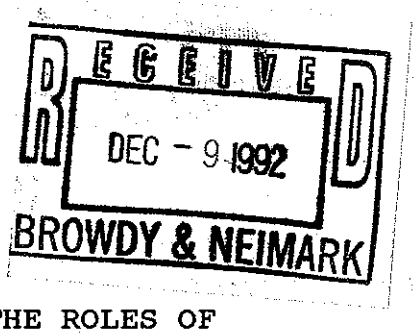

FEDERAL LABORATORY CONSORTIUM FALL 1992 MEETING
Scottsdale, Arizona
November 2-5, 1992

"ENHANCING OUR INTELLECTUAL PROPERTY RESOURCES: THE ROLES OF ORTAs, LAWYERS AND LABORATORY DIRECTORS"
Presented by Saul Elbaum,
Co-Chairman, FLC Legal Networking Subcommittee

I am pleased and honored to address the members of the Federal Laboratory Consortium, especially this particular meeting of the FLC. There is historic significance associated with this meeting.

For the first time in the history of the FLC, the attorneys representing the FLC laboratories are here not merely as attendees. They are here as program participants within the framework of a newly established Legal Networking Subcommittee of the FLC. This meeting of the FLC may, therefore, be viewed as the first official conference of lawyers and ORTAS.

Too often lawyers and ORTAS have found themselves at odds. They may talk about each other, they may talk at each other, but they rarely talk to each other. If there has been misunderstanding between ORTAS and lawyers, it may be because of misunderstanding about the role that each plays in the technology transfer process.

To understand what the relationship between lawyer and ORTA is, we must first understand what it is not. It is not like the relationship between the lawyer and his client in the business sense. And it is not like the relationship between the lawyer and the Contracting Officer in the government contracts sense. Neither of these models correctly expresses the relationship of lawyer and ORTA in the development of the CRADA.

In the business arena, the lawyer is hired to draft an enforceable contract that protects his client's interests. The lawyer's job is to identify the legal risks involved, but not to make the business decisions. The client makes the decisions because the client assumes the risks.

The situation is similar, although not identical, in the government contracts arena. Here the contracting officer has the legal authority to sign the contract and, therefore, to assume certain of the business risks associated with the contract.

In the technology transfer process, however, the situation is very different. Unlike the private sector client or the contracting officer, the ORTA has no authority to sign a CRADA on behalf of the government. That authority, by law, is granted only to the laboratory director. So it is the laboratory director, not the ORTA, who is the real client.

Many of the elements of a CRADA are neither "legal" nor "illegal." They are simply business judgments, and neither the ORTA nor the lawyer has a monopoly on business judgment. It is the combined job of the ORTA and the lawyer, working together as a team, to make those business judgments. A "partnership" is, I think, the term that best describes the relationship between lawyer and ORTA.

If this partnership is to work, then each party must accept his or her role in the process. The lawyer must offer reasonable interpretations of laws and regulations, keeping in mind the broad goals of the Technology Transfer Act, so as to enable the deal to happen. The lawyer must become actively engaged right from the start, including drafting and negotiating the original CRADA document. Most importantly, the lawyer must adopt a positive attitude about technology transfer.

The ORTA, on the other hand, must view the legal office as something more than a hurdle to overcome. The ORTA must get the lawyer involved early in the process, and the ORTA must learn to respect the lawyer's business judgment as well as his legal judgment. Most importantly, the ORTA must adopt a positive attitude about the lawyer.

If the goals of the Technology Transfer Act are to be achieved, then lawyers and ORTAs must form a partnership based upon mutual respect. Each must recognize that the other is an equal member of the Laboratory Director's team.

I have been doing so much thinking lately about lawyers, ORTAs and laboratory directors that I have even started to dream about them. Last night I dreamt that I was on a luxury ocean liner and that the ship was filled with lawyers, ORTAs and laboratory directors. We were on our way to Hawaii where the next meeting of the FLC was scheduled to take place. I don't usually realize that I am dreaming until I wake up but, an FLC meeting in Hawaii? I suspected this was a dream right from the start.

As the ship approached land, the captain suddenly announced that the ship had taken on water and that, in order for the ship to make it to land, some of the passengers would have to continue

the journey in rubber life rafts. To make matters worse, the captain warned that we were travelling through shark-infested waters.

