Lizzie Peabody: This is Sidedoor, a podcast from the Smithsonian with support from PRX. I'm Lizzie Peabody.

[MUSIC]

Lizzie Peabody: Sometimes you stumble across something or someone you never realized you were looking for. That's what happened to Ashleigh Coren.

Ashleigh Coren: So, I was doing my Googles, as I tend to do.

Lizzie Peabody: And she finds this interview from 1993 with a woman she's never heard of before.

Ashleigh Coren: Beatrice Davidson Kenner.

Lizzie Peabody: The interview started like this.

Barbara Faison: Everyone's story must begin somewhere. My story began somewhere near Christmas when I was a little over five years old.

Ashleigh Coren: She's directing us, and saying, "No. When you start with my story, start here."

Lizzie Peabody: Ashleigh is the Head of Education for the Smithsonian American Women's History Initiative, which means it's her job to share stories of extraordinary American women.

Ashleigh Coren: I'm always trying to dig and search for stories that help us pull another thread when sort of thinking about the importance of women in history.

Lizzie Peabody: And this story, this was a thread Ashleigh wanted to pull.

Barbara Faison: Like I said, it was near Christmas when I heard my mother tell my brother, "Sugar boy," she always had pet names for us. I was sweet sister. "Sugar boy, if you rake the yard, Santa Claus will be good to you for Christmas." I was a little thing then, but I heard her.

Lizzie Peabody: Kenner and her family were living in Charlotte, North Carolina. This would've been around 1917. And the voice you're hearing is an actor reading from Kenner's interview.

Barbara Faison: Anyway, I went to the yard where my cousin and brother were raking leaves. So, I decided to help them because I wanted Santa Claus to be good to me too. I didn't know
that some of the leaves were lit. I just reached down, grabbed those leaves so nicely, and had them clinging to me as I tried to place them on the pile.

Lizzie Peabody: Her mother was watching from the door, holding her baby brother wrapped in a blanket.

Barbara Faison: When Mother noticed that I was on fire, she laid the baby on the floor, snatched his blanket off him, took the porch stairs two by two, grabbed me, knocked the burning leaves away, and wrapped me in the blanket. As she ran toward the house, she called for my grandmother who lived across the hill. Grandmother come right away.

Ashleigh Coren: Her dad sent for every doctor in town, all five of them.

Barbara Faison: I remember them telling Ma and Pa that there was nothing they could do because I was going to die anyway. "She swallowed too many flames," I heard one say.

Lizzie Peabody: The doctors left, but her grandmother stayed.

Ashleigh Coren: The woman in her family were country women. They had known a lot of hardship.

Barbara Faison: My mother and grandmother, these two great black women sat in a rocking chair in front of the fireplace and held me to their chest for six weeks. When one had to leave to attend to an errand, she would hand me to the other. Because of these two great women I survived.

Lizzie Peabody: But the fire left its mark on Kenner.

Barbara Faison: The accident had burned my lips so badly that they grew down to my chin. The kids called me burnt face and didn't want to play with me. People used to say, "She ain't never going to be nobody." Yet, the more I would hear statements like those, the more determined I became.

Ashleigh Coren: She was determined to thrive in the face of doubt. And she really took others dismissal of her as fuel to create wonderful things.

Barbara Faison: My going through that experience has been the inspiration for my life and has directed my living.

Lizzie Peabody: The fire was the first of many obstacles to come Kenner's way. But she had the ingenuity to create solutions to overcome many of them, even designing solutions to other people's problems. In fact, she solved so many problems she went on to become one of the most prolific African American inventors of her time. So, this time on Sidedoor, we bring you the inventions of Beatrice Kenner. Right after the break.
Lizzie Peabody: Beatrice Kenner came up with her first invention when she was just six years old, about a year after the fire that nearly killed her. She got the idea while watching the comings and goings of her tight-knit family. There was this pesky door in their house.

Barbara Faison: Every time someone would go through the door, it would make a screeching sound. I remember my dad oiling the hinge, but soon that old door would begin screeching again. I remember telling my mother that we needed a self-oiling hinge. She shook her head okay. And I went outside to make one.

