

other stop, but in this particular invention no such concussion is necessary, and the skip can be overturned at any point in the air.

In these transporters erected at Sfax, in order to prevent the transporting beam colliding with the masts and rigging of vessels the ends are hinged, so that if necessary they can be hauled up out of the way.

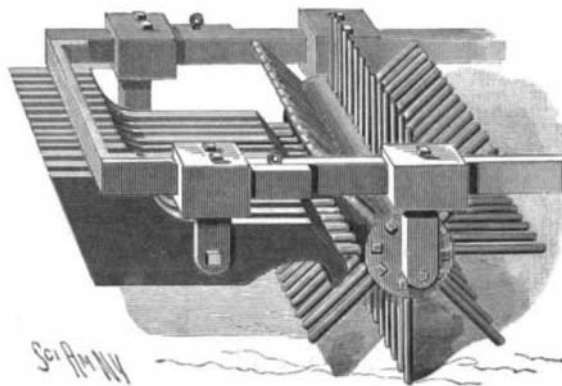
THE DAMAGE TO THE "OREGON."

Since the "Oregon" grounded in the Gulf of Pechili, on a submerged rock, a technical description of the injuries to the ship has been awaited with interest. In our issue of September 1 we gave an account of an eyewitness of the salvage operations, and we now publish some engravings showing the extent of the damage. A cable message from Kure dated August 29, 1900, is published verbatim below as it was received at Washington: "'Oregon,' outside plating frame fourteen to nineteen strake A port to B starboard indentation maximum depth eighteen inches plating not pierced frame eighteen to twenty-five port strake A B extending into A starboard and larboard aft indentation maximum depth twenty-four inches plating pierced over much of area up frame twenty-four and driven almost to inner bottom about twenty. Minor indentations on fore body forward frame fifty-five most serious keel frame ten to eleven twelve to fourteen three inches maximum depth strakes C D port frame twenty-four depth three one-half inches keel and larboard frame twenty-seven to thirty depth five inches strakes A B port frame twenty-seven to thirty depth four one-half inches strakes C D starboard frames forty-four to forty-five depth three one-half inches other indentations maximum depth one-half inch to two one-half inches some butts rivets started plating scored in places bilge keel starboard buckled two places inner bottom port side buckler frames eighteen to twenty-four over first longitudinal calking rivets started in places structural part longitudinal vertical keel floors frame eleven to thirty near indentations generally distorted some badly lower ends frames fifteen, sixteen, seventeen and floors and longitudinal frame eighteen to twenty-five port side to third longitudinal crushed vertical keel buckled places frames twenty-nine forward cellulose framing over minor indentations buckled varying extent lower plated bulkheads eighteen twenty-two buckled bulkheads fourteen twenty-nine and four and aft near frame thirty-two slightly buckled protective deck beams fifteen sixteen buckled at tops hold stanchions door frame slightly distorted bulkhead twenty-two pump room fire rooms fire room floor forward slightly bent six-inch branch main drain two suction secondary drain broken certain drainage valve seats sea suction slightly distorted woodwork holds slightly damaged estimate cost permanent repairs twenty-five thousand time one hundred days home card damaged part frame fourteen nineteen and eighteen twenty-five first mentioned undergoing temporary repairs other places being calked riveted in view large cost and long time dock permanent repairs recommended completion of temporary repairs as now going on strengthening shoring weakened part structure building to ship's frame with wood covered with plating spaces to inner bottom filled cement watertight and structural work elsewhere to be carefully gone

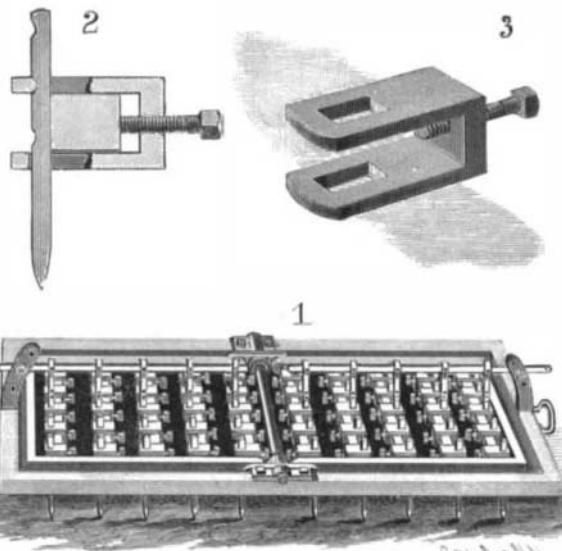
TWO NOVEL HARROWS.

Several harrows have been invented by Mr. William M. Baker, of Fortville, Ind., which are of such improved construction that we have selected for illustration from their number two which may be of some interest to our readers.

