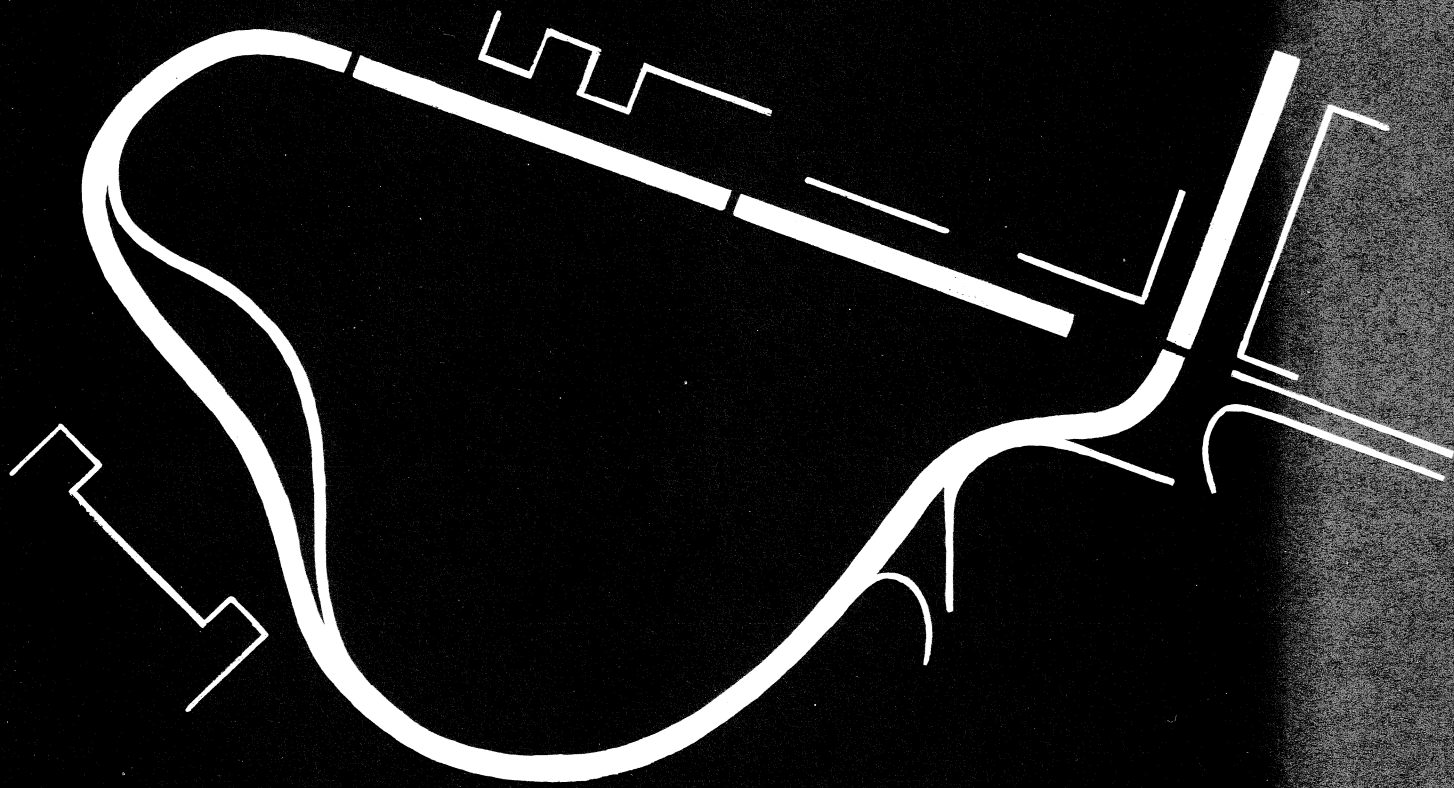


Buggy
1966





Grand Prix of Tech

Spring Carnival is a tradition at Carnegie Tech; it is a three-day weekend consisting of all the usual campus "carnival" events — a jazz concert, queen competition, skits, spring dance, and booth building competition. There is one event, however, which gives to Carnival weekend that spark which is unique to Tech's campus. Known enthusiastically as the "buggy race", this event takes place on a mile long course mapped through Pittsburgh's Schenley Park. Buggy entries are built, supported, and manned by campus organizations.

Buggy competition is initiated on Friday at 7:00 a.m., when the buggies, designed exclusively by Carnegie Tech students, are judged by automotive designers.

Next on the program are the preliminary heats which will start at 9:00 a.m. Friday. Competing in the heats will be twenty-one teams of fraternity and dormitory men.

At 10:00 a.m. Saturday a Consolation heat is run by the buggies finishing 4th, 5th, and 6th in the preliminary heats. Following the consolation heat, buggies finishing first, second and third in the preliminary heats will race for the Sweepstakes in the long-awaited Championship heat.

To the casual observer, the Buggy Sweepstakes are an exciting event, but Buggy races mean much more to its participants—the Buggy team.

The skill of both pushers and drivers must, in the three or four brief months preceding the race, be developed to near-perfection. During this period of training, the lantern glowing through the night becomes the trademark of both pusher and driver—mind and muscles become conspirators which are invaluable tools in the grueling competition to come.

The course for the race has five push zones, each of which presents unique problems which must be met by the pusher, running at top speed with his 250 pound load. This challenge demands that the pusher exercise full control over sweating, straining muscles already pushed to the limit; his mind must function quickly and expertly despite the heavy

beating of his heart and head. It is this combination of speed, spirit, and strength which can make or break a buggy team.

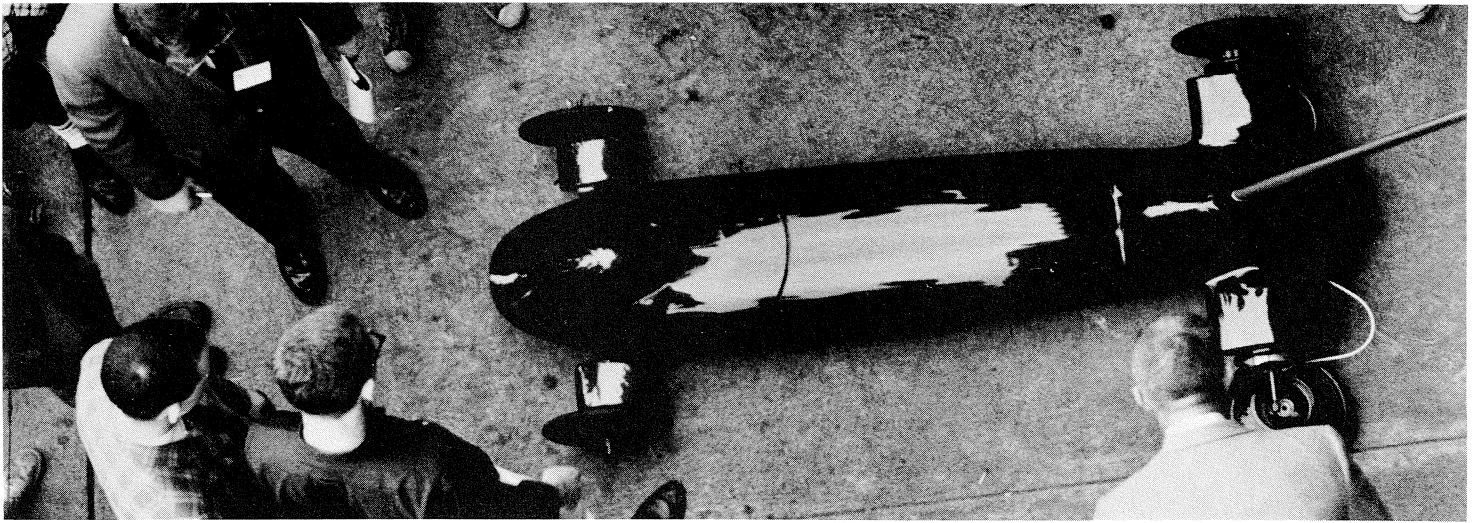
At the sound of the starting gun, the pusher, his muscles tight, and his mind racing, takes off up hill one—Tech Street—remaining in his own lane until he meets the second runner on the way up. This fresh man takes the buggy over the top for the free roll down Schenley Drive. Often a race may depend on the second runner's sense of balance and timing as he releases the buggy for the free roll.

Inside the buggy, the driver suddenly feels a surge of speed, and he is left to his own resources on the free roll. Late night practices have acquainted this brave man with the course he travels—he knows all too well its pitfalls and possible hazards. The clicking and humming of competing buggies must not interfere with the driver's thinking, for he must be aware of his position throughout the course. Often the characteristics of his own buggy can cause distress to a well-trained driver, for comfort is always sacrificed to speed and maneuverability. Often attaining a frantic speed of thirty-five to forty miles per hour, he will be jarred and bounced, may be nearly blinded by sweat running into his eyes because of a lack of air; yet his nerve and enthusiasm are undiminished.

At the bottom of Frew Street, the third man joins the driver and his furiously moving buggy, to begin pushing as the buggy coasts uphill at his running speed.

The fourth pusher takes over at Porter Hall and must negotiate the many potholes in his zone. Opposite Administration Hall, the fifth man takes up the final drive of 200 yards. It is here where the team of buggy, driver and pusher exhibit that furious will to succeed marked by heaving, panting chests, taut muscles, and distorted faces that show in one moment all the energy, determination and exhausting effort of three months work.

The ultimate victory is won by the buggy team which first passes the finish line. Finalists or semi-finalists, pushers or drivers, all are winners in Carnegie Tech's fleeting day of action and glory.



Alpha Tau Omega

A.T.O. has long been a campus leader in the sweepstakes competition. Starting in 1953 with Andy I, which will still race this year basically unaltered, the streak extended until 1962. Andy I broke the existing record with the then unheard of 2:30.55 in 1953. In 1954 Andy I went on to break it again with a 2:28.1, and placed second in 1955 to A.T.O.'s new entry, the Golden Goose, which set the existing course record of 2:25.0. The Goose reigned supreme until 1963 when it failed to make the Frew Street curve when the driver was forced to turn too sharply. Again in 1964, the Goose failed to negotiate the same turn and went slamming into the curb. The Frew Street jinx gave current driver Jim Phillips trouble last year as he caught the Beta "00" in a power slide around the turn and came out with a very clean hole in the side of the buggy to prove it. Despite the collision, the Goose finished second.

The Andy I has become the venerable old man of the Sweepstakes course. Its four by two and one-third foot plywood frame allows its driver, Bill Robinson, to remain in a kneeling position in its canopied cockpit.

In contrast to the older design of Andy I, the six by one and one-third foot Goose was pushed onto the course last year with several innovations, entrance to prone driving position via removable front canopy plus a specially designed plexiglass windshield. Driver Jim Phillips steers the buggy by control rods at his sides. Will this be the year the Goose is steered to victory?

Beta Sigma Rho

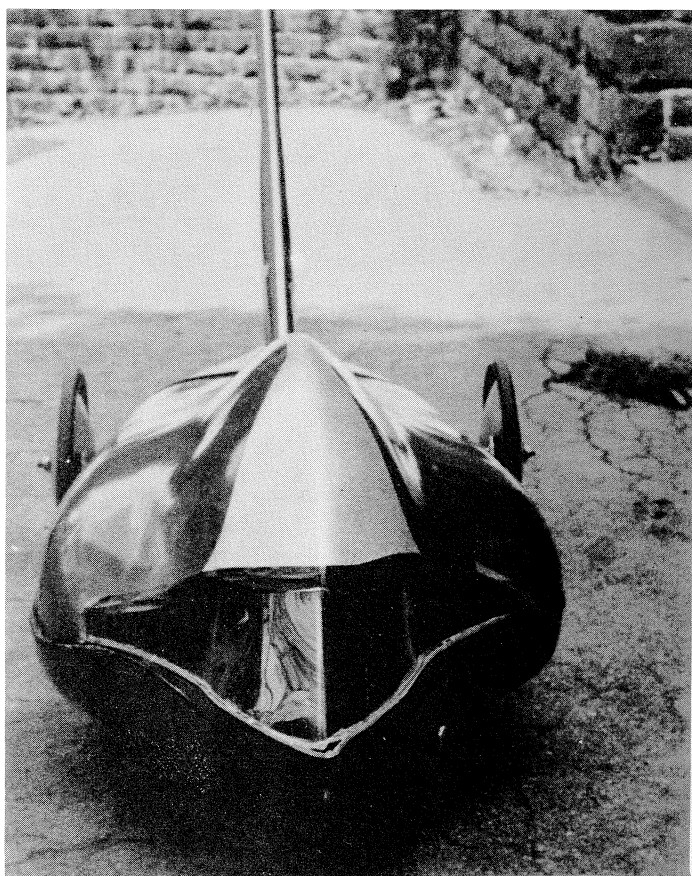
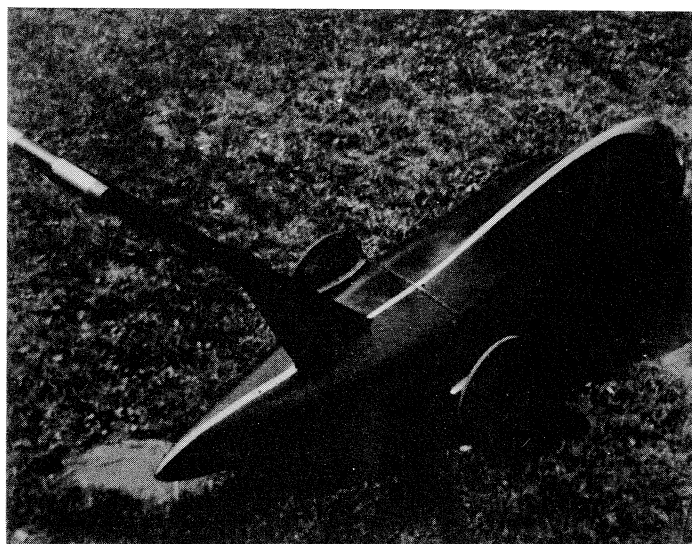
The Beta Sigma Rho "Dolphin" is the product of four years of hard work and twenty long years of tradition. These four years of hard work have created a fine running buggy. Unique in design and construction, the Dolphin is the only buggy with a three-wheel configuration. Its excellent handling characteristics and fast free rolls make it a top contender, and a win is certainly hoped for.

Still, it's no easy matter to defeat twenty long years of tradition. In previous years, push-bars have come off in pushers hands, judges have unwittingly stopped their watches in the middle of races, and pushers have inadvertently been run over by motor scooters.

However, the hard work of Steve Rosenblatt, Bob Gammons, Bernie Lubell and Gerry Berger has removed all the bugs from the "Dolphin". This year the "Dolphin" is being readied for the race by Steve Hendelsohn and Dennis McElvoy. The buggy is now one of the fastest, if not the fastest, buggy on campus. The single front wheel greatly reduces the various drag effects and also allows sharper and faster turns than standard buggies.