Lizzie Peabody: Her mother probably wasn't surprised. Inventing ran in the family.

Ashleigh Coren: Well, her grandfather and father were both inventors.

Lizzie Peabody: Her father invented something called the body lifter, which was like a stretcher for transporting people and also-

Ashleigh Coren: A window washer for trains and a pants presser.

Barbara Faison: He had it set up like a suitcase. While you traveled, you would also be pressing your pants.

Lizzie Peabody: Ever since her accident, Kenner had dreamed of becoming a nurse, but her family couldn't afford college. So, after she graduated from high school, she took a desk job in Washington, DC. But outside the office, that's where the real work happened.

Barbara Faison: At night, when I should be fast asleep, I'm laying in my bed creating. Then I'll get up, draw up the plans. The next morning, I try to make a model.

Lizzie Peabody: Kenner modeled dozens of inventions, but in 1954, she had one that stood apart from the rest. Here was something the world, or at least half of it, needed. It was a sanitary belt. And if you don't know what that is, well, call yourself lucky.

Ashleigh Coren: So, imagine it's almost kind of like a jock strap for women.

Rachel Anderson: The whole thing sort of ends up looking like a super, heavy duty, industrial strength, G-string panty contraption.

Lizzie Peabody: Oh my gosh.

Rachel Anderson: That is there to keep that absorbent napkin between your legs, hopefully where it needs to be.
Lizzie Peabody: This is Rachel Anderson, Museum Specialist for the Division of Medicine and Science at the Smithsonian's National Museum of American History. Rachel presides over the sanitary products in the museum's collections, because periods are as old as humanity, but the technology around them has come a long way. Can we sort of go on a magical menstrual history tour here? Can you take me back in time a little bit?

Rachel Anderson: Absolutely.

Lizzie Peabody: So, in let's say the 16, 1700s, what were American women doing when they menstruated?

Rachel Anderson: Well, initially women were just using pieces of cloth to absorb menstrual fluids. Sometimes sewing their own sanitary cloth napkins. They had patterns for them. Sometimes just using rags and then they washed and reused these cloths.

Lizzie Peabody: But by the late 1800s, women had a few more options.

Rachel Anderson: Women could buy sanitary aprons or rubberized panties or rubberized bloomers.

Lizzie Peabody: I didn't say good options.

Rachel Anderson: Which sound absolutely horrible.

Lizzie Peabody: Those sound not very breathable.

Rachel Anderson: They sound really, really not that healthy. There were even a few types of disposable sanitary napkins that were sold in those same catalogs by the late 1800s.

Lizzie Peabody: And we have World War I to thank for what happened next.

Rachel Anderson: Wars tend to be periods of innovation for design and materials. And it's no different here.

Lizzie Peabody: This period of innovation meant innovation for periods. There was a shortage of bandaging and surgical supplies during the war, so people were in search of cotton alternatives.

Rachel Anderson: And one of these innovations was using sphagnum moss as an absorbent material instead of cotton.
Lizzie Peabody: Moss?

Rachel Anderson: Yes. A dry moss like that can absorb many times its own weight in fluids.

Lizzie Peabody: That's right, the fuzzy plant that grows in bogs. Turns out moss has antiseptic properties as well. So, in the museum collections, you can see a little paper box of Sfag-Na-Kins from 1919, moss filled, disposable gauze pads with safety pins to pin to your underwear. Now, by the 1930s, tampons did exist, but they were pretty controversial because the idea of a young woman inserting something into her own body made some people uncomfortable.

Rachel Anderson: Lots of parents were really worried about their daughters. They were afraid that this was improper for them, that it would compromise their virginity.

Lizzie Peabody: And some tampon companies reinforced this idea by saying their products were only for married women. So, through the 1930s and '40s, most women used disposable pads, but these pads needed a way to stay strapped in place, say with a sanitary belt. So, around the time Beatrice Kenner was coming of age, sanitary belts were already out there, but they weren't very comfortable. They were bulky. Imagine strapping a heavy rubber belt around your waist. And you had to order them sized to the inch, so if you gained weight around your period, you're in a pinch. And they really didn't account for the fact that women move around so the pad would often slide out of place or chafe against your skin and leak. And they were tricky to use. To detach the pad from the belt and reattach a new one, you had to use buttons, hooks, clips, or safety pins.

