



ISTITUTO ITALIANO  
DI TECNOLOGIA

## TITLE

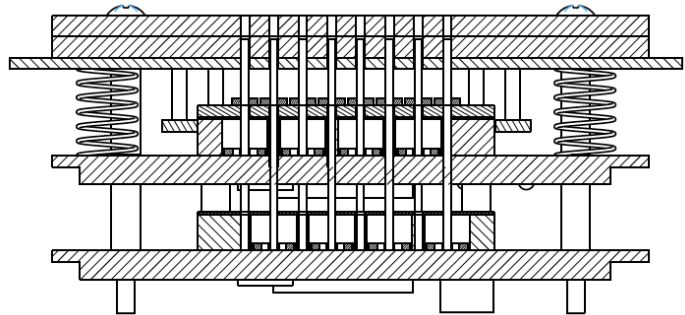
Attuatore bistabile basato sull'attrazione elettromagnetica

## INVENTORS

Franco Bertora, Luca Brayda, Giulio Sandini

## DESCRIPTION

A tactile display for the visually impaired comprising a plurality of tactile pins (taxels) that may be individually actuated to produce graphic figures or Braille lines of characters. The taxels consist of a multi-magnet arrangement connected to the stimulating pin that exhibits two stable positions: either raised or flat. The application of a short duration electric pulse to a printed circuit underlying a taxel brings it to the raised position, after which pulse the taxel remains in said position indefinitely, without the need of further energy delivery. The taxels can be brought collectively to the non-raised position by mechanical action.



## APPLICATIONS

Braille display, visually impaired persons

## KEYWORDS

Electromagnetic actuation, Tactile display, bi-stable, adhesion, repulsion, array

## BIBLIOGRAPHIC DATA

Bi-stable scalable actuation mechanism based on electromagnetic adhesion

Application Number IT 102016000088204

Priority Date August 30, 2016

Applicants Fondazione Istituto Italiano di Tecnologia

## CONTACTS

Technology Transfer Office

Matteo Faccenda

Matteo.faccenda@iit.it

+39 010 71781 968