



LETTERS

DEAR SIR: It is with a great amount of caution that I submit a solution to Professor Martel's problem concerning the pensive schmoo as presented in the June issue of E & S.* First, let me explain my reticence by describing one never-to-be-forgotten experience that I had with the distinguished professor.

As every C.E. graduate will recall, Prof. Martel would often test the general alertness and attentiveness of his class by drawing a "simple" problem on the blackboard, peer out the window, and at the proper psychological moment quickly turn to the assembled group for an answer to the implied question.

It was on these occasions that I would become mentally trapped by the tense atmosphere (not unlike "auction sale fever"); and blurt out anything that might come to mind. At rare times I was correct, or nearly so, but in most instances my spirited answers were met with a look of pity and scorn. Following a period of exceptionally poor batting average, I was called aside by Prof. Martel and told in a firm but pleasant manner, "You know, Cook, you have a very fertile mind—but why don't you pull out the weeds before you open the gate?" So you see, I have good reason to tread softly in presenting a solution to the schmoo dilemma.

In true Martelian manner, I will dispense with lengthy equations, and substitute "obvious" where needed.

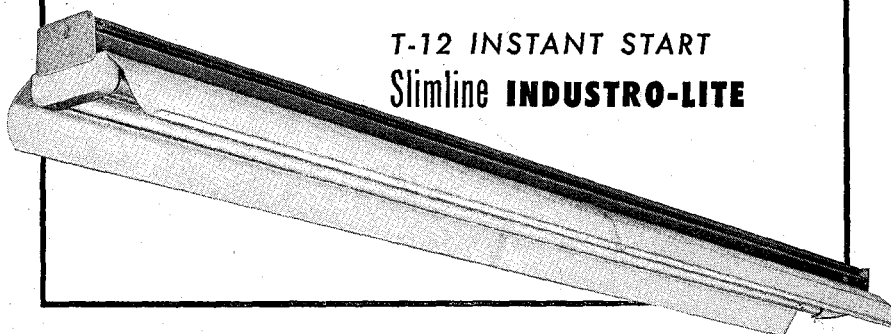
1. From the equation of the schmoo's bottom it is obvious that the surface described can be formed by revolving the ellipse $\frac{x^2}{6} + \frac{y^2}{4} = 1$ about the Y axis.

2. The statement of the problem reveals that O , the center of gravity of the schmoo, lies in the Y axis—as must the point of contact between the rock and seat of the schmoo, since he (she) is in equilibrium at that time, and ΣM must equal zero.

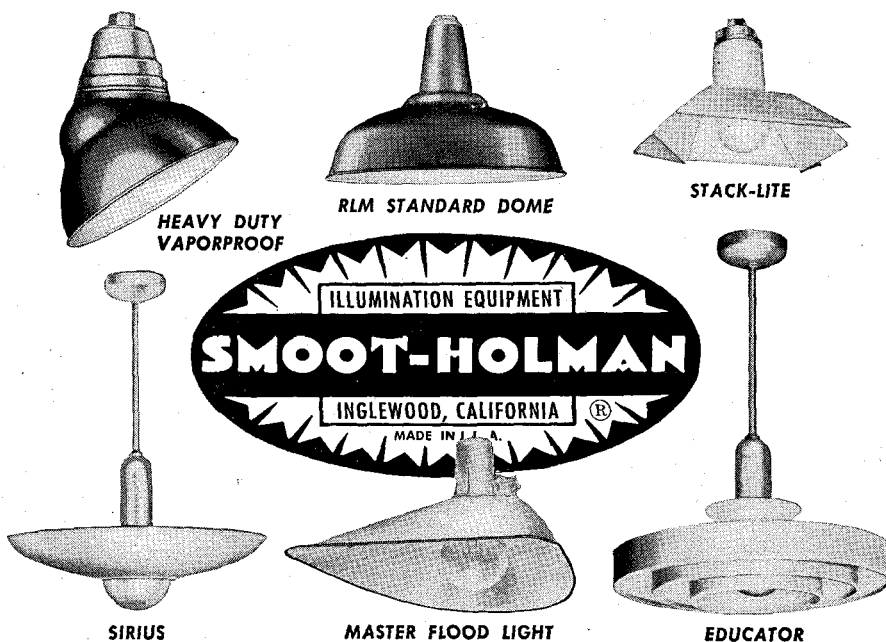
3. Designating the original contact point between schmoo and rock a_s , we find that this point is on the Y axis and that O_s is the minor axis of the ellipse used to generate the bottom surface.

*For handy reference, the problem is presented again on page 24.

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Los Angeles Times

p. 20—Drawings by Harry Diamond

and I were sent to St. Louis where I am more or less permanently located as a Sales Engineer. Proud father of a baby girl, Constance Ann, born May 24."

1943

Orin J. Mead finished Stanford's Graduate School of Business in June of last year and is working in Boeing's Propulsion Development Department in Seattle. On February 20th of this year he married Mary Ellen Harding (Stanford, '48).