Up until this point, a spirit of cooperation and partnership had permeated this journey. I am sorry to report that it was the ORTA's who were the first to break the happy mood. They actually suggested that the lawyers should be the ones to get off the ship, arguing that "professional courtesy" would keep the lawyers safe in these shark-infested waters.

The lawyers were more than a little offended by this suggestion. They flatly denied that there was such a thing as "professional courtesy" between lawyers and sharks. Moreover, they reminded the ORTAs that lawyers were too important to the technology transfer process to be sacrificed. "Without us lawyers," they argued, "important boiler plate clauses might be left out of some CRADAs." I kept wishing that the lawyers would mount a more persuasive argument.

The lawyers did, however, succeed in shifting the focus onto the ORTAs by suggesting that the ORTAs should be the ones to be thrown overboard. "The ORTAs contribute very little to technology transfer," said the lawyers. "All they do is attend meetings and conferences. They are depleting the laboratory's limited travel budget."

"Not so," responded the ORTAs. "We may look like we're partying, but we're really networking."

Up to this time, the laboratory directors hadn't been paying much attention to this discussion. However, the mention of "budgets" caught their attention. The laboratory directors seized upon the budget issue, took up sides with the lawyers, and decided to throw the ORTAs overboard. Fortunately for the ORTAs, they were the ones who had chartered the ship, so they couldn't be thrown off.

At last, the focus of attention shifted to the laboratory directors themselves. They were asked to justify why they shouldn't be the ones to go overboard. The directors explained that their contribution to the technology transfer process was the most important of all because they sign the CRADAs. To this, the lawyers and the ORTAs both responded that if a signature was all that the directors could contribute, then the directors could be replaced by rubber stamps.

The laboratory directors were about to be thrown overboard when one of them stepped up with another explanation of his contribution to the technology transfer process. "In my laboratory" he said, "technology transfer begins with a

demonstration of interest from the very top of the organization. We establish a climate of creativity and innovation within the laboratory. We nurture a culture of technology transfer, and we recognize our most creative inventors, together with the lawyers and ORTAs who support them, with praise, promotions and pay."

This was just what the ORTAs and lawyers wanted to hear. Suddenly, the spirit of cooperation and partnership returned to the ship. The spirit was so uplifting that the ship rose out of the water and flew all the way to shore. I awoke with a renewed sense of optimism about the future of the federal technology transfer process.

While there is reason for optimism, there are also reasons for concern. One of the reasons for concern about the future of federal technology transfer is because of the limited number of patents generated by federal laboratories. Between 1981 and 1991 the number of U.S. patents issued to foreign residents nearly doubled (Fig 1). The number of patents issued to U.S. residents also rose, although not as rapidly as the foreign patents (Fig 2). In fact, the number of patents issued annually to U.S. residents remains lower today than it was in 1973 (not shown on chart). The number of government-owned patents, however, has been in decline for most of the past decade, although it has been rising for the past three years (Fig 3). In the case of Army patents, the decline actually became more severe after enactment of the Technology Transfer Act of 1986 (Fig 4).

It is a major premise of the Technology Transfer Act that permitting government scientists to share royalty income from their inventions will motivate them to make more inventions. So far, that has not happened. A study about to be released by the General Accounting Office finds that the interest of federal scientists in patenting appears unaffected by the royalty sharing provision of the Act. Federal invention reporting has not improved as a result of royalty sharing.

Although no one has yet seriously suggested that royalty sharing be eliminated, the absence of proof as to its effectiveness, coupled with the controversial conflict of interest issue which is under review by the Department of Justice, may spell trouble for the future of royalty sharing. Given time for royalty sharing to become better known, it should contribute to an increase in the invention rate. However, there is much we can do to stimulate federal inventing right now. Let's begin.

From my experience as a patent attorney in a federal laboratory over the past twenty years, I have found that the most effective thing a patent lawyer can do to stimulate reported inventions is

to visit the scientists in the laboratory. Scientists appreciate such an expression of interest in their work. It is inevitable, in the process of discussing their work, that one or more potentially patentable inventions will be identified.

Some patent lawyers make such visits routinely. Others present occasional lectures to groups of scientists. Within DOD, however, the number of patent lawyers has been decreasing even faster than the number of inventions have been decreasing. There are not enough of us available to make these important visits.

