pressure would be severest. In the after-hold these beams had to be raised a little to give room for the engine. The upper deck aft, therefore, was somewhat higher than the main deck, and the ship had a poop or half-deck, under which were the cabins for all the members of the expedition, and also the cooking-galley. Strong iron riders were worked in for the whole length of the ship in the spaces between the beams, extending in one length from the clamp under the upper deck nearly to the keelson. The keelson was in two tiers and about 31 inches (80 cm.) high, save in the engine-room, where the height of the room only allows one tier. The keel consists of two heavy American elm logs 14 inches square; but, as has been mentioned, so built in that only 3 inches protrude below the outer planking. The sides of the hull are rounded downward to the keel, so that a transverse section at the midship frame reminds one forcibly of half a cocoanut cut in two. The higher the ship is lifted out of the water, the heavier does she, of course, become, and the greater her pressure on the ice, but for the above reason the easier also does it become for the ice to lift. To obviate much heeling, in case the hull should be lifted very high, the bottom was made flat, and this proved to be an excellent idea. I endeavored to determine experimentally the friction of ice against wood, and taking into account the strength of the ship, and the angle of her sides with the surface of the water, I came to the conclusion that her