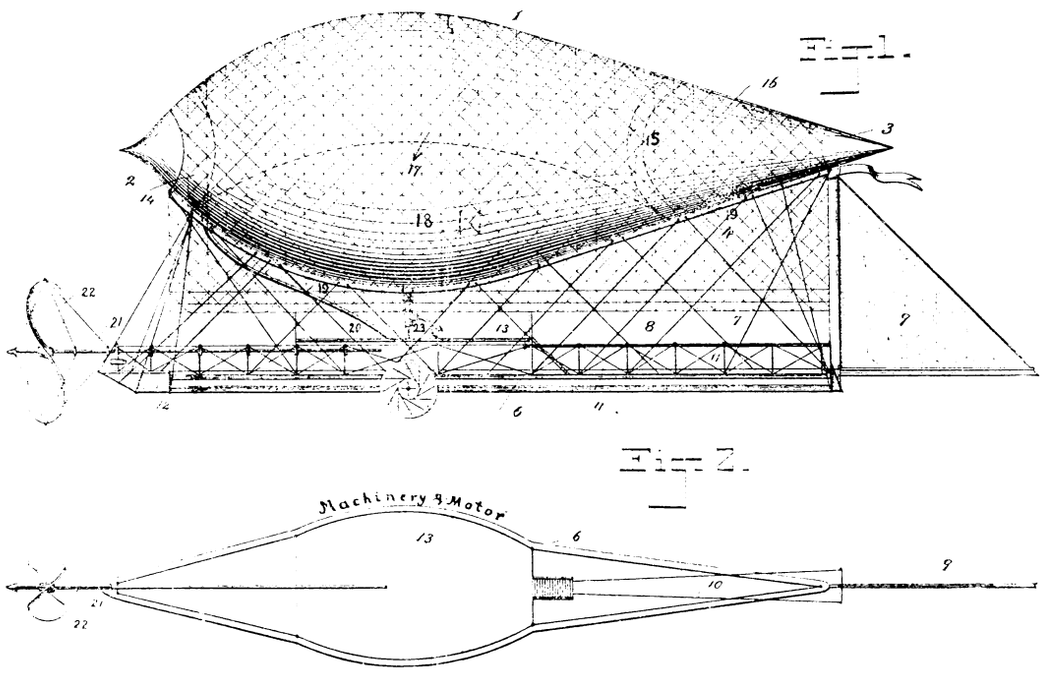
French Navy buying one for the colonies of Guinea, etc. Lately, however, in the Brussels Exhibition, the new stripping and peeling machine of Norbert de Landtsheer from Paris was exhibited, and it is the most simple, complete, and inexpensive machine yet used for the peeling of either dry or green stalks. Peeling is accomplished without crushing, and the threads are free from cuts. The disaggregation is perfect, and the machine is free from waste in either dry or green peelings. The daily product is: dry, 100 to 158 kilograms (220 to 330 pounds), a quarter to one horse-power; green, 100 to 200 kilograms (220 to 440 pounds), a quarter to one horse-power, price $240. A machine run by hand-power produces 75 kilograms (165 pounds), price $200.[1]

On a large scale of cultivation, a corresponding series of machines built by Norbert de Landtsheer will be necessary. With this in view, and the value of these machines being established, there is no longer any doubt as to the success of its introduction into the United States, where the conditions of soil and climate are so favorable.

[1] At aforesaid September Exhibition at Paris the decorticating machine of De Landtsheer was recognized to be the best.



THE AIR-SHIP OF LOUIS BOISSET.

1. Extremity of the inflated part; 2. Front cone; 3. Back cone; 4. Nets; 5. Riggings; 6. Lower parts of the car; 7, 8. Fringe of the net; 9. Rudder or guiding sail; 10. Passengers' cabin; 11. Safety-rail; 12. Front extremities of the car; 13. Machinery and motor-room; 14. Front air-tight compartment; 15. Back air-tight compartment; 16. Large back air-tight compartment; 17. Centre of gravity; 18. Large central compartments for ammoniacal gas; 19. Metallic bar (very light); 20. Gas-pipes for the motor; 21. Shaft of tractive screw; 22. Tractive screw; 23. Throttle-valve for ammoniacal gas; 24. Wheel with air-sails.

It is not within the scope, nor is it the intention, of this article, to advise agriculturists to proceed to develop this industry on the strength of the information and statements contained in this report, but rather to draw the attention of the United States to the feasibility of its introduction into the country.

AN AIR-SHIP.

MR. LOUIS BOISSET, a retired officer of the French army, is now in this country, perfecting an air-ship, an invention of his, and seeking the protection of the United States patent laws.

Mr. Boisset has had some experience in recent years with the air-ships experimented upon by the French war department, the more or less successful voyages of which over the suburbs of Paris were recorded in *Science* in 1884. One trouble with these older forms Mr. Boisset believes to have been due to their symmetrical form, and he seeks to make the equilibrium of his balloon when in motion more stable by giving it, as shown in the figure, an ovoidal form, following in this the dictum of Mr. Dupuis de Lome, — that in general, organisms destined for motion in water or air, be they birds or fish, have such a form, the larger end being the forward end in their movements. To maintain the shape under varying pressure, there are two air-tight conically shaped compartments, — one at each end of the balloon proper, — into which air or other gas may be forced, as occasion may require, to keep them distended.

The buoyant power it is proposed to make just sufficient to raise the ship; and if, on rising higher, the warmth of the sunlight or other cause should expand the balloon, some of the gas would be removed, and condensed, thus doing away with the clumsy makeshift now in vogue of throwing out ballast.

To start with, the balloon is supposed to be filled with just enough coal-gas to cause it to rise. As the balloon rises, a portion of this gas may be withdrawn and compressed, and another portion may be employed to drive the motor, and some part will escape. To replace this loss of buoyancy, there is a reservoir in the car containing a solidified gas, the composition of which Mr. Boisset still keeps a secret, but the basis of which is ammonia, from which a fresh supply of gas can at will be obtained, and introduced into the lower compartment (18) of the balloon.

Mr. Boisset believes that he has made improvements over any thing that has gone before, in the shape and rigging of the ship, in the gas-motor, and in the method of compensation by which the equilibrium of the ship may be maintained. Further, the dividing of the balloon into air-tight compartments is a novel feature, and allows of replacing the consumed coal-gas by the ammoniacal gas, whatever its composition may be, without mixing the two.

Mr. Boisset estimates that a vessel of his construction, capable of crossing the Atlantic, should have a gas-chamber (the balloon proper) 62 metres in length, and with a maximum diameter of 20.33 metres. The height from the top of the balloon to the flooring of the basket would measure 31 metres; and the length from the end of the propeller to the end of the rudder-sail, 82 metres. The weight of the ship, its provisions, crew of ten men, and passengers, the inventor would place at 6,000 kilograms.

AMONG the features of the issue of *Light, Heat, and Power* for Jan. 19, are four photographic plates, illustrating the recent gas-holder explosions at the works of the Citizens' Gaslight Company, Brooklyn, N.Y.