## $\triangle$ NOVEL SELF-CLOBING GATE

An invention has recently been patented by Dr. Peyton B. Green, of Wytheville, Va., in which a simple and ingenious device is provided for closing a gate automatically.
Referring to the accompanying engraving, it wil be observed that, on the top bar of the gate, a roller is journaled which is engaged by an inclined rod fulcrumed at its lower end on a fixed support set at a proper distance from the hinge-post. A weight is held on the rod and can be fastened in any desired position by means of a set screw. To prevent the rod from leaving the roller when opening and closing the gate,


## GREEN's SELf.CLOBING GATE

the bracket in which the roller is journaled is provided with a loop.
When the gate is swung open, the free end of the rod travels over the friction-roller and assume nearly a vertical position. As soon as the gate is released, the weight of the rod pressing against the roller closes the gate. By changing the position of the weight, the gate can be closed with more or less force.

## $\triangle$ GREAT RAFT OF PILE ON THE PACIFIC.

The largest marine structure that ever entered the bay of San Francisco arrived in that port the first of August. It consisted of an immense raft of piles, ten thousand in number, which had been chained together at Stella, State of Washington, a point about seventy miles from the mouth of the Columbia River. The dimensions were: Total length, 600 feet; breadth, 50 feet, with a depth of 45 feet. The 10,000 piles, which varied in length from 30 to 90 feet, were from 12 to 18 inches in diaweter at the butt. The raft drew 30 feet of water, and it contained upward of $5,000,000$ lineal feet of timber. The distauce from starting point to destination is about 700 miles, and $51 / 2$ days' towing was employed in bringing it to port.
To transport the same number of piles by steamers would have employed twenty at least, of the ordinary size. The journey from the shipping point was made without accident, owing to the unusually favorable weather, and the successful result of the venture has encouraged the Northern timber dealers in continuing this method of continuing

Owing to the excellent financial results of rafting, attempts have been made in past years to introduce this method on the Pacific coast. So far five attempts have been made, and success has attended three of them. One grounded on the bar at Coos Bay and another was lost at sea This last was far and away the largest yet attempted and will be succeeded by mother fully as large. Shipments of piles only liave so far been made in this way, but it is the in tention to experiment in shipping lumber either sa wed or in the rough, the saving in freight alone allowing a margin for large losses
The method of building these rafts at Stella differs radically from that pursued at the East, when the attempts were made to raft timbers from Nova Scotia to Eastern ports. The Canadians constructed theirs upon ways built upon the land, which were launched when


GREAT RAFT OF PILES ON THE PACIFIC.
Length, 600 feet ; breadth, 50 feet ; depth, 45 feet ; number of piles, 10,000 ; total amount of timber, $5,000,000$ feet, B. $M$.
are constructed of wood covered with clay, and, as a rule, consist of only one room, in which the people and animals live together. The upper and wealthie class are better provided with lodging and food. As a race they are exceedingly courteous and very hospit able, and they are excessively punctilious concerning points of honor, such as the proper place at table and at festivals.

AN IMPROVED WINDOW-SABH-LIFT
The sash-lift pictured in the engraving is designed The sash-lift pictured in the engraving is designed to be attached to a sash in order to facilitate the open-
ing and closing of the window. The device can be readily applied and is designed to prevent the acci-


GREEN'S WINDOW-8A8H-LIFT.
dental breaking of the glass by the slipping of the hook or pole used for raising and lowering the window.
Of the accompanying illustrations, Fig. 1 is a perspective view showing the device attached to a sash. Fig. 2 is a central cross section of the lift.

The device comprises a plate or shield which is attach ed to the top rail of a sash. This shield has an out wardly extended flange engaging the upper surface of the sash rail. On this flange a stop is formed in the form of a staple or loop, serving the dual purpose of preventing the hook or pole used from slipping and striking against the glass of the upper sash, and of offering a means for attaching a cord by which the sash may be raised when it is not desired to use a hook. may be raised when it is not desired to use a hook. shield is a ledge having its under surface downwardly shield is a ledge having its under surface downwardly and in wardly inclined. This ledge is designed to be
engaged by a pole or hook for the purpose of raising engaged by a pole or hook for the purpose of raising
the sash, the inclined under surface preventing the hook from sliding outwardly ; by providing the plate or shield with braekets, the raising instrument is pre vented from sliding laterally. Around the upper inner edge of the ledge is an up wardly extended flange designed to be engaged by a hook or pole for the pur pose of lowering the sash Extending outwardly from the plate or shield is a stop in the form of a staple o loop which, like the firs mentioned stop, serves the purpose of preventing the hook or pole from slipping and of offering a means fo attaching a cord for the purpose of lowering the sash. This window-sash lift is adapted for use in factories and shops where obstacles such as work benches are usually placed near the window, render ing access to the sashes dif ficult. Since under these circumstances workmen usually employ a rod or pole to open a window, device like the one describ ed would lessen the danger of breaking the glass.

The attachment describ, ed is the invention of William H. Green, 322 Ful ton Street, Elizabeth, N. J
Another New Element "Xenon."
and two in the winter. The cattle are very small in size, and are fed with hay in winter. Occasionally they are allowed to go out when there is the slightest break in the weather, but their teats are always care fully covered up with felt. Milk is the principal food. This is sometimes supplemented with hares, which are quite abundant, but not very relishable. The house

At the meeting of the British Association, which was held this year at Bristol, England, it was announced that on September 8. Prof. Ramsay and Mr. Travers had discovered another elemental gas which they called "xenon." It is found to possess a spectrum analogous to that of argon, but the position of the lines differs materially. It seems to only exist in minute quantities.

