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cow pastures into paradises

**A GOLF COURSE IS AS GOOD  
AS ITS SUPERINTENDENT—  
... AND HIS EQUIPMENT!**

*by don herold*

I'm in heaven when I play golf. And a good part of my fun is . . . grass. I'm one golfer who appreciates the work of you Golf Course Superintendents.

In fact, I'm writing a series of ads in *Golfing* to remind my fellow golfers that YOU make good golf possible for us . . . and asking them to help you keep the courses in good shape.

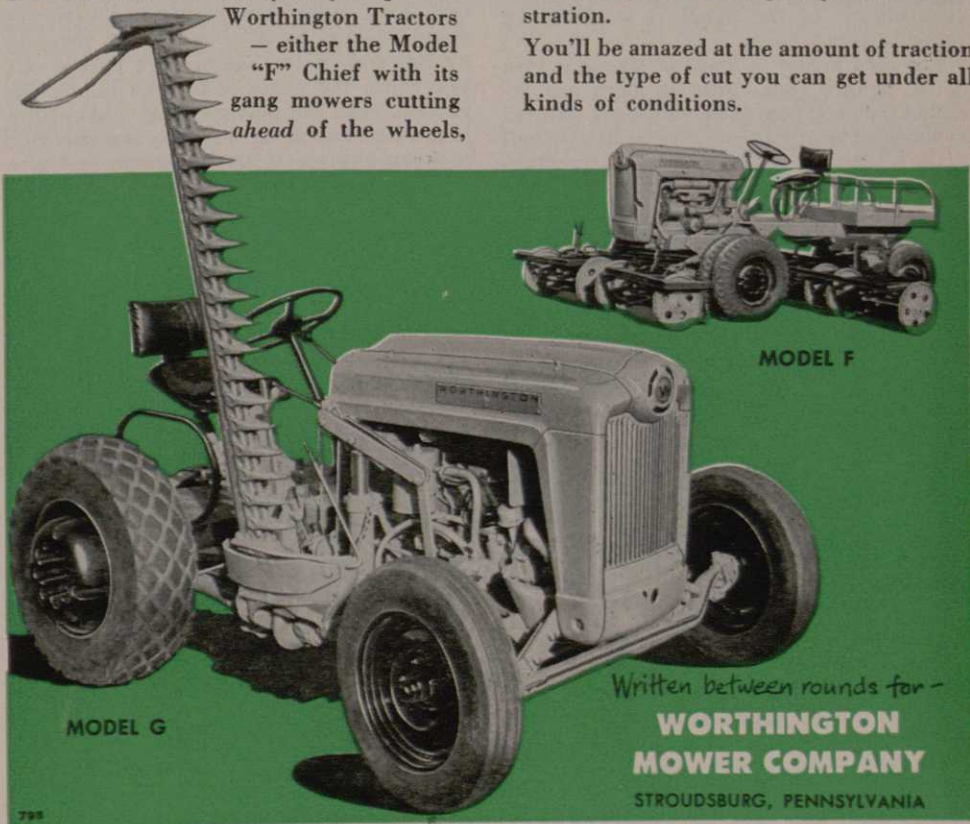
I've noticed that many of you prefer Worthington Tractors — either the Model "F" Chief with its gang mowers cutting ahead of the wheels,

or the Model "G" with tow-type gangs.

Both tractors are tops. Both have the new, more powerful Ford engine with overhead valves. Both have "steerability" for those hard-to-get-to places. Both have adjustable steering columns, extra-comfortable seats and big, low-pressure tires for maximum traction on hilly terrain.

If you don't have the 1954 Model "F" or "G" on your course, why not let your Worthington dealer give you a demonstration.

You'll be amazed at the amount of traction and the type of cut you can get under all kinds of conditions.



