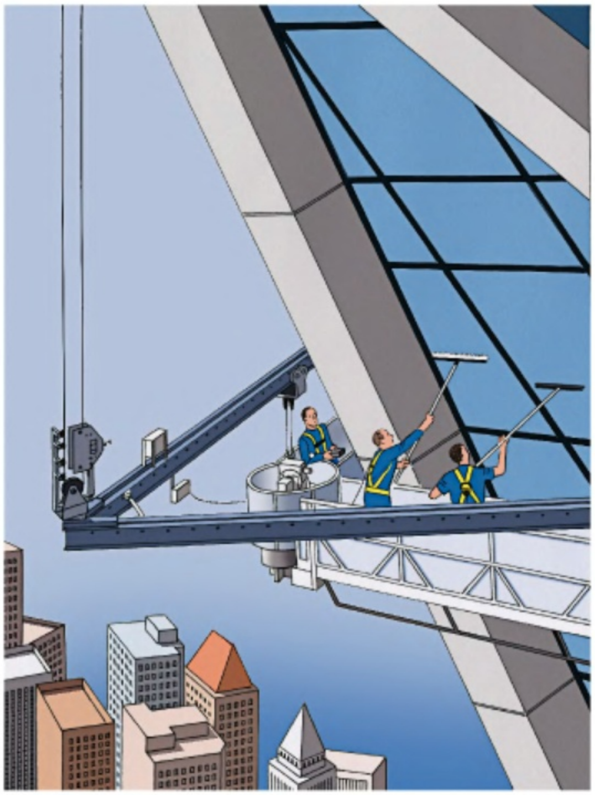
OUR LOCAL CORRESPONDENTS

LIFE AT THE TOP

What a window washer sees.

BY ADAM HIGGINBOTHAM



Shortly after dawn one December morning, Bob Menzer rode the freight elevator to the forty-fifth floor of the Hearst Tower, on Eighth Avenue in Manhattan, and opened the door to the roof. The weather was clear and cold; five hundred feet above the street, the rooftop was silent except for the hum of giant air-conditioning fans. Menzer, a soft-spoken, bearded fifty-four-year-old with a nervous laugh, narrow blue eyes, and a thick shock of brown hair, was the rigging foreman of the tower's window-cleaning crew. He had risen at 3 A.M. to travel to Hearst from his home in Queens, and clocked in at five. He wore dark-blue overalls, a yellow fall-protection harness, and heavy gloves. Carrying a checklist on a clipboard, he was joined by Ron Brown, fifty-eight, and Janusz Kasparek, fifty-five. Together they prepared to go "over the side" in the basket of the most complex window-washing rig in New York. Menzer chuckled as he showed me the machine for the first time. "It's a little monster," he said.

When the architect Norman Foster initially presented sketches for the Hearst Tower, the first skyscraper approved for construction in Manhattan after September 11th, one of the questions the building's prospective owners asked was: How are we going to clean those windows? Foster's proposal featured curtain walls of glass and stainless steel hung in a diagonal grid that met at each corner of the structure in a dramatic chamfer, a zigzag bevelled edge formed of four concave diamond shapes, each sixteen feet deep and eight stories high, known as "bird's mouths" by the architects. These would have the effect of making the finished building look like a colossal, finely cut jewel. But there was no means of making them accessible to a window cleaner.

The world above the fortieth floor is an almost silent one, isolated and exhilarating.

In early 2002, Foster + Partners' associate architects approached Tractel-Swingstage, one of the world's largest manufacturers of scaffolds and window-washing platforms, based in Toronto, to provide a solution. The task fell to the company's vice-president of engineering at the time, Lakhram Brijmohan, who has spent a thirty-year career developing cleaning rigs but had never seen anything like the "bird's mouths." Designing and building the machine took a team of Tractel engineers three years. The result, a rectangular steel box the size of a Smart car, supporting a forty-foot mast and a hydraulic boom arm attached by six strands of wire rope to a telescopic cleaning basket, houses a computer that monitors sixty-seven electromechanical safety sensors and switches, and runs around the roof of the Hearst Tower on four hundred and twenty feet of elevated steel track. When it was finally installed, in April, 2005, at a cost of some three million dollars, it was described by Scott Borland, the project's construction manager, as being "like a ride at Disneyland."

