



*April Showers —*

*Bring May Flowers*



# Engineering Terry Toons

Last month's article was so small, you probably missed it (as I missed writing it!).

This month, however, you're going to wish that you never read this.

With spring in the air, bowling just finishing, softball starting, let's turn to another important fact of spring--the radio. . . .which brings me to commercials, which finally brings me to drag racing!

Last year, I found out that John Haines was interested in drag racing (as a spectator only). So-o-o-o I told him about the event which takes place every year at Martin, MI. After the event, which he missed attending after all, he said something had come up. So this year, I'm giving him advance notice.

If you are the slightest bit interested in racing, I suggest that you be there on Saturday evening about 4:00 P.M. till about midnight. This is possibly the most impressive time of the event. Don't expect it to be cheap! Gate price is \$7.50 a day per person (that was last year)!! However, all the professional drivers and sponsqrs are there. You get what you pay for.

The event starts Friday, 10:00 A.M. with qualifying all day. Saturday gates open at 12:00 P.M. and more qualifying till 7:00 P.M. Then competition under-the-lights for the class of funny car. This goes on till the elimination of all but the winner, around 12:00 to 1:00 A.M. Sunday,

gates open at 12:00 P.M. and all other classes of competition complete the day--pro-stock, AA/FDS Bikes, stock, and pure stock.

If you're interested, see the following page for more information. Also there's plenty of room for camping out--free and not so free!

Hope to see you there this year, Mr. Haines.

Tom Szerencse

(((((

In tennis shoes. . . .

Tim Brown shot a 9 hole score of 44 at Mishawaka's Eberhart Golf Course on April 11. His partner, Yours Truly, however, did not do so well. . .with our total combined scores being just under 100. So, the challenge is out-- any twosome or foursome playing 9 or 18 holes on a regular golf course is urged to submit their score to the CROWN Crier. Tim and Murray agree to take on all comers!!

Lowest personal score on a "par three" nine hole course so far for this writing is 37, recorded at the New Paris Par More on April 12. Challenge for Saturday, April 19 will be at the Augusta Hills course in Albion, IN.

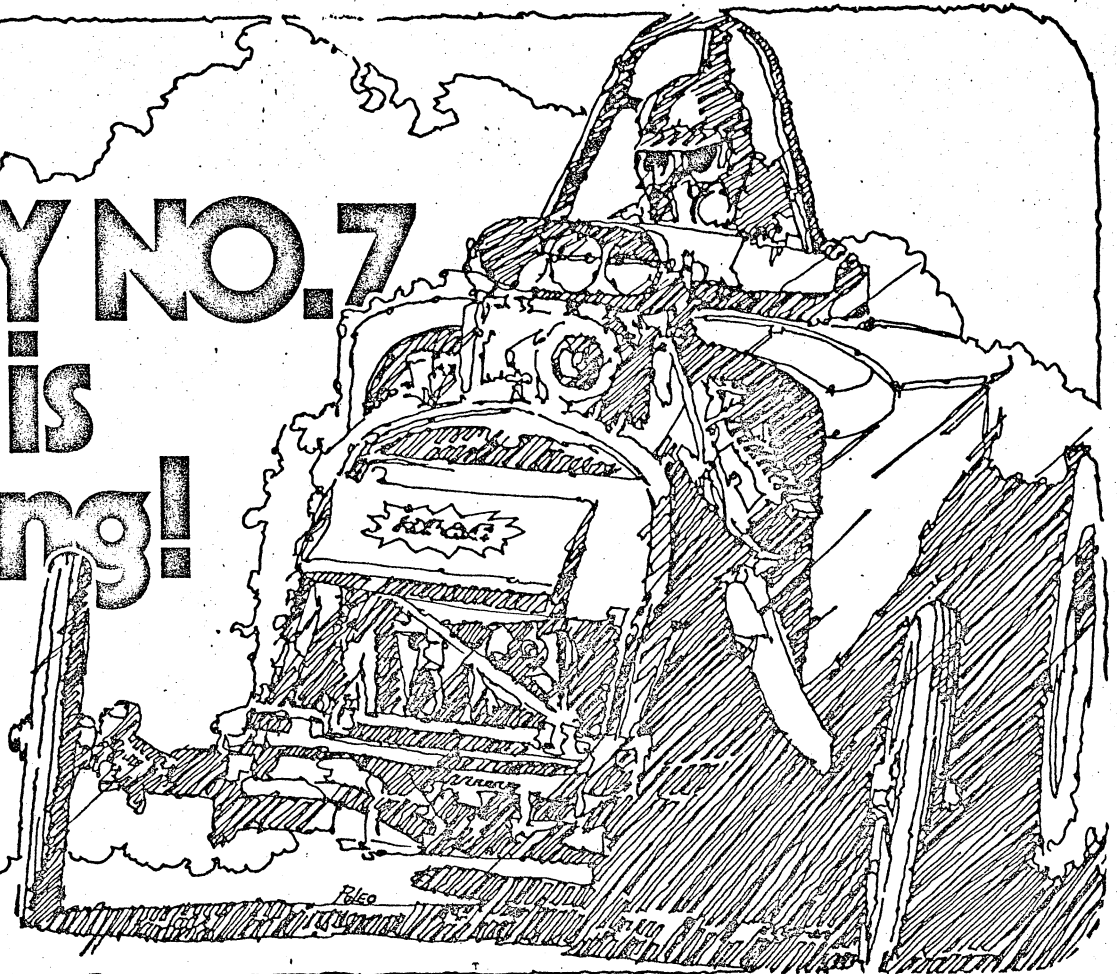
Wish us luck!