It occurred to me that the ORTAs are ideally suited to conduct these visits. The ORTAs already have the responsibility to prepare an assessment of technology within the laboratory. To do this they must be in the laboratory and they must be speaking to the scientists about their work. Why not have the ORTAs seek to identify potentially patentable inventions and bring them to the attention of the lawyers?

The ORTAs should become the eyes and ears of the patent lawyers. All that remains is for the lawyers to teach the ORTAs enough about inventions to enable them to recognize what is patentable. The ORTAs can then function as Patent Liaison personnel, serving both the inventors and the lawyers, to find, patent and market the laboratory's valuable intellectual property resources.

Now I would like to turn to the laboratory directors. Their role is most important of all, not because they have the legal authority to sign CRADAs, but because they have the moral authority to build a spirit of innovation within the laboratory. Monetary awards alone will not lead to more inventions because money alone is not what inventors crave. What inventors crave is public recognition and appreciation.

In some agencies, where royalties are already being paid to inventors under the Technology Transfer Act, the royalties arrive in the form of a check in the mail. Those agencies miss the point. What is needed is a public ceremony in which the laboratory director hands the inventor a certificate, a plaque, or the patent itself, together with the check. A quiet check in the mail is not the way to recognize inventors, and it will do nothing to encourage other scientists to invent.

Even the public award ceremony will not suffice if the ceremony is perceived as a mere formality. Inventors must be recognized with career enhancing promotions. Too much emphasis is placed on publications, to the exclusion of inventions, as the path to promotion. Some inventions don't lend themselves to publication, yet the inventors deserve equal treatment before promotion boards. As for those inventions that do lend themselves to publication, patenting should always take place first. Once an

invention has been published, it is usually too late to get it patented.

To create a favorable climate for innovation, the laboratory directors must recognize inventors with awards, and reward inventors with promotions.

The laboratory directors are, unfortunately, not here to hear this. There are 350 of us here, representing virtually every federal laboratory, yet there is not a single laboratory director among us. We get together like this once or twice a year. We listen to inspiring speeches. We hand each other awards. Then we return to our laboratories where creativity, innovation, and technology transfer receive only lip service at best. If we want to enlist our laboratory directors in support of technology transfer, we have to bring them to our meetings where they will become inspired about this important program. This is where the FLC can help.

I propose that the FLC initiate an Annual FLC Inventor Of The Year Award and an Annual FLC Software Developer Of The Year Award. The FLC should request that each member laboratory establish its own annual award. The winners of their respective laboratory awards will compete for each of the FLC's six regional awards. The final winner will be selected from among the regional winners, names to be announced at an annual FLC meeting such as this.

To give this award the national attention it deserves, the final selection should be made by a panel of renowned inventors, and the award should be presented by a prominent public figure such as a member of the Congress or the Cabinet. The six regional winners, together with their laboratory directors, will certainly not want to miss the FLC meeting at which this important national award is presented.

Several years ago my laboratory received its 1,000th patent. We marked this milestone with a gala day-long celebration. The senior Senator of our state gave a speech; the President's Science Advisor presented the keynote address; the Commissioner of Patents personally presented the 1,000th patent; and laboratory directors from other laboratories came to see and be seen. If one small laboratory can generate this much interest in inventions, imagine what the FLC can accomplish on a national basis.

You may wonder whether enough inventions are being generated within the federal laboratories to justify this much public attention. They are. Every year the U.S. Patent and Trademark Office (the PTO) reports how many patents have been awarded to U.S. and foreign organizations. This list is usually topped by

Hitachi, followed by Toshiba, followed by Sony. We are lucky if an American company shows up among the top five.

Further down the list, beyond 20th place, you will find the U.S. Department of the Navy, followed by the Department of Energy, NASA, the Army, and other federal agencies. If you were to add up all the federal entities on the list, you would arrive at a number of annual patents that exceeds Hitachi's. Federal entities actually receive more patents than any company in the world. It is time we made this fact known. The FLC should ask the Commissioner of Patents to consolidate the number of patents issued to all federal departments into a single figure. Let's put the USA on top, where it belongs.

While I am on the subject of the PTO, there is something else that the PTO can do for federal laboratories. A patent remains in force for 17 years from the date of issuance. In order to raise enough income to make the PTO self-funded, the Congress authorized the PTO to charge a series of maintenance fees at intervals of approximately four years during the life of a patent. These maintenance fees are high enough that agencies are tending not to pay them. Agencies are allowing their patents to expire in as little as four to eight years after issuance.

