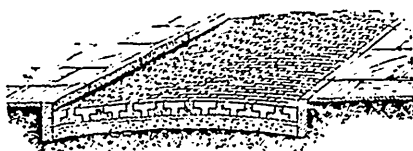


assist in keeping the boat steady in the water. Similar pipes also extend from the pump to the front and rear ends of the floats, the vessel being steered either to the right or left by forcing water through one of the pipes in one of the sets, and the auxiliary pipes in the floats being also used when desired in the propulsion of the vessel forward or backward. Other pipes lead to openings in the sides of the floats, where their discharge is directed downward and outward, to assist to turn the vessel, to keep it from drifting on to a wreck or rocks, and to keep it from capsizing when in the trough of the sea. The pump is also connected by suitable pipes with the various compartments and the interior of the floats, to pump out water, should they become accidentally flooded. As the boat has no rudder or screw propeller, it is designed to stand the roughest weather without being damaged or disabled, and when the boat approaches a wreck the platform and hatches may be readily reached by those who are rescued, the interior of the central hull being then conveniently accessible.

A NEW BRICK ROADWAY.



Inventors are still trying to find the ideal pavement, and one of the latest attempts is that of Mr. G. E. Briggs, an American, who has recently introduced his plan into this country. Our illustration will give the reader a better idea of it than a long description. The bricks, as will be seen, are T-shaped, and lock into each other, one above, the other below, thus ensuring a compact, firm, and solid roadway suitable for light or heavy traffic. Such a road can be quickly made, and will prove very useful in the country as well as in towns.

The new Secor boat, says *Zion's Herald*, is nearly ready in Brooklyn. It has neither boiler, furnaces, nor coal bunkers; yet high speed is expected of it. In the stern of the vessel are two cylinders placed close together, one on each side of the rudder frame. The outer end of each

is closed by a valve; each has a piston. Atomized oil is to be injected into the cylinders; the pistons will compress it; an electric spark will explode it, the outer valve opening simultaneously, permitting the whole force of the explosion to project itself against the water at the stern. With 160 of these impulses a minute from each cylinder the speed expected is sixteen miles an hour. The boat when finished will be tested by a naval board. The inventor has spent \$300,000 in developing his direct propulsion system, and expects to revolutionize the motive power of vessels.

A novel system of disseminating weather forecasts, which seems a trifle ahead of the new scheme of putting bulletins in the post office date stamps, has been inaugurated by the Florida Central and Peninsula Railroad. The engineers blow six long blasts of the whistle, at intervals of three miles, to warn fruit growers of cold waves predicted by the United States Weather Bureau.

Strong nitric acid has set pine sawdust afire in less than three minutes after saturating the sawdust. When nitric acid is spilled upon woodwork there is danger of fire, and the acid should be neutralized immediately with ammonia.

The up-to-date cities now use street sprinklers with wheel tires six inches wide, and the outside of the front tire is placed even with the inside of the rear tire, the machine thus rolling twenty-four inches of street as it moves along, and doing excellent work in keeping the streets in good condition.

The little rows of perforations in a sheet of postage stamps to facilitate their separation was patented in 1848 by Henry Archer, and was considered of such utility by the Government that he was awarded twenty thousand dollars for his patent right.

When water freezes it expands with a force estimated at thirty thousand pounds per square inch. No material has been found which can withstand this pressure.

Exposure to sunlight is one of the best disinfectants for clothing known. The light passing through glass will not do it.