This year the fellows of Beta Sigma Rho believe that the "jinx" has gone. The "Dolphin" and driver, Bob (Speedy) Serabin are now a seasoned race team. With six experienced pushers of past seasons training and a large group of enthusiastic freshmen, the 1966 push team promises to be much improved.

So keep your eyes open for the blue and silver streak.





Beta Theta Pi

Beta Theta Pi has come up in the buggy racing world in the last two years. In 1963, "00" (double zero) took a third place. By 1964, "00" took first place in the race with a time of 2:31.5 and our second buggy, "000" (triple zero) tied for third place with a time of 2:37.7. Beta Theta Pi had not entered the design competition for two years, when last year Van Rysin decided that speed and beauty could be combined in a single buggy. He used the basic design of the original "00" to build a shining new buggy while employing only the old shell and push bar. He added a few design improvements and the result was two first place trophies.

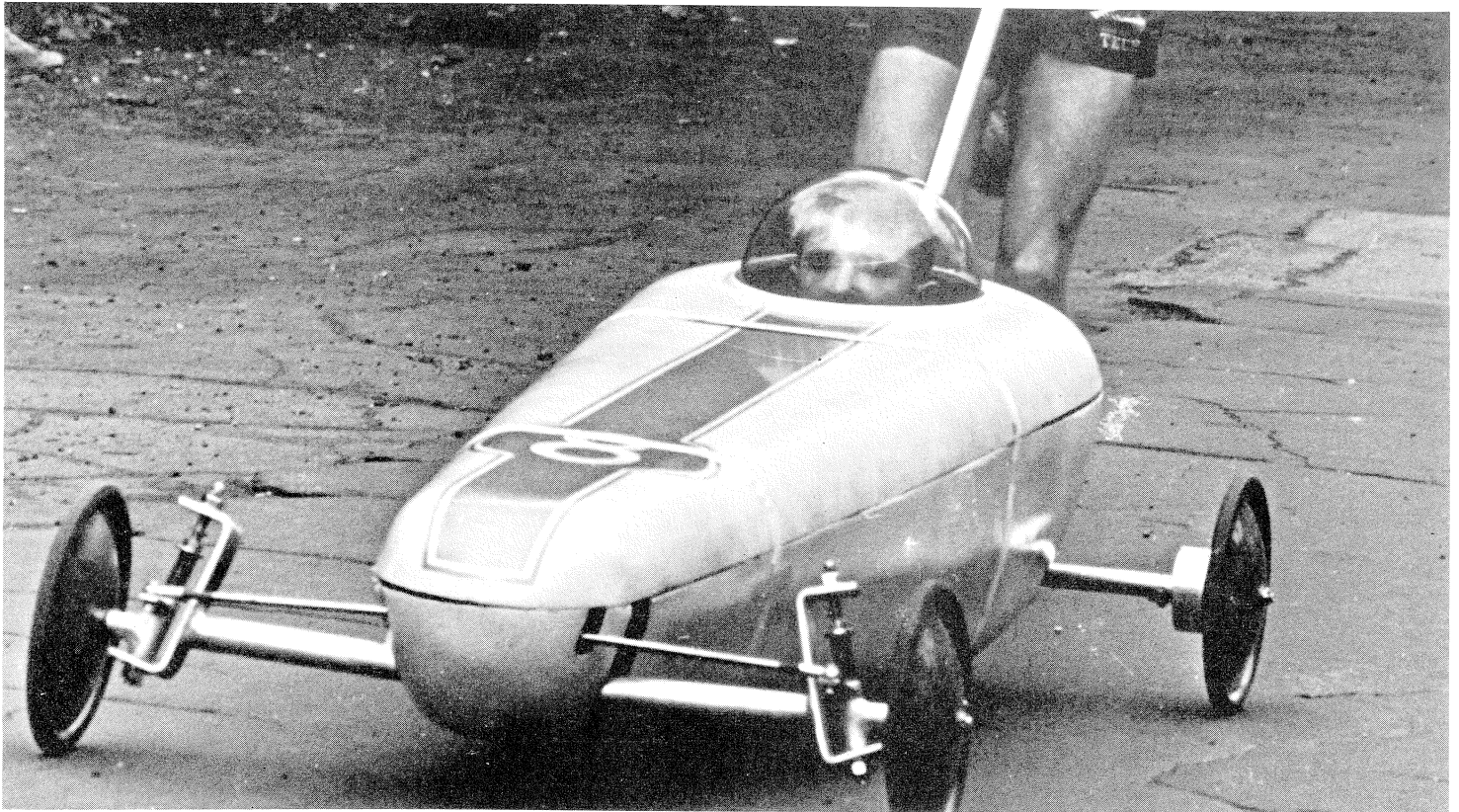
The "00" consists of a flat honeycomb of aluminum and cardboard to which the mechanism is attached. The driver lies

prone steering with his hands at his side. The shell is molded fiberglass in two halves which clamp together. The most interesting feature of this buggy is its braking system. It is powered by compressed air with free floating cylinders and like all true air brakes it emits a loud hissing sound when the brakes are released.

Because of the construction of the "00", the "000" was without a shell as well as a pushbar. The pushbar was easily fabricated, but the formation of the shell required a little more imagination. While several more sophisticated materials were considered, the simplicity and excellent characteristics of paper mache were too perfect for the purpose of constructing a shell to be ignored. Many a childish moment was spent in "000's" construction and on race day, the shell lacked "class". Fortunately, a can of spray paint and a few magic markers supplied the necessary polish.

This year, since no drivers with race experience have returned, there are many possibilities for drivers. Two sophomores with some racing experience would like to drive, but two small pledges are equally eager to drive.

Even though there is a lack of experienced drivers, seven out of ten pushers have returned including four of the five members of last year's first team. They include: Ray Burdett, Bob Nolan, Bob Livengood, and Dale Johnson. Don (The Legs) Keefer is handling our first hill push spot and we plan to fill the open second team spots with pledges.



The construction of the Delta Tau Delta buggy began in 1962, and it was completed in time for its first race in 1963. Preliminary designs were done by Henry Rianhard, Dan Elmore, and Dave Royer, while Done Schroeder and Bill Hovis instituted minor design modifications in 1964 and 1965.

The frame, dimensions of six and one-half by two feet, is constructed of aluminum tubing and has a king-pin type suspension, assuring the independent action of each front wheel. The solid rear axle also features adjustable suspension. The original two-piece fiberglass body will probably be replaced this year with a much lighter shell.

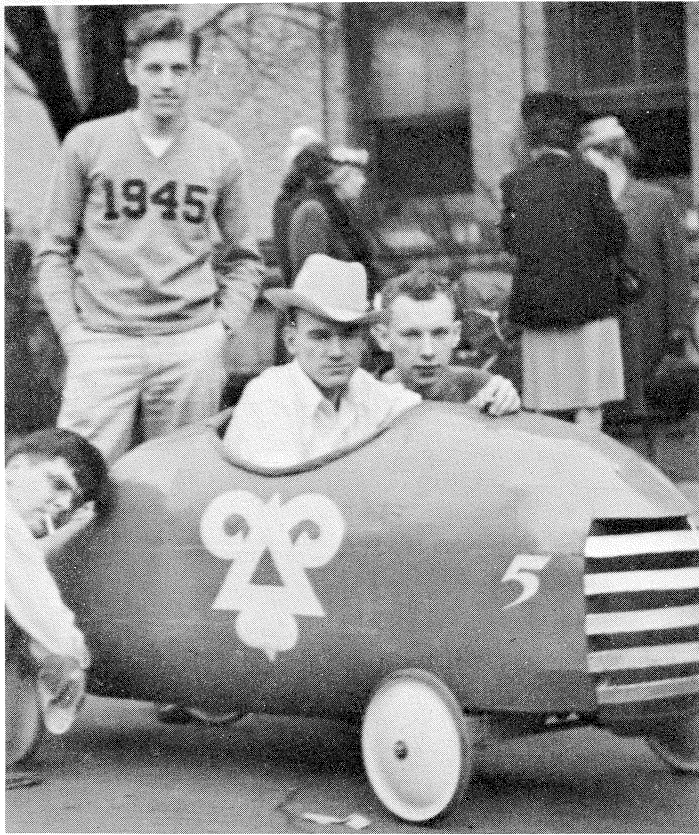
The driver's position is unique. He sits in a semi-reclining position while a bubble located in the rear portion of the top allows an unrestricted field of vision. The steering column extends from the front axle between his legs, while the brake handle is located beside the steering wheel.

The buggy is equipped with a hydraulic brake system with two main cylinders inside the body and an actuated cylinder outside while two pairs of discs on the rear axle generate a retarding force. The Delts' buggy also sports self-centering wheels.

Three-year veteran driver Bob Salter has also taken over the job of chairman of the Delta Tau Delta pushmobile machinery. Veteran pushers Carl Bryan and Scott Snowden will be hard pressed to keep their positions this year by a strong and enthusiastic pledge class.

The Delts dominated pushmobile competition for eight years following World War II, and they are confident that this year's design changes will bring them into the group of top competitors again.

Delta Tau Delta



Delta Upsilon

This year Delta Upsilon is departing from its past ideals of clean lines and complexity in a buggy: the 1966 buggy will exemplify the principles of simplicity and adjustability.

The new frame will use a variety of building materials and methods. The frame is of rigid tubular aluminum, overlaid with 5/8" plywood sheeting, and finally a layer of foam rubber for driver safety and comfort. The driver will be in a prone position, strapped in place, and wearing a crash helmet.

The wheels are modified Soap Box Derby discs, so mounted that they may be aligned to less than one degree error. The brake system especially demonstrates the desire for simplicity and reliability: it is a spring-loaded, hand operated friction device which has been shown to be quite effective. Steering will be direct, with the entire front axle pivoting.

The men primarily responsible for this effort are: Barry Millman, chairman; Rex Allers and Stan Sholik, co-chairmen; and Howard Illian, pushing team chairman.

Our pushing team will be made up of both veterans, such as Smoky Merrill and Tom Terpack, and various newcomers to the ranks of Sweepstakes. Veteran James White will be driving; however, Steve Ruvolo is making a strong bid for the jockey position.

Kappa Sigma

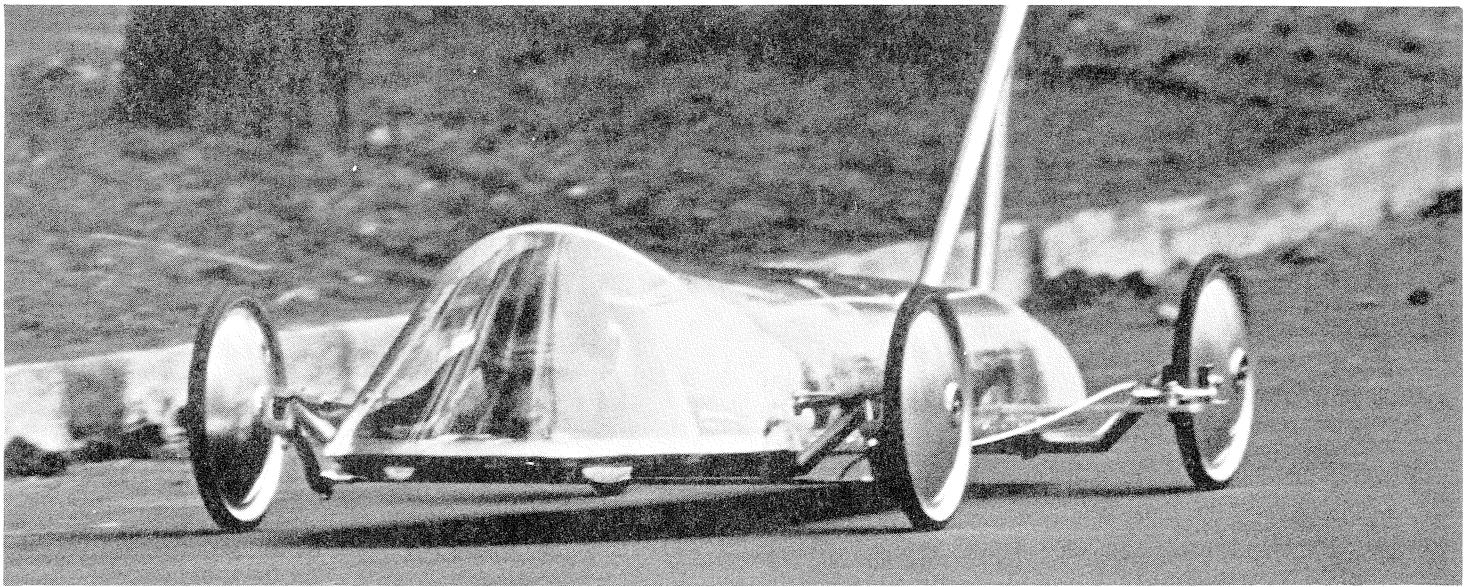
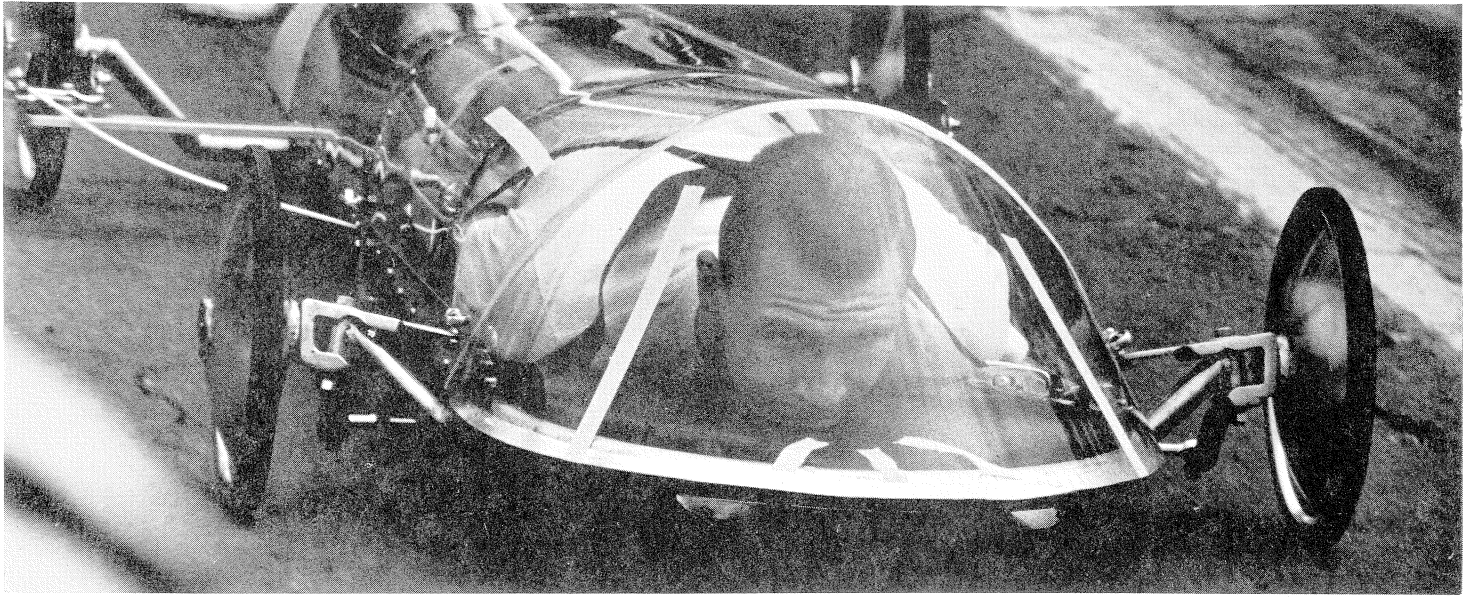
For the first time in four years, the Kappa Sigmas will roll a buggy up to the starting line in this year's sweepstakes. An all-out effort has been made to construct this year's buggy, which has been built from scratch. It is a good one, as has been the Kappa Sigma tradition.