M. Young  
(For the Team of  
Brown & Young)

(((((

Few of us can stand prosperity--another man's that is!

**LUCKY NO. 7**  
**is**  
**coming!**



**THE 7th ANNUAL**  
**POPULAR**  
**HOT RODDING**  
**CHAMPIONSHIPS**  
NOW AN OFFICIAL NHRA RECORD EVENT!

**AUGUST 8, 9, 10, 1975**  
**U.S. 131 DRAGWAY, MARTIN, MICH.**

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**THE LARGEST INDEPENDENT  
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FUN . . .AND COMMITMENT  
by Richard McCreary

Camping trips, softball, fishing , games, having kids look up to you, being the center of attention--these are all things that happen to you when you are the leader of a Cub Scout Webelos den. This was the kind of dream I had when I took charge. It was a true picture, but incomplete.

You also take dues, plan this and plan that, attend meetings, discipline kids, cope with parents and help with wounded feelings. In our group, we have a kid who knows more about physics than I do as well as a boy who comes from a broken home and doesn't have any other male in his life for which he can build a pattern. His mother is too involved with her own problems to be a help to him.

Another boy has such a crying need for attention that he is a constant trouble-maker. Most have fathers that cheat on their taxes, run illegal CB units and don't give time to their children. The boys become filled with hostility and develop personality problems.

I didn't want to be a scout leader--I haven't been given a gift for working with boys and I don't see any great breakthroughs because of my work. Last year I wasn't "involved." I did go once with my son to a father-son banquet.

The leaders and some of the fathers stood around the campfire and drank beer and told stories--many of which should not have been told to 10-year olds. I don't tell this to tear down the scouts. I tell it because it shows what can happen to a terrific program that doesn't have really "good" leadership.

This year when they were organizing the cub pack I said, "No way, my son won't be involved. He's not going." Some people from the scout office called me and said, "If you don't do it, who will?"

So I went to their meeting and told my story. I agreed to help if they would provide other good leadership. This was in accordance with their own policies and they readily agreed.

Now the point of all this is to show that you are needed, you can make a difference in someone's life. If you don't become a controlling influence in the life of the community , what kind of person will step in and fill the vacuum ?

## Fun . . .and Commitment (cont.)

I've had comments from other parents who didn't want to speak out but were unhappy with the situation. You must not only step in and do your share, make your commitment, but sometimes you need to be a "fanatic" and speak out. If just one life is run into the ground a little less because of your speaking out, you have a good reward. Try it--you'll like it!!