Bob Menzer told me that safety checks and delicate maneuvering of the machine mean that it can take almost an hour each morning before he is finally in position to begin washing windows, for which he uses water and dish soap—"a good squirt" of either lemon-scented Dawn or Joy. A sophisticated device for containing this concoction has not yet been devised. "It's just a bucket," Menzer said. "Nothing too special."

The commercial window-washing industry in New York emerged with the rise of the skyscraper, at the end of the nineteenth century, after one Polish immigrant, seeing an opportunity, organized a team of expert window cleaners—mostly Poles—whom he let out on contract. This set a pattern for specialization in the trade by one ethnicity after another: the Poles

ILLUSTRATION BY GUY BILLOUT

were followed by the Ukrainians, then the Italians and the Irish. "We're like the aboveground sandhogs," Bill Fitzgerald, the former director of operations at Palladium Window Solutions, which held the contract for the Hearst Tower for several years, told me one afternoon in the cluttered and windowless basement room that served as his midtown office. The latest influx of immigrant window washers has come from South America: Fitzgerald's crews included men from Peru, Guatemala, and Ecuador.

In the early years, skyscraper windows were routinely cleaned by a washer simply standing outside on the ledge and gripping the frame, or "fingering." In the first decade of the last century, they began using leather safety belts, buckled at the waist and fitted with straps that attached to a pair of anchor bolts installed in the brickwork surrounding each window. By 1931, when the Empire State Building was completed, there were between two and three thousand window cleaners in New York; eventually, a crew of eight men worked in two teams on the tallest building in the world, balanced on ledges no more than two inches wide, to clean each of the sixty-five hundred windows.

It was a trade for which little or no education was necessary, although admission to the union has rarely been easy without a personal connection. Bill Fitzgerald's older brother Joey, at forty-four a gravel-voiced smoker with a wind-burned complexion and a sardonic sense of humor, has worked at the Empire State Building for nineteen years, most of them in the company of Andy Hock, a childhood friend from Woodhaven, Queens. Described by one colleague as "the No. 1 man on the No. 1 building in the city," Hock is a union shop steward at Local 32BJ, the most senior of the three veterans who form the permanent cleaning crew at the Empire State Building, and the scion of a dynasty of window washers. His father, Louis, a second-generation German immigrant born in Brooklyn—and a bodybuilder who was known as Papa Smurf by younger cleaners—was followed into the business by five brothers, in the late fifties. "They got their sons in, and then their sons-in-law in, and it started coming down the tree," Hock, a stocky forty-one-year-old with a shaved head and a goatee, told me recently. He joined the union on his eighteenth birthday, and got Fitzgerald in six months later. He now has thirty or forty relatives who are window cleaners. "I got three daughters. I don't have any sons," he told me. "But I'm sure one of them's gonna come up and be, 'Dad, you gotta get my husband a job window washing.' " In New York, the trade remains an almost exclusively male preserve. Hock told me that one of the few female window cleaners in the city, his cousin's granddaughter, stopped work when she became pregnant. "It's a man's job," he said. Hock has worked at the Empire State Building since 1996. His right calf is covered with a tattoo of the skyscraper silhouetted against a mackerel sky; scaling the façade is a giant figure, twenty-five stories tall, wearing overalls and carrying a bucket.

"I threw King Kong out," Hock explained. "It's my building now."

Having completed their safety checks, the three-man crew at Hearst climbed into the cleaning basket for their trip down the side of the tower. Bob Menzer stood alone at one end, separated from Brown and Kasparek by one of the unique features of the rig—a cylindrical turret around which either end of the platform could fold toward the other, forming a ninety-degree angle. The boom arm lifted the basket from the roof, forty feet into the air and out over the building's parapet, and the thirty-six-and-a-half-ton roof car began almost imperceptibly to move along its track toward the corner of the building. When I went out on the scaffold myself, this proved to be the most unnerving stage of the process: as the basket cleared the parapet, a frigid wind scythed across Columbus Circle, humming in the rigging overhead, and each time I shifted my weight the narrow platform swayed sickeningly, like the world's most appalling fairground ride. Menzer, resting his elbows on the edge of the basket with the serenity of a man watching ducks on a village pond, controlled each of the rig's movements using a set of sixteen buttons on a remote-control box. When the car reached the northeast corner of the tower, the basket hung in the air above Eighth Avenue and slowly folded into a right angle. It was ready for a "bird's mouth" drop.

