

**A COMBINATION WARDROBE.**

In chambers and in houses where the bedroom accommodation is limited, which very frequently is the case, combination furniture (such as the wardrobe here illustrated) is exceedingly convenient as well as useful. The *multum in parvo* piece of furniture is, however, by no means always deserving of the taking title thus applied to it, and instead of serving all the purposes aimed at fairly well, results in failure all round. Experience of this kind has led many to avoid so-called "combination furniture" as a delusion and a snare; but conclusions like this, says the *Building News*, are not to be universally depended upon, and the wardrobe here illustrated by Messrs. W. A. and S. Smee goes far to show how much really useful space can be got out of one comparatively small and compact piece of furniture when thought and ingenuity are brought to bear upon it.

A wash-hand stand occupies the right hand corner with useful drawer under, the marble top, a chamber cupboard, and a curtained recess below. Three shelves are arranged over the table top, and the lower one in the angle is intended for the sponge. The central space is utilized as a hanging cupboard, with a large silvered glass mirror in the panel of the door. To the left a clothes press extends the rest of the width, over a useful recess for books and bottles. Then comes a table top, with three drawers below, and under these is another cupboard for hats, bonnets, boots, or slippers. The whole stands on a heavy plinth.

**THE BOAT BILL HERON.**

This remarkable bird (*Canceroma cochleareae*) is a native of South America. It has a singular shapeless flat bill, bent like a hook at the end.

Both mandibles are shortened and hollowed so as to resemble a pair of boats placed upon each other—from this it derives its name. Its legs are nearly covered with feathers; the wings are strong and moderately long. The feathers upon the back of the head and neck are elongated, forming a plume which hangs down over the back and shoulders. The feathers on the throat, back, and side of the neck are white. The plumage of the back is bright gray, with occasionally a touch of rusty red. The wing and tail feathers are grayish white; the sides black.

The eye is brown, the bill brown, and the foot yellowish. The length of the bird is about fifty-eight centimeters. The female is somewhat smaller; the young bird is reddish brown—darker upon the back—and paler on the breast.

The boat bill heron lives in the thickets and marshes on the shores of the forest streams of Brazil. It may often be seen sitting on the branches overhanging the water. It is more abundant in the inland forests than near the sea. On the approach of a boat it hops from branch to branch, and quickly hides itself.

Its food consists of various crustacea found at low water, but not of fish.

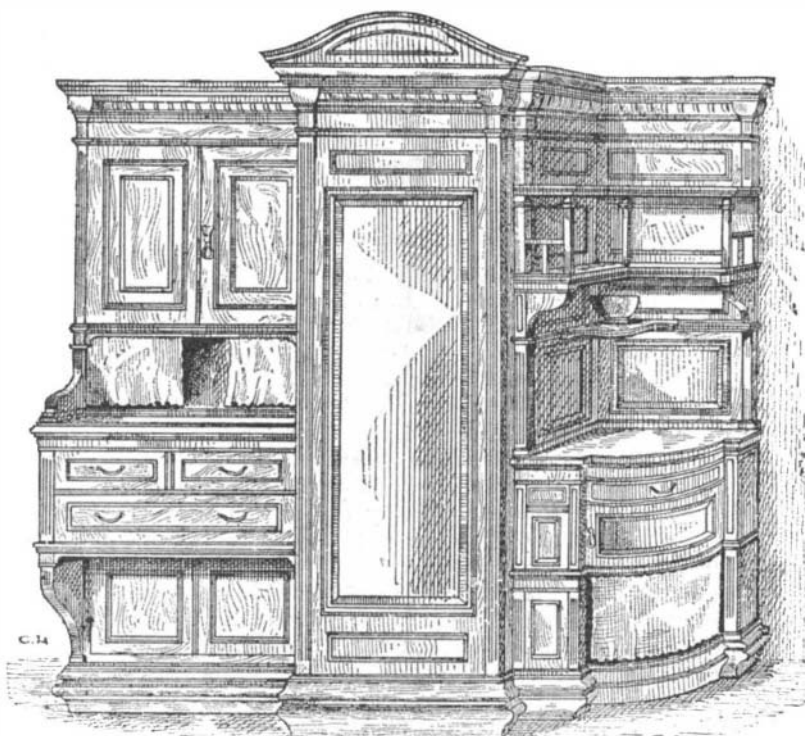
The Prince of Wied found only worms in the craw of one of these birds which he killed, and thinks that the bird with its broad, boat-shaped bill cannot catch fish.

