

Cause and Effect

By STUART MURRAY
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I arose at dawn this morning, just when the sun was coming over the hills, then motored out to my golf club. On my way I passed over a railway bridge, noticing the lines meet in the distance, and wondered how the train kept on the rails. Possibly, I thought, the axles have some means of adjustment as they proceeded from that bridge, for the lines were wide under the bridge, but met in the distance. Then it occurred to me that my eyes might be fooling me, but being a golfer I doubted it. As a golfer, I was used to accepting everything I saw as truth.

For instance, I had witnessed champion after champion with straight left arm, full pivot, cocked wrist, right elbow to side, and many other similar happenings, and I had accepted them as CAUSE. True, many of my members possessed all these wonderful actions and played most horrible golf; some had never even broken 100. These I had come to dismiss as exceptions. If the player failed to straighten the left arm, then he was bound to hit the shot wrongly. Or if he failed to negotiate any of the other hurdles of golf theory, he was doomed to failure.

Search for a Law

Then I began to reason it this way: If so many wonderful golfers hit the ball straight so often, then a law was involved somewhere.

What was that law? To hit the ball straight, the face of the club had to meet the ball square to line of flight and stay in that line for duration of impact. How could I obtain a motion for my clubhead that time and time again would bring about that result?

Then Ernest Jones, the great teacher, swung a penknife on a handkerchief to and fro as he would a golf club, but though my eyes could not see it, yet we found the knife passed the hands in the center of the swinger each time.

Yet this could not be true because the



Stuart Murray

left arm was bent, there was no full pivot, the wrists had not fully cocked, and, horror of horrors, the right elbow was far from the side. This was rank heresy, to promote such an idea; had not Galileo been jailed for just such heresy? Besides, even if true, how about that snap of the wrists in order to speed up the head at impact? Timing was perfect in the swinging motion of the pen-knife, and force of gravity takes care of the so-called "snap." My sense of sight testimony must be right, surely? Could I not see the snap of the wrists?

Even if Ernest Jones was right, yet lacked he one thing, I reasoned—that was the force in the motion of the pen-knife. I needed much more than that to send 1.62 ounces of ball over 200 yards. What was this idea doing to my theories based on SIGHT? Where would it stop?

Practically 5,000 years ago another young man had proved that the pen-knife possessed terrific force, though he did not use a pen-knife. The Bible says David took five small stones and a sling, and Goliath of Gath was no more. Let us look at the actual words, "the stone sunk

into the middle of his forehead." Both ACCURACY and FORCE are here. What kind of force? Why, centrifugal force, the greatest force for the least amount of power expended.

This force—What was its nature? What did it do? If true, then all my theories of arm, pivot, cocking, and so on must take a radical reversal. Did the sun go round the earth? Did those lines meet in the distance? Did the sun really rise and set? According to my science books—no.

Then what was I seeing? Only an optical illusion? Yes. Then maybe what I had taken for granted for CAUSE was in reality nothing but EFFECT.

The workman with his can of hot tea swung it in a circle, but none of the tea fell out of the can. That was centrifugal force. The longer the arc of his swing, the faster the can moved. Oh, no, this could not be, for how about that short controlled swing to hit it straighter and farther? Yet, here was irrefutable proof that the pendulum took the same length of time to cover a short swing as a long

swing; hence the longer the swing, the faster it must move.

Summing up, the properties of the SWING motion are ACCURACY, TIMING, and FORCE. The motion was the CAUSE of the straight arm, the free pivot, the cocked wrists, and so on. All players, being slightly different physically, respond a little differently. In other words, the EFFECT upon each one of us might vary somewhat though not greatly.

Thus a law was seen to exist in the swinging clubhead and the swinging pen-knife, in that each time it passed the hands' dead center at its highest speed and possessed force.

Need more be said? Yes.

How was this motion created? Then I was reminded that the sun did not rise and the rail lines did not meet, though it looked that way. In other words, not through sense of sight, but through sense of FEEL at the point of contact with my instrument, my HANDS and FINGERS.

So we have arrived. CAUSE lay in our sense of feel in our hands to create a

(Continued on Page 17)

A LESSON FROM HOGAN

(Continued from Page 9)

masterpiece. It was a challenge to the player. The best players finished on top."