The size of any building cleaned by scaffold is measured in drops, a single vertical section of the façade running from

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the roof to the lowest point the basket can descend—either to the ground or to an architectural feature of the building such as a setback. Every three floors, Menzer and his team anchor the wire ropes from which they're suspended to steel buttons on the façade, to prevent the basket from being pulled away from the building by the wind. One day's work on an average drop takes around four hours; given good weather, it takes a month to clean the whole tower from top to bottom. Work on larger skyscrapers in the city takes much longer: a single cleaning cycle on the eighty-story black glass curtain walls of the Time Warner Center, where the central "canyon drop" alone descends seven hundred feet, from the roof to the fourth-floor setback, can take six men four months.

The first window-cleaning scaffold in New York was built in 1952, to maintain the outside of Lever House, on Park Avenue, whose striking design was inspired not merely by the crisp aesthetics of the International Style but by Lever Brothers' wish that its world headquarters be "a symbol of everlasting cleanliness." Every window was a sealed unit, impossible to open and clean the traditional way, by a man climbing out on a safety belt. The answer, an electrically operated platform built by the Otis Elevator Company, set the standard for how the city's rising thicket of glass, steel, and sealed windows would be cleaned. Early attempts to fully automate cleaning began in 1973, with the opening of the World Trade Center, where the forty-three thousand six hundred windows were cleaned by a machine on each tower fitted with rotating squeegees and brushes, mounted on mullion tracks that could take it down the full height of the building in twenty minutes. The "robot" was designed to clean eleven hundred windows on a tank of twenty gallons of water, but sometimes jammed; it was of little use on the corners, and the windows on the top floors were always cleaned by hand. Today, one similar machine remains in use in Manhattan, at 1251 Sixth Avenue, in Rockefeller Center. "With automatic machines, you really need a building like a box," Lakhram Brijmohan said. "As soon as a façade has any little kink or a slope, the automatics don't work anymore."

"Years ago, it was just straight up and down, flat glass. Bing!" Bob Menzer told me. "Now everything they're building is all angles." Catalyzed by advances in glazing technology, and computer software that makes it practical to design buildings with a different plan for every floor, architects have recently created towers of floor-to-ceiling windows, turning Manhattan into a crystal garden of geometric forms and irregular shapes. Frank Gehry's IAC Building required a scaffold custom-designed to cope with the swooping shapes of its all-glass walls; the cleaning platform on Renzo Piano's New York Times Building is suspended from a rooftop hydraulic boom arm a hundred and twenty feet long, necessary to navigate the spikes that crown the structure. The window washers work with squeegees on an "articulating reach pole," designed to pass through the ceramic rods that cover the face of the building, and clean the windows beyond.

At the Hearst Tower, with the wings of the cleaning basket aligned in a right angle around the northeast corner, Menzer began lowering the scaffold down the façade. I watched from inside the forty-fourth floor—the Hearst executive conference suite—as the platform gradually dropped into view. Pulling out a mechanical safety catch, Menzer and Brown unlocked one wing of the basket from its suspending superstructure. Menzer grinned and gave me a thumbs-up sign and, as they hauled on a pair of chain pulleys, the platform closed slowly on the angled windows of the bird's mouth, until the men were just a few inches away from me, on the other side of the glass. Finally, the team was in a position to clean.

