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Stratford vs. Woodstock

WOODSTOCK golfers motored over to Stratford on June 6th and had a most enjoyable and very close match with the players of that place. The visitors speak very highly of their reception and of the Stratford course. The score:

STRATFORD	WOODSTOCK
Lloyd1	Rossire2
Steele0	Yarker3
Miller2	Bain1
Nasmyth2	Heath1
Keller2	Krupp1
Kay1½	Lounsborough1½
Ballantyne1½	Whitby1½
Maynard1½	Clayton1½
Macdonald1	Stone2
Martin3	Wilson0
Copus½	Stokes2½
Total16	Total17

TIMING THE BALL

"Give Us Some Time to Blow the Man Down"—*Old Chanty.*

By Robert Stanley Weir, Montreal.

THE precise significance of this topic will, I hope, soon appear as I write. I do not propose to discuss that nice co-ordination of movement which goes by the name of Timing the Stroke. Much, indeed, has been written about that, and will, doubtless, continue to be written; but little if anything has been written about the duration of a well-hit golf ball's flight. How long, for example, does a well-struck golf ball, with an aerial flight or carry of, say, 200 yards, remain in the air? How long is a proper iron or mashie shot, apart from the run of the ball on reaching the ground? These are interesting questions. Some may regard them as of little practical import; just as some golfers thought that the late Professor Tait's enquiry into the nature of the flight of a golf ball very proper for students of physics but otherwise of no value or interest. None of the phenomena attaching to the flight of golf balls, however, should be disregarded by players of the game. The more we know about such phenomena the more we train ourselves to observation, the more intelligent as golfers do we become, the greater be-

comes our pleasure and our efficiency.

It is clear that some balls (dealing just now with full shots), are driven with lower trajectory and greater run than others; but whether balls with a low trajectory represent a better type of golf than balls with a high or a medium trajectory is perhaps a moot question and need not be considered here. Granted that when balls are well struck a certain relation between height and carry should be discoverable, there is doubtless a happy mean as to the height to which the trajectory should soar. But the skillful golfer will take account of ultimate hazards and will, in certain circumstances, seek good loft with a modified or minimized run; and in other cases where no hazards intervene and a maximum distance is desired, he may alter his methods. We are told, for example, that Harry Vardon prefers to play his big shots for all "carry" and even with a touch of slice so as best to insure an accurate alighting of the ball and little run. Such a method of play should afford admirable opportunities for timing the duration of aerial flight or "carry," and I trust that records of such may be made available soon. The direct utility or otherwise of such observances need not, however, give us much concern. Let us enjoy ourselves in the simple pleasure of counting the seconds which golf balls require for their exquisite flights and look for utility afterwards.

On Saturday, November third, I went out to Kanawaki and got Albert Murray, professional there, to play me a number of shots up and down wind with his driver and mashie. The day was cold and raw, and Albert who had just returned from ten days' duck-shooting on Lake St Francis was slightly handicapped by cold hands and some extreme weight of clothing; however, as will be seen, he was able to despatch highly creditable balls in all respects. Albert has a theory to which he holds tenaciously, that balls have, owing to the different atmospheric conditions, more carrying power in summer time than in the denser air of autumn. That longer carries can be got in July than in, say November, is not to be disputed, but whether this be due to any difference in

the impalpable ether or to the way in which one's body is diversely affected by heat and cold; in other words, whether the difference is, not in the air but rather in the player, is perhaps worth considering. Another professional friend of mine, not a golfer, it is true, inclines to the latter doctrine, but Albert may be quite right for all I know.

The result of the experimental shots delivered by my professional were interesting and in some respects surprising. Let me say that I was accompanied by my friends Harry Birks and H. S. Philips, who timed the shots by means of a first-class stop watch, which split the seconds into fifths and was close enough for my purpose, the timing being reckoned from impact to the drop of the ball. Two of us were provided with sharp pointed stakes, and, watching the balls as they came to us where we stood down field, we marked the spot where each alighted and determined the distance afterward. The course from the tee outward was already marked by side posts showing the 100, 150 and 200 yard distances, so that the measurement of the odd yards was a simple matter.

The first shots were with the driver down wind, which I had no means of measuring, but it was, while not a sea-side breeze, quite perceptible and fairly strong. I have since ascertained from the Observatory at McGill University that the velocity of the wind there at the same hour was 24 miles per hour, and this may be taken as sufficiently accurate as to conditions at Kanawaki, which is not more than ten miles distant from Montreal. The Thermometer stood at about 37° Fahrenheit, so that we did not waste any time over our work. The wind, I daresay, assisted the carry of the balls, but as to this I have no comparative data; some day I hope to procure them so as to decide whether, and if so to what extent, a following winds helps a ball in its flight.

I now give the distances and duration of carry of seven shots played by Albert with his driver.