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### CROWN Sports

As spring arrives we see our winter sports closing out and summer sports waking up. The sport we've kept our eye on this year mostly is bowling. I'm sure the men would just as soon I not report their results. With but four weeks left the team finds itself in second to last and in heads-up competition with the last place team has split the decision, each team getting 4 points.

The ladies seem to be doing much better. They are presently in 8th place which puts them about in the middle of the pack. Not bad for a second year team! Mary Miller reports that one team member got a 204 in practice. Does that count? Of course everyone has heard the rumblings of softball. If someone in your department has not been complaining about a sore arm, at least you've heard Mac's announcements about the big picnic. The team is whipping into shape and has even played a "pick-up" game with another team. Of course the results of the game will not be printed but

it was good practice.

Just an editor's note--the team needs your support at the games. A schedule will be put up on the bulletin board when I get it. If you came you'll be proud of this bunch of guys.

Good sports. . . .fans.

John Bachman

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### Scene at Sales. . .

In Sales we have added another MRS. Her name is now Dolores Lechlitrer. To make life a lot easier for all of us, we are going to call her Dolores for short. Did you ever try to say a name like that fast? It could be almost as hard as saying Peter Piper . . . . . fast.

In case some of you missed it, all the girls in Sales got pretty red roses last week! They grew over our lunch hour on Wednesday. In case we didn't tell all those who got them for us--"THANKS! !"

Happy Birthday, Gloria! We won't tell

how old you are. They'll never guess because you can't tell you are a year over 20!

See you all next month !

----Donna Martin

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Try praising your wife, even if it does frighten her at first.

--Billy Sunday

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#### SAFETY COMMITTEE REPORTS

CROWN's five-member Safety Committee meets weekly to discuss improvements in employee health and protection and to upgrade company accident and emergency procedures. Members include Ray Stevens (chairperson), Sylvia Eger (secretary), Don Florea, Gene Gaevert, and Murray Young.

These current members express appreciation to former committee members Ken Yoder, Cheryl Crow and John Branch for their contributions and efforts on behalf of their fellow employees during the past year.

Some weeks ago, following the surprise fire drill (It was a surprise even to the Safety Committee!), firemen from the Concord Fire Department visited CROWN on the evening of April 8.

Verne Searer led the tour and several of the men commented on the cleanliness and orderly arrangement of our plant.

As well, they recommended a number of improvements to further upgrade our

building and procedure.

Among the topics currently under investigation by the committee members are CROWN's emergency and fire procedures, including the formation of a fire brigade; a study of the vapor problem in the module wash area; and a review of our compliance with OSHA standards and regulations.

A Safety Committee Library has been established and employees are urged to contribute materials (such as magazine and periodical articles, books, and the like). In a further effort to increase participation and involvement in safety and related matters, the Safety Committee members will be conducting one chapel each month.

On behalf of the committee, I wish to extend to all of you an invitation to share with your Safety Committee the concerns and suggestions you have relative to safety and working conditions here at CROWN. You'll find all of us eager to listen and willing to help.

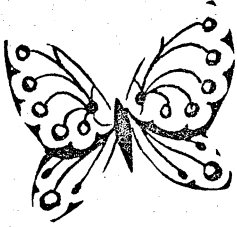
Yours for increased safety,  
Murray Young

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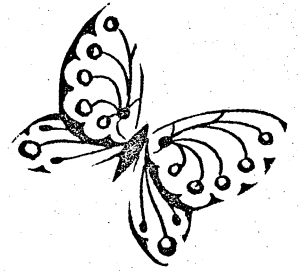
#### Bouquets & Brickbats

This month's bouquet goes to Gale Balmer for the fine job he does keeping the chapel clean.

Brickbats for those people who leave their lunches in the refrigerator for 2-3 weeks are also in order.



# LADIES



"FOR, LO, THE WINTER IS PAST, THE RAIN IS OVER  
AND GONE: THE FLOWERS APPEAR ON THE EARTH:  
THE TIME OF THE SINGING OF BIRDS IS COME, AND  
THE VOICE OF THE TURTLE IS HEARD IN OUR LAND:  
Song of Solomon 2:11,12

ATTENTION ALL LADIES: It is now time to get your seeds out and get that garden planted. In order to make a GOOD garden one must have a variety of seeds. Below are a few seeds you might want to put in your garden.

