

## CASE STUDY

# DEPULVERA BOOK CLEANER AND BOSTON PUBLIC LIBRARY

“WE HAVE A RESPONSIBILITY TO KEEP THE TEXTS IN OUR CARE INDEFINITELY. THE DEPULVERA PROLONGS THE LIFE OF OUR BOOKS; MAKING THEM SAFER AND HEALTHIER FOR HANDLING”



### The Product

Depulvera automatic book cleaning machine

### The client

Boston Public Library, America's largest public library

### The problem

Legacy of coal-dust pollution causing damage to historic books and texts

### The challenge

Replacing ineffective hand dusting with a practical, automatic cleaning method

### The goal

They wanted a machine that was portable, effective for cleaning the books, simple and safe for an untrained assistant to use,

easily cleaned and maintained and quiet. Catherine Willis, Chief of Technical and Digital Services, Boston Public Library

### Boston's new leaf

Boston Public Library's antidote to a century's worth of coal dust contamination is the Depulvera automatic book cleaner

What damaging substance threatens the permanent survival of over 24 million books in America's largest public library? The answer may seem surprising. 'The problem for us is coal dust,' says Catherine Willis, Chief of Technical and Digital Services at Boston Public Library (BPL). In modern America's largely gas-powered economy you might expect worries about soot to be a thing of the past but for Willis, they remain a present-day problem. 'The Central Library was built next door to one of

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Boston's main railway stations in 1895 as well as being heated by coal in the early days,' she says.

It's not the prize possessions of this important research institution that are at risk. The BPL's extraordinary collection of 1.5 million rare books and manuscripts, among them a Shakespeare 'First Folio', President John Adams personal library, Mediaeval and Early Renaissance manuscripts, music scores handwritten by Mozart, Prokofiev and others, and a beautiful collection of Fine and Historic Bookbindings, are cared for by a dedicated conservator. But both the scale of the library and the age and variety of its collections make it impossible to give less precious but equally ancient books comparable attention. 'If someone called up a volume that was catalogued over a century ago and not requested since, it may well be covered with decades' worth of dust and grime,' admits Willis. 'Cleaning is a hidden problem, one which few libraries have the resources to solve entirely.'

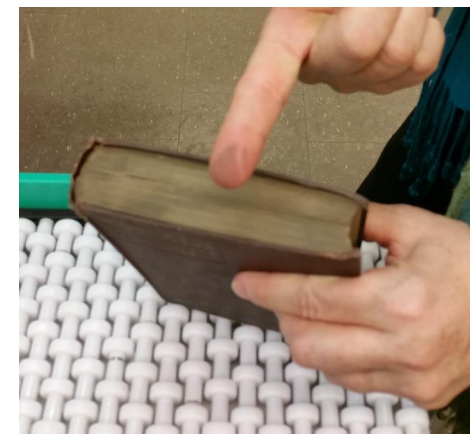
### five-point cleaning hit-list

Willis had a five-point hit-list for the ideal book cleaning machine in her mind's eye. 'I wanted it to be portable, effective for cleaning the books . especially the top bottom and edges . simple and safe for an untrained assistant to use, easily cleaned and maintained and quiet,' she recalls. In 2011 she came across the Depulvera, a machine custom designed and hand built in Italy. Specifically intended to clean books at speed (up to a dozen per minute, or 3000 per day), the Depulvera is able to cope with the volume of books a large library like the BPL regularly handles. Portable and compact enough to negotiate narrow library stacks, the machine's sophisticated mechanism makes use of ultra-soft horsehair brushes controlled by an ultrasonic system of sensors that enable both its brushes and vacuum cleaning nozzles to adjust swiftly and automatically to the dimensions of each volume.

The benefits of the Depulvera to the longevity of books and to the health of staff and readers had already attracted the attention of major libraries around the world, among them the British Library which bought two machines to clean its collections when it moved most of its storage facilities to Yorkshire in 2005. But Catherine Willis still had her doubts. 'It seemed to tick all my boxes,' she recalls. 'But I'm a sceptic. My commitment had to be without reservation.'

### An all-round examination

Bearing this in mind, when Catherine was offered the chance to put the Depulvera through its paces, she came up with a challenge intended to push the machine to its limits. 'I took a package of books that reflected almost all of the different conservation problems we face,' she recalls. Among them were books without covers held together by cotton ties; books with their spines half torn off; books with



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pages out of place or projecting; even loose collections of pamphlets. To Willis's surprise, all but one, a tiny book two inches square, came through much cleaner, and all were entirely undamaged.

The BPL purchased two Depulveras and today the machines remain in constant use. The unit in the Central Library is used to clean books called up by researchers and readers, as well as for the cleaning that is essential before books can be scanned and digitised. Catherine Willis believes the machines' purchase contributes both to the future well-being of the BPL's users and to its mission to preserve its literary treasures for posterity. 'We have a responsibility to keep the texts in our care indefinitely in a form that is useful and usable,' she says. 'These machines are prolonging the life of our books and making them safer and healthier for staff and the public to use. That alone justifies the cost.'

### Other Depulvera clients

100 plus worldwide: British Library, National Libraries of Scotland, Ireland, Wales, Slovakia, Argentina, Norway, Turkey, Russia, Spain, Czech, Latvia, South Korea ,Belgium.....

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