A lack of experience has created a large number of design problems. Therefore, quite a bit of engineering has gone into this buggy. During construction, one of our computer boys attempted to determine the ideal body shape on the machine. The only result he was able to obtain was an infinitely long straight line—hardly practical and even illegal. The length used is 6'5".

Independent torsion bar suspension is one of our design features. All aluminum construction minimizes the 180 pounds of weight. A set of super-precision wheel bearings, along with a special lubricant, make bearing friction negligible.

A number of men have been training and competing for the five pushing spots, and there are several lightweight candidates for driver.

The strong points are excellent design and a great amount of enthusiasm. This, along with lucky number 13, should be sufficient to overcome lack of experience and create surprising results on race day.



This year the efforts of the dorm are aimed at bettering last year's position, which was the top half of all contenders.

The present A buggy was constructed just prior to the 1964 race and ran that year on radical solid steel wheels. The buggys is about six feet in length and approximately one and one-half feet high, riding on four Soap Box Derby wheels. A tubular aluminum frame and steel bar axles make up the basic design. A unique direct steering system gives the driver excellent maneuverability. The clear plastic body makes the buggy very light and gives the driver good visibility. The driver, lying on his stomach, rides on naugahyde covered foam rubber. Planned body streamlining and the inevitable bearing experimentation should produce a buggy capable of performance better than most.

Experimental work is being done this year on the B buggy. The dorms hope to experiment on one buggy each year while the other runs as a relatively tried and proven machine.

Dormitory

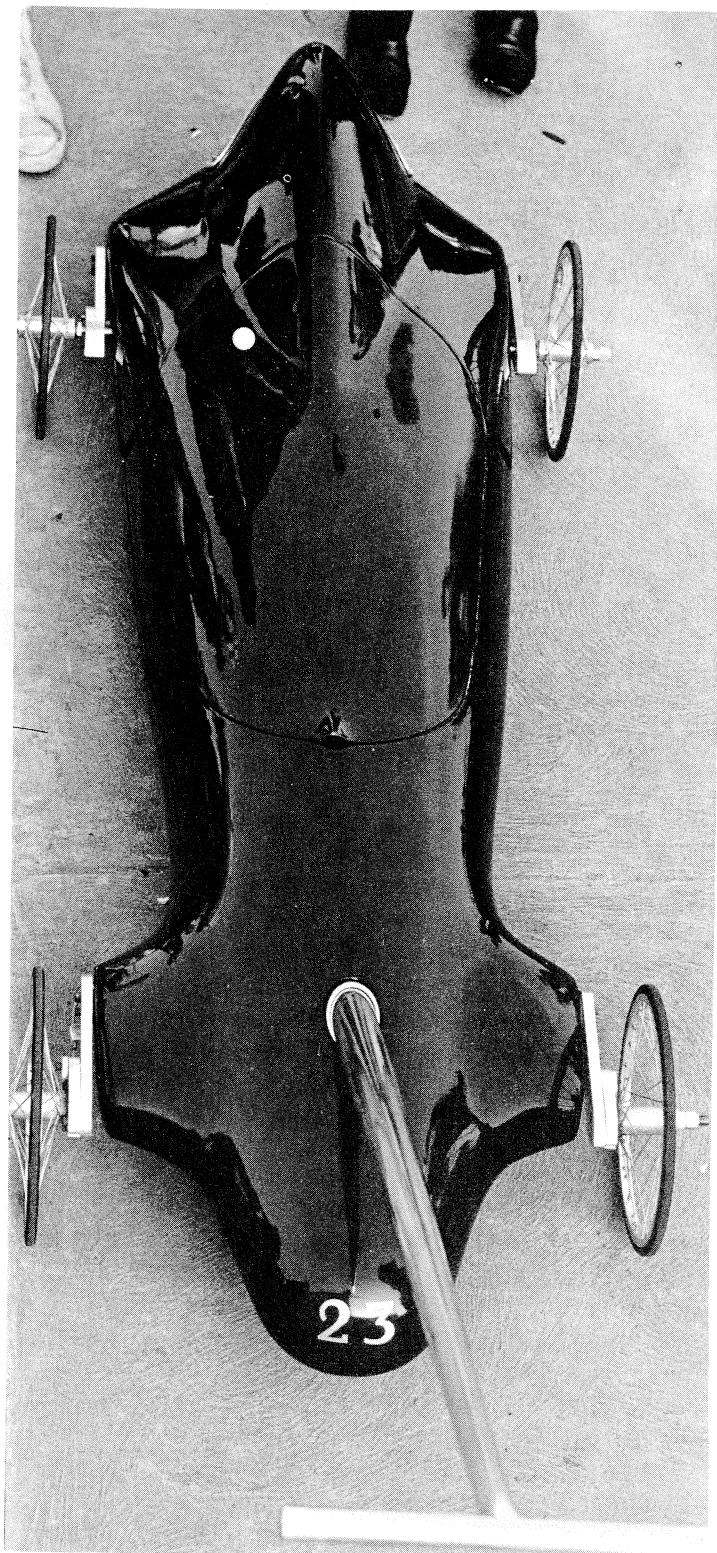
Phi Kappa Theta

This year race spectators will again see two veterans of the Sweepstakes races which have shown both winning abilities and potential in race and design. Snorpous was introduced in 1963, and immediately made her mark by winning second place in design at her debut and third place in design in 1964. She incorporates such features as an all-fiberglass unibody, aesthetic design, and independent torsion bar suspension.

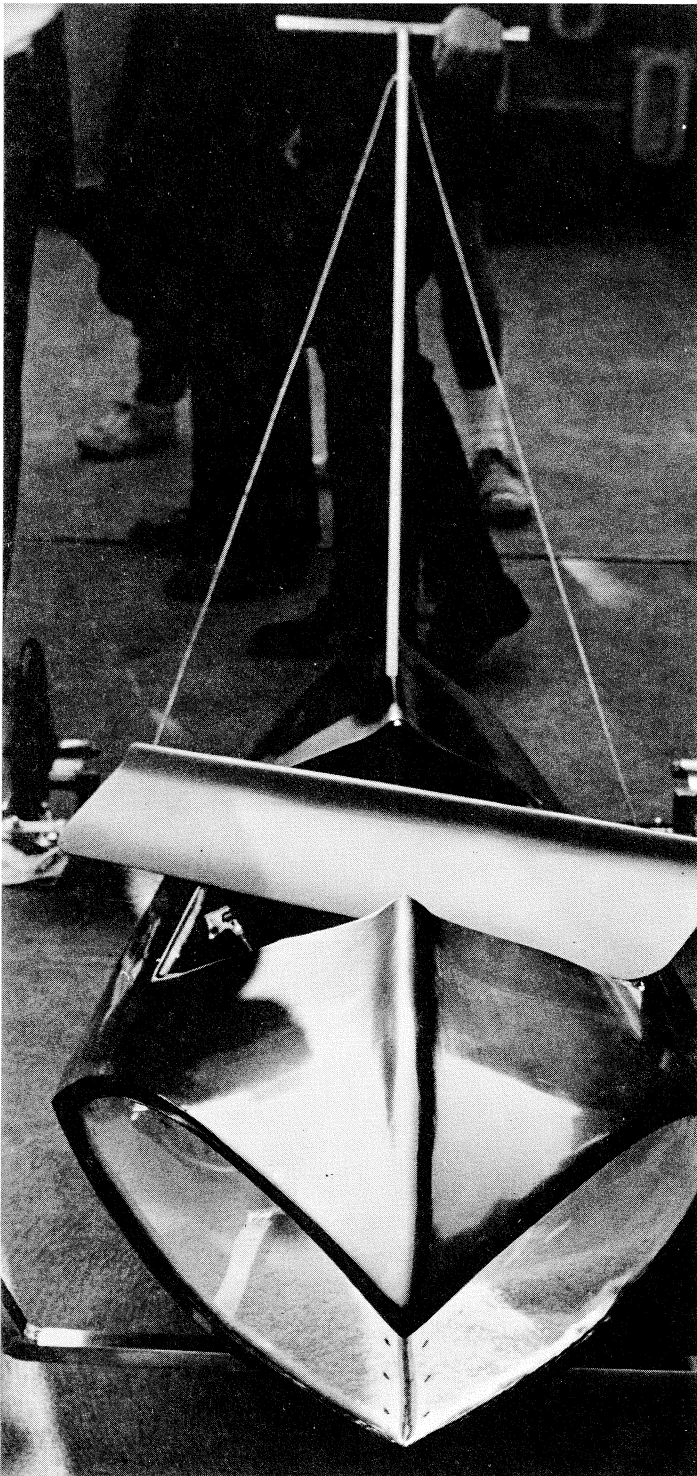
Shamrock, a two-year veteran, proved her worth by winning second place design and third place Sweepstakes trophies on her maiden voyage, becoming the first buggy in Sweepstakes history to accomplish this feat. A special feature of Shamrock is her plexiglass canopy, which was made in the Phi Kap oven after many painstaking failures. She also sports a unit fiberglass body.

Innovation has been a trademark of Phi Kap buggy efforts, with the introduction of ideas like prone driver position, free-standing pushbar, and unit fiberglass bodies, and last year was no exception. Though highly innovative, last year ended in bitter disappointment. A new steering system in Snorpous caused new suspension and alignment problems that never were quite ironed out. Last year Shamrock saw a new, radical and unproven parallel trailing arm suspension which supported a kingpin between them. Alignment was a severe problem here, too. Summer research and work has eliminated these complex systems, and should put the two buggies in a leading position.

Buggy chairman Ed Jesteadt, along with Bill Sherman, Larry Moran, Ken Kelly, and Chuck Rapach, have worked most of the flaws out of the buggies and foresee only minimal problems before final readiness. The pushing teams from last year are going to work hard to maintain their positions because of the unprecedented interest shown by the pledge class. The charge is being led by John Minarik who is already on a strict diet and training schedule. The Phi Kap Chariot workers suggest that if you want to watch a winning buggy this year, keep your eye on Shamrock. She's the fastest buggy they have had since 1961, when in that year they hit the two minute mark at the beginning of hill five, and in the next 47 seconds managed to leave parts all along hill five.



Pi Kappa Alpha



Pi Kappa Alpha has been a top contender since the beginning of the Sweepstakes over 40 years ago. This includes a period of 25 years during which PiKA consistently placed in the top three trophy positions. The PiKA's helped to bring about the highly sophisticated models of today when over 15 years ago they introduced the first fiberglass body.

The concept for the shark form, characteristic of PiKA's buggies is derived from a particular breed of sea life having excellent flow characteristics. A little spark of imagination is also used to adapt the shape to human engineering needs, specifically, vision requirements for the race. Each body is molded fiberglass and uses four externally mounted Soap Box Derby wheels. The driver, lying in a prone position, peers through a gaping shark's mouth windshield.

The older buggy, the "Shark", 6'3" in length, 22" high, was built in 1953 by Aubrey Amey and Don Barvoets. It remains a constant contender in the Sweepstakes with first place trophies in 1959 at 2:29.7 and 1963 at 2:31.7. Its features include tie rod steering and spring suspension enclosed in aluminum trees.

The newer buggy is the "Tiger Shark" which is again undergoing slight modification by a crew headed by buggy chairman Mike Emerson. The "Tiger Shark" is 6' by 18". A detachable canopy will be one of the new features. The machine was originally designed in 1964 by buggy chairman Ed Escallon and has a well styled simplicity in its lines. It rides on a leaf spring suspension and has a wire steering rig which the driver, in a prone position, operates from under his body.

PiKA again boasts one of the strongest push teams on campus and is working out under Tim MacMillan, perhaps the school's best man on hill 1. An important function of this year's work is the training of new drivers. Fortunately, a large number of young candidates illustrates the interest generated by the Sweepstakes and indicates one more ingredient of a very promising team for this year and the immediate future.



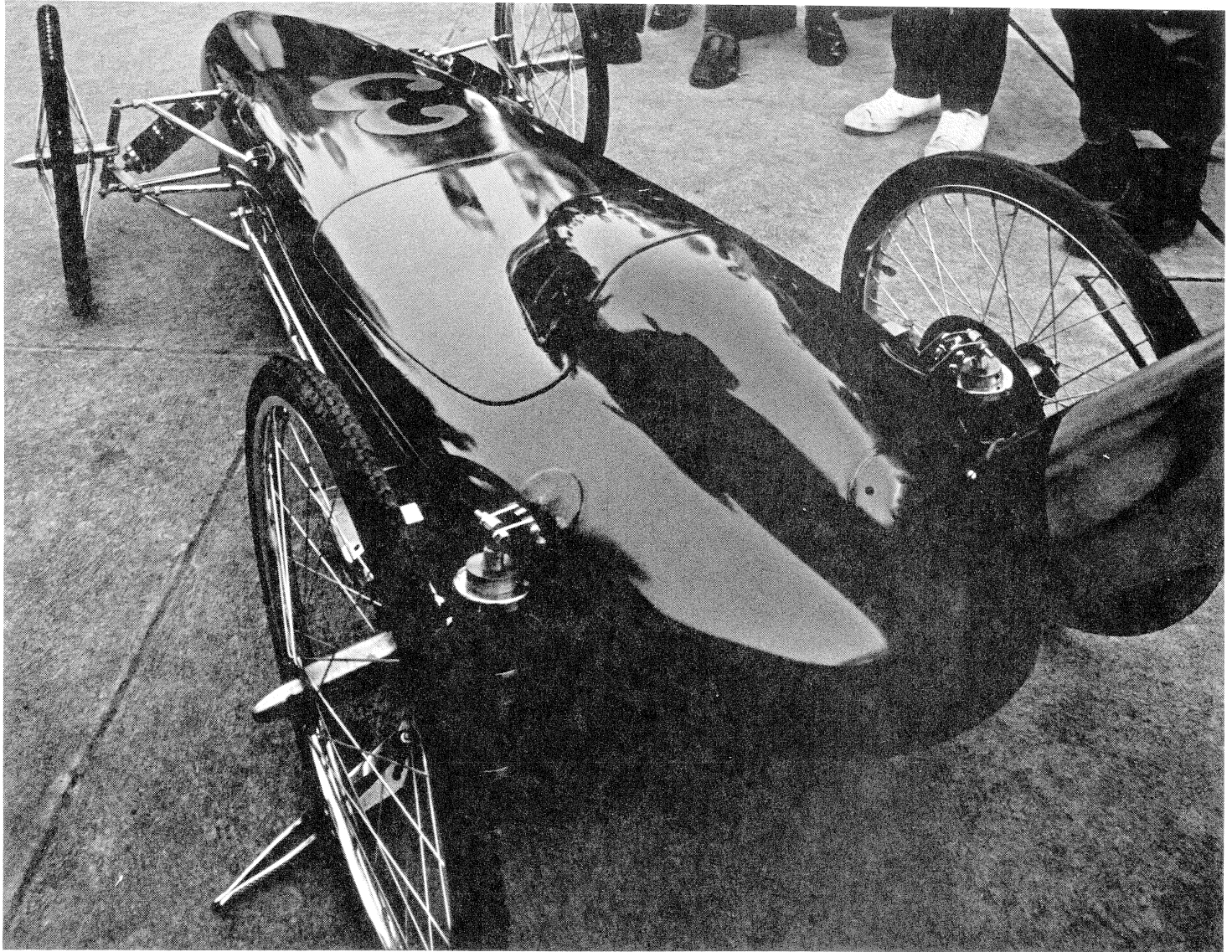
Sigma Alpha Epsilon

SAE's Maroon, designed by Bill Faircloth, takes advantage of bicycle aerodynamics as well as the abilities of an energetic push team. Highly successful, SAE Maroon has taken second place twice in the last three years.