Requiring corporations to pay maintenance fees is reasonable because corporations understand their technologies well enough to know which patents to maintain and which to discard. Federal agency inventions, however, are usually made for a mission-related purpose. The spin-off applications of these inventions are not necessarily apparent within the early years of the invention. Because the agencies don't know which patents to maintain, and because they cannot afford to maintain them all, the agencies are allowing the vast majority of these patents to lapse into the public domain. Once they have lapsed, these patents can be exploited by our foreign competitors.

The logic of imposing patent maintenance fees on federal agencies is even less apparent when one recognizes that maintenance fees produce no net revenues for the government. Uncle Sam is merely moving money from one pocket to another.

In imposing maintenance fees on federal patents, the PTO is undermining federal technology transfer policy. Ironically, the lead agency for technology transfer, the Department of Commerce, is also the agency to which the PTO reports. This looks like a case of the left hand not knowing about the right. The FLC is uniquely positioned to raise this important competitiveness issue to the attention of Department of Commerce officials.

I was asked to talk about things the Legal Networking Committee could do for technology transfer. Instead, I have been proposing things for the FLC to do. It wouldn't surprise me if I am not invited to speak here again! Federal lawyers can contribute a great deal to the technology transfer process. Their contribution will have its greatest effectiveness if made within the framework of the FLC. Therefore, I applaud the FLC's decision to establish the Legal Networking Committee.

This year's meeting of the FLC is historic for having brought the lawyers into its organization. Let's make next year's meeting historic by getting the laboratory directors just as involved.