Rachel Anderson: Just picture it. You're in a rush or God forbid you're in a public bathroom and you've got this squirrely thing where you're trying to hook the front up, you're trying to hook the back-up, doing it all without getting dirty, without poking yourself.

Lizzie Peabody: Oh gosh.

Rachel Anderson: It sounds unpleasant.

Lizzie Peabody: And this was the unpleasant reality for women who were more than ever before navigating their periods in public.

Rachel Anderson: Women were increasingly out there in the world. They're working in offices and department stores. They're going to college. And they're often doing this in a world that is just not set up for or concerned about or even honestly aware of their hygiene needs.

Lizzie Peabody: But you know who was aware? Beatrice Kenner. She'd actually started working on a design for a sanitary belt in her teens. By her 40s, she'd spent two decades working in an office as a menstruating woman thinking, "How can I make this better?" And in 1954, she answered her own question with a design she hoped to patent. So, what did it take to file a patent in 1954? Like lay it out for me. What is the first thing Kenner had to do?
Adam Bisno: It was a pretty arduous process.

Lizzie Peabody: This is Adam Bisno, official historian of the US Patent and Trademark Office. Full disclosure, I did not know that the US Patent and Trademark Office had a historian.

Adam Bisno: I'm glad you found out I did exist.

Lizzie Peabody: So am I, because Adam really straightened me out on the basics, starting with what a patent is.

Adam Bisno: What it is, first and foremost, is an acknowledgement of your original idea.

Lizzie Peabody: Kenner's original idea took the old sanitary belt and improved on it in a few specific ways. First, hers was adjustable, with adhesive tabs to tighten or loosen it to your body size.

Adam Bisno: That the patent is dealing in adhesives means that it's cutting edge.

Lizzie Peabody: Second, it was way easier to use. Two more sticky tabs attached to the pad to the belt.

Rachel Anderson: And instead of fumbling with two safety pins, you're peel and stick.

Lizzie Peabody: Way better.

Rachel Anderson: Way, way better. Really nice

Lizzie Peabody: Third, it had give. The pad could slide on the belt like a bead on a string.

Rachel Anderson: The napkin is sliding and moving with the body as you twist at the waist or as you bend at the waist, instead of being stuck in one place. And Kenner, she is really sort of paying attention to women's bodies

Lizzie Peabody: To top it all off, Kenner's design specifies that this adjustable, flexible, easy to use belt will be cheap enough to be sold in a bathroom vending machine, because when it comes to Aunt Flo, you just never know. Kenner was thinking practically.

Rachel Anderson: She's really tuned in. She's essentially concerned about meeting women where they are. And I think it's because she's really aware that it's hard to move with any confidence out there in the world if you're afraid, say, that your belt is going to fall down or if it's rubbing you raw.
Ashleigh Coren: And so, the fact that this black woman in the 1950s was sort of taking this initiative to say, "Yes, women should have more autonomy over their bodies and should be comfortable in their bodies," is really amazing, but also just really kick ass at the same time.

Lizzie Peabody: Agreed. So, Kenner writes all of this up in her patent application, complete with detailed technical drawings. And she submits it to the US Patent Office where it’s assigned an examiner, whose job is to judge two things. One, is it new? And two-

Adam Bisno: Does this thing do what it says it’s going to do. Does it actually work? Could someone use it?

Lizzie Peabody: And after almost two years of evaluation, Kenner’s patent examiner rules yes on both counts. In 1956 at the age of 44-

Ashleigh Coren: Beatrice Kenner receives her very first patent.

Lizzie Peabody: Now the only question was would Kenner be able to get her design onto store shelves and into the hands of women who needed it? She knew from experience it wouldn’t be easy. That’s coming up after the break.

[MUSIC]

Lizzie Peabody: Beatrice Kenner remembers the morning agents from the Sonn-Nap-Pack Company knocked on her door. It was a Sunday.