John O'Hara, who did a superb job as Oakland Hills' General Chairman, wrote us: "Much controversy has been raised by the treatment of the course, and it looks as if it is a subject that will be continued far into the future. The reception given Robert Trent Jones at the presentation ceremony showed that the public regards him as a hero. I am wondering whether the general rank and file of golfers, as well as spectators, feel that golf is difficult for them and they would like to see some of their obstacles placed in the paths of the stars."

Jones, who designed the course revisions, saw it in retrospect as follows: "The quality of the players who led the field gave conclusive proof to the belief that Oakland Hills was a great test.

"So did the manner of scoring. There was no one hole—no trick hole—where all players did badly.

"If I had the alterations to make all over again, I would do exactly what has been done, with the exceptions of two places, on the fourth and the eighteenth holes."

Oakland Hills was a very severe test. But it produced a field of unusual ability for the final 36 holes. It required Ben Hogan to use practically every club in his bag during his two great rounds of the last day. And in that respect it recalled a remark which the late William C. Fownes, Jr., the spirit behind Oakland near Pittsburgh, made to Walter Hagen.

"Walter," he said, "surely it isn't asking too much of the Champion to require him to play every shot."

When the Guttie Gave its Last Gasp

By WALTER E. EGAN

RUNNER-UP IN 1901 USGA AMATEUR CHAMPIONSHIP

Readers of the USGA JOURNAL may be interested in an account of the exit of the gutta percha ball in USGA Amateur competition.

About 1898 a rubber-cored golf ball was invented by a man named Coburn Haskell, of Cleveland. At that time, we were all using the solid gutta percha ball. The new Haskell ball carried considerably farther but had a tendency to drift at the top of its flight and was gradually given up for that reason.¹

In the summer of 1901, Jim Foulis, professional from the Chicago District, found out that some old cut-up Haskell balls flew well, without the objectionable drifting. In those days, all the pros had remolding machines and he remolded these cut-up Haskell balls, with deeper indentations. That was the answer.

I was going to play in the USGA Amateur at the Country Club of Atlantic City in September, 1901, and went down there some ten days ahead of the tournament with a very good friend of mine, an excellent young golfer, Manny Holabird by name. Foulis gave each of us two boxes of the remolded Haskell balls.

On arrival in Atlantic City, we had a four-ball match with Walter Travis and Fred Herreshoff, who was later runner-up in the 1904 Amateur. Herreshoff was a very long driver. Fred was much disturbed to find that Manny and I were outdriving him and finally asked what kind of ball we were using. We laughingly confessed, and within the next week practically all the expectant contenders had telegraphed or telephoned their home clubs, so that when the tournament started Findlay S. Douglas was the only prominent player who stuck to the gutta ball.

The semi-finals were at 36 holes and as I had finished my match early, I followed Walter Travis, the ultimate winner, and Douglas as they played the 37th and

38th holes. When Travis finally won and Douglas picked up his ball on the 38th green, I think I can rightly say that was the last time a gutta percha ball was used in a USGA Amateur Championship.

When Mr. Egan's story was referred to Mr. Douglas, he recalled it as if it were yesterday.

"That ball gave Travis a tremendous advantage," he said. "It bounded along and ran through traps in a way that left my ball behind. I think I might have beaten him that day but for that."

That may truly have been the last appearance of the guttie in the Amateur, although Mr. Douglas did not relinquish it quickly nor very soon embrace the Haskell ball. He did not play in the Amateur in 1902. When he won the Metropolitan Amateur in 1903, two years after the incidents in Mr. Egan's story, he won it playing a pneumatic ball — a ball made of a shell filled with compressed air.

¹ It is interesting to note that the manufacturers of the new ball had omitted exactly the same important factor as the first makers of the old guttie, which dipped and swerved in flight until caddies discovered by accident that it flew straight when nicked up.

CAUSE AND EFFECT

(Continued from Page 15)

SWING, and all other movements would be EFFECTS. What should we think about then? Why, the clubhead SWINGING.

How did Ernest Jones put it?

"Use the hands to wield the clubhead and to sense control of what is being done with it from first to last. Actions by other body members are responsive to this conscious purpose of maintaining control of the clubhead throughout the stroke."

Notice that last sentence carefully. I think the sun has risen, and I hope we never let it set again.