Outside or inside, the technique used to wash a window is the same: once the glass has been wetted down with a sponge or a wand, the water is wiped away with a squeegee, without leaving a smear. This is more difficult than it sounds. My first effort, made early one morning inside the eighty-sixth-floor observation deck of the Empire State Building—under the tutelage of the third man on the crew there, Ron Zeibig, an affable hulk with stringy blond shoulder-length hair and a black belt in jujitsu, nicknamed Thor by his last partner—was not a success. "Horrible," Zeibig concluded cheerfully, examining the dirty water I had left streaming down the glass, before demonstrating the art of the window cleaner's "sway." This movement requires a light touch and a smooth, serpentine glide—to chase the water across and down without the rubber edge of the blade leaving the glass, followed by a final motion of the wrist to flick dirt, water, and squeegee off the window—which is different for everyone. "However you're doing it, you always have music playing in your head," Andy Horton, a window washer for thirty years, who runs the apprentice-training program at the window cleaners' union, said. "It's a constant orchestra." Bob Menzer told me that most window cleaners inadvertently leave a "signature" or mark somewhere on the glass—although usually he manages to avoid it. Depending on where he's standing on the scaffold,

"Didn't I just give you money for a start-up last week?"

Menzer can also squeegee with either his right or his left hand. "He's that good," Ron Brown said. "He could use his feet if he needed to."

Once he has finally managed to reach the windows at Hearst, Menzer rarely finds much dirt on them: "They stay pretty clean, you know. You might have your bird turd, which you have to scrub. But basically it's just a quick scrub and a quick squeegee." At the Empire State Building, where many of the windows can be opened, the job is more complicated. Zeibig—who first worked at the skyscraper in 1989, before the old belt windows were replaced with "tilt-ins," which hinge inward on their sashes, so that they can be cleaned from the inside—is often called to clean glass splashed with coffee tossed out by tenants higher up in the building. "They throw shit out of the windows all the time," he told me. "One time, they threw, like, twenty gallons of strawberry preserves—and it went through ten floors, all over the windows. And it was the winter, so it froze on there and we couldn't get it off."

The wind, which blows capriciously around high-rise buildings, can make cleaning awkward. Updrafts and eddies that create uncanny microclimatic effects—a narrow tunnel of visibility from the roof to the street on an otherwise foggy day, rain falling upward against the palm of your hand—will drive the water from a mop sideways or even up across the glass, ruining work that has already been completed. "You try to hold your wand underneath the squeegee to keep the water from shooting all over the place," Menzer said. "But there's really not much you can do." Powerful cross-drafts create further hazards in skyscrapers where the windows are cleaned from the inside: a door and a window opened at the same time in offices in the Empire State Building can blow out every tile in a suspended ceiling, or suck them out into space; in a city administration office at 217 Broadway, Ron Zeibig once watched in horror as a stack of continuously printed computer paper three feet high was caught by a draft and disappeared in a matter of seconds, "like a snake," through an open window. "It looked like a quarter of a mile—all the way as far as you could see. . . . I was, like, 'Oh, shit, that was a lot of information, man!' "

During my own trip down the wall of the Hearst Tower, not long after sunrise on a Saturday morning, the offices had been as empty and lifeless as an inexpertly kept aquarium. Apartment buildings are apparently different. "You see everything," Menzer said, and smiled. "Some people don't know how to close their blinds, you know?" Erik Brown, a sociology graduate who began washing windows as a way of paying his way through Fordham and is still doing the job, a decade later, clearly recalls his view from the scaffold outside an Upper East Side apartment building, where one woman was in the habit of swimming naked in her private pool. Andy Horton worked the scaffold at the Solow Tower, a forty-seven-story curtain-wall skyscraper on East Sixty-sixth Street, for fourteen years, and recalled one resident who could be seen every morning eating breakfast with his dog sitting next to him at the table. When the animal fell to its death from an open window, the owner had to be taken, hysterical, from the building: he blamed the window cleaners.