PATENTS ISSUED TO FOREIGN RESIDENTS

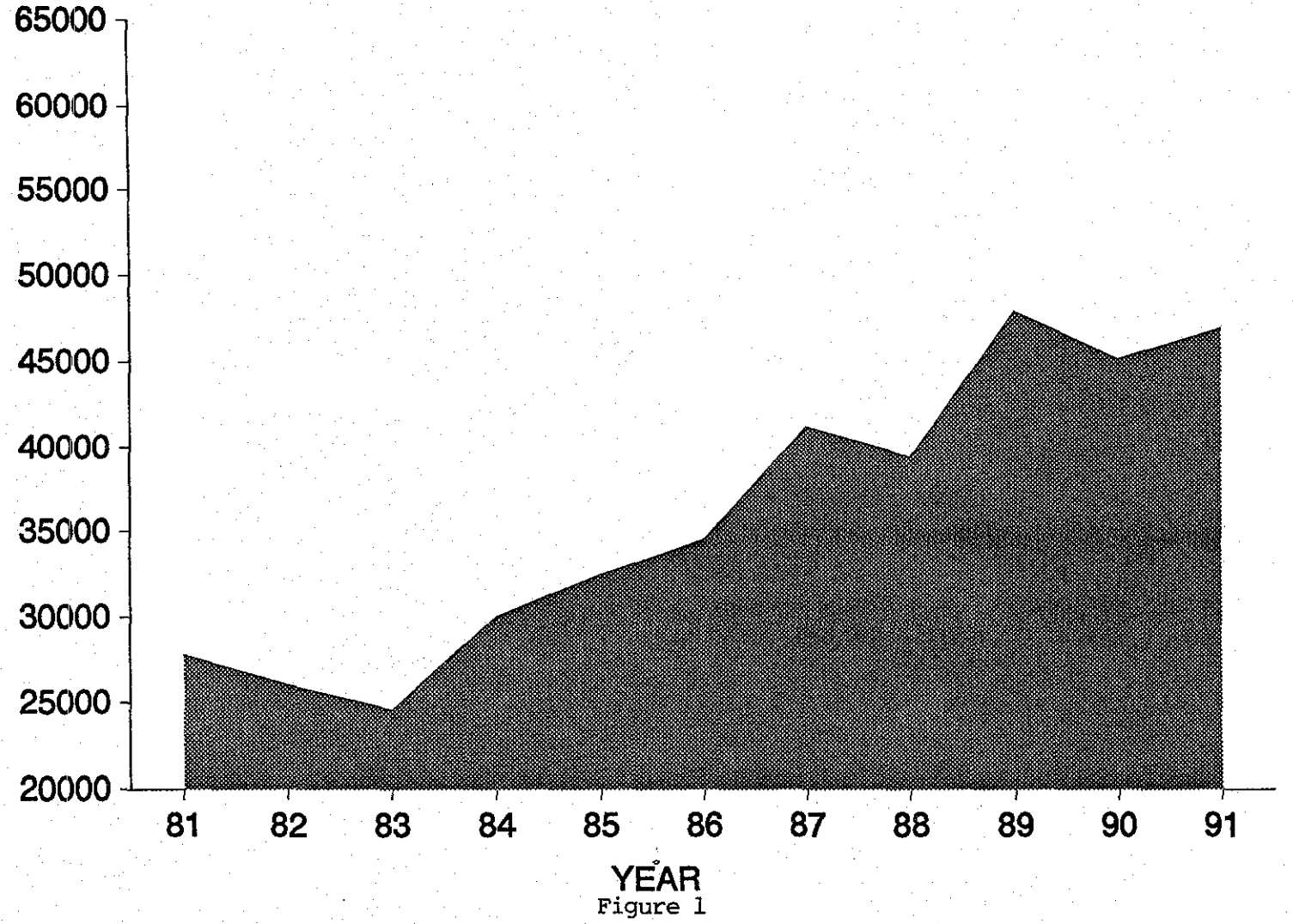

Figure 1

PATENTS ISSUED TO U.S. RESIDENTS