Schomburgk says that they make a clatter with their bill, like a stork, or they do this at least when they are captured. Little is known of their brooding. The egg is oval, white, destitute of luster, and without spots.—*From Brehm's Animal Life.*

**Making Sure Fits.**

A subscriber to the *London Boot and Shoe Trades' Journal* gives the following description of a plan he adopts for making "sure fits," and thereby avoiding the annoyance of having goods left on his hands by customers: "I make it an invariable rule to measure customers myself. Having drawn the outline of a foot on a sheet of paper, and taken the girth measurements carefully, I fit up a pair of lasts to correspond with the measure. I always keep by me a few pairs of uppers—stale or damaged goods—and I last a pair of these on the lasts so fitted, using a stout pair of insoles. A pair of soles cut out of lifting, and which see service times over, are then put on and attached by a few pegs. The lasts are then drawn, the pegs cut out, and the "dummy" boots are sent to the customer with the request that he will wear them for an hour or two indoors, and a note is made of any suggestions he may offer as to additional ease being required in any part. Alterations, if required, are

then made in the fittings on the lasts, before the customer's order is made up. Since I adopted this plan I have never had a customer's order returned for misfitting. I estimate the cost of making up the "dummy" boots at a shilling, and this, of course, I add to the price of the goods. A neighbor, a tailor, tries on his coats and insures himself against loss. It was from his practice," adds the writer, and it seems to us a practical idea, which if adopted by our boot-makers would likely enhance the comfort of many of

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their customers, as well as save the maker much annoyance and cost for misfits, "that I took the idea."

**A Horizontal Well.**

In "Kidder's History of New Ipswich, N. H.," published in 1852, the following is related about David Hills, who became a resident of that town in 1772:

"In supplying himself with water he resorted to a most successful expedient. He reasoned thus: 'If my neighbor at the top of the hill obtains water by digging sixty feet,

Loosen the rod, however, as soon as it will not injure.

I would advise those making such a pipe, if they have had no experience in using cement, to employ a person who has. Much material and time may thus be saved without experimenting to get it right. The work must be done in dry or fair weather. Use the best materials; the fresher the cement the better. Old cement should not be tried. The sand must be perfectly clean. A pipe can thus be made which if laid below the frost will last as long as a stone.

I know of one such pipe which has been in use forty-five years, and is as good to-day as when first made.

**The Zodiacal Light.**

The cause of the luminous phenomenon known as the zodiacal light has long been the subject of speculation, and numerous hypotheses have been suggested to account for it. A correspondent of *Cosmos les Mondes* regards the entire phenomenon as one of the reflection of light. What we observe is nothing but the reflection of that part of the earth which is illuminated shortly before the sun rises and after it sets. In order to understand this we must assume that the earth is surrounded for a certain distance by a comparatively dense envelope of gas, beyond which the latter exists in a state of great attenuation. We therefore have two media of different density which influence the rays of light in the well known way, refracting them up to a certain limiting angle of incidence, beyond which total reflection takes place.

If we imagine the sun a little below the horizon, a part of the earth directly in front of us will reflect the rays of the sun at a very obtuse angle; these rays, meeting the boundary of the media at a very obtuse angle, will be totally reflected, and it is these totally reflected rays which we see.

This explains the appearance of the light in the shape of a cone whose line is always inclined in the direction of the ecliptic, and whose base is toward the sun; it also accounts for the fact that the changes observed in its appearance follow a reverse order in

the evening from that in the morning. The reason why the cone is longer in the evening than in the morning is that the layer of dense atmosphere is expanded by reason of its exposure to the sun's radiation through the entire day, whereas in the morning the reverse is the case.

**BLINDNESS** has steadily decreased in England for the last thirty years, owing, it is thought, to the improvement of the opticians and the almost complete extinction of the smallpox among children.

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why may not I obtain the same by running a shaft into the side till I reach the same point?' He acted upon the obvious conclusion, and made a horizontal well, which not only supplied a perpetual stream to his house without the trouble of drawing, but afforded a most ample and capital cellar for the storage of butter, cheese, and other articles from both heat and cold."

**KEROSENE** oil will soften boots and shoes that have been hardened by water, and will render them pliable and new.