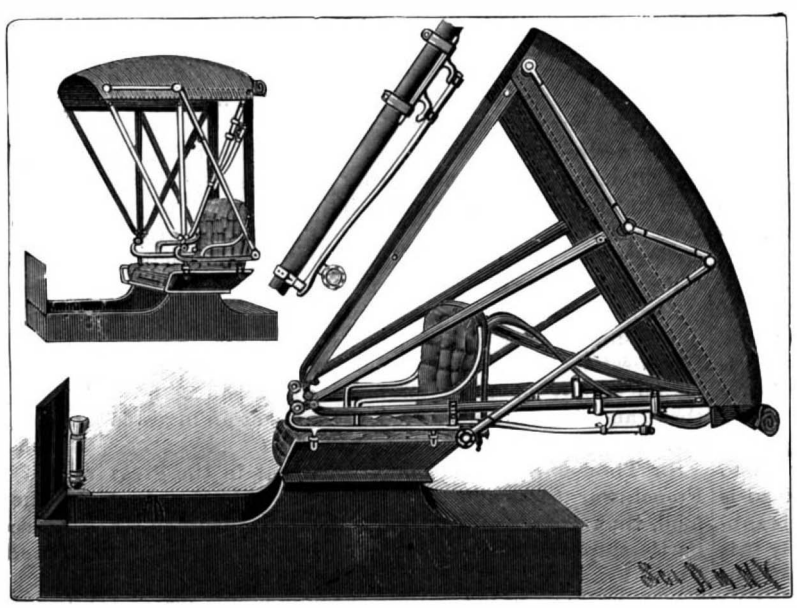
SHONE'S DOUBLE HULLED VESSEL.

Labyrinthine Deafness.

Mr. G. P. Field, M.R.C.S., Aural Surgeon to St. Mary's Hospital, communicates to the *British Medical Journal* a paper on the treatment of this form of deafness with hypodermic injections of pilocarpine. The results (told in most cases in the patient's own words) are of a remarkable character. Persons who had been deaf for long periods, 20 years and even more, and had to rely upon ear trumpets for anything they did hear, gradually, under the influence of the pilocarpine, recovered their hearing, and that in so marked a manner as to cause comment by those who were unaware of their being treated. Mr. Field hesitates to explain how the pilocarpine acts, but there seems to be little doubt of the correctness of his suggestion that it stimulates secretion by the membrane, and maintains this so well as to help the absorption of any solid waxy matter which may be lodging in the ear cavity.

AN IMPROVED VEHICLE TOP SUPPORT.

In ordinarily constructed vehicles, when the buggy top is down, its weight is all far back from the bearing or prop, causing great strain on the back bow and also on the whole top and seat, which frequently bends and breaks the bow. The accompanying illustration represents the application of a top support, which has been patented by Mr. Samuel Sanders, of Montezuma, Iowa, designed to obviate this difficulty, and afford a good, easy rest for the top when down, and, even if the joints are thrown so that the top drops down hard, it will not be damaged in the least. Our view represents the improvement applied upon a carriage when the top is up, and when it is partly laid back, while the small figure is an enlarged view of the attachment in place upon the back bow. A shoe, preferably of malleable iron, is secured to the back bow by means of clips and a screw, and this shoe has depending arms, the lower ends of which are bent forwardly. A slightly curved yielding rod or spring, adapted to be supported by the rest or prop, is attached thereto at the forward end of the spring by a strap and buckle, the strap passing through an elongated slot in the spring. The rear end of the spring is attached to the depending arms of the shoe by means of ferrules or clips. This device, as will be seen, can be readily attached to any back bow, and by its use the weight of the top is thrown so far back as to entirely prevent damage to any of the parts when the top is thrown down. The device also improves the looks of the carriage, particularly when the top is down. Although the improvement has been but recently patented, it is said that some large orders have been already received for sets of these supports.



SANDERS' VEHICLE TOP SUPPORT.

IMPROVED STEAM FOOD COOKER.

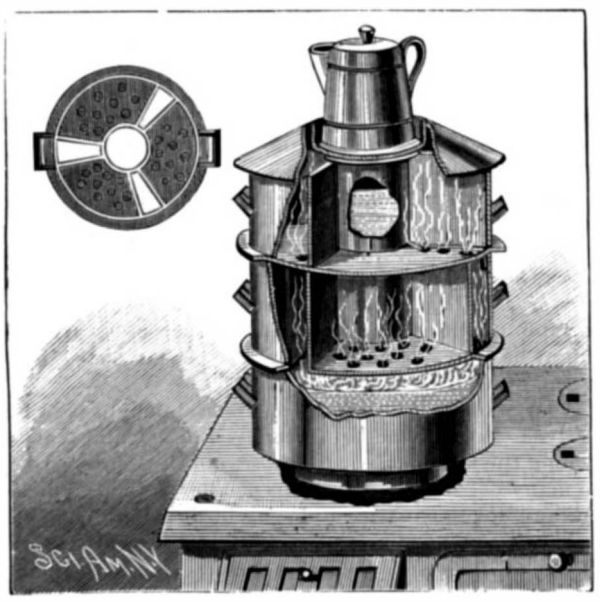
We give an engraving of a new steam food cooker recently patented by Olive C. Christin, of Bodie, California.

In the engraving portions are broken away to show the interior construction. This invention is designed to cook several different varieties of food at one operation, without imparting the flavor of one to another.

The invention consists of a boiler and two or more cooking sections arranged one above the other on the top of the boiler. The lower section is provided with passages leading through it and arranged to deliver steam to the upper section without communicating with the lower section. Each section is divided into compartments, the steam entering the lower compartment separately through the perforated bottom. Steam is admitted to the compartments of the upper section through the passages referred to and through apertures in the bottom.

The central compartment, which extends downward through the sections and projects a short distance into the boiler at the bottom, forms a soup vessel. The cover of the soup vessel is made flat and adapted to receive a coffee pot or other cooking vessel. By means of the conical cover the steam of the upper section is deflected so as to strike the coffee pot resting on the cover of the soup vessel. The passages leading through the lower cooking section are clearly shown in the detail plan view.

By means of this improved cooking vessel, six or eight different kinds of food may be cooked at once without interfering one with the other, thus greatly economizing space, time and labor.



CHRISTIN'S STEAM FOOD COOKER.

Mortuary Gold.

The French scientist, Mr. Victor Mennier, as the result of careful inquiries, asserts that the American dentists insert in American teeth, each year, the enormous amount of 800 kilogrammes (about 1,800 pounds) of the precious metal, which represents nearly $450,000. This gold is never recovered, of course, but is buried with the person in whose mouth it is placed. Making allowance for the rapid increase of the population of the United States and for the continued deterioration of American teeth, it appears that in less than one hundred years the American cemeteries will contain a larger amount of gold than now exists in France.

CHIMNEYS, to be safe from fire and draw well, should be not less than sixteen inches square inside and built up from the cellar. Use good brick with clay, instead of mortar, up to the comb. Plaster it inside with clay mixed with salt. Top with the best brick well wet and laid in cement. Do not let wood come too close to the brick, and don't let the stovepipe come nearer than eighteen inches to the ceiling.