Sow a seed of loving kindness  
As you travel on your way,  
'Twill return a lovely blossom  
Greeting you some future day.

Sow a seed of gentle patience,  
(Tho' sometimes it's hard to do),  
It will make your heart much lighter  
And 'twill make you stronger, too!

Sow a seed of full forgiveness,  
And in due time you will find  
Growing there, sweet understanding  
Leaving enmity behind.

May each tiny unseen seedling  
Dropped along life's thoroughfare  
Grow and blossom in abundance  
For the harvest, Over There.

## SOUNDS GOOD - - PINEAPPLE-FILLED ANGEL FOOD CAKE:

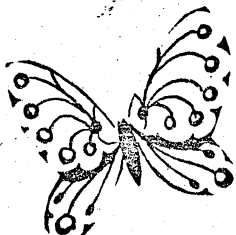
Bake one angel food cake mix according to the directions on the package. Cool, remove from pan, slice horizontally into 3 thick slices. Top each with filling and put cake back together. Refrigerate.

FILLING: Beat together 2 eggs and 1 cup of sugar. Add 2 Tbs flour and 1 small can crushed pineapple with juice. Cook, stirring constantly until thickened. Cool completely. Fold in 1 cup whipped cream.

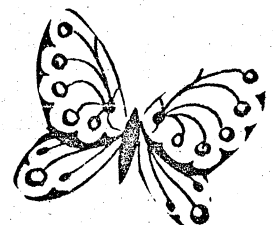
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Never, never mix  
household ammonia with  
other household cleaners.  
The combination may  
form a poisonous gas.

Use baking soda  
as a cleanser  
to restore the  
transparency  
of your  
glass oven door.



If the whole world followed you,  
Followed to the letter,  
Tell me—if it followed you,  
Would the world be better?



## THE TECHNOLOGY AROUND US. . . .

Recently I inadvertantly volunteered myself to write an article for this GREAT publication. You might say Don Eger "engineered" me into this on one of his "circuits" through my office.

While browsing through a trade magazine recently (Computer Decisions, March 1975), I discovered an article about various media of storing computer data. Magnetic tape and magnetic disc were the primary storage media discussed.

Since CROWN traded in our first business computer for a faster one about four months ago, and that included upgrading to higher performance disc drives, I though the included illustration would help you appreciate some of "the technology around us."

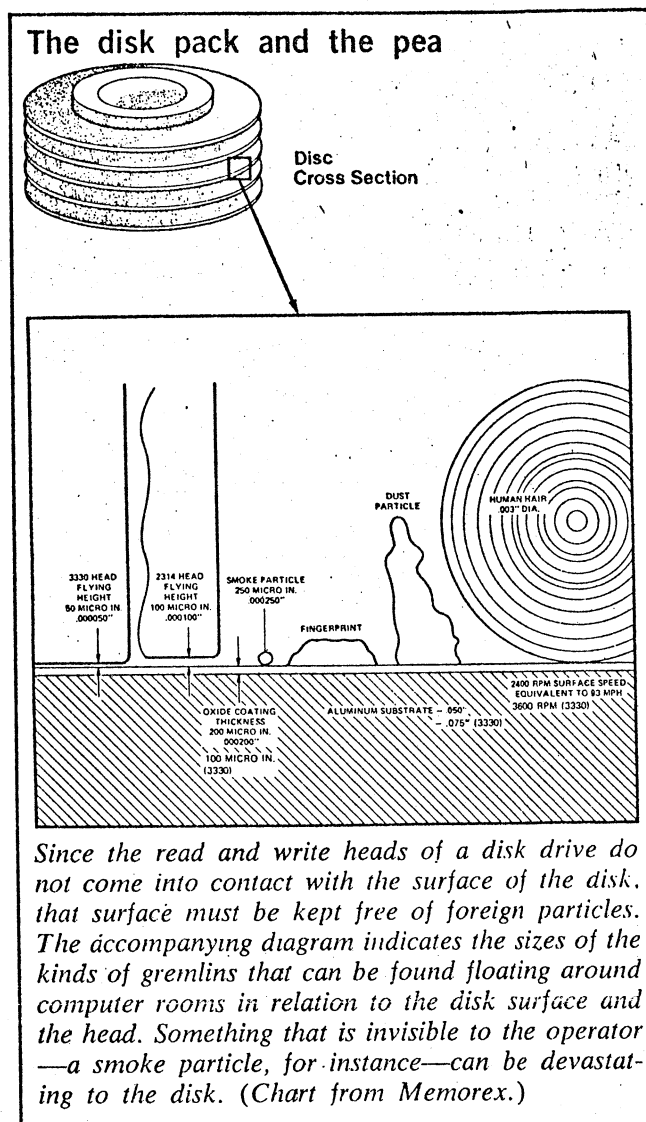
As many of us know, music or voice is recorded on tape when the tape recorder magnetizes tiny areas on the tape, which, when played back, are converted back to the sounds we're familiar with. In like marner, data (numbers and characters) is recorded on a computer disc pack. Whether tape or disc, both are coated with Ferric oxide or some other magnetic material.