At One Penn Plaza, the fifty-seven-story black-glass monolith overlooking Madison Square Garden, where the more than two hundred commercial tenants include the Department of Homeland Security, Erik Brown told me that one woman on the twelfth floor regularly held up scribbled messages, greeting him as he passed. More frequently, he is simply witness to the tedium of cubicle life. "I'd say on three out of ten computers that face windows someone's playing solitaire," he said. Some tenants leave their offices when he appears, apparently too unnerved by the sight of the men outside to watch them at work. Earlier, I had asked Bob Menzer if window cleaning felt dangerous to him. "It's always dangerous," he said. "But you try not to think about that." The biggest risks of the work lie in not checking your equipment: "Not realizing, you know, it's a piece of machinery. Everything's due to fail at some point."

For many years, being a window cleaner in Manhattan was regarded as one of the most dangerous occupations in the world: by 1932, an average of one in every two hundred window cleaners in New York was killed each year. And, despite subsequent state and city regulations governing the trade, as recently as the nineteen-eighties New York's window cleaners were plagued by accidents. But in 1993, as part of an effort to formalize a professional standard for the trade, Local 32BJ launched an apprentice-training program. All new union window cleaners now take two hundred and sixteen hours of classroom instruction, followed by three thousand hours of accredited time with an employer.

Today, the work of washing windows in the United States is significantly safer than driving a cab. But most injuries on the job are the result of what the Occupational Safety and Health Administration calls "falls (from elevation)." Even from thirty feet, only half of those who fall survive. "The rule is four floors," Ron Zeibig said. "Two-hundred-pound man, four floors—you're dead."

The stories of the city window cleaners whose luck ran out have become part of the lore of the job: the four men killed on the same falling scaffold at the Equitable Life Building in 1962; the cleaner who stored his safety belt in the trunk of his car, until one morning at work the belt, eaten through by leaking battery acid, snapped, and he tumbled to his death; Richard Singleton, working at 345 Park Avenue South in 1999, one minute cleaning tilt-ins on the inside of the twelfth floor, the next lying dead on the pavement. On September 11th, three window washers were at work at the World Trade Center when the first plane struck. In the north tower, the Polish-born cleaner Jan Demczur helped save the lives of five men who were trapped in an express elevator with him on the fiftieth floor: after they prized open the elevator doors, Demczur used his squeegee to cut a hole in the wall of the shaft, through which they all escaped. In the south tower, the Trade Center's veteran rig operator, Roko Camaj, and an apprentice, Fabian Soto, were cut off near the roof and killed when the building collapsed. Their surviving colleagues are convinced that in the last moments before the tower fell Camaj was trying to use the cleaning scaffold to reach safety.

According to a spokesman for Local 32BJ, between 1983 and 2008 non-union window cleaners in New York—whose growing numbers have slowly supplanted organized washers—were involved in roughly two hundred accidents, more than seventy of them fatal. The union, now reduced to a membership of only seven hundred, has prided itself on its safety record. But the deaths persist.

Edgar and Alcides Moreno, brothers

who came to the New York area from southern Ecuador at the end of the nineteen-nineties, were both trained at Local 32BJ by Horton. On December 7, 2007, they arrived for a day's cleaning at the Solow Tower, where the permanent scaffold had not been used since it was serviced by Tractel employees that November. When they stepped into the cleaning basket, the wire rope anchoring it to the roof of the building tore free from its davits, and the platform plummeted into the courtyard, four hundred and seventy feet below. Edgar was thrown free before the basket reached the ground, and was killed instantly when he struck a fence, cutting his body in half. Alcides rode the platform all the way down, sustained injuries to his brain, chest, and abdomen, and suffered fractured ribs, a broken arm, and two broken legs, but somehow survived; minutes later, paramedics found him conscious, sitting upright in the wreckage.

When the OSHA safety inspector reached the roof, he saw two safety harnesses and two buckets of water beside the parapet. The water in the buckets was still warm. Tests showed that the Tractel employees had replaced the wire rope using a faulty tool, and had not checked their work when it was complete. Three weeks later, the Moreno brothers had climbed onto the platform before putting on their fall-protection harnesses, which would have anchored them to an independent safety line attached to the building. If either task had been performed correctly, Richard Mendelson, the Manhattan-area director of the agency at the time, told me, there would have been no accident: "The platform didn't fail and they're not tied off—they would eventually have tied off and done their work. If the platform did fail but they were tied off, the platform would have fallen to the ground—but they would have been dangling six feet below the parapet."

