INTRODUCTION
Digital photography is increasingly being used to create printed fills for loss compensation on a variety of materials that may otherwise be difficult to replicate. The creation and digital manipulation of the image are important steps, but it is the alteration of the image post-printing that can allow the fill to take on the appearance of materials very different from the paper on which it is printed. For this project, missing leather strap pieces for a 19th century militia knapsack and valise were created using this method.

RESULTS AND CONCLUSION
The printed photographic fills proved successful in replicating the appearance of the cracked, painted leather. The addition of the Tyvek backing, paint, and varnish enhanced the effectiveness of the printed image. With the intact straps in place, the knapsack and valise can now be displayed together as they would have been worn. This project is one example of how the combination of digital editing and post-printing manipulation by hand can be used to transform a printed image into a convincing fill for loss compensation. The technique may be adapted to reproduce a variety of other materials. Ideas for future work include printing on different types of paper, using other backing materials, and experimenting with various media to alter the printed image in order to achieve different effects.

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