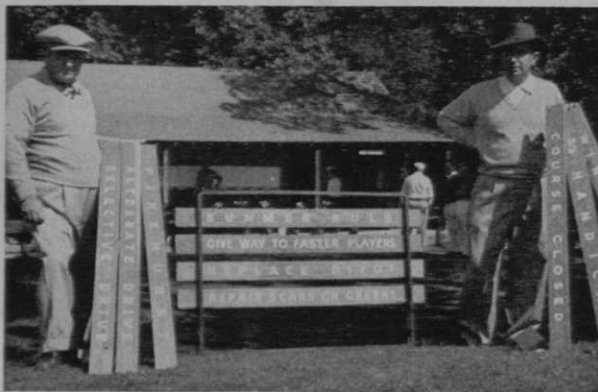
MODEL G

MODEL F

Written between rounds for

**WORTHINGTON  
MOWER COMPANY**

STROUDSBURG, PENNSYLVANIA



At the left of Kenwood's attractive and informative first tee sign is the club's pro, George Diffenbaugh, and at the right is club member J. P. Trouchaud, the architect who devised the sign.

### Sign Informs and Adorns at Kenwood's First Tee

**J.** P. TROUCHAUD, prominent architect who's a member of the Kenwood G&CC at Washington, D. C., designed a sign holder used alongside the club's first tee that answers questions usually asked at the tee and which reminds players of their responsibility in course care.

Many of Kenwood's guests ask members about the sign and get from their hosts confirmation of the hunch it would be of value to other clubs.

The sign holder is made of wrought iron  $\frac{3}{4}$  in. square rods. Into its slots are inserted redwood boards on which are painted in white letters: Replace divots, Repair ball scars on greens, Give way to faster players, Summer rules, Winter rules,  $\frac{3}{4}$  Handicap,  $\frac{3}{8}$  Handicap, Full handicap, Course closed, Alternate drive, Selective drive. Selection of the signs to be displayed in the five slots of the holder gives information on type of competition being played as well as information to be heeded at all times.

George Diffenbaugh, Kenwood's pro, says the sign saves much time in answering questions about the weekend competitions and is bound to be noticed as it faces each player as he tees up.

The legs of the sign end in pointed prongs which make the device easily removed for mowing and for relocation.

Cost of the sign was about \$60, of which \$40 was for lettering the boards. The lettering is spaced to line up at both ends of all sign lines used.

### Tells Club Range Plan of Operation

Geoffrey M. Field, a director of Northmoor CC (Chicago dist.) where Ed Vines is pro, tells of the operation of the club's range. This has been a highly pleasing

feature for members of that excellent club and many other clubs have inquired about the Northmoor plan. Here it is, in Jeff's words:

"Our manner of operation is to turn everything over to the golf professional; that is, club cleaning, sales, lessons, and driving range.

"We have a space about 70 yds. long by 45 yds. wide which is somewhat elevated and used as the driving range tee. Our supt. sods and plants in repairing every Spring as it is very well torn up by the end of the season. We spread out two ropes the width of the tee (along the ground) and the players must stay within those two ropes. In this way we are able to keep the tee in better shape and also avoid accidents. We do not mark off distances between the players but we can accommodate 10 to 12 at a time and it rarely is that crowded.

We charge 75¢ for a large bucket of balls and 50¢ for a smaller one. The large bucket contains about 60 balls. We use second-hand balls. Leading ball manufacturers make very good range balls which are livelier and more like the ball you would play than the regular driving range ball. The professional gives one new ball for every 10 satisfactory used balls turned in by members.

"We paint a stripe or an 'X' on the range balls.

"Most of the members seem to want to contribute their old balls. We do not allow any shagging by caddies on the driving range as we had numerous accidents from members using caddies for shagging their own practice balls.

"One man runs the range. We keep a table and a charge book on the range with a sign for members to sign as the man spends a great deal of his time picking up balls. Our range is about 240 yds. long

and we have a wire screening at the end to stop the long boys. We also built a green about 150 yds. out which is flashed up with a couple of traps. It is only for a target and not for putting but it is much better than just having a sign. We also have large sign markers for 100, 150, 175, and 200 yds. The players do want to know the yardage from middle for practice tee to the marker.

"We were bothered quite a bit by players who want to hit a half a dozen balls before teeing off. The human tendency is to act a little bit like an old-time cop around a fruit stand. We got around that by having a "Warm Up Box" of 12 practice balls for 25¢. No more free samples!

"Our driving range is close to 20 years old and it is profitable for the pro. The exact figures I do not know as he works it as a partnership with the man who runs it for him. They have some sort of a deal on lost balls, new balls, etc.

