Green section, and articles written by many practical authorities were published by GOLFDOM and played a very large role in the educational program. The ever-growing demand for finer turf caused the manufacturers to develop better and more economically operated equipment, the fertilizer men to develop better and more efficient fertilizers, the chemical companies to develop insecticides and weed control and means of applications.

During these changes and developments it was very necessary to keep in constant contact with your green chairman and other club officials so that they could understand the progress in golf course maintenance. It also became necessary to start keeping a set of records so you could show what was done and why.

With the development of chemicals and the danger in applying, it was necessary to be very careful in selecting men and training them for this work.

During the constant changes and developments of golf course maintenance it was found necessary for the superintendents to make a study of landscaping so his course was a place of beauty as well as sports ground.

Through the years there has been a lot of long hours of hard work and planning, but the enjoyment of seeing your efforts develop into a place where many people could have a club to which they were proud to bring their friends has more than offset the worry and strenuous labors and headaches.

After 38 years at the same club I have severed my connections. The club was purchased for a fee course operation and maintenance to the exacting standards of highest type private course operation is deemed impractical. In a way that's a tragedy to one who has spent almost four decades in striving to perfect and beautify a course. But the case is not unusual among superintendents who love their work and are proud of their courses. The veterans have raised the standards so the ordinary conditions of courses today are better than existed at many high ranking private clubs 25 years ago.

I wish to extend my most sincere appreciation for the many interesting topics which the publishers of GOLFDOM have supplied to the superintendents and club officials in keeping them abreast of progress.

I know there are many felow superintendents who have gained as much as I have in the 25 years of GOLFDOM and I feel sure that they will continue to be of great help to the younger men who are coming up in the ranks to take over as the so-called "old timers" approach the retirement age.

# Five Major Developments In Course Improvement By JACK PATTERSON

Congratulations to GOLFDOM on the completion of its 25th year. It has been the guiding hand of many of the improve-



ments made on golf courses with timely and well selected articles. I would like to present to its readers at this time a few observations of an "Old time Pro-Greenkeeper."

There have been five major developments in the past 25 years that have been

Jack Patterson

the means of making golf courses the places of beauty they have become. I list them in what I consider their order of importance.

First: Machinery: I well remember in the early 20s at Midlothian all the power we had were men and horses. The rough at that time was allowed to grow to the late spring, then cut, and the resultant hay was allowed to cure, then raked up, stored, and used as fodder for horses.

Those were the days that the rough was the golfers' nightmare. The rough of today is only rough because of the comparison between the perfection of today's putting greens and fairways which would have been impossible to obtain without all the present-day equipment; gangmowers, power mowers, spray machines, etc. But in spite of the lack of equipment Midlothian, in that earlier period, was recognized as one of the best courses in the country. Golf has come a long way since then.

# Second: Elimination of Worms and Grubs.

The problem of worm casts on greens today is rarely encountered. In the early 20s it was one of the greenkeeper's heartaches. With the help of good old bichloride of mercury and, at a later date, Mowrah meal, we were able to present a reasonably clear putting surface. Then came arsenate of lead. I am happy to say that I was one of the first to use this for worm and grub elimination and got quite a thrill at the time when greenkeepers from far and wide visited Midlothian to inspect the wonderful results obtained. Chemical control is the reason you see no worm casts on putting greens today.

### Third: Fairway Watering.

In the early 20s it was no picnic to walk on fairways by the time the 4th of July arrived. The fairways were not only brown and hard but had cracks; in some cases, big enough to lose a golf ball. But that's not the case now since fairway watering came into general practice. The fairways are almost as good as some of the greens years ago. Oh, you lucky golfers of today!

In the early 20s the Reddy tee was introduced and later on eliminated one other of the greenkeeper's chores; the removal of tee sand boxes which had to be attended to every day to keep the sand in condition so that a ball could sit on it. Probably the majority of golfers of today have never seen a sand box.

#### Fourth: Development of Fungicides.

Putting greens for many years have been damaged by fungus diseases. In the 20s the only remedy then known was bichloride of mercury which did a fairly good job, but at the same time could do a great deal of damage if applied carelessly, so very close supervision was required. Around about 1923-1925 the chemical companies began to experiment and have developed fungicides that have brought fungus disease under close control and have therefore made possible the perfect putting greens of today.

## Fifth: Putting Grasses.

To go back again to the 20s, in the early life of GOLFDOM, the putting greens were composed of many different types of grasses which made it very difficult to maintain a really good putting surface. About this time United States Golf Assn. began to take a very active interest in the development of bent grasses and has continued through the years with the active support of the superintendents' associations and have now developed many strains of grass suitable for different sections of the country. This has resulted in excellent conditions of the putting greens all over the country and has helped to make the game of golf the healthful and popular game it is today. I am proud of my over 50 years of active service in Golf, and having taken part in many of the improvements made in the "Grand Old Game."

When I change cups and happen to hit a hole left by an aerifier and see long roots extending far below that of the other growth I see a pay-off for attendance at turf conferences. After the Los Angeles conference in 1949 I got our officials to make possible aerifying of our greens. We've escaped enough trouble that was common with us and improved our greens so much that idea alone was worth attending the turf conferences and meetings.

A. R. Emery, Supt., Bonneville GC, Salt Lake City, Utah.

## Progress That Looked Nearly Impossible By EDWARD B. DEARIE, JR.

Supt., Oak Park (III.) Country Club



Ed. Dearie

During the 34 years I have been in golf course maintenance work I have seen progress that we would have regarded as impossible as recently as 25 years ago although some of us probably were dreaming of what now has come true.

We have made our

experiments — some very cautiously and some boldly — and have seen a fair amount of failures but some remarkable successes. I remember one early venture in chemical weed control on the 15th fairway at Oak Park that I made after worrying and exploring all possible angles. When our officials gave me the "go ahead" the treatment was applied. For weeks the fairway was horrible looking and I suspect that some of the members thought I'd made an unwarranted mistake. Then the recovery began, as we'd planned. Now I doubt that there's a better fairway in the midwest. It's weed-free and the turf is firm, deeprooted, compact, of fine color and healthy.

That was one example of what we risked when we applied earlier research to our courses. But the pay-off is in the results and the advance in the practical application of testing research promises continued and greater advance in course maintenance.

I began greenkeeping at Wanango CC, Reno, Pa., in 1917. My salary was \$110per month. The men working on the course numbered twenty and were paid  $25\phi$  an hour. We had mixed grass greens, consisting of German mixed bent, blue grass and fescue. Our main equipment consisted of Coldwell gang mowers. We used Bordeaux mixture for insect and fungus control and used mushroom soil and sheep manure as our main fertilizers.

Since that time I have seen many changes come about. We gradually changed to stolon bent greens. In the '20's we saw fairway irrigation come into its own. Research and science have given us a number of effective controls for diseases, insects and other pests.

Mower companies have developed power mowers and machinery, reducing the cutting time about one-fourth from the early days. Research has also come up with weed killers, which to my mind have been the greatest aid to the greenkeeper and