and the merit to increase as the probability, *so estimated* diminishes. The range in this table of the quantity a, or what may be termed the probable error from the centre of a single shot, includes what may be taken as the extremes of good and bad shooting :—

TABLE I.

a	Probable hits per thousand in the					Misses 5 to ∞.
	Gold 0 — 1.	Red 1 — 2.	Blue 2 — 3.	B ack 3 — 4.	White 4 — 5.	
1	500	438	42	. 20	0	0
2	159	341	290	147	50	13
3	74	191	235	208	146	146
4	42	117	164	177	161	339
5	27	78	116	137	142	500
6	19	55	85	106	118	617
7	14	41	65	82	96	702
8	11	31	51	66	78	763
9	9	25	40	54	65	807
10	7	20	33	45	54	841

(6.) For the purpose of comparing this theory with practice, I have been favoured with the series of annual reports of the practice at the Grand National Archery Meeting, with their target lists, and awards of prizes, for fifteen successive years, commencing with 1850 ; which record the hits made by each competitor in each of the colours, from specified distances, and with specified numbers of arrows. The number of shots delivered amounts, collectively, to upwards of half a million ; and excluding 169 cases in which it is noted that the shooter did not deliver all his arrows, and those comparatively much more rare ones in which the record of the shots is incompatible with the awarded value from some other cause than a mere misprint (which can generally be rectified), to 474,384 ; of which 168,239 were hits, and 306,145 misses, on a target of 48 inches in