

used for the production of "coal oil," or "Breckenridge oil," some years before the discovery of native petroleum. Hence arose the name "coal oil," which, in some sections of the country, is still applied to refined petroleum, although it never had any relations to the Coal-measures. Peat and lignite are capable of employment for the same purposes.

The deep-seated shales of the earth's crust are inclosed in rocky retorts hermetically sealed. The unquenched fires of the molten nucleus of the planet continue to impart their warmth to the ever-cooling crust. The rocky retorts in Nature's vast laboratory are warmed—their organic contents undergo a slow distillation—the products escape in the form of gas or oil, and slowly filter through pores and crevices toward the surface, till intercepted by some impervious stratum. These products, from the nature of the case, can not descend. They are lighter than water, and must tend to rise through the water in the midst of which they are disengaged.

The largest portion of oil and gas thus elaborated escapes to the surface and is lost. In order to prevent this escape, the retort must be furnished with a closed condenser or receiver. The exhalation ascending from the mother shale must be intercepted by a stratum of a clayey and impervious character. Beneath this the oil and gas will accumulate, displacing the water previously occupying the space. This reservoir may be an open cavity, a fissure, a shattered stratum of rock, or a mere porous sandstone. Here the oil will be stored.

But it is obvious that in the course of time a tendency will be manifest toward lateral extension over an indefinite distance, so that the products will be little concentrated in place, if they do not even find a leak in the roof and slyly escape to the surface. In order that these products