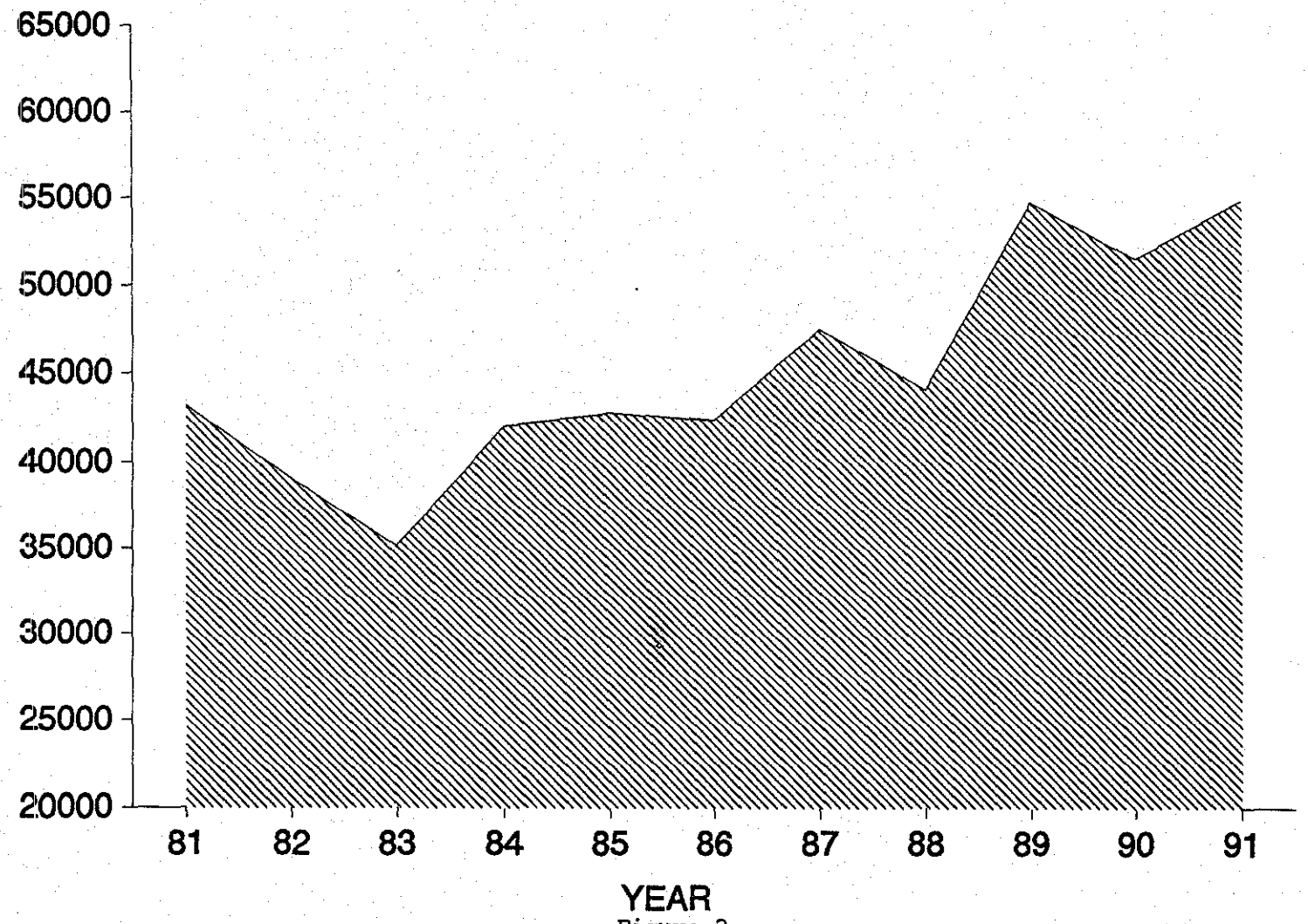

Figure 2

PATENTS ISSUED TO U.S. GOVERNMENT

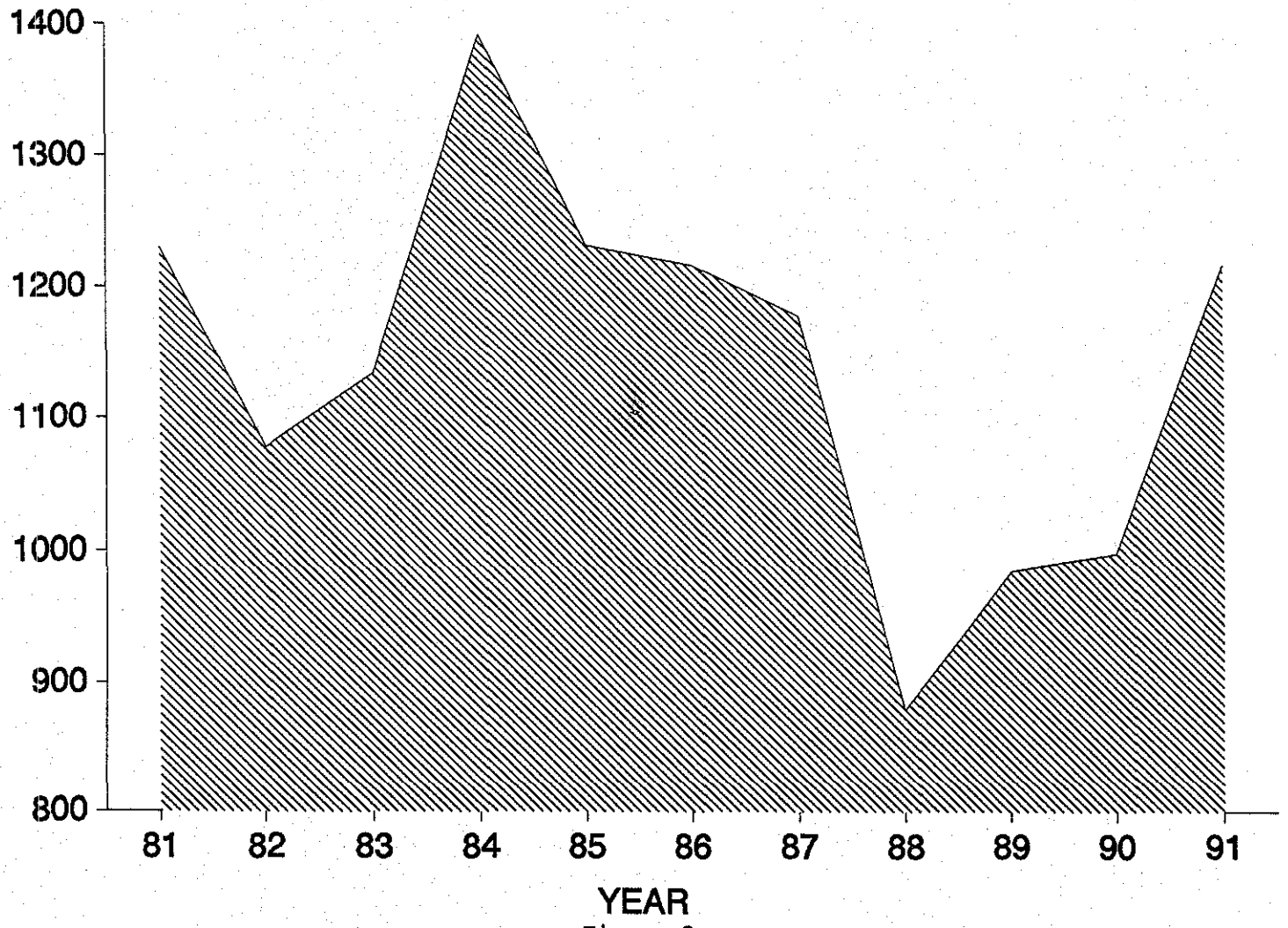

Figure 3

