

Indigenous IITians

The first batch of mechanical engineers at IIT Gn unleashed their creativity to make innovative and economically-viable equipment, which would make day-to-day life easy. Dhvani Pathak Dave gives you a glimpse of their creations



INNOVATION: STAIR-OID TEAM: KAUSTUBH, NIKHIL AND ABHIK **WHAT IS IT:** The stair-oid was born from the drudgery of lugging heavy luggage up several stairs at different places. This equipment will make manoeuvring at railway bridges and airports easy. "This machine will bring a regular and smart motion, helping in avoiding unnecessary jerks. It can be used in industries too where they have to carry heavy objects," said Nikhil.



INNOVATION: LOW-COST PADDY CUTTER TEAM: AJINKYA, OMKAR AND SUMATEJ **WHAT IS IT:** Keeping in mind the remote villages in India, where electricity is scarce, this team has designed a low-cost paddy cutter which operates without electricity. Ajinkya said, "This machine aids in increasing efficiency. Usually, equipment used for reaping is quite bulky, and for a huge mass of yield. This cutter can be used on small farms."



INNOVATION: ADAP-TABLE TEAM: SHWETA, ISHAN AND NEEL **WHAT IS IT:** This one looks like a wooden box, which when opened can be converted into a table, a chair or even a storage device. Aimed at two diametrically opposite target groups of well-to-do families living in small spaces (like Mumbai) or the construction labourers who are always moving, this piece of furniture can solve space problems. Said Shweta, "Currently we have used wood to make this but later on it can be transformed into PUF, which is a much lighter and durable option compared to wood. It can also enhance the concept of classroom furniture especially in rural areas and add some motivation."



INNOVATION: AGARBATTI ROLLER TEAM: TANMAY, KESHAV AND PRAKASH **WHAT IS IT:** The inspiration behind the agarbatti roller are scores of women who make a living by making and selling agarbattis. The wooden machine can produce one agarbatti per second.



INNOVATION: BICYCLE-CUM-FLOOR CLEANER TEAM: ABHISHEK, VISHWAM AND RAMPRAKASH **WHAT IS IT:** With the simple use of shaft attached to the cycle, the mop starts moving in circular motion as the cycle is pedalled. Said Abhishek, "The same technique can be used with golf carts."



INNOVATION: LUGGAGE TROLLEY CHAIR TEAM: ANCHIT, HARE LAL AND SANJAY **WHAT IS IT:** Keeping in mind the inadequate seating arrangements, at bus and railway stations, this suitcase is something you would want. Said Hare Lal, "This has a chair attached to the trolley that can be retracted, is durable and is ergonomically suited."



INNOVATION: EKLAVYA — A PROSTHETIC LIMB TEAM: MAISUN, ADNAN AND NITISH **WHAT IS IT:** This prosthetic thumb is meant to help those who have lost their thumb in some accident. This prosthetic thumb costs Rs 150. "We wanted to come up with a non-electrical prosthetic. The artificial thumb works with the help of strings and pulleys. This helped in reducing its cost price considerably," said Maisun.



INNOVATION: AUTOMATIC WINDOW CLEANER TEAM : BHARAT, SAURABH AND ROHIT WHAT IS IT:

Watching men clean the outer surface of glassed buildings, gave these students an idea to produce a machine which can clean windows without putting human lives in danger. Bharat said, "The machine can be operated with just a motor and a pump. It is quite a marketable idea."



INNOVATION: T T BOT TEAM: PUNIT, SWATI AND PANKAJ WHAT IS IT: This innovative equipment is aimed at helping budding table tennis aspirants and enthusiasts to practice without help of a partner. "An air compressor is used to shoot the ball towards the player. The machine shoots one ball every five seconds. A player can adjust the direction, speed and spin of the ball," says Punit.