The Shots	Length of Carry	Duration of Carry
One	220 yards	5 4/5 seconds
Two	214 "	5 2/5 "
Three	222 " 1 foot	5 4/5 "
Four	203 "	5 2/5 "
Five	225 " (a beauty	5 4/5 "
Six	197 2/3 "	5 1/5 "

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Our watch does not appear to have been able to register differences in time of flight where the difference in distance was 6 or 8 yards. Thus, balls which carried 220, 222 and 225 yards are all timed at $5 \frac{4}{5}$ seconds; and those which carried 187 and 197 $\frac{2}{3}$ yards were registered alike at $5 \frac{1}{5}$ seconds.

We next proceeded to another hole, ordinarily requiring a nice firm mashie shot, but on this day's demanding, Albert said, a little more punch. The distance was 110 yards and it was rather surprising to us to note the very slight difference in the time of the mashie shots as compared with the tee shots. I append the results of our notes as to six mashie shots.

The Shots	Distance	Duration of Carry
One	112 yards	$5 \frac{1}{8}$ seconds
Two	110 "	$4 \frac{4}{5}$ "
Three	115 "	$5 \frac{4}{5}$ "
Four	110 "	$5 \frac{1}{5}$ "
Five	112 "	$4 \frac{1}{5}$ "
Six	110 "	$6 \frac{1}{5}$ "

After playing the first four of these shots in his normal style, which was with fair but not exaggerated loft, Albert

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said he would play a lower shot, with the result indicated in No. Five. The sixth shot was played deliberately high, giving a duration of $6\frac{1}{5}$ seconds.

I venture to think that a comparison of the two tables give above will occasion some surprise. Few golfers would suppose that a golf ball flying 220 yards would take only a fraction of a second longer than a mashie shot pitched in the ordinary way. Compare No. 1 in each table. For example, a mashie shot of 112 yards consumed $5\frac{1}{5}$ seconds; whereas a full drive with a carry of 220 yards was only $2\frac{2}{5}$ of a second more. Taking for granted, as I think we must, if Professor Tait's learned and conclusive researches that the aerial flight of properly constructed golf balls is characterized by underspin, it is evident that the underspin is a ball despatched by a driver or brassie must be very much more rapid than the underspin of a properly played mashie shot. It is a common supposition with many golfers that the mashie shot possesses underspin to the highest possible degree and that with a niblick it is still greater. This view is quite erroneous. The longer the flight the more rapid is the underspin. The shorter the flight, the less rapid the underspin. In fact, so sluggish is the underspin in, let us say, a half shot with a mashie, that it is quite perceptible to the naked eye. Underspin, be it understood, is the soul of golf. It is the characteristic of all good flight in golf balls. It should also be understood, and much incorrect speech and writing should be corrected accordingly, that topspin spoils all aerial flight. A ball, afflicted with topspin, immediately scuttles. If conditions are favorable it degenerates into a roll along the ground. In the putt there is, of course, neither underspin nor top spin; the ball is merely rolled; but there are various ways of impacting the ball, hands in front or behind the ball, at, above, or below the centre of the mass.

Coming back against the wind, which showed the usual tendency to climb up still blew strongly, Albert's first shot against the wind, and, accordingly there was a relatively increased duration of carry. This shot had a carry of 155 yards with a duration of 7 seconds, which

showed clearly the retarding influence of the wind. The second shot had a carry of 163 yards, with a diminished duration of $5\frac{3}{4}$ seconds. It was both lower in flight and swifter. Albert now buckled himself for a mighty and careful effort and succeeded in despatching a beauty with a carrying flight of 172 yards and a duration of 7 seconds. This was an exceedingly beautiful shot to witness, as it mounted up against the wind, hanging at the top of its flight perceptibly before it fell. Another lower shot had a carry of only $5\frac{1}{5}$ seconds. The difficulty of controlling shots against the wind travelling in the neighborhood of 25 miles an hour was thus clearly illustrated. On the other hand, it would appear that when balls against the wind are perfectly struck, as in the case of the third and fourth shots above described, the duration does not greatly differ from the good shot down wind. The perfect tee shot, according to my observations, would thus seem to have a carrying flight of about $5\frac{3}{5}$ seconds, and it would really seem that the difference in duration of carry between all full shots, whether with driver, iron or mashie, is only fractional when they are well struck. When the distance is less the underspin is slower; when greater, more rapid; the time, however, about equal. This I took to be the most striking feature of our experiments—that a mashie shot covering half the distance of a drive took practically just as much time to fulfill its flight.

An old chanty or sea-song had the refrain as sailor-men used to heave at the windlass:

Similarly should the golfer always give his stricken ball sufficient time to come down and let him pause at the finish of his follow-through and enjoy his own statuesque poise as he watches the descent of the ball. Golf Illustrated.

