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### I Like You, America

-Denny McCammon Steamboat Village C.C.

While shopping the other day, I found some fabric which had in its design a red apple with a bite taken out. Where the bite was supposed to be was written, "I like you, America."

I bought a piece of the fabric and hung it on my wall. It was pretty to look at, but more important, it is a wonderful reminder to me that I do like America.

When I was in junior and senior high school, American history was pioneers, cherry trees, wars, and wagon trails. But now that I am in college, I can see America is much more.

"I like you, America" is not our tall buildings and our concrete highways. It is my mother and father's house, where I was brought up and where they had the right and freedom to bring me up in their philosophy.

"I like you, America" is the church I went to, not becasue I had to go but because I could if I wanted to.

"I like you, America" is the police force that worked for me, and the school which was not only a place for me to go during the day but also where my parents went to vote and to share in the activities of the community.

"I like you, America" is the courthouse and the city hall — not that I went there — but because they were there looking out after American justice. I was free to do anything I chose to do as long as I didn't infringe on any of the rights of my neighbors.

"I like you, America" has nothing to do with the commentators on television who think that because they comment they are the lawmakers. It has nothing to do with Watergate or lying or any of the other forms of deception that dominate our news.

In that small yard of fabric with the shiny red apple with the bite taken out there is 200 years of work and growth. Yes, there is sadness in our history, but our sadness had as its purpose, compassion, justice, tenderness, understanding, and individual respect.

And in my shiny red apple there is a spirit that was taken directly from the Bible, that simply states that all things are possible to him that believeth in God . . . and in himself.

-Zonda Montgomery, Purdue freshman in humanities from Indianapolis, in letter to the editor, The Purdue Exponent.

# Lightning

#### credit - Chicago Newsletter

The occurrence of rainfall brings positive charged ions from the air to the ground, leaving a surplus of electrons in the air. When the potential difference between the earth and the surrounding air builds to a certain limit, an arc is formed as the electrons move at the speed of light toward the positive charge. Ionization of air between the two areas of positive and negative charge generates the flash of light and discharge of energy called lightning.

(Continued on page 2)

# **President's Message**

With the Bicentennial Fourth of July celebration almost upon us. I'll add my few lines in behalf of our country's two hundred years of independence. I'm sure many of us are all full up with hearing the commercialism of the advertising media but we'll only have to live through this one. I stand corrected, I just saw a full page ad last night in the Washington Star looking for suggestions on how to celebrate the Tricentennial in 2076. I haven't been a fanatic about the Bicentennial and I haven't been waving my flag at everyone I pass, I haven't even mentioned that one of my ancestors of long past was a Minuteman at Lexington. What I do have is a great feeling of thankfullness that our Maker has given this country the strength for these past two hundred years, to survive so that you and I can come to work everyday and enjoy our work and our freedom. There are those that would take away everything we have if it wasn't for a country full full of "Minutemen" who will spring into action at a Moment's notice when our freedom seems in jeopardy. I feel we all have that makeup inside and even though we might not be flag wavers and commercialism fanatics, we feel a shiver up our spine when we see our flag waving in the breeze or hear our National Anthem. Let's enjoy our Bicentennial Fourth of July celebration in any manner that we personally wish and be proud of the freedoms which we have. Happy Birthday America!

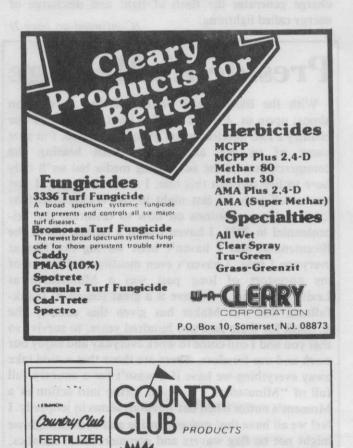
David Fairbank

#### Protection of Sprinkler Equipment from Lightning

Lightning, or any other form of electricity, will seek the path of least resistance in its attempt to reach the ground potential. If lightning strikes an area where both an electrical insulator and a metal object are present, both tied to the ground, the lightning will strike the metal object, since it is the path of least resistance to the ground.

