

THE EVANGELIST OF BRONCHOSCOPY

FOREWORD BY CHUCK STARESINIC

PHOTOS COURTESY THE MÜTTER MUSEUM OF
THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Chevalier Jackson was born in 1865 in a plain, three-story brick building on Fourth Avenue in downtown Pittsburgh. The city was a bustling manufacturing center, and the air was frequently filled with smoke and coal dust. He would spend his boyhood just a few miles downriver at the family home on a steep hillside overlooking the Ohio River.

It was coal country, and back then the stuff was mined by hand, loaded onto wagons, and hauled by horses to the iron mills. It was hard, dirty living for a great many in the region, and Jackson was a sensitive boy. In his autobiography, he describes his childhood as a time of terror, tears, and torment at the hands of bullying children. He recounts vivid memories of mothers grieving for their children killed in accidents involving wagons and horses. He describes his anguish at the brutal and unnecessarily cruel treatment of working animals such as horses, mules, and dogs.

Jackson was a tinkerer, perhaps even a bit of a mechanical prodigy, and he was good at drawing. From age 4, he was never without workspace where he could build and experiment. He describes one experience when he was about 12 years old that is oddly prescient of his later career as a pioneering bronchoscopist. Because the family was located just 25 miles from oil-producing territory, a prospector put down a test well on his father's property. When a great length of rope came loose several hundred feet deep in the well, the driller declared the well a lost cause owing to the immovable plug of old line. Jackson conceived of and designed a barbed probe that would screw onto the drilling rig in place of the bit. He took the drawing and a wooden model to a forge, where a toolmaker fabricated it. This harpoon was lowered into the well at the end of a new rope. When it was pulled out, the old rope was firmly attached to the barbs. Jackson described it as his "first foreign body case" and declared it typical of hundreds of his later successful bronchoscopic cases.

Jackson studied at the Western University of Pennsylvania (the forerunner of the University of Pittsburgh) and decided he was ready for medical

school in 1884. However, Pittsburgh's medical school wasn't yet ready for him. (The Western Pennsylvania Medical College admitted its first class in 1886.) A skilled artist and illustrator, Jackson earned cash for his medical education by painting glass lamps and china at Fort Pitt Glass Works. When he had earned enough, he took the train to Philadelphia and enrolled at Jefferson Medical College.

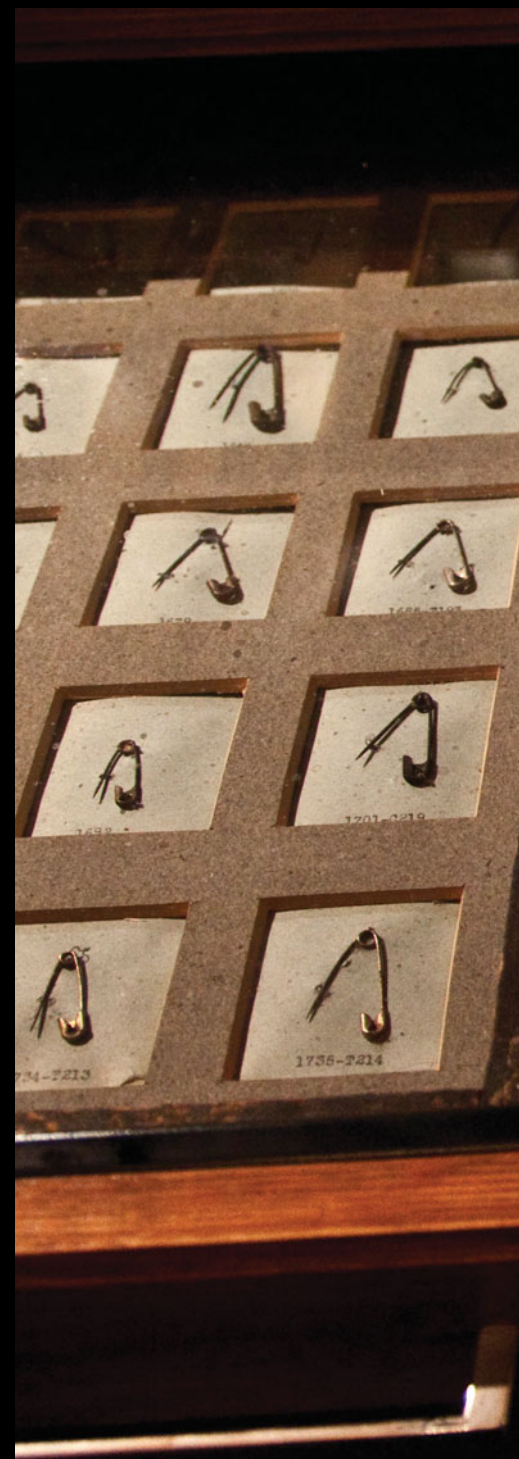
After medical school, Jackson made a visit to London—"the cradle of laryngology," he called it—to learn what he could from the most highly regarded physicians in his chosen specialty. When he returned to Pittsburgh, he set up practice in a newly vacated tailor's shop near Penn and Sixth Avenues.