"We do not run it at night. We feel that business is for the driving ranges in the neighborhood. Ours is open from 8:30 in the morning till 7 at night. I doubt seriously if it could be operated at a profit at night; at least the professional doesn't want it. The regular man couldn't put in the hours and another man would not pay. Like all clubs, we have a few members who would like to stay until 1 in the morning."

### **Give Officials Summary of Turf Meeting Ideas**

BY GEORGE L. LANPHEAR

*Supt., Riviera Country Club, Los Angeles, Calif.*

**T**HERE HAVE BEEN TIMES when course supts. have been discouraged by apparent official reluctance to O.K. what the supts. know are good for the courses. Such cases certainly don't mean that the officials are any less eager than the supts. to have the courses in fine condition. What the instances often do mean, I believe, is that the supts. haven't clearly explained the ideas to their officials.

Part of our job is to keep our officials acquainted with the new ideas that we pick up in our frequent association with other supts. and from speakers at golf-turf conferences.

Last year my club sent me across the country to the GCSA convention at Miami. I, like the rest of you responsible for course maintenance, wanted to make this investment of club money and my time show as big returns as any other money

that possibly could be spent on our course.

### **Report On GCSA Trip**

So, just as you, I kept looking for what I could make pay returns at our course. And when I got back I reported in writing to our club. Maybe you'll get some ideas from my report which follows:

"The knowledge and experience I gathered are divided into three categories:

1. Educational lectures and discussions,
2. Equipment show of all up to date golf course maintenance materials, and
3. Personal observation of Golf Courses visited throughout the Miami territory.

"The three day educational lectures covered a number of subjects: varying from improving the personal characteristics of the supt. the improved course from the player's standpoint, to the most exacting job of turf methods and techniques.

"I am convinced that I accomplished many things during the week and I am positive I have not only improved my own knowledge, but have gained valuable information that will benefit Riviera financially and no doubt give our club a higher rating in the golf club maintenance field.

"The subjects that seemed most valuable to me were on better turf management. This was presented by three outstanding golf course superintendents of America, and many fine and enlightening subjects were discussed.

"In the discussion of tees, I have found that by altering my seed mixture for tees, especially those shaded by trees such as we have at Riviera, I will be able to keep better turf without adding any additional cost to maintenance.

"On the subject of greens I have been convinced that my present program is on solid ground, but have found a few helpful hints that I hope will improve the surface of our Seaside bent turf. Seaside, a creeping bent, has been the characteristics of developing a thatch condition and we, for many years, worked our greens by brushing, combing, and topdressing and have been able to control this situation. A new machine has been developed to help control this thatch called the Verti-Cut, working on the principle of renovation only not nearly as severe as other treatments.

"When Beryl Taylor, Supt. of Iowa State College GC, explained his method of topdressing and the reason for his

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**F O R L E A S E**  
**F L E E T S F I N A N C E D**

**W R I T E F O R D E T A I L S**



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ANCHORS BAGS SECURELY  
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Above cart is a T14 standard, with 14 inch wheels for oval bags. Retail price \$33.95.

Also T11 with 11 inch disc wheels at \$29.95.

Brackets of various types are easily interchanged to take care of every size and shape bag.

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### LININGS FOR GOLF BAG SLEEVES

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## HAIL THE HALLS

procedures, I believe I established in my mind some methods that will give me better results from my topdressing program. He said that topdressing must come in contact with the soil, if it does not, we form a pocket that causes a decaying condition which is more harmful than good. Thus I have found a reason why the topdressing must be worked into the grass until it actually contacts the other soils. By working this soil down we also improve the immediate playing condition of the greens, which has been the cause of complaints in the past by our members.

"The subject of 'Water, Weeds and Waste' by Dr. James R. Watson, was very interesting to us here in Southern Calif.

"We realize that by light, frequent watering we create a shallow root system in our turf; one that is easily damaged by traffic and bad weather conditions. Thin turf, therefore, crabgrass, poa annua, and other weeds have a chance to become established and crowd out the existing desirable grasses.