There is an important difference between the two media, however. Whereas magnetic tape passes over the recorder's heads at a slow rate and is physically in contact with them, the heads of a disc drive dare not come in contact with the disc which is spinning from 1500 to 3600 RPM. Physical contact at those speeds usually causes a "head crash", a disheartening event that occurred a dozen times in the two years we used our first computer. Three things are lost when this happens. The disc drive's heads will need to be replaced, costing from several hundred to over a thousand dollars. Also, the disc pack must be replaced due to the scratches and gouges caused by the heads. Disc packs range in cost from \$75 to \$500. Third, and often the most important, is the loss of the information on the destroyed pack. It is for this reason a copy or copies of all valuable data files are stored on "back-up" disc packs. Should a valuable disc pack be destroyed and no copy exist, it often means many man-days of effort to capture the data and recreate the file.

Enough about the dreaded results of a head crash. What causes them?

On computer disc drives we've already discussed that the heads should not come in contact with the disc platter. The heads must, however, "fly" very, very close to the platter in order to store millions of characters of data on the pack. Depending on the disc drive, the heads will fly from 50 to 100





millionths of an inch from the surface. This means that almost any foreign particle present on a disk surface will interfere with the head if they meet. The illustration shows that "air bearing" gap, and the relative size of a smoke particle, fingerprint, dust particle and a human hair. This may explain to Gail why I've requested the computer room to be vacuumed so often (for dust), and why I occasionally go on a "sweeper binge" and vacuum out the disc drives and other parts of the computer. The value of the information, and its recovery time if lost also explain why select disc packs are removed from the building during a fire alarm.

--Ken Yoder

*from the desk of:*

GERALD STANLEY

**- B8 /S**

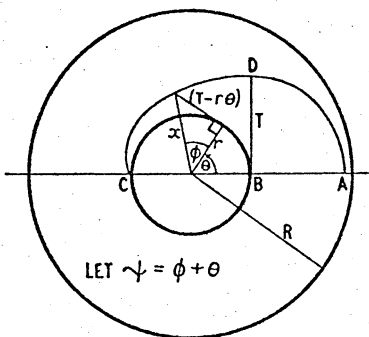
**Date**

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The curate knew his own age and therefore he should have been able to work out from the factors of 2450 the ages of the parishioners. He failed, because there are two sets of factors which give a correct solution.

i.e.,  $7 \times 7 \times 50$   
and  $10 \times 5 \times 49$ .

$10 \times 5 = 50$  which makes the vicar older than any of his parishioners.