R. E. McWethy is in the insurance business in Aurora, Ill. He's married, has three children.

William C. Thompson, Jr., is working as an electronics engineer at the U.S. Naval Ordnance Test Station at China Lake, Calif.

Married: Harrison C. Lingle, to Dorothy Jane Bragg, on May 14, in Champaign, Ill. Douglas C. Reid, M.S. '47, to Marian Paul, on May 7, in Carmel, Calif.

1944

William H. Bond is a thermodynamicist at Consolidated-Vultee Aircraft Corp. in San Diego. This month he's taking a Naval Reserve cruise to Hawaii. Bill, Jr., is now nearly two.

1945

Burton E. Freeman is at Yale University, working toward a Ph.D. in theoretical physics, which he expects to get next year. He was married to Elizabeth Forrest, of Santa Monica, in 1946, and has an eight-months-old daughter, Kay Marie.

Donald H. Bates, Jr., writes: "Am learning the fish business through odd jobs that turn up — very seasonal work but highly interesting. Just returned from Costa Rica aboard tuna freezer ship *Saipan*, and am heading for a salmon cannery in Alaska. Have worked in a cannery before, and with the Oregon Fish Commission . . . Engineering always comes in handy."

Charles R. Cutler graduated this June from the George Washington University Law School. He plans to practice law in Washington, D. C.

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Donald C. Tillman is designing freeways for the city of Los Angeles, lives in Altadena with his wife and little Don, aged 2.

Robert Wilson Taylor is doing editorial work for McGraw-Hill Publishing Co. His engagement to Miss Virginia Ann Mays of Bronxville, N. Y., was recently announced.

Charles Melville Davis is teaching at John Muir College in Pasadena. In August he will marry Miss Carolyn L. Wolfe, of Alhambra.

1946

Douglas S. Ellis got his M. A. in Psychology from Occidental College in 1948, and is now working toward his Ph.D. at Northwestern University. He's a member of Sigma Xi, and holds a University Fellowship. Ellis expects to win his doctorate this January, and then hopes to work in industrial psychology on the West Coast. In 1946 he married Winifred Lambert. They now have a nine-month-old daughter, Christy.

James F. Chalmers was graduated from Harvard Graduate School of Business Administration this June and is returning to California.

1947

C. Burton Crumly spent a year at GE taking the A-Course, then returned to Caltech for grad work in Electrical Engineering. He held a Teaching Assistantship in that department, and received his M.S. this June. Next fall he goes to Stanford for study toward the doctorate.

Dave Caldwell worked at Los Alamos during the summer after his graduation, doing research in nuclear reactions. He spent the next year at Stanford, doing graduate work in physics, and then got a job as radar design engineer at Gilfillan, in Los Angeles. Now he's continuing his studies at UCLA, where he says he has encountered Dale Meier and Herb Royden.

George D. Shipway announces the birth of his second daughter, Karen Elaine, on February 26.

D. Murray Alexander, M.S., now teaching at Webb School, Claremont, joined the ranks of proud fathers on May 17th, when Patricia Stuart was born at Pomona Valley Hospital. Pat's mother also sojourned at Caltech—as Evelyn Deibert in the Meteorology Department.

1948

Vincent R. Honnold is the father of a baby girl, Maryanne, born April 1 at St. Joseph's Hospital in South Bend, Ind.

Reed A. Gray, Ph.D., is Assistant Chemist for the Pineapple Research Institute of Hawaii, in Honolulu. He's doing research on the biochemical nature of mealy bug wilt on pineapples.

Letters

CONTINUED FROM P. 2

Therefore, by definition, Oa_s is also the shortest distance between the center of gravity and the bottom of the schmoo.

4. In tilting or jostling the schmoo, some other point a'_s on the animal's seat will be brought in contact with the rock, with the original point a_s now some distance y' above the rock. Thus, the vertical distance between O , the center of gravity, and the surface of the rock must have been increased since Oa_s is less than any other distance between O and the bottom of the schmoo.

5. In effect, jostling the animal in any direction will raise the center of gravity, providing of course that the center of gravity remains at the same point in the animal and that he (she) does not attempt to wiggle his ears or lay an egg at this moment. To raise the center of gravity, work must be done, and this will necessitate an opposing righting couple formed by the vertical displacement of the center of gravity from the point of contact between rock and posterior.

6. When the displacing force or couple is removed, the righting couple described above will continue to act until ΣM equals zero, and the center of gravity O is once again in its original nadir position with point a_s in contact with the rock.

Long Beach

William H. Cook '45

The schmoo is sitting on a flat rock and thinking. His center of gravity is at O . With reference to a set of coordinate axes through O , the equation of his bottom is $2x^2 + 3y + 2z = 12$. The schmoo is in equilibrium in his present position. If he is jostled slightly, will he fall over, remain in the displaced position, or return to a vertical position? Why?