While in London, he'd seen a device for inspecting the esophagus. He deemed this particular device impractical and began working on his own version. He developed his prototypes and his skill at manipulating them to remove foreign objects from the throats of children, usually for no fee. And he ventured farther into the bronchi to remove objects such as safety pins. By the turn of the 20th century, the first bronchoscopes were in use for peering into the lungs and even extracting foreign bodies, and Jackson had set up his own bronchoscopy clinic in Pittsburgh. A meticulous and fastidious recorder of case histories, Jackson published some of the first bronchoscopy texts.

At the age of 35, Jackson was surprised by an offer to chair the Department of Laryngology at the Western Pennsylvania Medical College (now the University of Pittsburgh School of Medicine). "The great honor carried with it additional expenses but no salary," he noted in his autobiography, adding, "Everything had to be financed out of a practice that was 95 percent charity."

Far from complaining of the limitations, Jackson seemed to relish his role as the evangelist of bronchoscopy. His appointment in Pittsburgh launched a segment of his career during which he would join the faculty of a series of medical schools in succession, always moving on when he deemed the bronchoscopy clinic able to stand on its own. He left Pittsburgh for Jefferson Medical College in 1916. In

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TOP RIGHT: Chevalier Jackson shows a diagram of a foreign object in the digestive tract. ABOVE: Some of the many pins and other items that are part of the Chevalier Jackson Collection of Swallowed Objects.

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Philadelphia, his prestige grew so great that no institution wanted to remove his name from the faculty roster. At one time, he held chairs in all five medical colleges there.

“[H]aving spread the gospel of safe bronchoscopy...,” he wrote, “it is necessary that I move on to where doubters and heretics abound.”

What follows is an article on Jackson that appeared last year in *The New York Times*. It is reprinted here with permission. Copyright January 11, 2011.

DOWN THE HATCH AND STRAIGHT INTO MEDICAL HISTORY BY AMANDA SCHAFFER

From brain tissue to gallstones, doctors have long preserved specimens from their patients—sometimes as trophies, sometimes as teaching tools, sometimes as curiosities or even art. But Dr. Chevalier Jackson went much further than most.

A laryngologist who worked in the late 19th and early 20th centuries, he preserved more than 2,000 objects that people had swallowed or inhaled: nails and bolts, miniature binoculars, a radiator key, a child’s perfect-attendance pin, a medallion that says “Carry me for good luck.”

Jackson retrieved these objects from people’s upper torsos, generally with little or no anesthesia. He was so intent on assembling his collection that he once refused to return a swallowed quarter, even when its owner threatened his life.

“He was a fetishist, no question,” said Mary Cappello, the author of *Swallow* (New Press), a new book about Jackson and his bizarre collection. “But his obsession had the effect of saving lives. That’s kind of amazing, and lucky for us that his madness made possible forms of rescue.”

Jackson was an artisan and a mechanical prodigy, a humanist and an ascetic whom colleagues sometimes described as aloof or cold. He spent hundreds of hours crushing peanuts with forceps to learn exactly how much pressure to exert. He experimented extensively on mannequins and dogs.

