United States Senate

VIA ELECTRONIC TRANSMISSION

December 11, 2020

The Honorable Andrei Iancu
Under Secretary of Commerce for Intellectual Property &
Director of the United States Patent and Trademark Office
United States Patent and Trademark Office
600 Dulany Street
Alexandria, VA 22314

Dear Director Iancu:

We write concerning an alleged gender gap among patent practitioners. A paper by patent agent Mary T. Hannon contends that "[q]ualified women are unnecessarily excluded from membership in the 'patent bar.'"[1] If true, this is concerning in its own right, as well as for its potential impact on innovation in this country. We know you have made expanding diversity in the patent system a top priority of the United States Patent and Trademark Office ("USPTO"). We therefore hope you will look into this allegation and address it accordingly.

In today's increasingly competitive global economy, we must leverage the creativity and talents of all Americans—including women, minorities, and people from low-income and other disadvantaged communities—to maintain the United States' place as the world's leading innovator. The patent system has long played a critical role in fostering American innovation. As you well know, the USPTO faces a significant gender gap among named inventors. According to a 2020 USPTO report, only 12.8% of named patent inventors are women.[2] The USPTO has undertaken laudable efforts in recent years to recognize and start addressing this gender gap. These efforts are good first steps.

However, we fear that the USPTO's efforts will be undercut by an apparent gender gap among patent practitioners. While recent data on the demographic make-up of the patent bar is not publicly available, studies from 2011[3] and 2014[4] suggest women made up as little as 18% of patent agents and patent attorneys with little growth over time. Unless there has been a significant increase in the number of women admitted to the patent bar in the ensuing years,

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[1] Mary T. Hannon, *The Patent Bar Gender Gap: Expanding the Eligibility Requirements to Foster Inclusion and Innovation in the U.S. Patent System*, 10 IP THEORY 1, 2 (2020), https://www.repository.law.indiana.edu/ipt/vol10/iss1/1.

[2] USPTO, PROGRESS AND POTENTIAL: 2020 UPDATE ON U.S. WOMEN INVENTOR-PATENTEES (July 2020), https://www.uspto.gov/ip-policy/economic-research/publications/reports/progress-potential.

[3] Annette I. Kohler, *Examining Exclusion in Woman-Inventor Patenting: A Comparison in Educational Trends and Patent Data in the Era of Computer Engineering Barbie*, 19 AM. U. J. GENDER SOC. POL'Y & L. 773, 791-92 (2011).

[4] Saurabh Vishnubhakat, *Gender Diversity in the Patent Bar*, 14 J. MARSHALL REV. INTEL. PROP. L. 67, 80 (2014).

female membership lags far behind the share of women earning degrees in either science, technology, engineering, or math ("STEM") fields (~36%[5]) or the law (~50%[6]).

Women inventors would likely benefit from having access to women patent practitioners. As Prof. Eric Goldman and Jess Miers explained in comments supporting the USPTO's SUCCESS Act study:

> [A]ccess to women patent prosecutors can increase women's patenting activity in several ways. Women patent prosecutors can bring extra substantive expertise on goods and services catering to women customers. This expertise can help inventors recognize patentable inventions and better describe them in patent applications. Women patent prosecutors use their unique social networks to cultivate and support women inventors, and they make it easier for women inventors to "see" themselves in the patent system. Also, women patent prosecutors may develop more effective client relationships with women inventors than would develop with male patent prosecutors. That, in turn, can help women inventors feel comfortable seeking patent prosecution assistance and produce the evidence necessary to succeed with their patent applications.[7]

Failure to address this patent bar gender gap will stand as an obstacle to increasing the number of female inventors and unlocking the true innovative potential of our country.

The USPTO sets the requirements for patent practitioners and, as such, serves as a gatekeeper to the patent bar. To ensure a high level of patent quality, it requires that all candidates pass a six-hour, 100-question exam in order to practice before the USPTO. However, this exam is not open to all. It is reserved for those who possess certain "scientific" and "technical" qualifications.[8] Currently, the USPTO allows college graduates with degrees in only thirty-two specific majors to automatically qualify to sit for the exam (so-called "Category A"). This list includes a wide array of majors in engineering and the physical sciences—degrees that disproportionately go to men.[9] However, it excludes several other majors, such as mathematics, that are highly relevant to modern-day innovation and are earned by women at a rate much closer to their share of overall undergraduate degrees.[10] The list also excludes students who major in industrial and fashion

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[5] National Center for Education Statistics, *Status and Trends in the Education of Racial and Ethnic Groups* (last updated Feb. 2019), https://nces.ed.gov/programs/raceindicators/indicator_reg.asp.
[6] AMERICAN BAR ASSOCIATION, A CURRENT GLANCE AT WOMEN IN THE LAW (Apr. 2019), https://www.americanbar.org/content/dam/aba/administrative/women/current_glance_2019.pdf.
[7] Eric Goldman & Jess Miers, *Boosting Patentee Diversity By Relaxing the Technical Barriers to Patent Bar Membership* (June 30, 2019), https://www.uspto.gov/sites/default/files/documents/SUCCESSAct-Goldman-etal.pdf.
[8] USPTO OFFICE OF ENROLLMENT AND DISCIPLINE, GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE (Feb. 2020), https://www.uspto.gov/sites/default/files/documents/OED_GRB.pdf ("General Requirements Bulletin").
[9] *Id.* at 10-11.
[10] National Center for Science and Engineering Statistics, National Science Foundation, *Women, Minorities, and Persons with Disabilities in Science and Engineering* (last visited Oct. 28, 2020), https://ncses.nsf.gov/pubs/nsf19304/digest/field-of-degree-women ("NCSES").