At the end of August, 2008, Robert Domaszowec was killed when he fell from a belt window at 40 Fifth Avenue. Domaszowec climbed out, hooked on, and leaned back on the belt, and the seven-inch bolts pulled straight out of the wall. He fell twelve stories to the street. New windows had been fitted recently, and for some reason, it emerged afterward, the anchor bolts on the inside of the apartment wall had been sheared off with a reciprocating saw. "People don't realize," Domaszowec's widow, Tracey, said later, "that being married to a window cleaner is very much like being married to a fireman or a policeman."

The world above the fortieth floor is an almost silent one, where the isolation is often complete, and exhilarating. "You come down, you hear everybody arguing in the street—cars and horns and sirens. Up on top, you don't hear anything," Andy Horton told me. "It's just you and your partner. You can discuss anything, you can talk to yourself, no one's gonna yell at you."

In the past, window cleaners' working hours have been notorious for their brevity. Employers paid for full-time staff but asked few questions about how much time a job might actually take. "It used to be an unwritten thing—because you were hanging out there, doing a risky job, they kind of looked the other way," Andy Hock explained. Traditionally, window washing in commercial buildings has always begun in the early mornings, to avoid disturbing the tenants, and, in the summer, when the temperature on black glass can rise to a hundred degrees Fahrenheit by one in the afternoon, to limit exposure to the heat of the sun. Even so, a window washer's day could start at six but finish four hours later; it was once, Horton said, "the greatest part-time job ever." "I think most window cleaners—even ten, fifteen years ago—probably cashed all their checks at the bar," Erik Brown told me.

But the culture of the trade has gradually changed. The recession has led to less frequent cleaning cycles on the big buildings, smaller permanent crews, and layoffs. Many veteran window washers no longer expect their children to pursue the occupation: Bob Menzer's son is at the Fashion Institute of Technology, planning a career as a photographer. Ron Brown says that he doubts his son, who graduated in economics from Rutgers, will be following him into the business. "I wouldn't allow it, really," he told me. "My son isn't wild about heights."

Yet the work of the men with buckets apparently remains just beyond the reach of technology: although the glass manufacturer Pilkington has developed windows with a self-cleaning coating catalyzed by sunlight, and scientists in Germany and Japan have built a series of costly façade-cleaning robots, neither has yet gained a foothold in New York. At the end of 2009, Tractel-Swingstage was awarded its largest contract yet: to design and build a scaffold that would enable window washers to descend the prismatically sloping glass walls of David Childs's hundred-and-four-story One World Trade Center, due for completion in 2014.

Until then, the tallest building in the city will officially remain the one at 350 Fifth Avenue. One crisp, cloudless November morning, while a doorman outside announced, "Welcome to the Empire State Building! Fifty-mile visibility!," I rode with Ron Zeibig and Joey Fitzgerald to the hundred-and-second-floor observatory, where they passed by visitors admiring the view, unlocked an anonymous white door, and climbed a steel staircase into a small, circular room. Here, on the hundred-and-third floor, bright sunlight streamed through two narrow glass doors: the highest windows in New York. Zeibig released a padlock that was chaining shut the easterly door, and Fitzgerald stepped out onto a narrow walkway, perhaps eighteen inches wide, bounded by a concrete parapet that reached halfway up his thigh.

"Come on—top of the world out here," he said. A light breeze rattled in the TV mast and antennas above us; the city below appeared in the pin-sharp miniature detail of a satellite photograph. Beyond the parapet yawned an apparently immediate and endless void. My palms prickled with sweat, and I sank to my knees in what may have resembled an attitude of pure terror.

"You're not the only one," Fitzgerald said. "Everybody's afraid out here." I struggled to stand; Fitzgerald picked up his bucket and tools, and ambled around the catwalk in the direction of Central Park, where he began soaping down the glass he had come to clean. Window washing at the Empire State Building is scheduled floor by floor, and never stops. "We have a regular routine—we start from the top, and go to the bottom," Zeibig said. "And, as a reward, we get to go to the top and start again." ♦