

three inches bore would be sufficient to see it distinctly through a thickness of 10 feet water, and that with a glass of three inches diameter we should easily see it through a thickness of 20 feet water, and so on. It appears, therefore, that we might hope to meet with success in constructing a telescope on these principles ; for, by increasing the diameter of the objective, we partly regain the light lost by the defect of the transparency of the liquor.

But it appears to me certain that a telescope constructed on this mode would be very useful for observing the sun ; for supposing it even the length of 100 feet, the light of that luminary would not be too strong after having traversed this thickness of water, and we should be enabled to observe its surface easily, and at leisure, without the need of making use of smoked glasses, or of receiving the image on pasteboard ; an advantage we cannot possibly derive from any other telescope.

There would require only some trifling difference in the construction of this solar telescope, if we wanted the whole face of the sun presented ; for supposing it the length of 100 feet, in this case, the ocular glass must be ten inches diameter ; because the sun, taking up more than half a celestial degree, the image formed by the objective to its focus at 100 feet, will