

There were the regular observations and all sorts of occupations, and I myself was not so absorbed in my plans that I did not find time for other things too. Thus I see from my diary that in the end of August and in September I must have been very proud of a new invention that I made for the galley. All last year we had cooked on a particular kind of copper range, heated by petroleum lamps. It was quite satisfactory, except that it burned several quarts of petroleum a day. I could not help fearing sometimes that our lighting supply might run short, if the expedition lasted longer than was expected, and always wondered if it would not be possible to construct an apparatus that would burn coal-oil—"black-oil," as we call it on board—of which we had 20 tons, originally intended for the engine. And I succeeded in making such an apparatus. On August 30th I write: "Have tried my newly invented coal-oil apparatus for heating the range, and it is beyond expectation successful. It is splendid that we shall be able to burn coal-oil in the galley. Now there is no fear of our having to cry ourselves blind for lack of light by-and-by. This adds more than 4000 gallons to our stock of oil; and we can keep all our fine petroleum now for lighting purposes, and have lamps for many a year, even if we are a little extravagant. The 20 tons of coal-oil ought to keep the range going for 4 years, I think.

"The contrivance is as simple as possible. From a