

# **My Engineer's Ring**

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Issue 1  
September 8, 2020

## **ABSTRACT**

The author received his engineering degree in 1957. In 1970, unknown to the author, a custom, already followed for many years in Canada, was newly introduced into the U.S. A student graduating from engineering school takes an oath to uphold the ethical standards of the engineering profession, and receives a simple stainless steel ring as a symbol of that commitment. Through a fascinating chain of events, the author, in 2016, just a few days after his 80th birthday, received his engineer's ring. This article tells that story.

## **"SO, WHERE'S YOUR RING?"**

### **New Jersey, 1959**

I received my engineering degree in 1957 from Case Institute of Technology, in Cleveland, Ohio (now the Case School of Engineering of Case Western Reserve University). I took a position with The Ohio Bell Telephone Company, Cleveland, Ohio, as an assistant engineer in the Transmission Engineering Department. I had actually worked at Ohio Bell in the summer of 1956, the summer before my senior year at Case, as what we would call today an "engineering intern".

In 1959, I was tapped to attend a recurring 18-month-long graduate-level training program in advanced telecommunication technology for engineers of the Bell operating telephone companies, held at Bell Telephone Laboratories in Murray Hill, New Jersey. It was a thrilling opportunity for me. The telephone system had actually been my hobby since about the age of 13, and to spend a year and a half at Bell Laboratories was like a dream come true.

At the orientation session the first day of the program, I sat next to a young engineer from Bell Canada, in Montreal, Quebec. He actually became my "lab partner" during the program.

During a break in the session, we were chatting about ourselves, and he asked, "So, where's your ring?" I said, "What ring?" He said, "Why, your engineer's ring", and he showed me his ring, a rough-hewn iron ring he wore on his right little finger.

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I said I was unaware of any such thing. He went on to tell me of the custom. In Canada, when a person was about to receive an engineering degree, they would take an oath, swearing to uphold the ethical obligations of the engineering profession (much as physicians do). They would then receive their ring. Its rough-hewn design was intended to remind of the physical work that flowed from an engineer's work.

He was startled to learn that, so far as I knew, this custom was not followed in the U.S. And I learned later that indeed, at that time, it was not.

So far as I know, I didn't think at all about this matter for over 55 years.

### **New Mexico, 2014**

In 2014, at a meeting of a local civic organization here in Alamogordo, N.M., the guest was a woman who was running for a seat on the New Mexico Public Regulation Commission, the body that regulates most public utilities (and some other things) in New Mexico. Then retired, she had had an eminent engineering career, concluding as Chief Engineer of a large industrial firm.

After her address to the group, she happened to come to sit at the table where my wife and I were sitting. I welcomed her, introduced us, and said that I too was an electrical engineer "Oh, yeah?", she said, playfully. "So, where's your ring?"

I said, "What ring?" She said, "Why, your engineer's ring", and showed us hers. I told her that there was no such thing when I had received my engineering degree, and told her about how I had heard from (in 1959) about a thing like that in Canada. She said, well, when she got her degree in 1970, at Cleveland State University in Cleveland, Ohio, that was in fact being done there.

I told her that I really appreciated learning about that, and would look a little more into the matter.

### **LOOKING INTO IT**

#### **Initial research—the Canadian program**

Some time late in 2015, for some reason, my conversation with her came to mind, and I decided to look into this matter.

I first learned of the formation of the organization in Canada that administers an oath of ethics to engineers and awards the engineer's ring. It was founded in the aftermath of the tragic collapse, during

construction, of a bridge over the St. Lawrence River, in Quebec, in 1907, and then another disaster in 1916 as the replacement bridge was being built. Investigation of these events, which together led to the loss of 88 lives, brought the conclusion that the two disasters were due to careless engineering work done in a "greedy" context.

A result was that serious attention was given to the need to establish ethical and professional norms for the engineering profession, and that led, in turn, in 1922, to the formation of the organization.

The founders of the organization called upon noted author and poet Rudyard Kipling to help craft the ritual to be used and the text of the oath that the engineers would take, which came to be entitled "The Calling of the Engineer". The actual words of the oath are said to be secret. Often, the ceremony itself is private.

Initially the rings were of iron, rough-hewn.<sup>2</sup> In modern times, the "iron ring", as it is still often called, has in fact in most cases been made of stainless steel, with an offset pattern of facets replacing the rough tool marks of the original design. The change in material was largely motivated by the fact that the iron rings would sometimes leave dark stains on the finger. But at institutions in the Toronto section of the awarding organization (actually called a "camp"), the recipient has the choice of the iron or stainless steel design.