In those days surgery was associated with high mortality, and few physicians were willing or able to peer into the air and food passages, let alone remove objects like open safety pins. Yet Cappello writes that the survival rate among patients from whom he removed objects was better than 95 percent.

“If Jackson could tell us how he wished to be remembered, I’m certain he would do so by assemblage, or meaningful collage,” said Cappello, an English professor at the University of Rhode Island. For him, collecting was a form of self-portraiture as well as a clinical and scientific pursuit.

Jackson viewed the world as a precarious place. Small and bookish as a child, he endured intense torment and bullying; at one point other children blindfolded him and threw him into a coal pit, and he was rescued only after a dog happened to find him unconscious.

So in a sense, Cappello said, when Jackson became a physician—first in Pittsburgh, then Philadelphia—he “was saving lives, yes, but he was also saving himself.” He grew to be a pioneer of the upper body, developing new endoscopic techniques for peering into dark recesses.

He attached a tiny light called a mignon lamp to the end of a rod that he inserted into his scopes. (Previously, physicians who used endoscopes had worked mainly with light held outside the body.)

And he was an early and outspoken safety advocate, particularly when it came to children. As one of his assistants put it, his quest was to make the public and the medical profession “foreign-body-conscious” about swallowing.

If it had been up to him, Cappello said, “parents who fed peanuts to children without molars would be drawn and quartered.” Chew everything thoroughly, he exhorted the public: “Chew your milk!”

And he lobbied for passage of the Federal Caustic Poison Act of 1927, which required manufacturers to place warning labels on poisonous substances like lye, which burns the esophagus and causes severe scarring that can make it impossible to swallow.



Rigid bronchoscopes like the ones pictured above are used to retrieve foreign objects from the bronchi. Jackson refined their design in the 1920s.

Children often ingested lye because it was present in many households (where it was used to make soap) and because it looked like sugar. A 7-year-old girl who could not swallow even a drop of water was taken to Jackson, who fed an endoscope into her esophagus and removed a grayish mass—perhaps food, perhaps dead tissue—with a forceps. Afterward, one of his assistants gave the child a glass of water.

“She took a small sip expecting it to choke her and come back up,” Jackson recalled in his 1938 autobiography. “It went slowly down; she took another sip, and it went down. Then she gently moved aside the glass of water in the nurse’s hand, took hold of my hand and kissed it.”

Jackson also developed a technique for dilating the esophagus in children with scarring. He taught them to swallow a long tube and to do so regularly for an extended period. He suggested they might think of themselves as sword swallows and imagine that the feat “inspires awe in other children.” This eventually helped many of them to eat and drink again normally.

To remove objects like keys and coins and pins, Jackson would insert a long, rigid tube into his patients—usually children, and usually awake, though his assistants did help to hold them still. “He must have had an exquisite gentleness and ability to calm people,” Cappello said. He also treated many poor children without pay.

Still, his eccentricities marked him. “Some people might have painted him as a socially phobic, friendless loner,” she added. “He was not a warm and fuzzy doctor.”

Nor would he compromise when it came to his collection. In the case of that swallowed quarter, he told the patient’s infuriated father that “all foreign bodies removed from the air and food passages were put into a scientific collection where they would be available to physicians working on the problems of relieving little children.”

The father had beaten the boy as punishment, and when he didn’t get the coin back he apparently beat him again, so viciously he broke his son’s arm.