 $C_{I3}/S$ 

We know that  $T = \pi r$

Let us assume that  $R \geq T + r$

$$\text{Area BCD} = \frac{1}{2} \int_{\phi_1}^{\pi} x^2 d\psi + \frac{1}{2} r T \text{ where } \tan \phi_1 = \frac{T}{r}$$

$$= \frac{1}{2} \int_{\phi_1}^{\pi} [r^2 + (T - r\theta)^2] [d\phi + d\theta] + \frac{1}{2} r T$$

$$\therefore \sec^2 \phi \, d\phi = -d\theta$$

Hence Area BCD =  $\frac{1}{2} \int_{\phi_1}^0 r^2 \sec^2 \phi (-\tan^2 \phi) d\phi + \frac{1}{2} r T$

$$= \frac{r^2}{2} \left[ \frac{1}{3} \tan^3 \phi \right]_0^{\phi_1} + rT$$

$$= \frac{r^2}{6} \pi^3 + \frac{1}{2} rT$$

Now the goat can eat twice the area ABCD less the area of the mausoleum;

i.e. it can eat  $\left\{ \frac{r^2}{3} \pi^3 + rT + \frac{\pi}{2} T^2 - \pi r^2 \right\}$ , which is half the area of the field.

Hence,  $\frac{\pi}{2} (R^2 - r^2) = \frac{r^2}{3} \pi^3 + \frac{\pi}{2} T^2$

giving  $\left(\frac{R}{r}\right)^2 = \frac{5}{3}\pi^2 + 1$

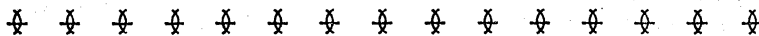
The area of the field  $= \pi r^2 \left( \frac{R^2}{r^2} - 1 \right)$

$$= \frac{5}{3} \pi^3 r^2 \text{ sq. yd.}$$

giving an area of 9 acres (approximately).

The minimum number of weights required is five, and these should weigh 1, 3, 9, 27 and 81 pounds.

15. There are two thousand five hundred and twenty-one.



"That's a special songbook I designed. . . . The pages are blank so all the little kids can have something to write in during the morning service!"



On a table are two identical bars of soft iron. One has been magnetised. Can you tell which is which? You may move them but not lift them from the table—nor may you use any other object.

## 10. Liars Again

Smith, Jones and Robinson each make four statements as follows:

SMITH: 1. Jones owes me £1.

2. Robinson owes me 5s.

3. All Robinson's statements are true.

4. All Jones's statements are untrue.

JONES: 1. I owe no money to Smith.

2. Robinson owes me 10s.

3. I'm British.

4. All Smith's statements are untrue.

ROBINSON: 1. I owe no money to anybody.

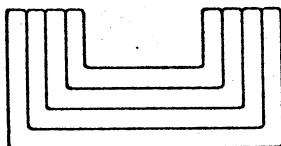
2. Jones is a Dutchman.

3. I always tell the truth.

4. Two of Jones's statements are true and two are false.

One person made 4 true statements.

Who? Find, for all of them, which statements are true and which false.



Four close-fitting, cylindrical containers stand one inside the other. They are all in the same proportion; (i.e. the ratio of internal height to internal diameter is the same for each). The walls are all of the same thickness.

The volume of the three smallest containers equals the volume of the largest container, which has an internal diameter of one foot.

What are the dimensions of the other containers, and how thick are the walls?

1	2	3	4
5		6	
7	8	9	
10			

Here is an easy cross-number problem. Not all the information given in the question is necessary for a precise solution.

### Across

1.  $ab^2c - bc - c$

5.  $\frac{cb}{2}$

6.  $bc + 1$

7.  $b^2 - bc$

9.  $b - 2$

10.  $4b^3 - 2$

### Down

1.  $3ab^2$

2.  $c^3$

3.  $\frac{b^2 + c}{2}$

4.  $b(4b^2 - 1)$

8.  $a(2b - 1)$

9.  $b - 1$

Find  $a$ ,  $b$ , and  $c$ , and complete the cross-number.

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Gerald's Puzzles . . . . .Gerald Stanley

Engineering Terry Toons. .Tom Szerensce

Guest Editors. . . . . "Mac" McCreary

. . . . . Ken Yoder

Scene at Sales . . . . . Donna Martin

Safety Committee Report. . Murray Young

Ladies Page. . . . . Kate Moore

Front Cover. . . . . Gale Balmer

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