

Our growing Gamow Collection

Chief Editor Ellis has given me a new lease on life because of the contributions I am getting for his Gamow Collection. After I asked for letters to and from George Gamow and anecdotes about him in February, many of you sent them in.

Freeman Dyson had the distinction of being first, and he sent two years of Gamow letters about constancy of constants.

Here is an entertaining extract from a 1946 letter that L. W. McKeehan sent home to his wife. McKeehan was then a Navy captain aboard the USS *Fulton* AS-11 assigned to Operation Crossroads, the postwar test of an atom bomb at Bikini. "George Gamow, of course, is the gem of my collection . . . and is the center of a small typhoon of amusement wherever he goes . . . Every few days a new group argues him into giving them a lecture on

bers of the growing collection. A couple of Gamow letters have the letterhead shown at left. Please keep them coming, letters from Gamow, letters to Gamow and stories about him.

Physics has versatility

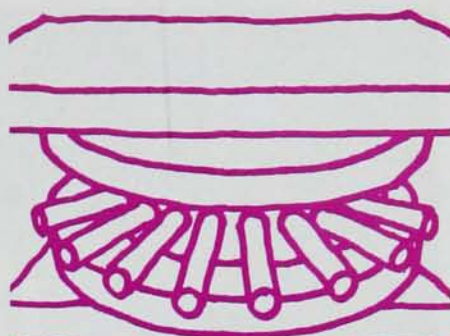
Rumors that highly trained physicists are unemployable except in continuation of their thesis work are exaggerated. Knowledge of physics is relevant to the real world. I have been satisfied of these two propositions by an anonymous paper that has circulated about the Case Western Reserve department for a couple of years. Internal evidence shows that the writer has learned physics and has been able to apply his knowledge to problems outside the discipline. I would like to know more about him.

I'm sorry I can't give you all of it. My oppressive boss keeps me confined to this tiny space. If you want the full text, though, write to me. Here are excerpts:

A Graduate Student's Fantasy

It's the oral portion of your qualifying exam. Things are going well. The questions probe deeply, completely, bringing out the important points, exploring the details. No chink in your armor of knowledge is revealed. You have just successfully fielded a series of questions on birefringent media from the third examiner. Your exposition is brilliant. Carried off without faltering, your arguments were tightly reasoned, lucid, your understanding faultless. The committee members relax with a sigh, seeing that you have a breadth and depth of knowledge they might envy.

Attempting to ease your taut manner somewhat, your adviser asks in an easy, friendly (even rather awed) fashion, "How long do you expect to remember all this stuff?" Not hesitating you turn automatically to the blackboard, grabbing chalk as you pivot. "As I recall, the principle to be applied here is Murphy's Law of Forgetting, also called by some 'Remanence of Remembrance Law.' I mention in passing that there has been some controversy over the naming of various psychological laws. I do not



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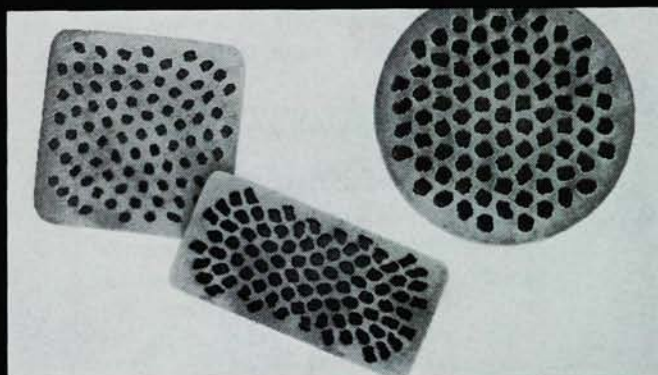
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something or other. The only problem he presents is one of management. He really tries to be a good boy but is always forgetting how to do it. Believe it or not, he actually turned out to have a movie camera on board, which some nit-wit on Kwajalein had forgotten to frisk him for, and though luckily he hadn't taken any pictures in this area, we had a high, wide and handsome flap getting the situation in order again . . . My prestige has risen, hereabouts, because I had the nerve to bring him out."

James Terrell sends correspondence about the visibility of the Lorentz contraction, all contributing to one of the *Mr Tompkins* books. Other stories are too long and too numerous to recount right now but much valued as mem-

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wish to enter into this controversy here but refer you instead to Whitaker's excellent volume *A History of the Theories of Mind and What Matters*.

"We begin by letting K be the amount of knowledge retained at any time t . We assume . . . positive constant b , the retentivity . . . $r_0 = v/b$ known as the *first bore radius* . . ."

Your adviser recovers his breath long enough to call out, "Hey! Stop! That wasn't my question!" as you grind on without pause.

"In the most general case we would expect the rate of forgetting to depend upon the pressure P , an idea that is borne out by experiment . . ."

" . . . loss of knowledge due to a pressure increase is a *reversible* process in contrast to that due to the advance of time, which is *irreversible*. These results can be proved as special cases of the more general second law of psychodynamics. Some theologians relate such considerations to man's fall from grace and his general, irreversible loss of knowledge of his creator . . ."

"For extremely large P , finite discontinuities of both signs in K , the so-called 'excited' and 'depressed' levels . . . P_m is usually associated with a phase transition in the state of the individual, making it a *critical point* . . ."

All efforts to break your trance have failed. The committee can only look on despairingly as the men in white jackets carry you out on the stretcher, still gesturing in the air with the chalk, babbling, "Thus we see that in general as t approaches infinity, the amount I will remember approaches zero. However, at any finite time I will always retain a finite fraction of the initial amount known."

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American physicist on a coin

After reading my little item called, "Physicists on Coins," in January, E. Scott Barr, physicist, teacher and historian extraordinary, wrote to me from the University of Alabama. He said he always enjoys my contributions.

He also reminded me that the US recently put a physicist on a half-dollar piece: Benjamin Franklin, "the first greatly esteemed physicist in this country." □

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