The success of SAE's bicycle-buggy rests in its extra light spoked wheels, high pressure pneumatic tires, and racing bike steering system. The driver lies flat, his chest enclosed in a molded fiberglass shell. Black leotards are the standard uniform for the driver. The skin tight suit and the chest shell reduce air drag to the driver, at the most critical place on the bike. The Maroon, at thirty pounds the lightest contestant in the race, gives the pushers a special advantage on the hills, by compensating for slow free roll due to the lightweight design. The driver has excellent maneuverability and visibility; safety features are the conventional bicycle hand brake and a heavy duty plexiglass helmet.

SAE's second buggy, Red, has not been seen for several years, but with SAE's increased athletic depth, the older buggy has been brought out of storage and revamped. The steering system has been changed and the fifty pounds that are in the buggy have been redistributed.

SAE pushteams use a "spurt" pushing system—each runner pushing the buggy forward and then running to catch up to push again. This system provides maximum speed, the fastest race time being 2:30.5. Both buggies are in prime shape and awaiting race day.



Sigma Nu

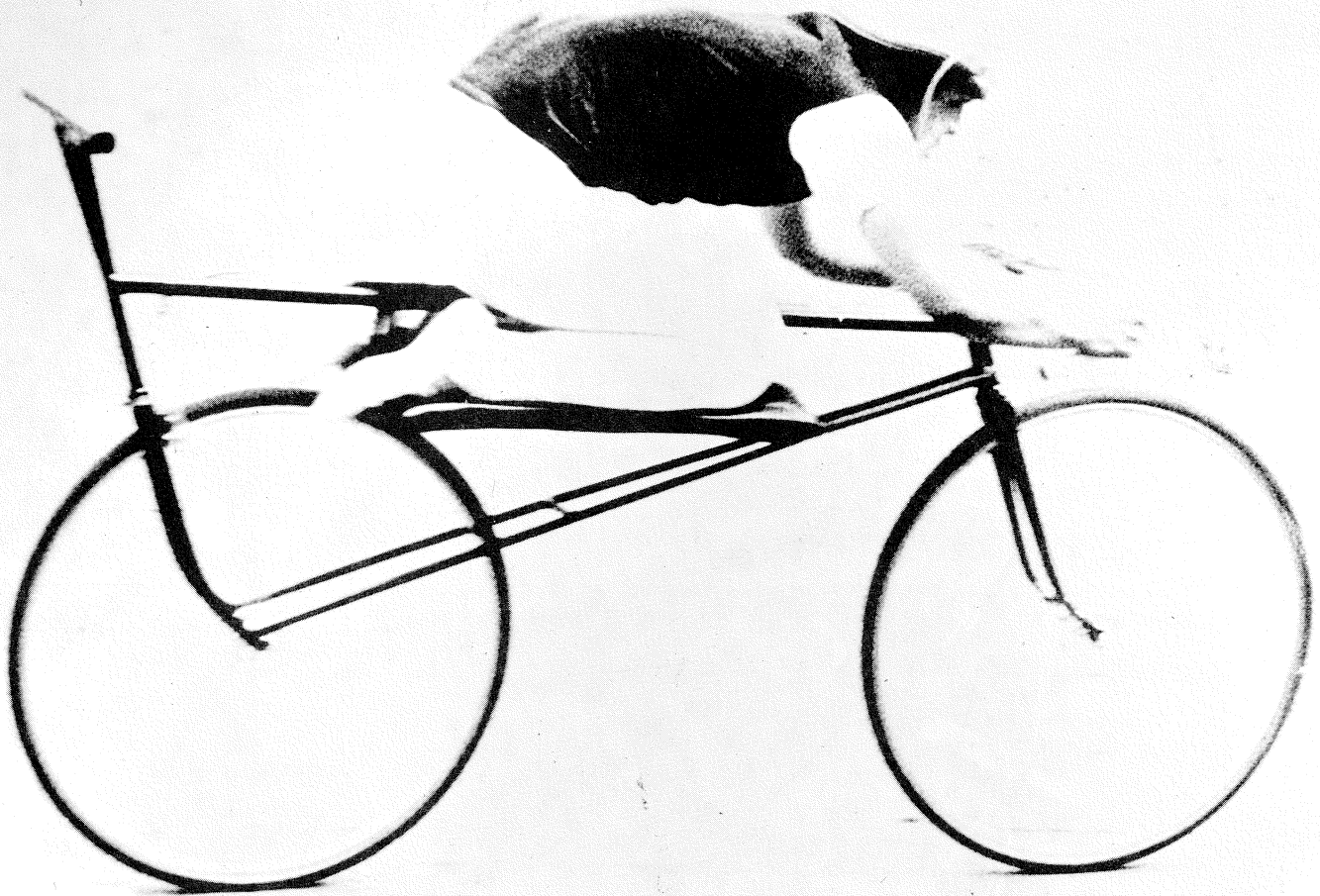
After several years of frustrating mechanical failure, the veteran "lizard" of Sigma Nu appears to be nearing the peak of its evolutionary process. With new brakes and many improvements in the running gear, Number 3 should finally show the potential built into its distinguished design.

Many of the familiar innovations of the "lizard" are unchanged. Its slim, low-slung lines, rearward driver position, chromed radius arms, and large wire wheels result in a strong resemblance to the Lotus of formula racing fame. The tubular "bird-cage" space-frame was pioneered by Maseratti, another

famous name in racing. A pre-stressed aluminum skin, external shock absorbers all around, and racing-inspired front and rear suspension complete the picture of a thoroughbred racing machine.

Driving position in the "lizard" is unique among sweepstakes buggies. The feet-first posture gives the driver more complete control and allows him a panoramic view through a wrap-around windshield, resulting in a greatly improved safety factor. This and the above are only several of the many exceptional features that earned Sigma Nu the buggy design trophy two years in a row.

In a discussion of buggy design and innovations the push team is often wrongly neglected; a good pusher is far more essential to race-day success than an advanced suspension system. Enthusiasm towards pushing is an unparalleled heights under the direction of Byron Chew, and, if Warren Atwood, Lad Dawson, and Frank Stark, directors of buggy design and construction, contribute the refined machine that is expected, Sigma Nu will be one of the leading contenders for both design and sweepstakes trophies on race day.



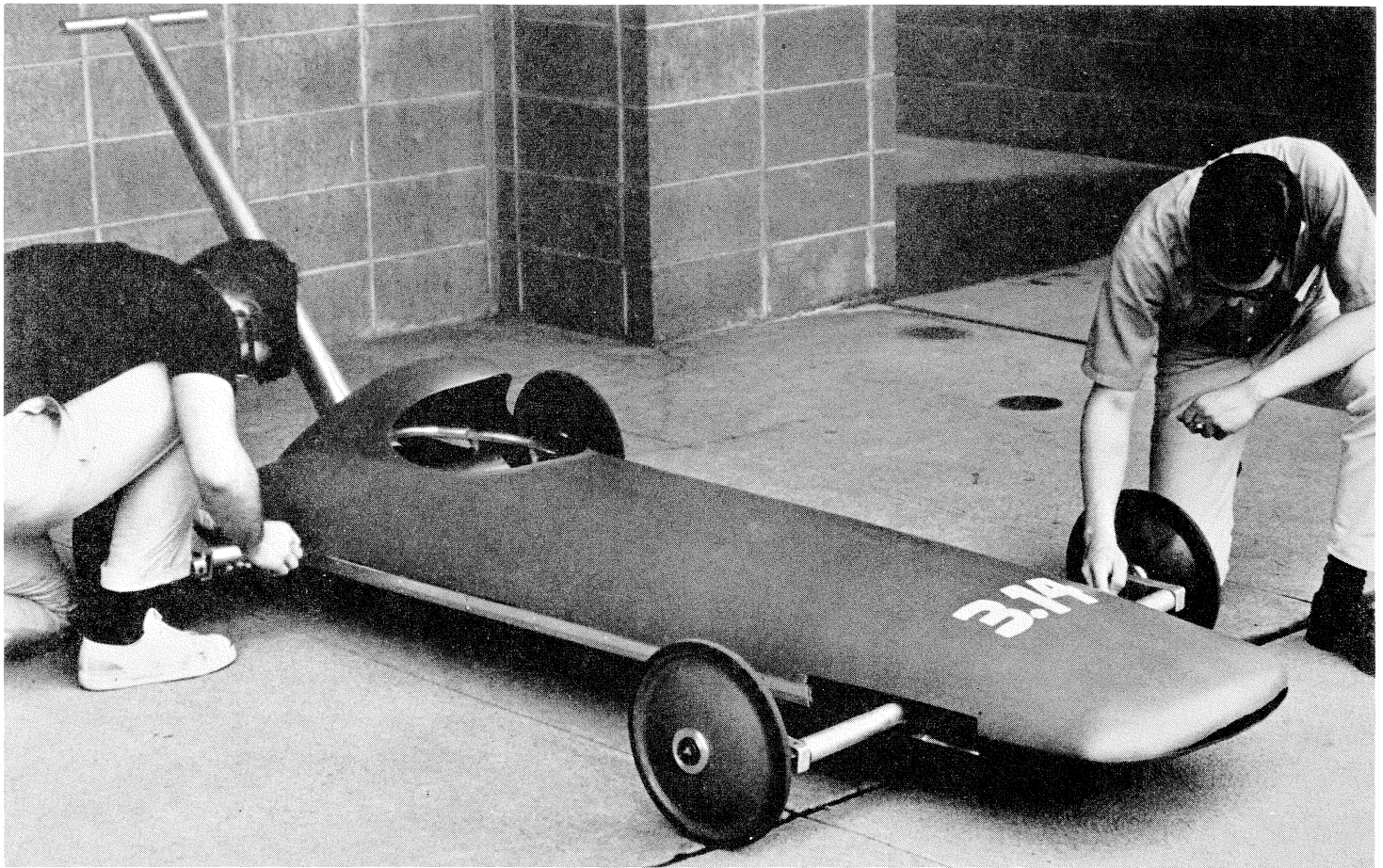
Tau Delta Phi

Last year, "Black Widow" (entered last year as "13") was the first Tau Delta Phi entry since 1959, when a highly machined buggy with large bicycle wheels collapsed, badly injuring the driver. It ran with the fifth fastest time, making Tau Delta Phi eligible for a trophy in their first year of recent competition. Unfortunately, "Black Widow" was disqualified. This year Tau Delt is also entering a class B buggy, "White Dwarf", which is a brand new buggy of two wheel design with an aluminum frame.

"Black Widow" is of bicycle design with a frame fashioned of tubular steel combined with racing bicycle components. The most obvious reason for choosing the bicycle design is its relative lightness in comparison to the conventional type of buggy. Last year, "Black Widow" was the lightest buggy in the race, however, this year it will concede this position to the new buggy, "White Dwarf".

While "Black Widow" buggy was the lightest in the race last year, it was also the only buggy where the driver rides in a jockey position with padded supports for his knees. The driver of "White Dwarf" will also ride in the jockey position.

Tau Delta Phi is entering the race this year with Mike Pollack (Architecture '68) acting as both buggy chairman and designer. Tau Delt is back with a stronger push team, two buggies, and a determination to win.



Theta Xi will field the same buggy this year that brought such success over many powerful opponents in the past. Last year TX improved its time and its place greatly over the performance of the previous year.

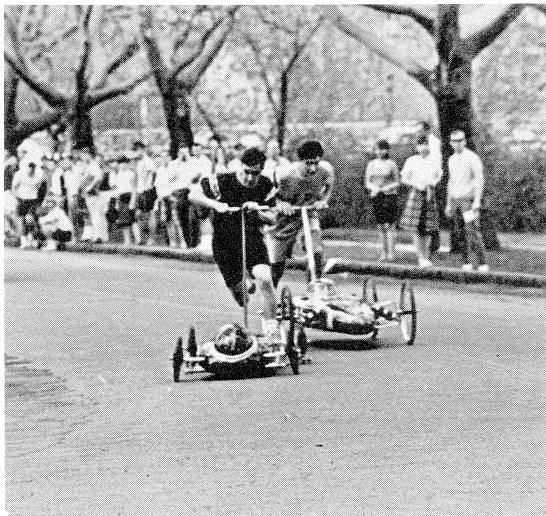
The A buggy, named π by the brothers, features an aluminum tube frame with a molded fiberglass shell that clams together in two halves to cover the driver and frame. The driver is in a reclining position on his back with controls for steering and braking at his sides. π will race in red again this year. The buggy weighs 100 pounds and is 9 feet in length.

