Ed Dudley Carry and Roll	256	245	258	254	253	George Dawson Carry and Roll	251	240	254	236	245
Carry Only	236	220	238	240	234	Carry Only	222	225	208	190	211
Roll Only	20	25	20	14	19	Roll Only Errie Ball	29	15	46	46	34
Harry Cooper Carry and Roll Carry Only	$\begin{array}{c} 257\\ 231 \end{array}$	$\begin{array}{c} 230\\ 220 \end{array}$	$\begin{array}{c} 262\\ 216 \end{array}$	$\begin{array}{c} 257\\ 219 \end{array}$	251 222	Carry and Roll Carry Only	$\frac{260}{226}$	$\begin{array}{c} 215\\ 202 \end{array}$	$\begin{array}{c} 235\\ 225\end{array}$	246 225	239 219
Roll Only	26	10	46	38	29	Roll Only	34	13	10	21	19
Denny Shute Carry and Roll Carry Only	248 235	222 205	$\begin{array}{c} 262\\ 215\end{array}$	$267 \\ 225$	250 220	Mike Turnesa Carry and Roll Carry Only	$\begin{array}{c} 252\\ 230 \end{array}$	247 235	247 225	$205 \\ 190$	238 220
Roll Only	13	17	47	42	30	Roll Only	22	12	22	15	18
Wilford Wehrle Carry and Roll Carry Only	247 235	$\begin{array}{c} 230\\ 220 \end{array}$	$\begin{array}{c} 260\\ 227 \end{array}$	263 238	$\begin{array}{c} 250\\ 230 \end{array}$	John Lehman Carry and Roll Carry Only	$\begin{array}{c} 236\\ 224 \end{array}$	225 223	$\begin{array}{c} 230\\ 213 \end{array}$	$\begin{array}{c} 253\\ 227\end{array}$	236 222
Roll Only	12	10	33	25	20	Roll Only	12	2	17	26	14
Harold McSpade Carry and Roll Carry Only	en 250 238	$238 \\ 225$	$\begin{array}{c} 262\\ 245 \end{array}$	247 235	249 236	Toney Penna Carry and Roll Carry Only	$\begin{array}{c} 240\\ 228 \end{array}$	$\begin{array}{c} 237\\ 205 \end{array}$	$\begin{array}{c} 234\\ 215 \end{array}$	$\begin{array}{c} 235\\ 223 \end{array}$	$\begin{array}{c} 236\\ 218 \end{array}$
Roll Only	12	13	17	12	13	Roll Only	12	32	19	12	18
Ben Hogan Carry and Roll Carry Only	210 185	$\begin{array}{c} 270\\ 230 \end{array}$	272 224	$\begin{array}{c} 240\\ 227\end{array}$	248 217	Tony Manero Carry and Roll Carry Only	$\begin{array}{c} 225\\ 202 \end{array}$	$\begin{array}{c} 250\\ 215 \end{array}$	$\begin{array}{c} 218\\ 195 \end{array}$	$\begin{array}{c} 244\\ 225\end{array}$	$\begin{array}{c} 234\\ 209 \end{array}$
Roll Only	25	40	48	13	31	Roll Only	23	35	23	19	25
Joe Kirkwood Carry and Roll Carry Only	$\begin{array}{c} 247\\ 238\end{array}$	$\begin{array}{c} 237\\ 220 \end{array}$	248 226	$\begin{array}{c} 252\\ 237\end{array}$	246 230	Chick Evans Carry and Roll Carry Only	$225 \\ 175$	$\begin{array}{c} 230\\ 207 \end{array}$	230 202	$\begin{array}{c} 232\\ 200 \end{array}$	229 196
Roll Only	9	17	22	15	16	Roll Only	50	23	28	32	33

## Greenkeeper Considers Design of Postwar Equipment By EMIL MASHIE

Golf Course Supt., Onwentsia Club

NOTWITHSTANDING the crowded schedule under which greenkeepers work these days many of them are giving thought to design and construction desirable in postwar equipment. Possibly some of this thought is prompted by the acquaintance with machinery design and performance which has been enlarged by wartime jobs. In my own case I start at the course at 6:30 A.M. or before and am in a machine shop of a metallurgical company from 3:30 P.M. until midnight.

Such a program, requiring intense study of means of conducting golf course maintenance operations with speed, economy and continuance of good playing condition, together with opportunities of observing close-up the methods of a very efficient industrial plant, is bound to have an effect in making one think about what improvements could be made in course maintenance machinery.

At Onwenstia we have had less power

equipment than I think we'll consider essential after the war. Prior to the war we were able to rely on manual labor to handle work that motorized equipment could do.