A sprinkler system which uses electrically operated remote control valves will usually have a common wire tied to all valves in the system. If this wire is not grounded and lightning strikes it (with many thousands of volts) an instantaneous current will flow through all the solenoids to the control wires and eventually through the insulation to ground. This instantaneous high voltage and current will destroy any solenoid through which it passes.

It is recommended that in order to protect against destruction of all solenoids in areas susceptible to



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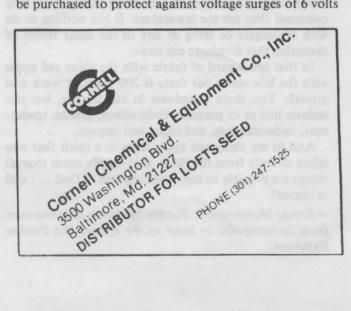
lightning, that the common wire to the valves be grounded to any good electrical ground. This ground can be a metal water pipe, a third ground wire provided with the 115 volt service, or a steel rod driven into the ground a minimum of 6 feet. The electrical path of least resistance will then be through the water pipe (or other ground connection) and not through the solenoid. If lightning does strike a solenoid or a control wire to the solenoid, the current will pass through only that solenoid to grond. The other solenoids will therefore be protected.

Automatic controllers should have their cases grounded. Controllers which actuate pumps should use the pump switch to actuate only a pump relay. This will isolate the pump circuit from the controller and isolate any possible electrical overload in the pump circuit from acting on the controller.

The 115 volt power lines to the controller should have a lightning protection device installed in each controller between these two lines. This device will protect the input side of the controller against high voltage trancients caused by lightning striking the power lines.

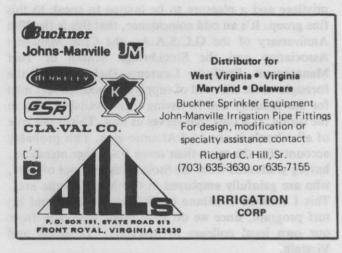
There are two basic types of lightning arresters presently available. The most common is the spark gap type of arrester. This is a device which has two electrodes mounted in a capsule filled with gas. When voltage reaches a predetermined maximum the gas is ionized creating a direct short between the two electrodes. With one of the electrodes connected to ground, the high voltage trancient is shorted to ground, thus protecting any devices down the power lines. Spark gap type of protectors generally protect against voltage surges above 1000 volts with response times anywhere from instantaneous to one second. Some are good for only one shot and then must be replaced. Others may be reset or are good for 50 to 100 strikes.

Zener type protectors are solid state devices which can be purchased to protect against voltage surges of 6 volts



and up. Due to the precise firing level that can be obtained from this type of device, they are excellent for protecting sensitive electronic circuitry. They will dissipate up to 1500 watts of peak pulse power or 200 amps for 1/120 second.

In summary, grounding of all common wires and insertion of lightning arresters in incoming power lines where necessary, will vertually eliminate mass damage to irrigation systems caused by lightning.



## July Mid-Atlantic Meeting

Our next meeting will be held at Andrews Air Force Base Golf Club on July 13, 1976. Virgil Robinson will be our host.

Andrews is a 36 hole layout which has evolved from a 9 hole course built by P.O.W.'s after World War II. The greens for the most part are small and improperly constructed with little or no internal drainage. In the early 70's upon advice from the U.S.G.A., the greens were aerified and topdressed very heavily to provide some sort of medium for the growth of turf. An automatic irrigation system, which I feel is one of the better systems on the East Coast, was installed in 1972. Fairways and tees are a combination of Bermuda-Ryegrass base with a little crabgrass and a lot of poa annua thrown in for decoration. Enjoy yourself, and if you play golf, greens and tees are automatically syringed at 1:30 p.m.!

The golf course will be available for play at 11:00 a.m. The greens fee is \$6.50 and carts are \$8.00. Lunch is available on a cash only basis. Lockers and towels are also available. Cocktail hour will be at 6:30 (Cash only — bar brands are 95 cents). Dinner will be served at 7:30 p.m., with a cost of \$8.50 per person.

Directions to the club: Take exit #36S off of Beltway (495). Go to fourth traffic light and turn left on Old Alex Ferry Road for 1/2 mile. Turn left onto base, clubhouse is on the left.