Barbara Faison: I remember I didn't go to church that day. We were so excited.

Lizzie Peabody: Kenner was just a high schooler at the time. Her very first design idea for a sanitary belt had grabbed the attention of an industry manufacturer and they wanted her to sign a contract to help them develop it.

Ashleigh Coren: Here she was, an African American woman inventor in Jim Crow America, about to get paid for her original idea.

Barbara Faison: In my mind, I had built I don't know how many castles or how many cars I had bought. Then the doorbell rang. I tell you., you should have seen the look on those men's faces. You’d have thought they’d seen a ghost.

Ashleigh Coren: They didn't know she was black.

Lizzie Peabody: Smithsonian's Ashleigh Coren.

Ashleigh Coren: And it totally surprised them.
Barbara Faison: They'd absolutely no idea that they had been negotiating with a black person. They would've turned away and ran if they could've. Every inch of their bodies signaled that's what they wanted to do. Instead of running away, they came in. Then they tried to find every reason under the sun as to why I couldn't sign that contract.

Ashleigh Coren: But from the conversation she understood that they were not interested in establishing a contract with her.

Lizzie Peabody: The agents left as quickly as they could. And historian Adam Bisno says-

Adam Bisno: The thing I would've worried about had I been kind of ghosting around that room is that they were going to go and steal her invention.

Lizzie Peabody: Mm.

Adam Bisno: It would've been a legitimate concern, especially for an African American woman.

Lizzie Peabody: Kenner would've known this. Remember, she came from a family of inventors, and she'd seen this very thing happen to her grandfather.

Barbara Faison: The light switch on the railroad track, red, amber, and green. My grandfather invented that. He was demonstrating it for the railroad company and three of the white men who worked for that company patented it before he could raise the money to do so himself. It was stolen from him, just like many inventions were stolen from black people.

Lizzie Peabody: Kenner knew the best way to protect her idea was with a patent. And now over 20 years after that meeting with the Sonn-Nap-Pack Company, she had one.

Adam Bisno: She's gotten her patent. It came to her on a beautiful piece of paper with the seal and the ribbon and everything. She is a bonafide inventor and this is a bonafide patent. But then when she goes to try to make money off it, she runs right into this racism wall.

Lizzie Peabody: The racism wall as Adam Bisno calls it, was the invisible barrier African American inventors hit after getting a patent. See, the US Patent and Trademark Office doesn't collect information about the race or gender of its patent holders. When the Patent Act of 1790 established the right for any citizen to file a patent application that included free African Americans, which made the Patent Office a rare loophole in a racist system.

Adam Bisno: Patents were special for African Americans because it was one of the few areas where apparently there were no real legal barriers to entry. The Patent Office didn't say you
can't apply as an African American. To the contrary the Patent Office is essentially saying, "We don't care if you're African American." That is very rare.

Lizzie Peabody: Right.

Adam Bisno: As late as the 1950s, and certainly very rare when Kenner is growing up. So, the Patent Office appears to be this way out or a way into the American dream, a path that is open around so many pathways that are shut. What most African American inventors found however, was that the path from patent to profitability was blocked in some really serious ways.

Lizzie Peabody: Remember a patent is just a legal document proving, "This is my idea." If a company decides to use your idea any way, or infringe on it, it's up to the person with the patent to take that company to court. Patent infringement is a danger for all inventors, but-

Adam Bisno: African Americans however, were uniquely vulnerable to this kind of infringement with impunity. If you didn't have access to the court, or you had limited access to the court, or you lived in a community where challenging a white person in court was dangerous for you or your family, you might think twice about-

Lizzie Peabody: Defending your-

Adam Bisno: Defending yourself against-

Lizzie Peabody: Intellectual property.

Adam Bisno: Yeah, defending your intellectual property. And there are plenty of cases of people making that choice.

Lizzie Peabody: Adam says a patent is just a tool to protect your idea in court. But if you don't have access to the courts, it's not a tool you can use. A patent doesn't do you much good.

Adam Bisno: So, although we would say the patent system at the beginning of the process is pretty open to African Americans, the path narrows and closes afterward. And the history of African American patenting is a history of triumph over adversity, but also, it's a history of disappointment.

