



Hollingsworth
& Vose

STAYING AHEAD WITH BETTER CAP BACKING

by Jeanne J. Gibson



Did you ever tell a supplier where to go?

Jacob Freeman went further. Freeman, the technical director for Ahead, a premier creator of high-end embroidered designs for golf headwear and garments, got to tell a nonwoven manufacturer how to create the ideal backing for his needs.

The result was a product that significantly improved a small but critical part of many embroiderers' process.



You really must be conscious of your quality. All the way down to the needles you use, the thread — and the backing.

— **Jacob Freeman**
Technical director for Ahead



A "RADICAL" SUGGESTION: Ask the customer what they need!

Opportunity visited Freeman one day in 2005, when Dave Stevens and Bob Coleman called on Ahead headquarters in New Bedford, Massachusetts.

Stevens represents AllStitch, a leading Baltimore-based distributor of embroidery backings and supplies. Coleman is the Account Manager for specialty nonwovens at Hollingsworth and Vose, an innovative worldwide supplier of specialty papers and nonwoven materials.

Together they had an interesting proposal: how would Freeman like to assist H&V in creating a revolutionary new cap backing? Freeman quickly agreed.

"I've tried at least 300 different types of backings," he says. "I thought the backing we were using then was the best — but I knew it could be better."

A QUESTION OF BALANCE

Cap backing stabilizes the headgear surface during embroidery. Otherwise the cap (especially soft-crown or unstructured models) can move or pucker in the frame, resulting in inconsistent design registration from one cap to the next. This degrades fine details or small lettering — and some Ahead caps feature lettering only 2.5 millimeters high.



Stability is also critical for high-stitch-count designs. Ahead produces a number of cap designs requiring 10,000 to 20,000 stitches. So a fairly “stiff” product is essential.

But a balanced approach is also vital. With backing that’s too tough, operators may struggle to tear it away cleanly after embroidering, even pulling stitches in the process! And backing too light may perforate around high-stitch-count designs.

The backing Freeman used before the start of the project had consistency problems from lot to lot. And far too often, operators were forced to struggle with two, three, even four plies of material to get the required stability, resulting in much wasted production time, effort, and expense.

Working together, Ahead, AllStitch, and H&V were about to prove they could do much better.

A FORMULA FOR SUCCESS

Over the next months, Stevens and Coleman visited Ahead several times, along with H&V Senior Scientist Wai-Ming Choi from the company’s West Groton, Massachusetts, R&D laboratory.

Each time, Choi offered an improved “hand sheet” sample. Stevens and Freeman evaluated it, with the latter personally embroidering a cap with the trial material. Choi would then use the resulting feedback to reformulate a new prototype on his lab’s pilot paper machine.

“Fortunately, we already had backing formulations to do some of what was needed,” says Choi. “We also used some technology from H&V’s filtration media. We wound up with a cellulose/polyester nonwoven that met all these demanding performance specs, and could be made at a reasonable cost.”

“Less than a year after the initial meeting — blazingly fast, in nonwoven product development time — the first sheets of H&V’s StitchBackers Grade 3045 cap backing rolled off the production line.” says Choi.

A BREAKTHROUGH RESULT

For a distributor, says Dave Stevens of AllStitch, it was an unusually satisfying experience: “In 30 years, this was the first time I’ve been able to work hand in hand on actual product development from scratch.”

H&V’s Bob Coleman is proud of the result: “There is no other product like it on the market today.”

Ahead’s Jacob Freeman agrees. He’s run nothing but StitchBackers Grade 3045 since August 2006, using the backing on virtually all the company’s headwear products, including high-stitch-count designs, soft- and hard-crown caps, low-profile caps, sock hats, and scarves.

He reports significant improvements in stitching uniformity, registration, lettering legibility, and productivity — especially in the elimination of having to use more than one ply.

“In cost per sheet, this is a little bit higher. But just the fact that we can use one piece — that alone is a savings for us.”

He sums up why this unusual collaborative effort can benefit embroiderers large and small.

“In this industry, we all know that word of mouth is our best advertising. And so you really must be conscious of your quality. All the way down to the needles you use, the thread — and the backing. Because the customers that get a great-quality product from you? They’re going to come back.”

Jeanne J. Gibson is the Product Manager at Hollingsworth and Vose, Inc., for the StitchBackers line of embroidery backings.

Established in 1843, Hollingsworth & Vose Company is a global leader in the supply of technically advanced industrial nonwovens. H&V drives value in customers’ products by inventing next-generation materials with superior performance. H&V’s expertise and process capabilities include wet-laid, dry-laid, meltblown and composite technologies. The company operates manufacturing sites and research centers in the Americas, Europe and China.

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