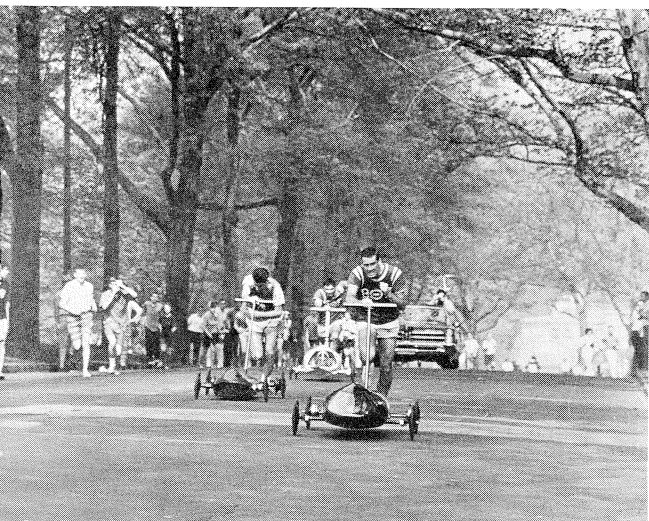
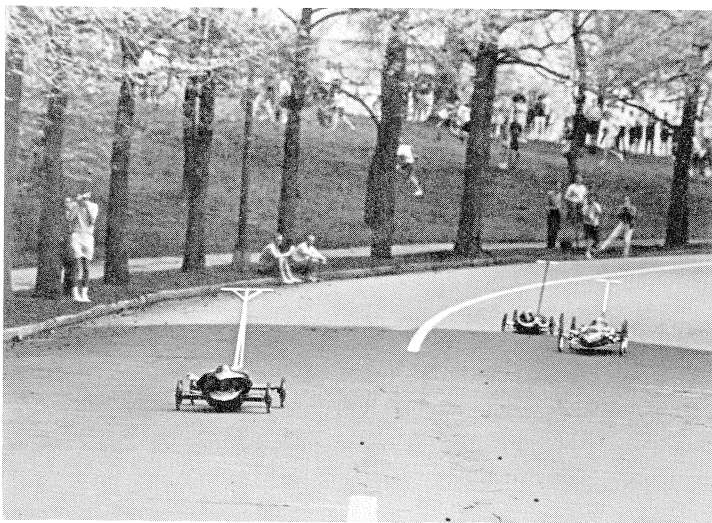
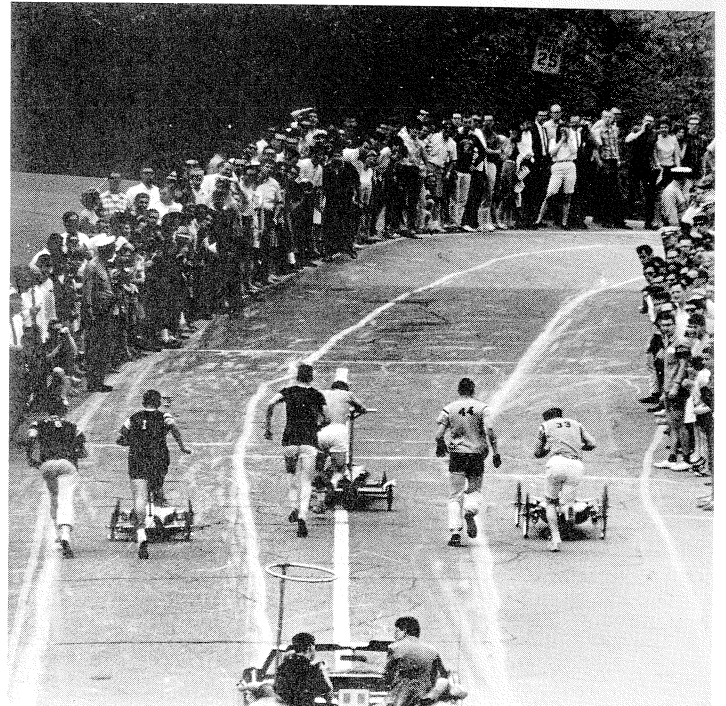
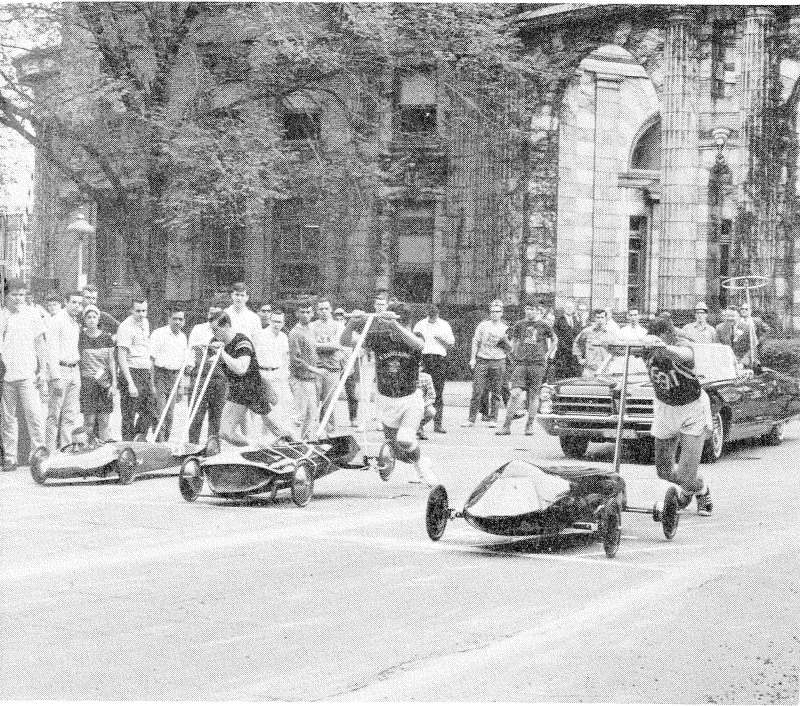
The buggy chairman, David Harris, has scrapped the entire old suspension system. The buggy is now equipped with solid axle torsion bars, both front and rear. New brakes will be installed to increase driver safety.

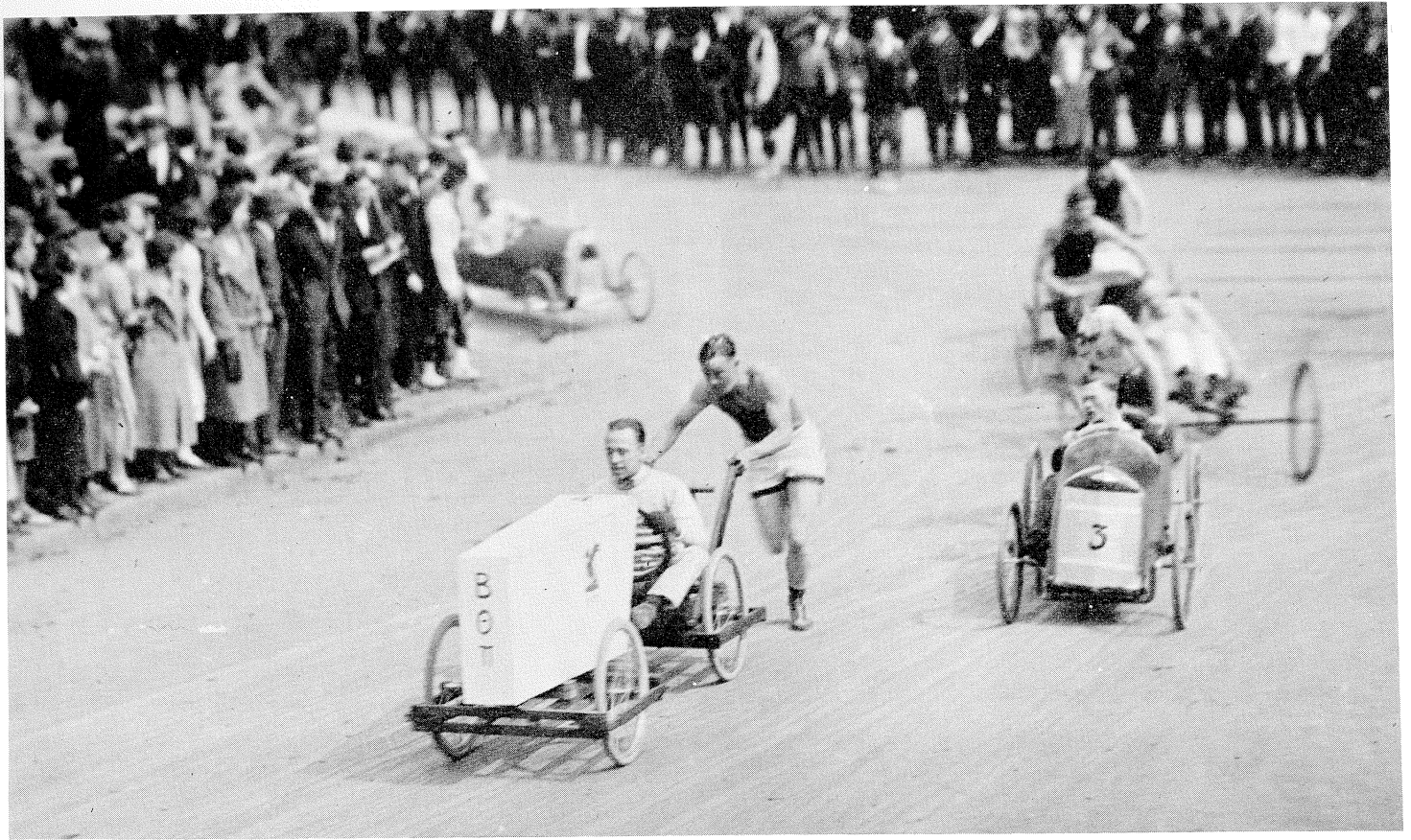
The Theta Xi's also have high hopes for the new buggy which will enter the sweepstake competition for the first time. The body is made of plywood painted dark blue. The driver lies on his chest while the buggy races on 4 wheels. The height of the buggy is 18" and it is 3.5' wide. Seven feet in length, it weighs 75 pounds.

All of last year's veteran pushers, Mark Begeman, Joel Gordon, David Harris, Fred Klein, and Rod McDowell, along with several younger brothers and pledges will be trying for the push team. Last year's driver, Jeff Reisner, is also expecting keen competition for his position.

Theta Xi







History of the Sweepstakes

Chris Macosko

On April 21, 1920, the front page of the *Tartan* announced the first Sweepstakes. "This Ben Hur of the 20th century . . . is going to be some race and the prize, the niftiest, finest silver loving cup — fully commensurate with the perilous ride."

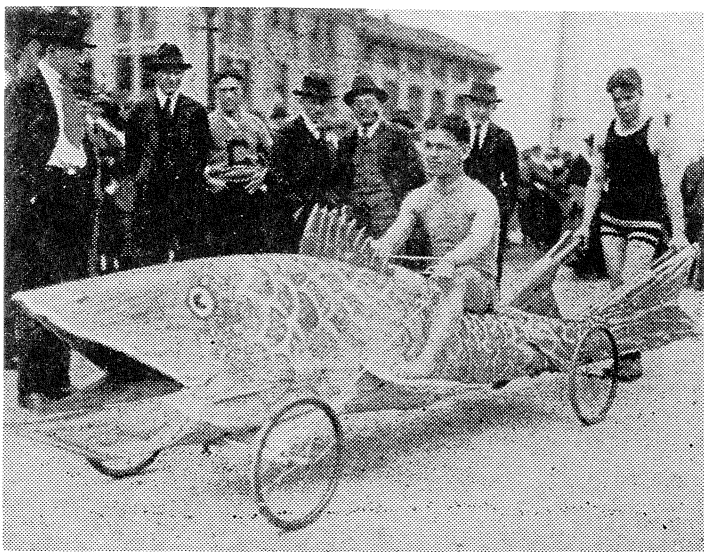
On May 19, a dozen boxy machines lined up in front of Margaret Morrison. At the crack of the gun they took off for Schenley Park. In the coast the pusher jumped on the back of the careening vehicle and the two-man team roared on. Somewhere was a pit stop and to demonstrate mechanical dexterity the rules required switching the left rear wheel with the right. Up the hill at Porter Hall driver and pusher could switch positions to "insure a breakneck finish."

The next year the first design cup was awarded. Uniqueness seems to have been the criteria for DU won with a monstrous fish on four wheels, and SN copped second with their Toonerville Trolley.

The pit stop was dropped to speed up the race. The field swelled to eighteen, all in one heat, lined up six abreast and three deep. The carnage was fantastic. As one write up put it:

"Powerful two-seated racers hurtling madly through the air, taking corners at death-defying speeds. The sound of steel and splintering glass—spectators gasp with averted faces and above all the sweet music of the agonized cries of the wounded and dying. Can you ask for more?"

In 1921 three machines went down in a terrific crash. "By skillful driving and an unparalleled burst of speed SAE forged to the front. . . . However, at the fish pond the jinx got them; their steering apparatus went bad and the machine, becoming unmanageable, headed straight for a tree. It crashed into the curb and removed two wheels. Wilson and Ted, his mechanic, were hurled through the air and after they landed the wreck landed on top of them."



Trophies weren't so plentiful then. First place was the only award and you had to win it three years to keep it. Furthermore, design and the race trophy couldn't be given to the same house. As today, there was continual debate over the merits of beauty and mechanical perfection in design.

The next year the fifth pusher was added and with the completion of Frew Street in 1928 through to the gym, the course and push zones assumed approximately its present route. Dorms were allowed to enter for the first time.

The campus swung with the rest of the nation in the late twenties. One night the police raided McGill Hall after some student prank and were greeted with hurtling light bulbs, smoke bombs, and the sheriff was crowned with a bucket of water. Spring Carnival had become likewise too much for the administration, and in 1929 President Baker cancelled the weekend.

The *Tartan* ran a cartoon entitled "Used Racers for Sale." But the race was in Tech's blood and ten buggies ran off on two separate weekends. Only preliminary times are recorded in the *Tartan* with Phi Kappa (now Phi Kappa Theta) on top.

The times came steadily downward as fraternity engineers improved their designs. In 1930 Beta broke the 3:00 minute barrier with an aluminum three wheeler and upright driver. Kappa Sig scrapped their "Indy Model" complete with "radiator" which had dominated the 1920's. They built a low beetle shaped three wheeler with perhaps the first prone position driver. This and the Beta machine fought for the championship during the next few years.

The race was still run in large heats, from four to six buggies. Lane stripes were added in 1932. Those on the outside had the added problem of getting around a traffic blinker erected in the middle of the intersection at the top of Tech Street. A rule was added requiring each buggy in design to enter the race also.

Through the 30's times were cut steadily down to the record in 1938 by Kappa Sig of 2:43 in a close finish with the Deltas. This time is remarkable considering that many of these machines still carried the second pusher and the driver down the coast and past Phipps conservatory. In the 1936 races Beta was disqualified because of an "illegal exchange of drivers." However, by 1940 it appears that most entries coasted with only the driver.

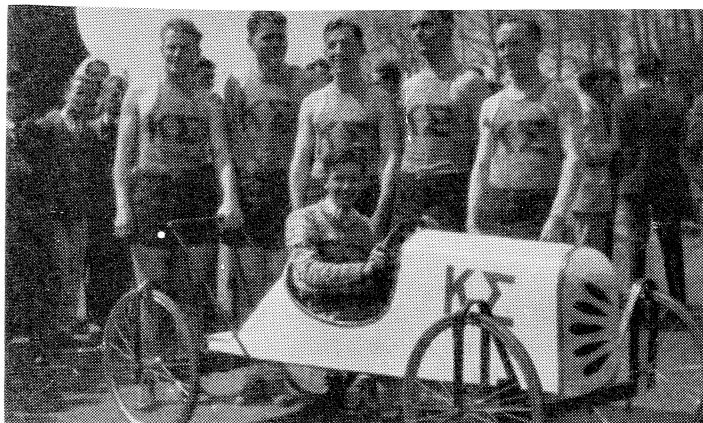
A local fraternity, Iota Sigma Delta, went on to win the race of 1921 with the first recorded time of 4:38. The race started and finished in front of Fine Arts on a road that cut through the campus then between Baker Hall and Hunt Library. In 1922 the *Tartan* writes: "The Kentucky Derby or the Epsom Downs annual classic hold little interest to the Tech student as compared with this mammoth pushmobile race." The Spring Carnival throng's interest swelled so much that the judges couldn't see the finish and awarded a tie. (The DU's succeeded their "fish" with a "grasshopper" but it ended up on a curb.)