design—fields highly relevant to design patents and for which women make up a majority of students.[11]

Further, the USPTO's Office of Enrollment and Discipline ("OED")—which administers the patent bar exam and registers patent practitioners—extends automatic qualification only to those with ***undergraduate degrees*** in the listed majors. It does not provide automatic qualification for those with ***master's degrees*** or even ***doctorate degrees*** in the same subjects (unless they also have one of the enumerated undergraduate degrees). This is not only nonsensical—a master's or doctorate degree connotes a more advanced command of the subject than does an undergraduate degree—it also disadvantages women. Data show that women earn master's degrees in STEM fields at a higher rate than they earn undergraduate degrees in the same subjects.[12]

While the above requirements have a particularly adverse impact on women seeking to join the patent bar, other seemingly arbitrary requirements exclude qualified women and their male counterparts. For example, the USPTO allows candidates with undergraduate degrees in computer science to automatically qualify for the patent bar only if the degree program is accredited by the Computer Science Accreditation Commission of the Computing Science Accreditation Board ("CSAB") or the Computing Accreditation Commission of the Accreditation for Engineering and Technology ("ABET").[13] As Ms. Hannon points out, none of the computer science programs at Carnegie Mellon University, Stanford University, or the University of California-Berkley—three of the top-ranked computer science programs in the country—are accredited by CSAB or ABET.[14]

In addition, OED denies automatic qualification to college graduates with technical degrees if the degree "is not listed EXACTLY as shown in the Category A list."[15] Under this policy, a student graduating from the University of Hawaii with a degree in "Biological Engineering" does not automatically qualify to sit for the patent bar, while a student graduating from another university with a degree in "Biomedical Engineering" does, despite similar requirements. As industry blends previously distinct fields to advance innovation, colleges and universities now offer specialized degrees to meet this demand (e.g., bioinformatics). That the USPTO would deny graduates from these programs automatic qualification to sit for the patent bar makes no sense.

We recognize that candidates who do not automatically qualify for the patent bar can qualify by making additional showings—for example, by meeting certain credit-hour or practical experience requirements (i.e., Categories B and C).[16] However, this requires the collection of additional documentation, such as old course descriptions, and potentially additional coursework. This additional work provides a disincentive for otherwise qualified candidates to apply for the patent bar.

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[11] Christopher Buccafusco & Jeanne Curtis, *The Design Patent Par: An Occupational Licensing Failure*, 37 CARDOZO ARTS & ENT. L.J. 263, 290-91 (2019).
[12] *See* NCSES, *supra* note 10.
[13] General Requirements Bulletin, *supra* note 8, at 4.
[14] Hannon, *supra* note 1, at 12.
[15] USPTO, *OED Frequently Asked Questions (FAQs)* (last visited Dec. 3, 2020), https://www.uspto.gov/learning-and-resources/patent-and-trademark-practitioners/oedfrequently-asked-questions-faqs.
[16] *Id.*

We appreciate your leadership in working to close the patent gender gap and look forward to continuing to work with you to ensure the patent system is available to all. As part of that work, we encourage the USPTO to reevaluate its criteria for qualifying to sit for the patent bar exam to ensure the patent bar is accessible to all qualified candidates. We are confident this can be done in a fair and straightforward manner without jeopardizing patent quality.

We also request detailed responses to the below questions by January 15, 2021.

1. What percentage of registered patent practitioners are women? To the extent the USPTO does not currently have this data, do you commit to collecting it?

2. Has the USPTO performed or is the USPTO aware of any studies regarding the impact of its criteria for admission to the patent bar on the diversity of patent practitioners?

3. When did the USPTO last evaluate its criteria for admission to the patent bar? Please provide the USPTO's reasons for either changing or maintaining the admission criteria at that time, including any proposed changes considered and objective arguments or data considered.

4. Over the past 5 years, has the USPTO received requests to change the criteria for admission to the patent bar? If so, describe each request and the USPTO's response to the request, including the USPTO's reasons for its response.

5. How many individuals have qualified to take the patent bar over the past 5 years? Please indicate the number of individuals, by gender, who qualified under each of Categories A, B, and C. And, for those individuals qualifying under Categories B and C, please provide a list of their undergraduate and graduate degrees.

6. How many individuals, broken down by gender, have requested to take the patent bar exam who did not qualify under Categories A, B, or C? Of those, how many individuals, broken down by gender, did the USPTO permit to take the patent bar exam? Please provide separate lists of the undergraduate and graduate degrees for those who were permitted to take the patent bar exam and those who were not, respectively.

We appreciate your attention to this matter. If you have any questions, please do not hesitate to contact us.

Sincerely,

Mazie K. Hirono
United States Senator

Thom Tillis
United States Senator

Christopher A. Coons
United States Senator