Lizzie Peabody: Beatrice Kenner had her patent, but she didn't have a company that would pay her for it. She tried to manufacture the sanitary belt herself, but she didn't have the money.

Ashleigh Coren: So, getting a bank loan as a black person, but also as a black woman, is still extremely difficult at this time.
Lizzie Peabody: We can't draw a direct line between her design and specific products that appeared on the market, but we can say that pads with adhesives came in massively in the late 1960s and 1970s. But by then Beatrice Kenner was onto new things.

Ashleigh Coren: She'd quit her government job.

Lizzie Peabody: Married a few times.

Ashleigh Coren: And opened up a flower shop in Washington DC with her sister Mildred.

Lizzie Peabody: She was raising five foster sons.

Ashleigh Coren: Volunteering with the Girl Scouts.

Lizzie Peabody: Her church.

Ashleigh Coren: The Red Cross.

Lizzie Peabody: Oh. And-

Pat Sluby: She was a part of the, I think, the Negro Opera ensemble they had here in Washington, DC.

Lizzie Peabody: What?

Ashleigh Coren: What didn't she do?

Lizzie Peabody: This is Pat Sluby. She's a former patent examiner with the US Patent and Trademark Office and a friend of Kenners.

Pat Sluby: There were a lot of facets to Aunt Bea.

Lizzie Peabody: Who went by Aunt Bea to those who knew her.

Pat Sluby: She was just a natural genius, I call it. She was an Eveready battery, so to speak.

Lizzie Peabody: And Eveready battery? One could say the same for Pat Sluby. She worked for over 30 years as a primary patent examiner specializing in chemical engineering. She's written three books on African American inventors. Ashleigh Coren and I went to meet her at her house, which is like a museum to African American ingenuity, full of patent models, artwork, photographs.

Pat Sluby: Yeah. That's a copyright. That's my first? Let me see, because I have 22 copyrights.
Lizzie Peabody: Oh my gosh.

Ashleigh Coren: Oh my goodness.

Lizzie Peabody: And Pat Sluby says if Kenner was disappointed that she couldn't sell her sanitary belt design, she didn't let it get her down.

Pat Sluby: She was in charge. I tell you, she was captivating and she had ideas. She always had ideas in her head.

Lizzie Peabody: The inventions just kept coming. In 1976 she got another patent.

Pat Sluby: And let's see, she came up with on an attachment for an invalid walker.

Lizzie Peabody: Inspired by her sister Mildred who had multiple sclerosis, Kenner created a collapsible tray that attached to a walker with a carrier pocket on the side. So even if you needed support getting around, you could take your stuff with you. And this invention was followed by another that had the potential to solve many a family debate.

Pat Sluby: Oh. And then the bathroom tissue holder. That was really interesting. She, really, to me solved the problem of which way you should pull the tissue on the tissue roller, because whether from the top or from the bottom, but it fed in through a unit and you could pull it out and get your bathroom tissue.

Lizzie Peabody: So, it was always in the right place.

Pat Sluby: In the right place and right time.

Lizzie Peabody: Beatrice Kenner kept it rolling. In 1987, she got another patent.

Ashleigh Coren: So, 75 years old, in her retirement. I personally would be chilling by the pool and watching Murder, She Wrote, but Aunt Bea is still inventing.

Lizzie Peabody: So, sitting there in her dining room, Pat Sluby just reaches under her chair and brandishes this thing.

Pat Sluby: Da-ta-da-dah! A shower wall back washer.

Ashleigh Coren: Oh my goodness.

Pat Sluby: Okay?

Ashleigh Coren: She pulls out Kenner's own model for a back washer, which was quite the surprise.
Lizzie Peabody: It was a square cushion, covered in soft terry cloth, mounted on Plexiglas with suction cups on the back.

Pat Sluby: And that way, when you're in the shower, you could take the suction cups and press it against your shower wall and just scrub yourself.

Lizzie Peabody: Like a bear against a tree.

Pat Sluby: Exactly.

Ashleigh Coren: But that is a hard to reach spot.
Lizzie Peabody: It is.