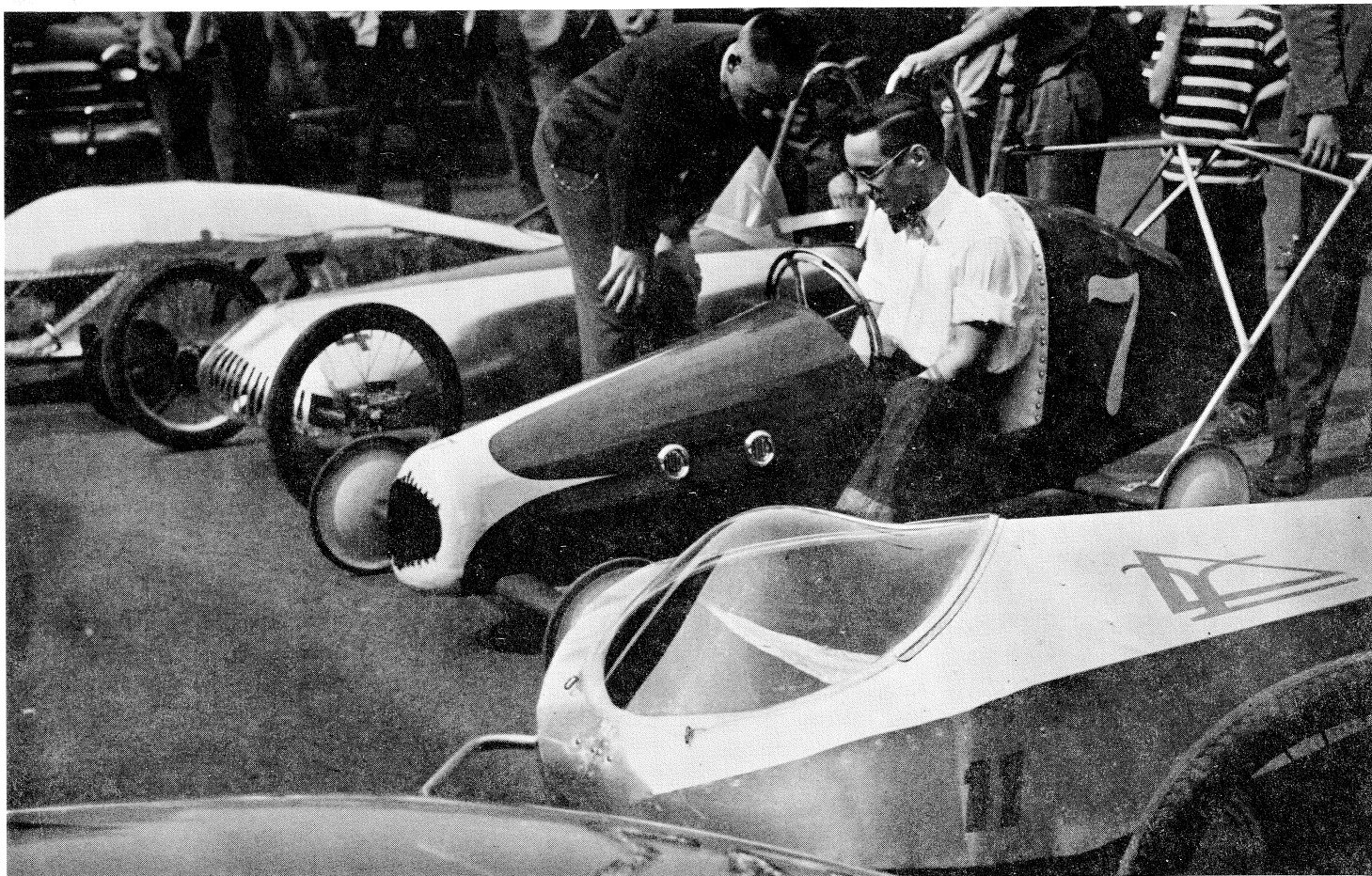
The next year saw more similarities to the present race. Freak designs were eliminated and mechanical perfection became important. The push team was increased from one to a relay of four. However, no trackmen were allowed because the coach felt they might get hurt.

By 1924 the fraternities were taking the Sweepstakes more seriously. In April the *Tartan* reported, ". . . and it has been rumored that some have already been cavorting around the course during the dead of night." The fans were warned to keep off the course (by patrolling ROTC men). The *Tartan* advised that "marshall of the course will condemn any vehicles taking shortcuts through the park."

In 1925 the race was finally run in heats. Nineteen entries were divided into four heats. The finals were the same day. Rules were changed to require the same body in the race as entered for design. Kappa Sig won the race for the third year. With their perennial houseful of Tech's big time football players they won at least twelve of the first twenty-one buggy races. The emphasis in the first buggies was lightness and durability. The rules required a minimum of sixty pounds and the machines were weighed before each race.

By 1926 the "Roaring 20's" fans were crowding to the race from all over Pittsburgh. Preliminaries were run on Friday for the first time. They even brought in Pittsburgh's top dirt track auto racer for a judge. Fraternity men were "disregarding the Black Bottom . . . and shaking their feet in another feature, the Interfraternity Sweepstakes."





Design seemed centered on lightness and airplane-like bodies. Three wheelers predominated. They ran on airfilled bicycle tires. Many of the entries looked like low-slung wheelchairs. The 1937 ATO buggy was a "conglomeration of wood, galvanized iron pipe, leather upholstery and aluminum covering."

The 1938 winner, built by PiKA, had a twelve foot long steel frame streamlined with a canopy of aluminum tubes covered with airplane silk. This was a rough year for ATO. They qualified in the top four with a fine 3:00 but when the finals were postponed a week because of rain, they had to cancel out because their top pusher, Mel Cratsley, was away at a track meet. The Betas were almost dropped when mechanic Dean Vance forgot to bring the wheels.

The next several races saw quite a few spills and slower times. In 1934 the aluminum Beta car flipped over. The next year PiKA's wheel rim collapsed and their big boat dived into the curb. In 1941 DU crashed into the curb trying to avoid a car let on the course. In the prelims, PiKA got a flat and ATO had two. They were allowed to run again on Saturday, but to no avail for ATO went out of control going into the Park and PiKA went into a curb trying to avoid them.

That year Kappa Sig won for the sixth year in a row. Design during this stretch seemed to stagnate as with houses entering nearly the same buggy each year. Times did not improve much, 2:50 seemed the common performance. A race

was run in 1942 but no results can be found. From 1943 thru 1945, the sweepstakes were dropped along with most of Tech's activities due to the draft and the high priority of aluminum.

Pittsburgh repaved the streets and provided police protection. The post war races saw a whole new perspective in buggy design. The old three wheelers, the bike tires, and the wheel chairs rapidly disappeared and by 1950, the soap box derby model was the winner. Four derby wheels were mounted on wedge and torpedo like bodies. Most drivers rode like their Akron counterparts in crouched sitting positions, but there were also a good set of prone position machines.

The transition models to this type must have been a sight to behold. The Thistle gives a rough pictorial record of these wondrous designs. In 1947, Beta entered a three wheeled "snow plow" while DU won with their "Flying pork barrel." Their driver wore a cowboy hat. The next year PiKA looked like a wingless Piper Cub. In 1949, ATO brought up the rear with a wide flat creation complete with rear view mirrors. Sigma Nu ran through a string of monsters, first a "water-mellon," then a "baby buggy," and finally an unbelievable three wheeler with bicycle handle bars in 1955.

Kappa Sig stuck to an aluminum tear drop with a prone drive from 1946 to the late 50's. But they never regained their postwar dominance. In 1946, PiKA crowded them and their silver beetle hit a pedestrian. In 1950 they set a new record in

the preliminaries, but committed a pushing fault. In 1956 they ran over a pusher and the next year lost their canopy in the coast.

The Deltas emerged the post war champion. For seven years their soap box racers lost only once, in 1947 in a protested race. From 1948 on "No. 12" broke a record in every race. In 1952, the 134.5 lb. buggy smashed nearly six seconds off its own record with a 2:36. The campus walked back to the midway shaking their heads, "wondering what makes the Delt buggy roll."

Some people at ATO set themselves to finding out. In May, 1953, the ATO's set down on the starting line a carbon copy of the Delt machine. The "Andy 1" won by .05 seconds. The hysterical crowd rushed so fast to the finish that third place PiKA hit a spectator.

This race marks the beginning of the modern sweepstakes. Since 1952 no winning time has been slower than 2:36. Since 1951, the finals have always been three machines and brakes have been required on all buggies.

In 1954, ATO tightened their hold with a 12 second victory. DTD died an agonizing death. In the preliminaries No. 12 didn't finish. Their second buggy still managed to qualify but froze a bearing in the finals. The ATO mechanics, no longer content with copying, also entered the "green flash" which, modified, is the present "Golden Goose."

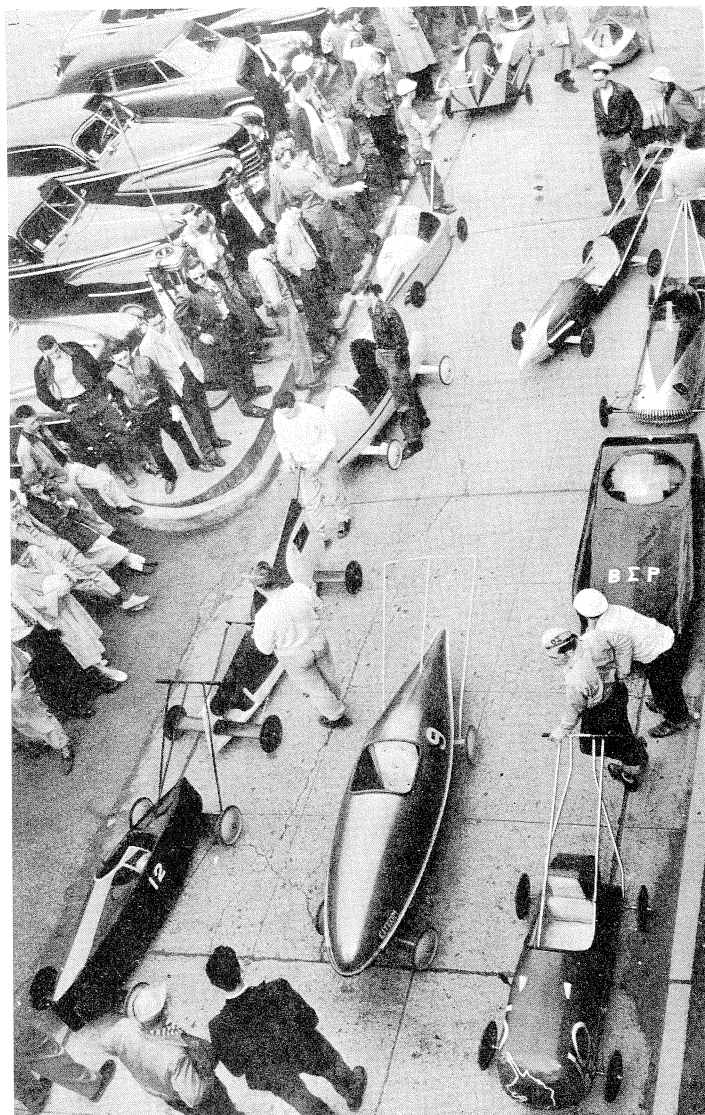
In 1955, ATO recorded the race's only one-two finish. The next year "Andy I" with Dick Swaney driving set the present course record of 2:25.0. The "Golden Goose" tied this the following year, hotly pursued by PiKA and Beta. The *Tartan* reports that both these teams had better pushing times. This year the Tau Delt driver was injured when he threw a wheel and hit a parked car mistakenly let on by the police. This is the only recorded injury in the last 12 years of the race.

In 1958, due to rain, the finals were run at 5:30 A.M. on the Tuesday after carnival. ATO got a week's social probation for their early morning victory celebration. The next year ATO's string was snapped as they were disqualified for pacers. The "Andy II" was running for the second time due to a timing error by the judges. In 1960, in keeping with their design tradition, DU entered a keg of beer mounted on four wheels. This year the Dorms made their best showing ever with a second.

In 1961, a radical departure in buggy design appeared on the starting line—the SAE bike. Old buggy chairmen hissed at the unconventional arrival but it has taken two thirds, two seconds and a fourth through 1965. The "Bike" is between five and ten seconds slower than a solid tire four-wheeler, but its lightness nearly makes up the time in pushing. This was dramatically illustrated in 1963 when SAE streaked by Beta on hill four. Tau Delt entered a bike in 1965. Though disqualified, it ran a similar time.

Perhaps the unheralded team of the post-war race is PiKA. Until 1964 they were in the finals 18 years in a row—2 firsts, 7 seconds, 7 thirds, and a fourth (in 1951). They are one of the three elite to break 2:30. They ran several designs, finally settling on the "Shark" model in 1956.

Since 1953, Phi Kap has been the most consistent in design finishes, taking at least five firsts.

