

BEST OF
**WHAT'S
NEW**
2009

TOP TECH AWARDS

POPULAR SCIENCE

**PROJECT
OF THE MONTH**



Deluxe DIY Frankenbike p.87

**THE
FUTURE
NOW**

100

**BEST INNOVATIONS
OF THE YEAR**

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US \$4.99
DECEMBER 2009
0 74820 08807 4 12

FILLIGENT LIMITED BIOMASK

A FLU-KILLING MASK

If **face masks** come into style this winter, all the smart people will be wearing the BioMask. Its interwoven cellulose fibers bind to bacteria and viruses, and zinc and copper within it kill them by destroying their cell walls, preventing you from inhaling germs or spreading your own around. Lab tests show that when sprayed with 50 times as much influenza A as is contained in a sneeze, the BioMask kills more than 99.9 percent of the flu virus in less than a minute, and all of it after 10, compared with the 50,000 bugs still thriving on a regular mask. Because the snug-fitting mask kills germs on contact, it can be used multiple times a day, unlike conventional one-and-done masks. Currently available in Hong Kong and Europe, it should hit the States early next year. **\$10; filligent.com**



XELA INNOVATIONS
PÜRLEVE HYGIENIC
DOOR HANDLE

A DOORKNOB THAT NEVER GETS DIRTY

The Pürleve hygienic handle makes the doorknob the cleanest thing in a public restroom, when usually it harbors thousands of infection-causing bacteria. The system stores thousands of spooled sterile plastic sleeves inside. After someone uses the handle, a motor within the handle mount draws the used plastic sleeve inside, dispenses a fresh sleeve up through the center of the hollow handle, and turns the sleeve inside-out as it unrolls over the handle's exterior. For good measure, the sleeves contain Microban, an antimicrobial agent that kills 99.9 percent of germs and keeps the used sleeves from contaminating the new ones. **\$200; \$25/2,500-sleeve refill; purleve.com**



INSOUND MEDICAL LYRIC HEARING AID

THE ALL-DAY-AND-NIGHT HEARING AID

The Lyric hearing aid is the first you can wear for months straight without surgical implantation. The bean-size device stays inside your ear canal even when showering and sleeping, for up to four months. Sitting just a sixth of an inch from the eardrum, closer than any other hearing aid, it maximizes use of the entire outer ear to

capture sound naturally. On the speaker end, the short distance to the eardrum reduces distortion. The user adjusts volume levels or turns it on or off by holding a small magnetic wand up to it. Patients replace the used Lyric every three to four months during a quick visit to the audiologist. **From \$1,650; lyrichearing.com**

CLEARCOUNT SMARTSPONGE

SURGICAL SPONGES THAT KNOW WHERE THEY ARE

ClearCount sponges pull double lifesaving duty. After soaking up blood during a surgery, they alert docs before they can be accidentally sewn up inside a patient—a potentially fatal mistake that requires a lengthy hospital stay and antibiotics to clear up. A table-side scanner keeps continuous tabs on the location of the radio-frequency ID tag securely embedded in each sponge and counts how many have gone into the patient. Once the doctor finishes the operation, he simply waves the RFID wand over the patient to ensure that he or she is sponge-free. **\$20–\$30/procedure; clearcount.com**

EASY MATH The ClearCount cart counts the sponges as they're removed from the patient and tells the surgeon if any are missing.