### **The U.S. program**

I then learned that over the years various groups of engineers in the U.S. had tried to arrange for the extension into the U.S. of the Canadian practice of the engineer's ring. But it had turned out that various legal considerations (including copyright issues) meant that the Canadian body that administered that program could not extend it into the U.S.

So instead, a new program, much paralleling the Canadian program, was created under the auspices of a newly formed organization, the Order of the Engineer. It turns out that its first ceremony was held in June, 1970 at Cleveland State University, the woman with a ring's *alma mater*, and in fact for her class (she may not have realized that it was a first)!

The Canadian "rough hewn" (or faceted) ring was not adopted by the U.S. program, but rather a smooth stainless steel ring.

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<sup>2</sup> It is rumored that initially these rings were crafted from iron recovered from the bridge in Quebec that had collapsed in 1907, but that is likely a myth.

As with the Canadian practice, the convention is that the ring is worn on the little finger of the engineer's "working hand". The concept is that this way, as the engineer makes calculations, draws sketches, and the sort, the ring will be near, or even in contact with, the work.

(As this sort of work is typically done today, the ring is often in contact with the mouse, or the rim of a smartphone!)

In the U.S. program, the oath that the engineer undertakes is called "The Obligation of the Engineer". The ceremonies are typically open. The text of The Obligation is given in Appendix A.

## **MOVING ON IT**

### **Contact with the Order of the Engineer**

I contacted the Executive Director of the Order of the Engineer, told my story, and said that I would be interested in the prospect that I might receive an engineer's ring. She filled me in on a lot of the details. The basic qualifications for receiving an engineer's ring under the Order of the Engineer were any of these:

- Holding an engineering degree from a program accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).
- Being a senior or graduate student in such a program.
- Being a licensed professional engineer.
- By reciprocity, being a member of the corresponding Canadian program.
- By special approval, as a "Special Individual", by virtue of "eminence" or "experience".

I told her that I saw the following possible problems:

- My engineering program was not accredited by ABET for the simple reason that ABET was not yet in existence at that time.
- Although I had been a licensed professional engineer for many years, in four states, as a consequence of my total retirement from offering engineering services I had "turned in" all my licenses. (There are significant annual costs and administrative requirements to keep them in effect.) So I was no longer a "licensed professional engineer".

She responded that she certainly thought that, given my history and background, I would likely be considered eligible, and she would bring the matter up with the Board of Governors at their next meeting.

Before long she got back and told me that indeed the Board of Governors had ruled that I would be eligible.

### **Contact with NMSU**

The ceremonies are held, and the rings actually issued by, what are called "Links" of the organization (in other organizations these might be called "chapters") at various engineering schools around the country. The school nearest to me having a Link is New Mexico State University (NMSU), at Las Cruces, N.M. (only about 65 miles from my home, hardly any distance at all here in New Mexico).

I contacted the administrator of the program at NMSU, advising her of my interest and of the conclusion by the Board of Governors. She said that they would be glad to have me receive my engineer's ring at their next ceremony, on May 13, 2016. We exchanged all the necessary information (including my ring size).

## **THE CEREMONY**

### **Registration**

On May 13, 2016, my wife Carla and I, accompanied by two friends and colleagues from The Hague, Netherlands, headed to Las Cruces. (The visitors had come to help celebrate three events: Carla's being in a play produced by our community theater group; my 80th birthday, on May 8; and of course this event.)

When we came to where the participants in the proceedings were being registered, I was asked from which of the engineering departments I was being graduated: Electrical and Computer Engineering, Civil Engineering, and so forth. I said, well, not actually any. There were of course no established arrangements for a situation like this.

Fortunately, my contact was working the registration table, and came over, welcomed me, and worked out with the registrar how to deal with me.

### **The ceremony itself**

In the actual ceremony where the engineering rings were awarded to the graduates (which was actually the commencement ceremony for engineering graduates), it turned out that there was a further part of the proceedings: the induction of each of the graduates into the NMSU engineering society, known as *Sociedad de Ingenieros*.

That name has an interesting background, Often engineers (in the sense of those graduating that day) are a little disturbed to realize that in U.S. practice, the term "engineer" can also refer to one who "runs an engine", in particular to include locomotive engineers and those responsible for tending generator plants, steam heating plants, and the like (all certainly very well respected professions).

