sitely polarized, the one being reflected, the other transmitted, and intermingled with the unpolarized part.

(134.) If a parallel plate of glass be used for this experiment, the same process is repeated at the hinder surface. An equal per-centage of the unpolarized portion is similarly divided between the reflected and transmitted rays, oppositely polarized, and as the transmitted polarized portion is, *ipso facto*, guaranteed from subsequent reflection at the polarizing angle, the total amount of polarized light in each of the two beams is nearly doubled. If behind this a second parallel glass plate be applied, the same process is again repeated on the remaining unpolarized portion, and so, by multiplying the plates, the whole incident beam is ultimately divided equally into a reflected and a refracted beam completely polarized in opposite planes. Such at least would be the case were the plates perfectly transparent and infinite in number; but as these conditions cannot be fully realized, the transmitted beam is never completely polarized, though enough so to afford a very convenient mode of viewing many optical phænomena. On the other hand, if the plates be truly plane and their surfaces exactly parallel, the reflected beam is wholly polarized, and as its intensity is nearly half that of the incident light, this affords an excellent mode of procuring a polarized beam available for purposes of experiment. A frame containing six or eight squares of good window glass laid one on the other, and backed by a sheet of black velvet, is one of the most convenient and useful of optical instruments, and will be frequently