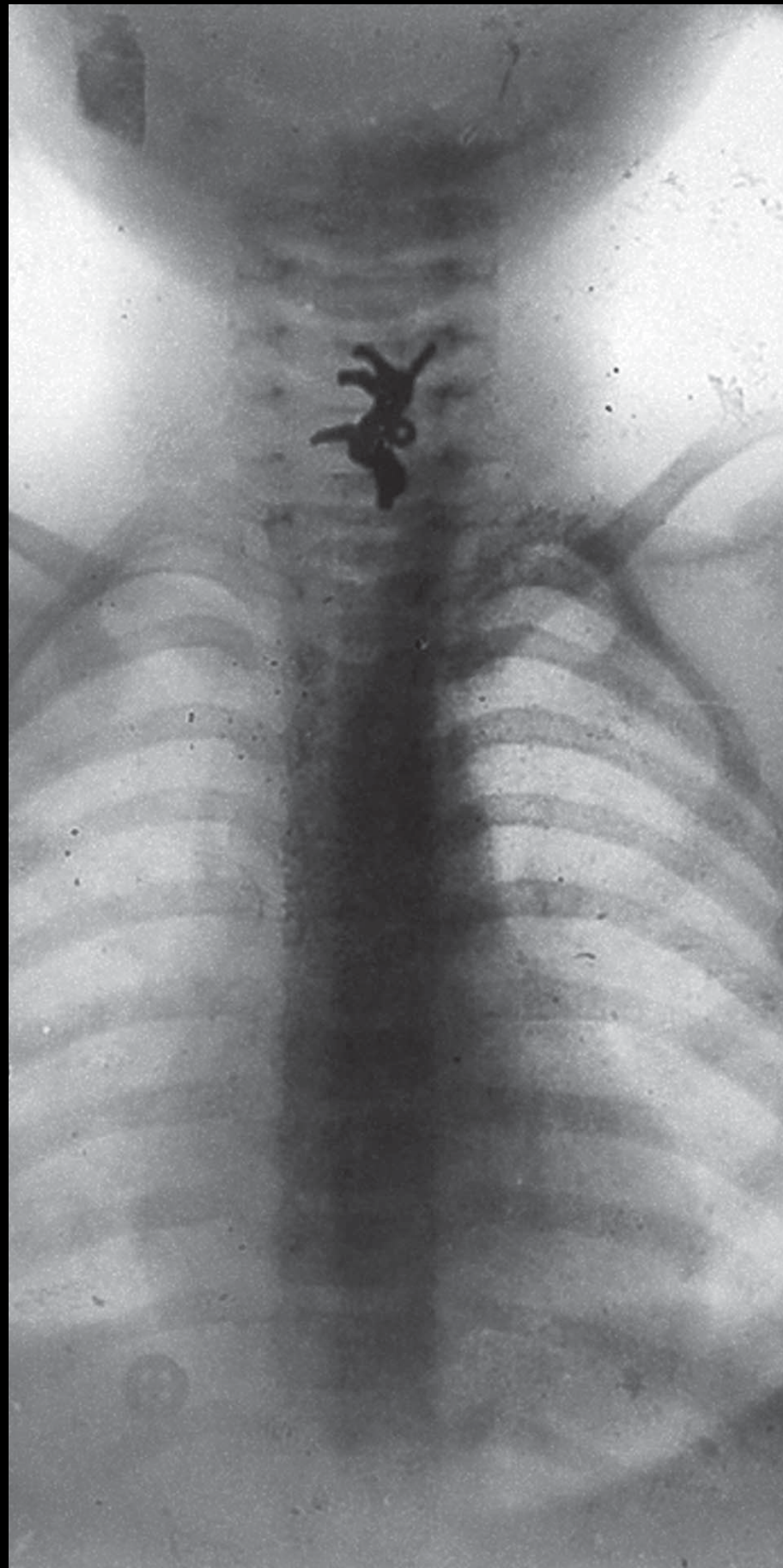
At that point Jackson gave the family a half dollar. But he did not return the swallowed coin.