Pat Sluby: Right. And she got a patent on this. And you put the soap, there's a little pocket in here for the soap, down here you can feel. I'll pass it on, let you see. In here's a little pocket for the soap. So that's how creative Mrs. Kenner was.

Lizzie Peabody: Beatrice Kenner had another patent idea in the works when she died in 2006 at the age of 93.

Pat Sluby: Yes. The last thing she was thinking of was how to cure the potholes in the city of Washington DC. So, she was contacting the city public works and so forth and so on, whatever steps she needed to take. I mean, she was thoughtful enough to follow through with all of the things that she had conceived.

Lizzie Peabody: By her own estimation, Kenner had ideas for over 100 inventions. She built models for over 30. She held patents on five. She earned $0 on any of them.

Ashleigh Coren: You know, Kenner wasn't able to profit from her inventions, but that doesn't necessarily mean that there's nothing that we can learn from her story and that we can't celebrate the work that she did.

Lizzie Peabody: In fact, maybe that's the reason to share her story.

Adam Bisno: We need to tell more stories than just the stories of the really successful inventors or the really famous black inventors. And telling those stories helps us to see just what people like Kenner were up against when they tried to access the American dream.

Barbara Faison: Although selling just one invention would bring joy to my heart, I invent because it's my talent. When God gives you a talent, you never stop. You just keep on going.
Lizzie Peabody: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX.

Lizzie Peabody: To see pictures of Beatrice Kenner's patents and drawings, subscribe to our newsletter at si.edu/sidedoor. We'll also include a bunch of fun facts that didn't make it into the story like the game invented by Kenner's sister, Mildred, called Family Tree Editions. It's all about how to teach family members how they're related to each other. Pat Sluby had a copy of that too.

Pat Sluby: This is the game. And what it is with the cards and each player gets a blank board. Okay?

Lizzie Peabody: Oh, good. We're playing.

Lizzie Peabody: We'll also include more information about how patents became a battleground of civil rights in the Reconstruction era. And we'll link to Dr. Patricia Carter Sluby's books, including the, “Inventive Spirit of African Americans: Patented Ingenuity.” Finally, you can look forward to some images of sphagnum moss sanitary napkins and a few other treasures stashed in the feminine hygiene collections of the National Museum of American History. They'll make you very glad you live in the modern era.

Lizzie Peabody: Special thanks for this episode to Pat Sluby, Adam Bisno and the US Patent and Trademark Office, Rachel Anderson and Valeska Hilbig at the Smithsonian's National Museum of American History and to voice actor Barbara Faison, who read the words of Beatrice Kenner. The interview text read aloud for this episode comes from an interview recorded in Arlene Hambrick's 1993 doctoral dissertation from the University of Massachusetts Amherst. Extra special thanks to Ashleigh Coren for researching the life of Beatrice Kenner and bringing this story to us. For more stories of important women in history, be sure to look into the Smithsonian American Women's History Initiative. To learn more, go to womenshistory.si.edu, or join the conversation using #becauseofherstory on social media.

Lizzie Peabody: Our podcast team is James Morrison, Nathalie Boyd, Ann Conanan, Caitlin Shaffer, Tami O'Neill, Jess Sadeq, Lara Koch, and Sharon Bryant. Episode artwork is by Dave...
Leonard. Extra support comes from Jason and Genevieve at PRX. Our show is mixed by Tarek Fouda. Our theme song and episode music are by Breakmaster Cylinder.

[MUSIC]

Lizzie Peabody: If you want to get in touch with us or have an idea for a show, you can find us on Twitter or Instagram @sidedoorpod, or email us. Our email address is sidedoor@si.edu.

[MUSIC]

Lizzie Peabody: And if you want to sponsor our show, please visit sponsorshipprx.org. I'm your host, Lizzie Peabody. Thanks for listening.

[MUSIC]

Pat Sluby: Is my blank, like my mother's sister is my-

Lizzie Peabody: Aunt.

Pat Sluby: And if you have aunt-

Lizzie Peabody: Sorry, I wanted to make sure you knew that I knew the answer is aunt.

Ashleigh Coren: This is fabulous.