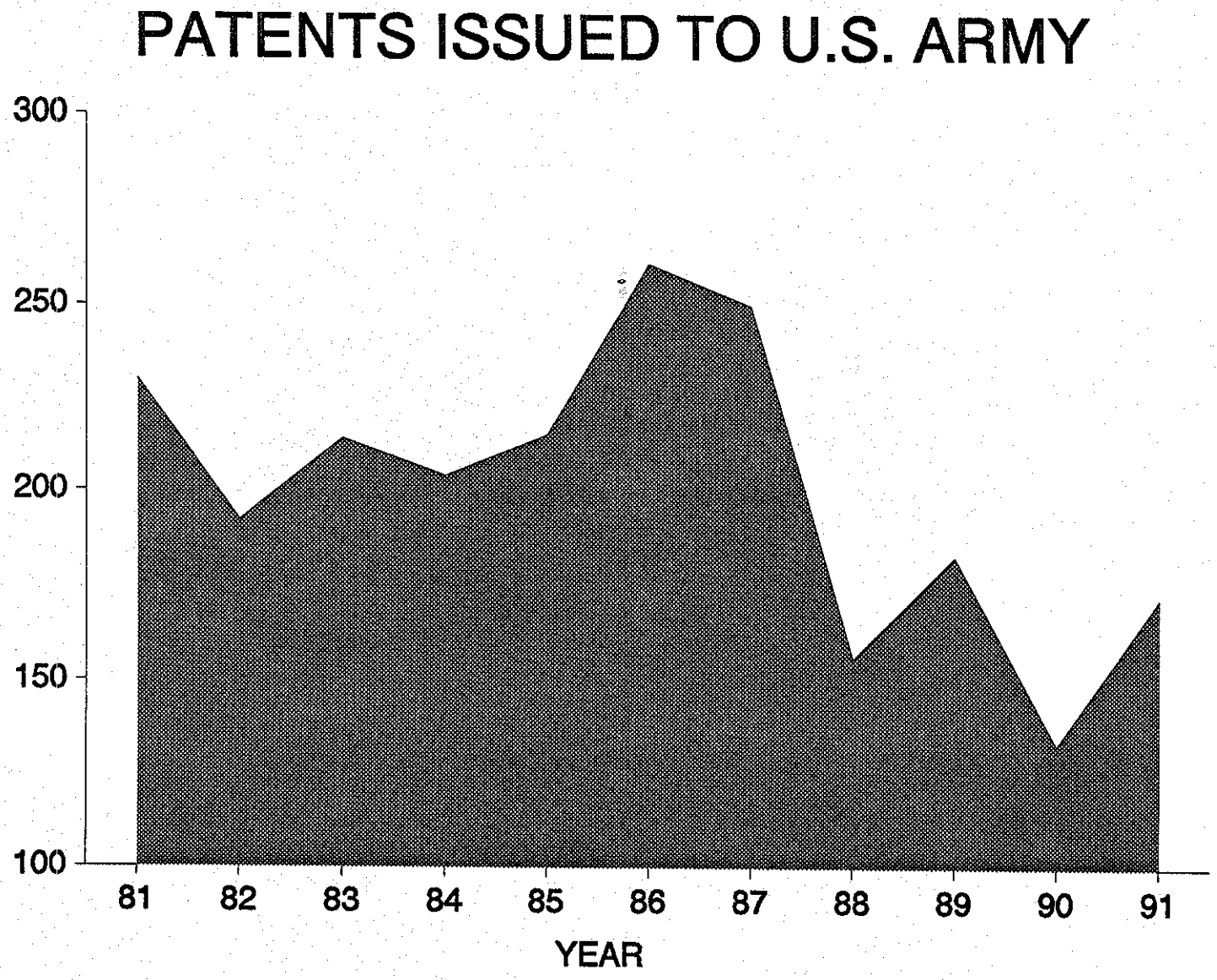
PATENTS ISSUED TO U.S. ARMY
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Figure 4