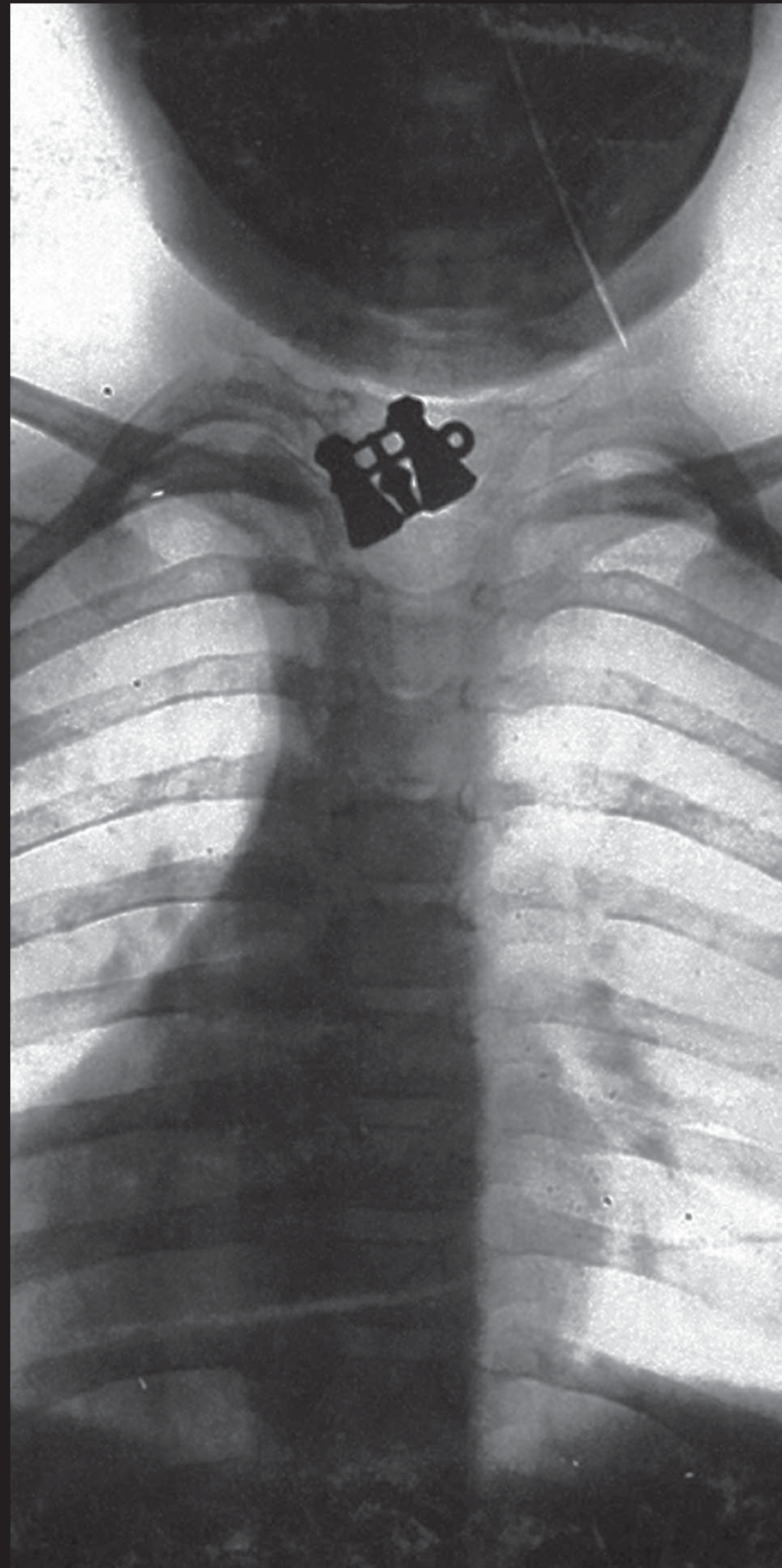
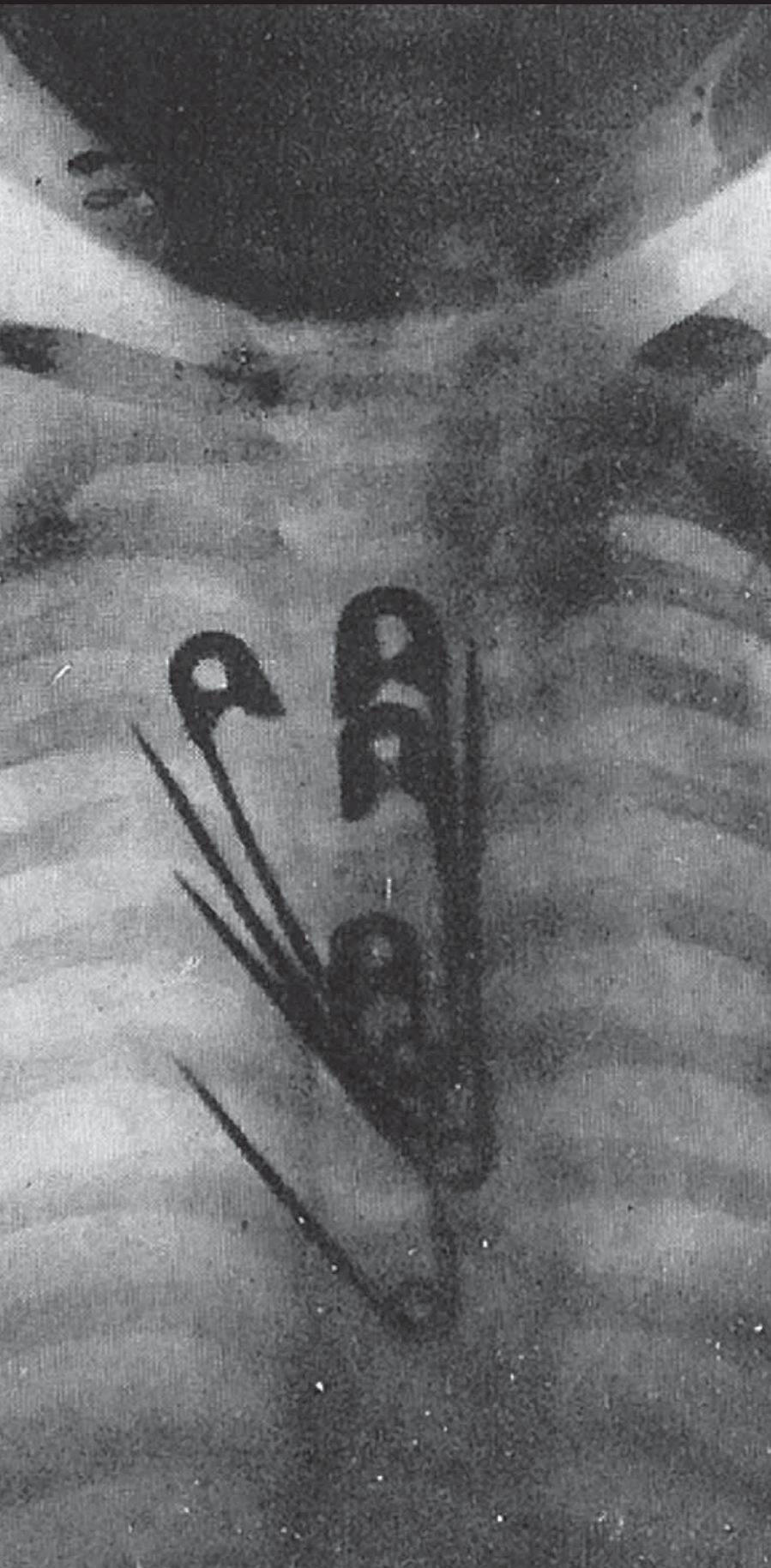
The Jackson collection is now owned by the Mütter Museum of the College of Physicians of Philadelphia, which is refurbishing it for an exhibition. ... Cappello will help curate the exhibition; Anna Dhody, the museum’s curator, called her work a substantial contribution that “we’re very lucky to have.”

V. Alin Botoman, a gastroenterologist at the University of Miami who has also done scholarly work on Jackson, called him “truly a renaissance man who made so many contributions to medicine and has been all but forgotten.” Until now. In October, Cappello gave a lecture on Jackson at the Observatory, an art and events space in Brooklyn. She also presented black-and-white films from Jackson’s family that had never been seen in public.

In a series of clips, Jackson is shown on a small boat, looking out at the sky. He is riding in the back of a pickup truck, writing intently.

His granddaughter, then a toddler, wobbles across a lawn holding a stuffed animal and a flower. She looks at the camera, shakes the flower and puts it in her mouth. ■





Skiagraphs (positive prints made from X rays) showing foreign bodies, including metal charms and safety pins, swallowed by children before Jackson successfully extracted them.