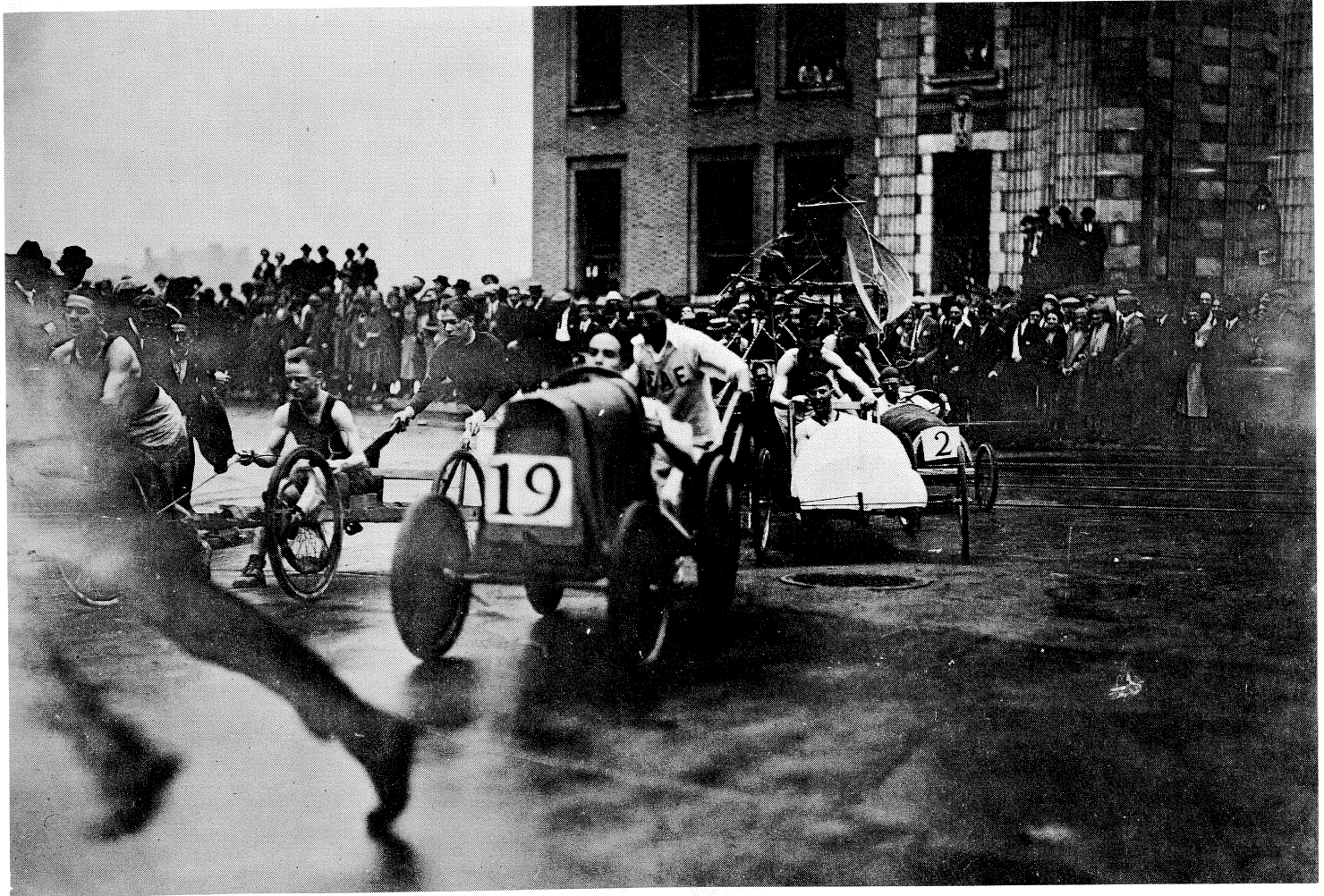


In 1963, another era ended as the "Golden Goose" spun out of control and crashed into the curb by Scaife Hall. It ran a 2:26.4 the year before and was well out in front. The next year the "Goose" hit the same spot, losing its canopy. In 1965 they finished without mishap but failed to break 2:31.

Meanwhile, another team has come to the front, Beta Theta Pi. They placed a three wheeler sixth in 1962, then third. In 1964, it was modified to form a four wheeler and took first. In 1965 it was improved further and became the first buggy to break 2:30 since 1962. In 1965, Beta coasted slightly slower than ATO, but won with their pushers.

In 1966, the race has an air of tenseness. The Sixties have seen many changes in design and frustration, especially internally. But times have not improved in 10 years. The present designs appear faster dynamically than the old "Andy I" and since 1960 many houses have taken to using closed trucks for secret prerace speed improvements. Buggy chairmen blame the slower times on the degenerating of the course. Neither the city of Pittsburgh nor park officials have done anything to the road surface in the last five years.

But, perhaps the race has reached its limit.



Official Sweepstakes Records

1920: first "Spring Week", first Interfraternity Sweepstakes
10 entries

Sweepstakes Winners

Design Winners

- | | | |
|-------|---------------------------|-------|
| 1921: | 1. Iota Sigma Delta 4:38 | 1. DU |
| | 2. G.M.E. 4:42 | 2. SN |
| | 3. Chi Sigma Upsilon 5:04 | |
| 1922: | 1. SAE 4:30 | 1. SN |
| | 1. PiKA 4:30 | 2. ? |
| | 3. Delta Mu | |

- | | | |
|-------|------------------------------------|---------------|
| 1923: | 1. KS | 1. Delta Xi |
| | 2. TX | 2. KS and SAE |
| | 3. SAE | |
| 1924: | 1. KS | 1. DTD |
| | 2. SAE | 2. BTP |
| | 3. DTD | |
| 1925: | 1. KS | 1. DTD |
| | 2. SAE | 2. Delta Mu |
| | 3. DTD | |
| 1926: | 1. PiKA 3:18.3 | 1. ATO |
| | 2. (Phi K, DTD, SAE, KS | 2. ? |
| | 3. and Woodlawn Club in
Finals) | |

1927:	1. KS 3:15.8 2. DTD 3. TX	1. BTP 2. Phi Sigma Kappa	1948:	1. DTD 2:48 2. KS 3. PiKA	1. KS 2. ?
1928:	1. KS 3:04.4 2. SN 3. Phi Kap (Roughly the present course)	1. SAE 2. Phi Sigma Kappa	1949:	1. DTD 2:42.5 2. PiKA 2:43.5 3. KS	1. SAE 2. PiKA
1929:*	1. Phi Kap 3:05.6 2. KS 3:08.5 3. BTP 3:08.6 (Spring Carnival banned this year)	1. (no cup awarded)	1950:	1. DTD 2:41.8 2. PiKA 3. DU	1. KS 2. SAE
1930:	1. BTP 2:57.5 2. Phi Sigma Kappa 3. ?	1. TX 2. ?	1951:	1. DTD 2:41.6 2. KS 2:54 3. DU	1. KS 2. SAE
1931:	1. DTD 2:59 2. BTP 3. KS	1. TX 2. ?	1952:	1. DTD 2:36 2. KS 3. PiKA	1. KS 2. SN
1932:	1. BTP 2:54.8 2. DTD 3. ATO	1. TX 2. BTP	1953:	1. ATO 2:30.55 2. DTD 2:30.6 3. PiKA	1. Phi Kap 2. ?
1933:	1. BTP 2:48.5 2. KS 3. SN	1. TX 2. DTD	1954:	1. ATO 2:28.1 2. PiKA 2:36 3. DTD	1. PiKA 2. ATO
1934:	1. KS 2:49.7 2. PiKA 3. TX	1. BTP 2. PiKA	1955:	1. ATO 2:26.0 2. ATO 2:30.5 3. PiKA 2:32.6	1. Phi Kap 2. ATO
1935:	1. BTP 2:47.2 2. KS close 3. ?	1. PiKA 2. TX	1956:	1. ATO 2:25.0 2. PiKA 2:30.2 3. PiKA 2:32.6	1. ?
1936:	1. KS 2:46.8 2. ? 3. ?	1. BTP 2. ATO	1957:	1. ATO 2:25.0 2. PiKA 2:27.5 3. BTP 2:30	1. Phi Kap 2. Dorm
1937:*	1. KS 3:00 2. BTP 3. ATO	1. BTP 2. ATO	1958:	1. ATO 2:28.4 2. PiKA 2:43 3. ATO 2:45	1. Phi Kap 2. ATO
1938:	1. KS 2:43 2. DTD 2:44.4 3. BTP	1. PiKA 2. ?	1959:	1. PiKA 2:29.7 2. SN 2:30.0 3. PKT 2:32.5	1. ATO 2. PKT
1939:	1. KS 2:44 2. DTD 3. ATO ?	1. PiKA	1960:	1. ATO 2:34.5 2. Dorm 2:36 3. PiKA 2:41.8	1. PKT 2. PiKA
1940:	1. KS 2:53 2. BTP 3. DU	1. BTP 2. ?	1961:	1. ATO 2. PiKA 3. SAE	1. ?
1941:	1. KS 2:55 2. BTP 3. DTD	1. PiKA 2. ?	1962:	1. ATO 2:27.5 2. PiKA 2:29.8 3. SAE 2:31.8	1. BTP 2. ATO
1942:	no results in Tartan		1963:	1. PiKA 2:34 2. SAE ? 3. BTP 2:37	1. SN 2. ?
1943-1945	no races—War years		1964:	1. BTP 2:31.5 (default) 2. SAE 2:33 3. PKT 2:37.7 3. BTP 2:37.7	1. SN 2. PKT
1946:	1. DTD 2:49 2. KS 3. PiKA	1. BTP 2. PiKA	1965:	1. BTP 2:28.7 2. ATO 2:31.9 3. BTP 2:32.05	1. BTP 2. ATO
1947:	1. DU 2. PiKA 3. DTD	1. PiKA 2. ?			

Sweepstakes Outlook 1966

Bill Marietta

The prediction of the outcome of the fiercely competitive and closely matched Sweepstakes race is a large task. These highly engineered machines are extremely sensitive, and the present potholed course is a potential eliminator.

Evaluating the human element, pushers and driver, is just as difficult. Pushing makes up two thirds of the race time. A fast man on the track is not always the best behind the push-bar. The campus "jockeys," the drivers, have a tough task navigating the rough course and the treacherous Frew Street turn.

With such variables, one can only say with assurance that the final result will be decided by the competitors on Derby Day.

Beta Theta Pi's entry, "00", promises to break the 2:30 barrier again in its second official clocking after a blazing 2:28 first place last year. Joe Van Ryzin supervised the Betas in 1965 while they fashioned from scratch the buggy that also took first place in design. One can be sure that 1966 chairman Marty Schussel will have "00" coasting no slower than last year. The Betas' perennially strong push team will certainly hold its own on the hills making "00" the buggy to beat. Loss of an experienced driver may prove a difficult obstacle to overcome. But to place a winner of two consecutive years in a lower position than first place would be to disregard the only real basis of prediction, performance.

Alpha Tau Omega, who saw their long reign of winning buggy races shattered several years ago, came back last year with a 2:31.8 time in the preliminary heats. The Golden Goose, whose speed has often been attributed to such fiction as hidden flywheels, will be ATO's prime buggy. A strong choice for second and a sure contender for the cup, the ATO's lack only pushers. The 1965 Sweepstakes saw three pushers graduate, but sophomore chairmen Mike Zimmerman and Dick Lagatella feel confident that 1965 B team pushers and possibly a pledge will be in shape to fill the bill.

Beta Sigma Rho is the dark horse of this race. No one should discount the Dauphin, a three wheeler that supposedly negotiates turns with greater ease than the conventional four wheelers. The Dauphin ranks with the front runners in free roll, but Beta Sig's have been hampered by accidental disqualifications and sub-par push teams in previous years. Chairman Steve Mendelson had his pushers out training for

the race early in March. Add to this a large pledge class and several returning pushers, the chances of victory are real. Beta Sig looms a conservative choice for third.

The next four places are even harder to choose. Beta Theta Pi's "000" is perhaps the best pick for fourth. Triple Zero won the Sweepstakes in 1964 and finished third by a matter of inches to ATO in the finals last year. Roy Williams, the B Team chairman, hopes to improve on the "newspaper" shell of last year's "000" and consequently shorten the free roll time. Beta lost only two pushers from this team; one by graduation and the other by promotion to the A team. Several promising pushers who did not have an opportunity to run last year are expected to move in and bolster the push team to perhaps even greater strength than last year.

Sigma Alpha Epsilon's Ted Ross is modifying the famed Bike. The SAE's took advantage of two disqualifications to get a berth in the consolation race. They recovered from a poor showing in the preliminary heats and sped home to fourth place in the '65 edition of the Sweepstakes. The SAE's lost two pushers through graduation but are anticipating a team equally as strong as last year's. The Bike, whose advantage is its light weight making its push team appear so formidable, will have to improve considerably over last year to pose a threat on the front runners.

Pi Kappa Alpha should not be counted out. From 1946 to 1964 PiKA was in every Sweepstakes final. Unfortunately, in the last two years the PiKA's have paired the faster push team with the slower buggy and consequently sub-optimum performances have characterized PiKA's buggy. Mike Emerson, the chairman, explains that in preliminary practice the Shark, winner in 1963, does not perform as well as the Tiger Shark, built brand new in 1964. On race day the "psychic" Shark seems to out perform its younger brother. If PiKA succeeds in priming the Shark for the race, they could conceivably be a contender.

Tau Delta Phi is building a new bicycle, the White Dwarf, to replace last year's Black Widow, which will also be entered. The Tau Delt's hope to make the White Dwarf even lighter so as to shorten the time required on the hills of the race. However, predictions can not be made on aspirations and a seventh place billing is warranted only on the basis of the Black Widow's 2:36 performance last year. Disqualification for pacing kept the Tau Delt's from the consolation final in 1965.

Another contender could be ATO's second buggy, the Andy I. This 13 year old soap box derby styled racer is a fast coaster. The question is can ATO muster a second push team.

Of the other contenders, Phi Kap finished third in 1964, but were thirteen seconds slower last year. They could improve and will certainly be a threat in design. The Delts improved last year in coast and push, but need to cut seven or eight seconds to be a contender. The Dorms took a second in 1960, but suffer from lack of continuity of chairmen. In 1965 their push team compared to the contenders, but the buggy did not roll. DU also had their perennial strong push team, but both their buggies coasted slowly. TX was just the opposite in 1965 with a good coast and a weak relay.