"By infrequent watering and deep penetration we develop a strong root system, one that can resist the increase of undesirable plants. By checking our sprinklers for the amount of water they distribute per hour we can determine the amount of time it takes a given sprinkler to deposit an inch of water on the area that it covers. In Southern California during the summer months with soil conditions similar to Riviera, turf should have an inch of water . . . which will penetrate approximately one foot per week to develop the desirable turf for golfing on fairways.

"Greens and tees must be watered on a different program to reach the results we desire. I prefer to water my tees and greens fairly heavily one night a week preferably on Sunday night. Play is usually light on Monday. By this heavy watering we encourage a deep root system and by capillary action help to leach away undesirable salts that accumulate in the top few inches of the soil.

"Equipment show and maintenance materials.—We were able to witness and discuss every type of turf maintenance equipment with the owner and manufacturer personally.

"After a thorough discussion with these companies I feel confident that as long as I have been at Riviera, I have recommended the purchase of equipment that is the best that money can buy regardless of type or cost. By close compari-



On the right is D. Lester Hall, noted for his job of selecting and developing U-3 Bermuda. Hall's job with this strain of Bermuda has resulted in supply of highly satisfactory tee grass in northern section of Bermudagrass belt.

At the right is Lester's son Dan, supt. at Peachtree, Atlanta, and a great credit to his father's cheerful, practical training.

Fred Grau took this picture at the Southern turf-grass conference.

son between many types of equipment I am satisfied we have made very few mistakes in our purchases of equipment.

"Personal observation of Miami golf courses:—I had the opportunity of visiting the following clubs: La Gorce, Miami Shores, Indian Creek, Plantation, Riviera of Miami, and Miami CC with Mr. Lawrence, prominent golf architect of Florida and Dr. Hallowell, of Pennsylvania State College.

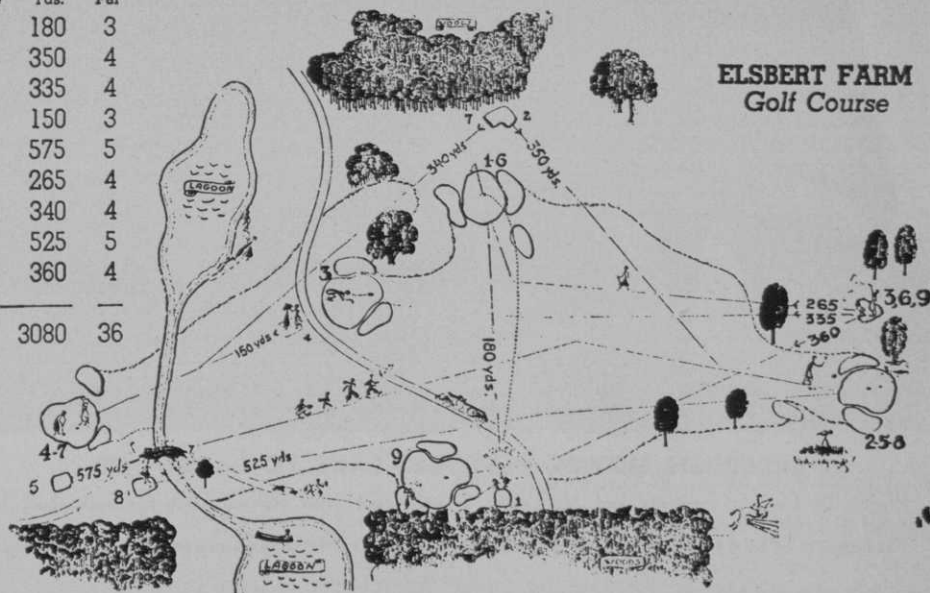
"Some of their architectural characteristics have advantages over those used here in California, and some of ours seem to be better than what they have.

"Due to their heavy rainfall, (72 in. of rain in 1953), I believe they have better drainage design than we do. All of the greens that I saw on the 7 courses I visited seemed to stress surface drainage in at least 2 directions, with as small an amount of water as possible being deposited on the front of the green. Their soil has very fine drainage qualities, but the surface drainage is what impressed me most.

"Their Bermuda grasses are far superior to any of ours, and I believe the turf on the fairways and tees was superior to what we have.