The first of our engravings represents part of a rotary harrow provided with a novel cleaning device. As a substitute for the rear roller usually found in such ma-



BAKER ROLLER HARROW.



DOUBLE HARROW AND TOOTH CLAMP.

chines, Mr. Baker employs a series of blades, each of which has a hooked forward end intercurrent with the teeth of the preceding roller. The downward and rearward inclination of the forward edges of the blades serves to direct the trash to the rear; while the upwardly and rearwardly inclined edges of the blades cause any trash which might be carried up between adjacent hooks to pass downward. The hooks likewise serve to pulverize the soil.

The second of our engravings represents a double harrow, the teeth of which are adjustably held in a simple clamp. The two harrow frames constituting the implement are located within a main frame, and are provided with supporting-bars journaled in the sides of the harrow-frames. The trunnions of the innermost

clamps are formed with slots of unequal length, so that the forward wall of the upper slot will engage a notch in the tooth when the plain forward surface of the tooth is in engagement with the forward wall of the lower slot (Fig. 2). The teeth are firmly held in place by set screws.

The central teeth on the supporting-bars, as shown in Fig. 1, are provided with arms connected by a shifting-bar. Standards on the main frame receive and guide each shifting-bar, the standards being provided with apertures adapted to register with apertures in the outer ends of the shifting-bars. By means of these shifting-bars, the harrow-frames can be readily adjusted up or down, and the teeth be given any desired angle. The shifting-bars are secured in adjusted position to the standards by passing pins through registering apertures.

The World's Shipping.

Lloyd's Register, the new edition of which has just appeared, gives as usual, a vast amount of valuable statistics relating to the mercantile marine of the entire world. There are now 28,422 vessels having a tonnage of 29,043,728. Great Britain has 10,838 vessels and her tonnage is 14,261,254. From this it will be seen that the numerical proportion of British ships is not so great as is the case with some other countries, because the greater part of her ships are of larger size than those of other countries, and more of them are steam vessels. It is gratifying to note that the United States comes next to the British Empire. We have 3,135 vessels, with a tonnage of 2,750,271; Germany has 1,710 vessels having a tonnage of 2,650,033. Then comes Norway with 2,380 vessels with a tonnage of 1,640,812; then France, with 1,214 vessels having a tonnage of 1,350,562, and Italy with 1,176 vessels having a tonnage of 983,655; Sweden has a greater number of vessels than France, having 1,433, but as the vessels are smaller, the tonnage is only 637,272. Japan has 1,066 vessels, the tonnage being 574,557; Holland, 406 vessels with a tonnage of 530,277; Denmark has 802 vessels with a tonnage of 519,011; Austria-Hungary, 270 vessels with a tonnage of 416,084. Greece, Brazil, Belgium, Portugal and Chile all have a tonnage in excess of 100,000. The steam tonnage of the British merchant navy is superior to that of all other countries combined, but nearly half of the tonnage of the United States is made up of sailing vessels. Great Britain has more than 1,600 steamers of 3,000 tons and upward. Germany has 127 of the same size; the United States 120, and France 60. Great Britain now has 24 steamers with a register of 10,000 tons or more.

Bees as Poachers.

A very interesting case has originated at Warwick, N. Y., and if the decision is sustained on appeal, a most important precedent will be established. Bees owned by one person punctured the peaches of another while they were ripening, extracting the juice from the fruit, thus destroying it. The plaintiff placed his damages at \$250.

Local experts gave testimony in both peach growing and bee keeping. The justice gave judgment to the plaintiff to the amount of \$25 and costs. If the case is sustained, it will render the owners of the bees liable in damages for their incursion on the premises of other property holders, the same as horses, pigs, and other



View from Port and Underneath, Showing Injury to Keel between Frames 14 and 19. Kure, July 25, 1900.



View from Port, Showing Temporary Patches Put on by Diver over Injuries between Frames 19 and 24.

INJURY TO UNITED STATES BATTLESHIP "OREGON."

over far as practicable drain pipes doors valves overhauled."

It is possible that the Navy Department will soon issue an amplification of this cable message illustrated by diagrams.

TWO logs of African mahogany from one tree have been sold in Liverpool for \$7,680.

supporting-bar of each harrow-frame enter the winged hubs of a shaft centrally mounted in the main frame. Thus a very simple method is provided for independently pivoting each harrow-frame in the main frame.

In order that the supporting-bar may not be weakened, the teeth are adjustably screwed in clamps of the form shown in Figs. 2 and 8. The shank of each tooth is notched. The upper and lower members of the

trespassers. A few years ago a suit was brought in Delaware County against a farmer to recover on a claim for pasturing bees. The plaintiff alleged that the bees had no right to obtain sustenance and material for making honey for the benefit of the owners from his property without compensation. The contention of the plaintiff was sustained and judgment was entered.