Like many others responsible for golf course condition I believe I have some definitely practical ideas of what will have to be done by motorized equipment after the war. Possibly some of my opinions and hopes are too visionary, but I believe them to be well founded.

First, regardless of type of equipment one is to favor, lighter equipment, especially green mowers is desirable.

On greens it seems that about 21-inch mower is the maximum that can be used practically. How about designs along the lines of fairway gang mowers, maybe three small mowers? How about two or three flexible reels as one larger unit? Personally, I like a single unit mower for greens—but the gang mowers accomplish the work faster. I have thought of units of two or three that can be used as such or separately. There is no question that with lighter mowers increased efficiency and improved turf will be attained.

In the rough mower field, there is need

for an efficient and practical mower-one that can take tall grass and do a good job of lopping it off to golf length rough and maintain it at good rough height. At present the reel type mower is not designed to cut rough well at any length. A mower with a large three or four blade reel and low frequency might be an improvement over the present type. I might add that with the style of leaving fairways longer mowers must be designed so the reel will do less fanning of long grass, especially blue grass, and to do less fanning there must be a slower revolving reel for the distance traveled and more dis-tance between blades on reels. Today's mowers do not do a thoroughly satisfac-tory job of cutting blue grass at say 1%-inch high. Simplicity of design to facilitate repair and upkeep is a much desired feature with the operator. In the past two years with inexperienced help and speeding about in trying to get the work done, grease fittings and oilings have been neglected by some. How about a four wheel drive on fairway mowing tractor to better distribute the forward traction pressure, and a different line-up of the forward and rear wheels so as to lessen lying down of grass to be cut?

## Iowa Tests Chemical Weed Control

At Ames (Ia.) G&CC in cooperation with V. S. Peterson, agricultural consultant, Dupont corporation, H. A. Lantz, Iowa Agricultural Experiment Station, made some preliminary tests on dandelions and the broad leaf plantain using "Amnate" (Ammonium Sulfamate) at rates ½, ¾ and 1 pound per gallon of water. In May the ½ lb. rate did as well as ¾ lbs. in killing dandelions. More than 95% of dandelions were killed by a single spray. The ½ lb. rate killed plantain efficiently in May, but in late June ¾ lb. gave a better kill. Another trial spraying on July 6 on an exceedingly heavy growth of plantain using ¾ lbs. "Amnate" per gallon gave near 100% kill on all plants covered by the spray. The effect of the spray on the plants becomes visible in 3 to 5 hours. It requires several or more days for a complete kill. The "Amnate" penetrates the leaves, is translocated gradually to the roots and kills the entire plant. The soil of a heavily infested weed area naturally is foul with weed seed, which germinates to provide a new weed crop. Prompt spraying when the foliage is about half developed will kill this crop. Further sprayings will be needed to finally clear out the infested area.

The early May spraying did no perceptible damage to bluegrass. In some areas which were well soaked with spray

the grass showed some weakening. Sprays of "Amnate" in July caused considerable grass killing. Further reports will be made later on about time of application, Lantz says.

We are not yet ready to make definite recommendations, but preliminary results indicate that "Amnate" will be an extremely useful chemical means of destroying weed in many areas on the golf course.

Our Vice-president E. F. Johnson went into the army July 27. He had done a swell job in repairing the damage done by the May floods on the College Golf Course at Ames. The Masters tournament July 29, 30 brought out a large number of top golfers from all over the state. Jack Hall, the well known Waveland pro, was medalist with a 70-77 score to best the field by six strokes.

## New York Golfers Plan Hospital Course

JOHN INGLIS, pres. of the Metropolitan PGA heads a committee planning construction of a 9-hole course adjacent to Halloran General hospital on Staten Island, N. Y. The committee expects to raise \$15,000 for building the course.

With the permission of the War Department, Brigadier General R. G. DeVoe, commanding officer of the hospital, has donated twenty-three acres of land around the hospital for the golf course. Robert Trent Jones, golf architect, has said that he can build a nine-hole course and in addition a driving range and a putting green.

The committee plans on raising the money by inviting every club in the metropolitan area to stage a one-day tournament during September with the proceeds to go to the Halloran Hospital Golf Fund.

The course will be completed in the fall and ready for play next spring. The driving range, however, will be complete in a few weeks.

GOLF IN ENGLAND—Capt. Elliott H. Griffith, well known in American greenkeeping, writes a pal back home: "The course I played on last week-end was an 18-hole layout that apparently had been rather nice before the war. They told me that they had just one man working on the course at present and that all the other work was done by members in their spare time. The fairways were cut up by ditches and had big concrete blocks lying around to forestall any chance of planes landing. The greens were cut all right but had quite a few weeds. They use the course as a riding grounds also and horses were being ridden all over the place."