"I still believe our bent greens on the whole are somewhat better than the Gene Tift and Tifton 57 Bermudas of Florida. The bents of California are of a much

Hole	Yds.	Par
1	180	3
2	350	4
3	335	4
4	150	3
5	575	5
6	265	4
7	340	4
8	525	5
9	360	4
<hr/>		
	3080	36



## ELSBERT FARM Golf Course

### FOUR GREEN, 3080 YARD COURSE, HAS NINE GOOD HOLES

On small acreage on the estate of a Chicago businessman this 9 hole course was designed and built by architect C. D. Wagstaff.

The course, well and economically maintained, has been the site of many a merry golf party for the beloved host and his pals.

finer texture and seem to be a little more dense. Our greatest problem is to whip the grain that develops in our Seaside bents.

"Although the turf on the tees of Florida is superior to ours, I believe our architectural design of tees is far more practical for better turf management.

"The greatest lesson I learned on these golf course tours was the neatness and cleanliness of all the golf courses. Possibly some of us superintendents of Southern California are neglectful of these small items and the golfers of Southern California are also much more careless and thoughtless of the upkeep of their respective courses."

### Renovate City's Bermuda Greens with Sweeper

Glen Byrd, supt., Miami Shores (Fla.) CC, comes up with a novel idea for renovating bermuda grass greens to prevent matting and graining.

Byrd says:

"I would like to submit something that we, here at Miami Shores, feel is a revolu-

tionary and economical method of maintaining our greens.

"The application of this idea is primarily adapted for usage on southern municipal courses where bermuda grass is found on the greens, and where it is possible to borrow certain pieces of equipment assigned to departments other than the golf course.

"As you know the aeration of greens is a necessary operation periodically to prevent matting and graining of the greens. What we do here at Miami Shores Country Club is to borrow from our Department of Streets a trailer type street sweeper and brush up the greens so that our power mowers may cut as closely to the root as possible. We then aerate and top-dress each green. The use of the sweeper permits us to maintain our 18 greens in this manner, over a period of two days, eliminating the necessity for closing down at least nine holes for a period of a week or two as was the practice when day labor was necessary to brush and cut the greens.

"In opposition to what one might think, the sweeper does no harm whatsoever to the greens even though it is a bulky piece of equipment."



## BULLRUSH MOWER RESTORES LAKE TO LAKEWOOD

Walter De Lisle, at controls, and Joe Jester, inventor, cut tules (formal name for bullrushes) from channel at Lakewood course, Long Beach, Calif.

The barge is 14 by 6 ft. A 6 hp engine propels the barge and a 7 hp engine operates the sicklebar mower.

**L**IKE a lost paddle boat, a Rube Goldberg-like contraption has been sliding over the lake at the Lakewood Golf course, near Long Beach, Cal. cutting tules from the lake bottom.

The Lakewood course, built in 1932 by William P. Bell for the Montana Land Co., was wrapped around a 20-acre lake and appropriately named Lakewood. But in recent years the tules have taken the lake out of Lakewood from the pictorial standpoint and have been choking out the water supply.

In addition to adding zest to golf shots, cooling breezes to the player and beauty to the course, the lake water is used for watering the golf course. Due to the fact that the lake was the source of the water supply, operators over the years have ruled out the use of poisons and chemicals to control the growth of the tule.

The tule is a rush—or bullrush—found in many western water lands, being classed as either *Scirpus lacustris* or *Scirpus acutus*, and is the scourge to irrigation ditches, lakes and waterways throughout Southwestern United States and Mexico. It grows to the height of 15 or more feet and in the case of Lakewood was choking out a 20 ft. channel from which the water was pumped into the circulating water system. Field tests indicated that each tule stem contained at least a pint of water, hence the loss of water soared to astronomical figures as millions of tules were soaking up expensive water.

Irrigation districts in central California were experiencing the same tule problem in miles of irrigation ditches—the tule was getting the water.

Into this picture stepped an ingenious inventor Joe Jester and after months of experimental work, out of his workshop waddled a queer looking machine bearing the name Jester Lake Maintenance Service.

In simple words it is a sickle-bar mounted on a barge. The hull of the barge a mess of gears, chains and pulleys all driven by an automobile motor. The sickle bar is mounted on a movable arm which can be lowered to mow any lake bottom up to 5 ft. deep. The auto motor is geared via an ordinary transmission to two large paddle wheels which propel the barge up and down the channel.