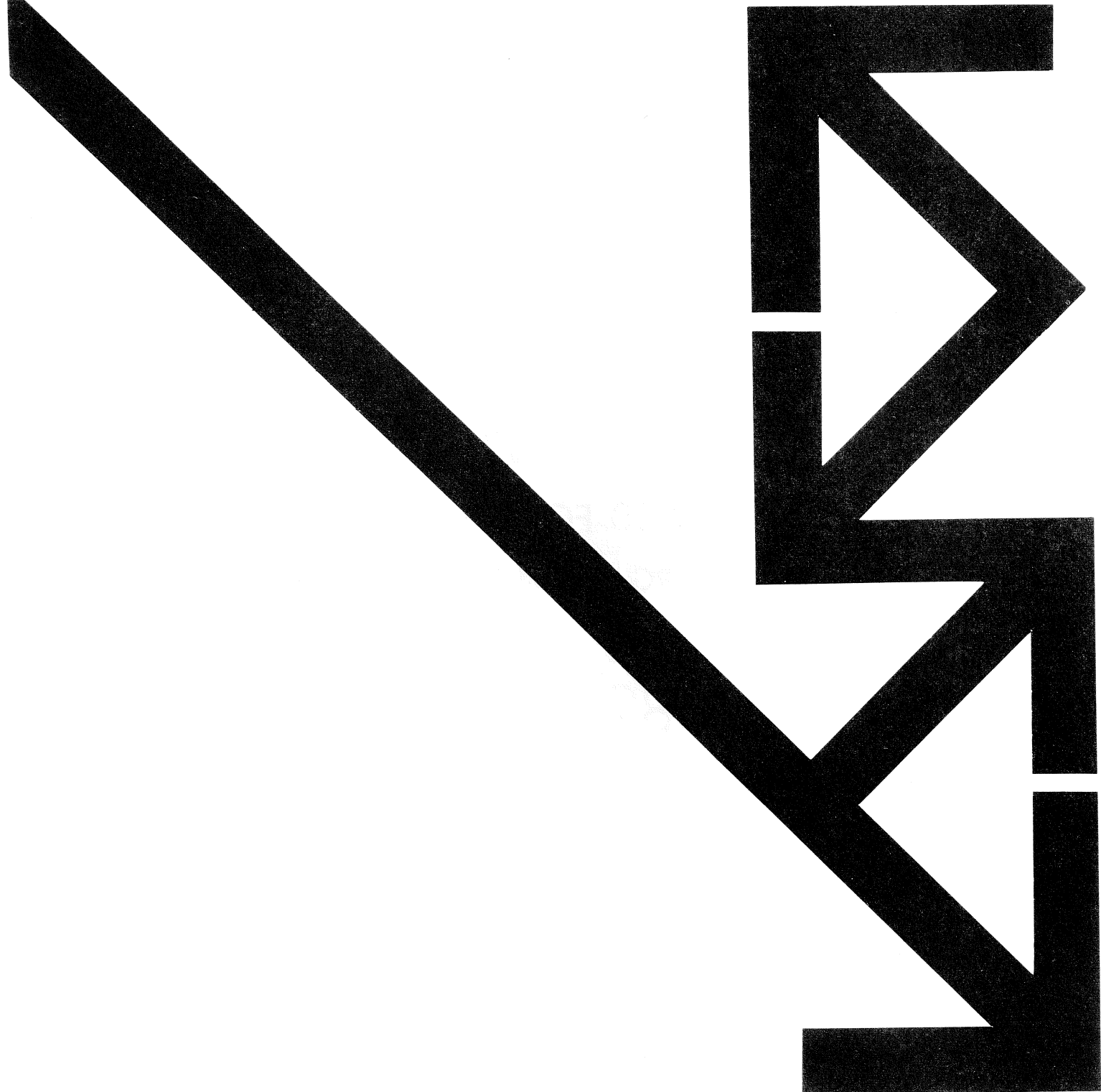
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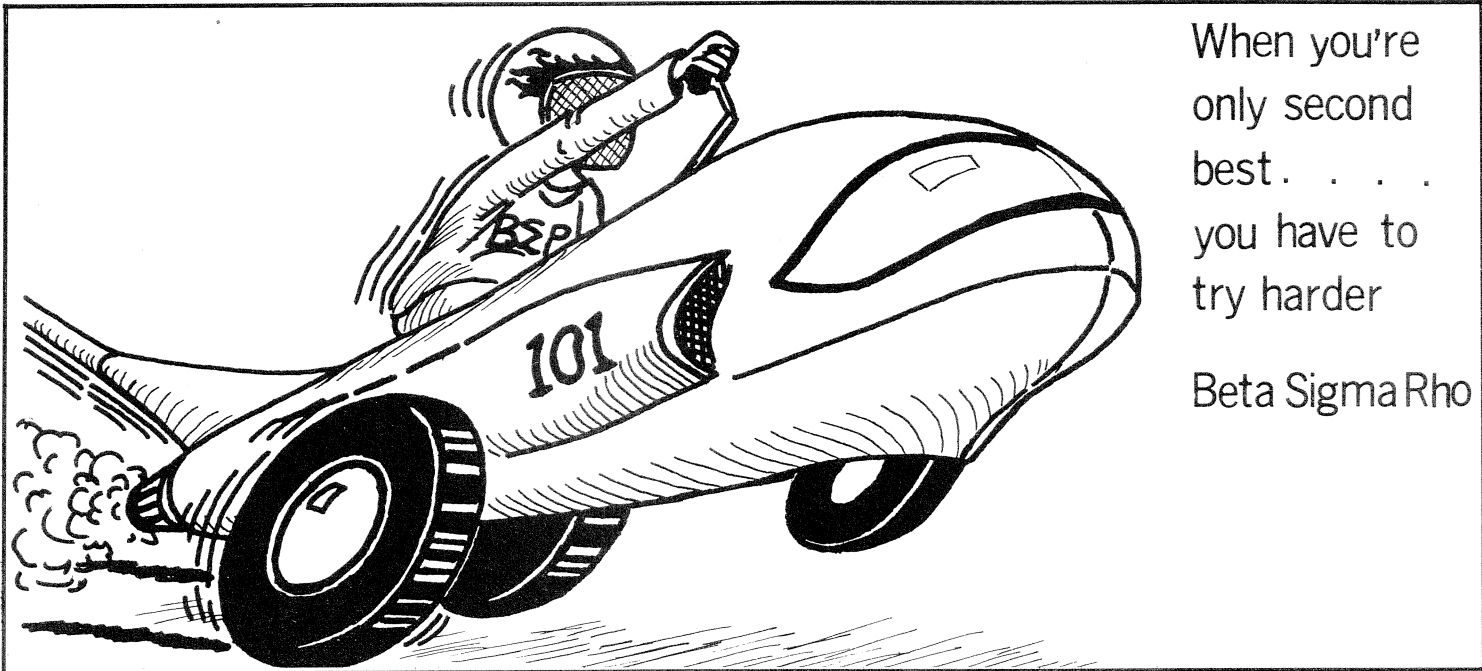
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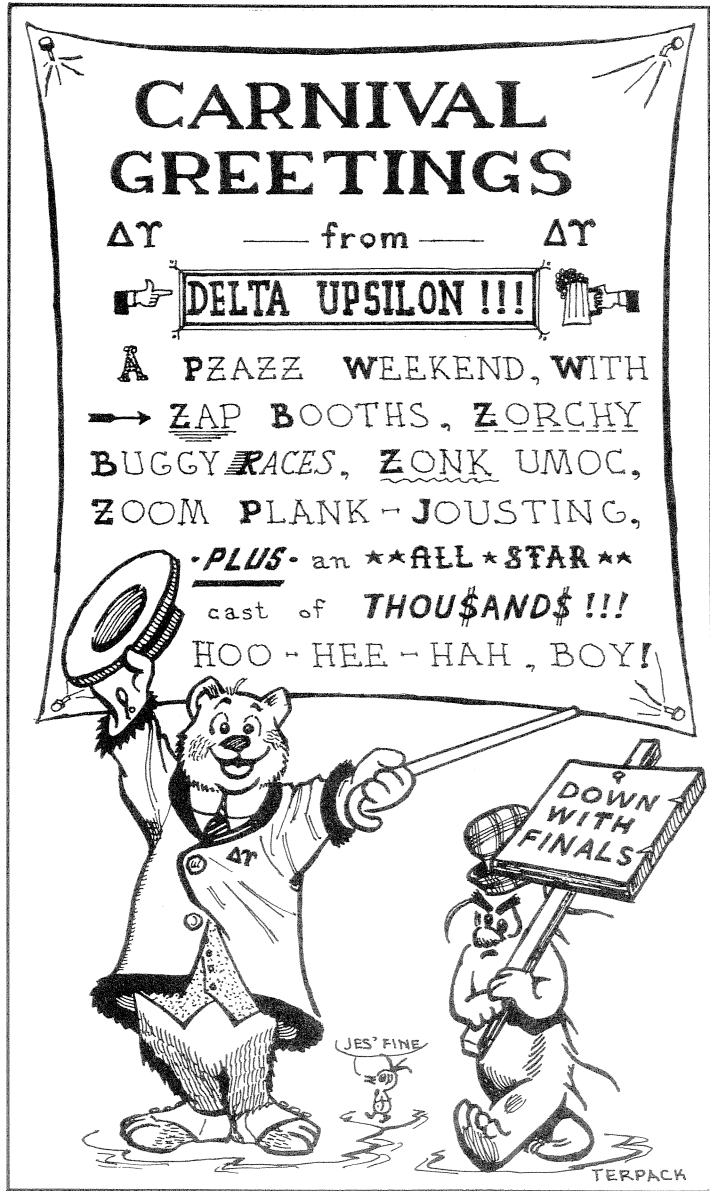
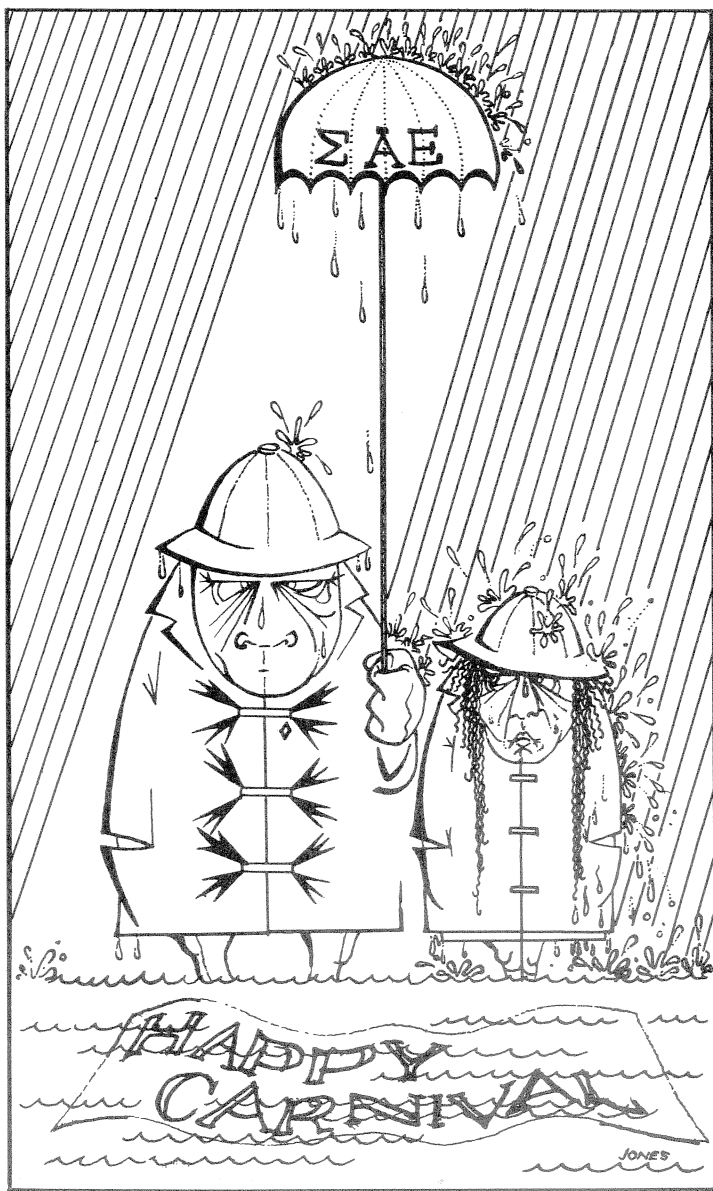
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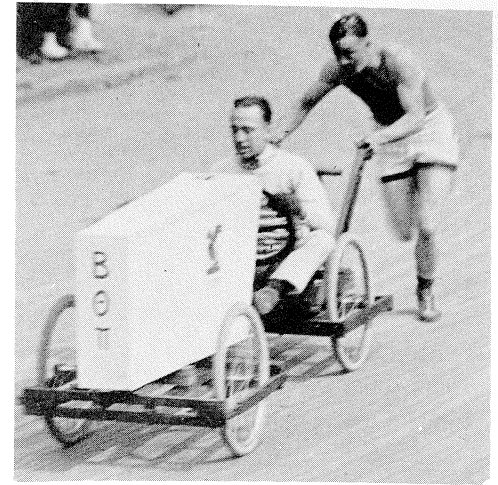
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Push Zone Judges	Dr. William Stokey Dr. Charles Farn Dr. William Laverty
Spring Carnival Chairman	Jeffrey Kalin

Sweepstakes Program: *The Carnegie Technical*; Charles Schoenfeldt, managing editor; Jean Menikoff, Kevin Silson, David Leibson, Richard Jaynes, graphics; Linda Kalkman, Janet Wurmb, Jacqui Pratt, Sharon Rambo, Virginia Cannon, Barrie Dinkins, editing; Andy Hickes, sales; Virginia Salko, Robert Schulman, business.

Any organization of Carnegie Tech undergraduates may enter no more than two teams. Each team consists of one buggy, one driver, and five pushers. The driver and pushers of each team may only participate with the buggy in their team.

Safety:

In order to participate in the sweepstakes, each buggy must pass a safety inspection where it must demonstrate:

1. adequate vision, 45 degrees to each side.
2. adequate braking system.
3. nuts involved in the control of the buggy must be fastened with lockwashers or locknuts.

Construction:

1. The length of the buggy may not exceed 15 feet and the width may not exceed 5 feet.
2. No internal propulsion of the buggy by steam, gasoline, oil, electricity, jet, liquid air, or any other mechanical means will be permitted.

Contest Rules:

1. The Friday Preliminary race shall be run in heats of three buggies each. No two buggies from the same organization may race in the same heat.
2. The race shall be run over the course shown on the map.
3. Each pusher may touch the buggy only in his push zone (see map for zones) and the adjacent neutral zones. The last pusher must have his hands on the buggy when it crosses the finish line.
4. No individual may enter the street to pace a buggy pusher at any time.

5. The combined weight of each buggy and driver must be constant. Jettisoning of weight is prohibited.
6. The time between the start of each heat will be ten minutes with warnings given at 5, 2, and 1 minute until the start of each heat. Any extension of this time interval must be requested before the 2-minute warning.
7. The three buggies with the shortest preliminary times will race together in the finals on Saturday; their order of finish in the race will determine the first three places. The three buggies with the next shortest preliminary times will race in the consolation race on Saturday; their order of finish will determine the 4, 5, and 6 places. This arrangement is used to prevent any possibility of mechanical timing errors in determining the winner.
8. Any buggy that has a design failure or that deliberately collides with or cuts off another entry will be disqualified.
9. Any buggy that complies, in the judges opinion, with the rules and is involved in an accident or slows or stops to avoid an accident will be eligible for a rerace. The rerace will be granted if the buggy is immediately impounded and passes, except for accident damage, a safety inspection.
10. The judges may disqualify any entry for going outside his assigned lane.

Inclement weather:

1. The judges may cancel the race due to inclement weather or insufficient course protection.
2. If the finals are cancelled, the winner will be decided on the basis of preliminary times.

Sweepstakes Heats

Preliminaries

FRIDAY, MAY 6 9:00 A.M.

Heat 1
 PI KAPPA ALPHA _____
 SIGMA NU _____
 TAU DELTA PHI _____

Heat 2
 BETA THETA PI _____
 DELTA TAU DELTA _____
 THETA XI _____

Heat 3
 ALPHA TAU OMEGA _____
 DORMS _____
 PI KAPPA ALPHA _____

Heat 4
 DELTA UPSILON _____
 KAPPA SIGMA _____
 SIGMA ALPHA EPSILON _____

Heat 5
 PHI KAPPA THETA _____
 TAU DELTA PHI _____
 THETA XI _____

Heat 6
 BETA SIGMA RHO _____
 DORMS _____
 PHI KAPPA THETA _____

Heat 7
 ALPHA TAU OMEGA _____
 BETA THETA PI _____
 SIGMA ALPHA EPSILON _____

Rerun (if necessary)

Finals

SATURDAY, MAY 7 10:00 A.M.

(lanes are based on the six fastest times)

Consolation Heat

Championship Heat