But this is not the practice in the Spanish language, where *ingeniero* means only "engineer" in the sense of the profession studied by these graduates and myself. So, when this organization was founded in 1989, in order to avoid the ambiguity of the term "engineer", and drawing upon the fact that Spanish names (and in fact the Spanish language itself) are so prominent in New Mexico life<sup>3</sup>, the university decided to adopt a Spanish name (only) for the organization.

Each graduate inducted into the *Sociedad* receives a large, handsome bronze medal, with the seal of the *Sociedad* on one side and the NMSU logo on the other, on a neck ribbon in the school colors.

After opening remarks by the Interim Dean of the College of Education and an address by a distinguished graduate (class of 1983), now a noted patent attorney (inducted at the ceremony as an *Ingeniero Eminente* of the *Sociedad*), the graduates *en banc* took the Obligation of the Engineer.

Next the graduates from each department were gathered in front of the stage and then called one by one to the stage by a member of the engineering faculty, who presented to the graduate their individualized certificate carrying the Obligation Of An Engineer (yes, that is the capitalization used on the certificate).

As the graduate passed across the stage, one of the Associate Deans of Engineering presented the graduate's ring (they too were individual, because of the different ring sizes), placing it on the proper finger, which the candidate was expected to extend, and then another Associate Dean would place the medal of the *Sociedad de Ingenieros* around the neck of the candidate.

It wasn't exactly clear how and where I would fit in with this, so I just sat.

After the graduates from the last of the departments had been recognized, the faculty "emcee" announced that there was one special

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<sup>3</sup> Perhaps especially so at NMSU, which is located only 36 miles from the U.S.-Mexico border.

awardee and called my name. I took to the stage and received my certificate.

I crossed the stage to the first Associate Dean, who put my ring on my finger and shook my hand. I thanked her. I started to walk past the second Associate Dean, since I assumed that, not being a graduate of the College of Engineering at NMSU, I wouldn't receive a *Sociedad de Ingenieros* medal. She motioned me back over, and put the medal around my neck. Apparently I was made an honorary member of the *Sociedad*, of which I was very proud.

When the ceremony was adjourned, many of the graduates gathered in front of the stage to congratulate one another and receive the congratulations of their proud parents, wives, boy/girlfriends, and others. Several approached me and offered their congratulations, not in this case on my graduation but on my career in engineering. And I of course extended to them my wishes for the best of success in their engineering careers. It was a stirring experience.

### **DESIGNATING MEMBERSHIP IN THE *SOCIEDAD***

Members of *Sociedad de Ingenieros* are entitled to use the pre-nominal abbreviation "*Ing.*" (*abbreviation of "Ingeniero"*) before their names, as I do at the top of this article. There are no pre- or post-nominal abbreviations used to indicate membership in the Order of the Engineer; a member may indicate that with the full name of the organization.

### **IN CONCLUSION**

I am very proud to have, 59 years after receiving my engineering degree, received my engineer's ring, and beyond that, to have received the medal of the *Sociedad de Ingenieros* of New Mexico State University. The engineering profession is a noble one, and its outlooks, both technical and ethical, have been important to almost every aspect of my life for many years. And, as they say, with regard to other things serious and worthwhile, one should "put a ring on it".

### **ACKNOWLEDGMENTS**

Thanks to the many people involved in this story (whom I have kept anonymous).

Thanks to Carla Crittenden Kerr for her excellent copy editing of this manuscript.

**Appendix A**  
**Text of "The Obligation of an Engineer"**

I am an Engineer, in my profession I take deep pride. To it I owe solemn obligations.

Since the Stone Age, human progress has been spurred by the engineering genius. Engineers have made usable Nature's vast resources of material and energy for Mankind's benefit. Engineers have vitalized and turned to practical use the principles of science and the means of technology. Were it not for this heritage of accumulated experience, my efforts would be feeble.

As an Engineer, I, N.N., pledge to practice integrity and fair dealing, tolerance and respect, and to uphold devotion to the standards and the dignity of my profession, conscious always that my skill carries with it the obligation to serve humanity by making the best use of Earth's precious wealth.

As an Engineer, in humility and with the need for Divine guidance, I shall participate in none but honest enterprises. When needed, my skill and knowledge shall be given without reservation for the public good. In the performance of duty and in fidelity to my profession, I shall give the utmost.

Order of the Engineer

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