The cutting procedure used at Lakewood is to cut the tules first at the water level. Then the barge is backed away, the sickle bar lowered and another cut made about 6 in. above the lake bottom. The cut lengths of tule then pop out of the lake like so many stalks of asparagus on the loose. After the tules have been cut free they drift to the sides of the lake where they can be removed, spread out to dry and finally burned.

Those expert in things tule hope that by a good program of cutting and the water level maintained at a high level, the tule may eventually give up the struggle and “just fade away.” This hope is an optimistic one and only time will tell if a permanent cure has been found.



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# Rebuilding Greens to Solve Maintenance Problems

By O. J. NOER

**R**EBUILDING an established green is not a pleasant prospect anywhere. It is resisted always by the golfer. In deference to him before the decision is made to rebuild, every other alternative should be considered carefully and exhaustively.

Correction of some basic fault is the only justification for rebuilding. Bad contouring, a poor location or an inferior grass are the principal causes of poor turf condition during adverse periods of weather.

Re-sodding with turf from a nursery is the quick answer for greens which are otherwise satisfactory except for type of grass. Turf may be all poa annua or an inferior strain of bent or Bermuda. Skinning a green is simple with a modern power-driven sod cutter. It can be done in a couple of hours.

Ground limestone should be scattered over the skinned surface at 25 to 75 lbs. per 1,000 sq. ft. if a test shows the soil to be acid. The heavy rate is justified on very heavy soil. Phosphate and potash should be applied also but it is best not to use nitrogen in quantity under the turf. It should be applied on top after laying the sod. An 0-20-20, or similar grade, is a good fertilizer to use under the sod. From 20 to 25 lbs. per 1,000 sq. ft. is about the right amount.

Where the existing soil is of the proper kind for a green, cultivation with a disc or roto-tiller will loosen and mix the soil. It will incorporate the lime and fertilizer with it. Where the soil is too heavy, it can be changed by mixing the proper amount of sharp coarse sand with it. One way is to spread the sand over the surface and use a tiller to do the mixing. Speedy operation of a roto-tiller brings the fines to the surface. They can be re-incorporated with a spring tooth harrow.

Soils of high organic content are bad especially in spots where there is no air drainage. They stay overly wet for a long time during periods of heavy rains. These muck-like soils are hard to modify with sand or mineral soil. The best plan is to

remove the top six to eight inches of muck and replace with soil of the right kind. A medium sandy loam soil with not more than 20 per cent by volume of fibrous organic material is a good one for greens.

After the surface of the green has been reshaped, light rolling should follow to firm the surface and disclose any slight pocketed areas and emphasize the final contours. Any imperfections should be corrected before the sod is laid. It is done by the addition of more soil, or by working soil from the high spots into the low ones with the back of a flat wooden rake. The green is then ready for sod.

## Nursery Same As Green

Turf in the bent grass nursery should be comparable to a good green. It should be tight and devoid of any mat or thatch. The nursery should have been mowed frequently with a putting green mower set at  $\frac{1}{4}$  to  $\frac{5}{16}$  in. The soil underneath the turf should be exactly like that in the green where it is to be laid. When the nursery sod is lifted, it should be cut thin at not to exceed one-half to three-quarter in. Thin cutting exposes more roots so the laid sod knits with the soil quickly.

The importance of care in laying the sod is obvious. Joints should be tight and a little screened soil should be placed under the sod wherever necessary to produce a surface of billiard table smoothness. After the sod is laid it should be rolled lightly, and nitrogenous fertilizer should be used at 4 to 5 lbs. per 1,000 sq. ft. for ammonium sulphate or ammonium nitrate, or at 30 to 40 lbs. for dried activated sludge or other similar natural organic fertilizer.

The green should be dressed lightly with a good topdressing mixture using 1 to  $1\frac{1}{2}$  yds. to an average size green. It should be kept moist until the sod gets off to a good start. Re-sodded greens have been back in play within several weeks after sodding where the job was carefully done.

## Correction Without Rebuilding

The presence of an excessive mat or thatch and the existence of imbedded sand,