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(71)Name of Applicant :

**1)Jaipur National University**

Address of Applicant :Jaipur-Agra Bypass, Near New RTO office, Jagatpura, Jaipur- 302017, Rajasthan, India. Jaipur -----  
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Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)Chandra Shekhar Rajora**

Address of Applicant :School of Engineering & Technology, Jaipur National University, Jaipur-Agra Bypass, Near New RTO office, Jagatpura, Jaipur- 302017, Rajasthan, India. Jaipur -----  
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**2)Dharamveer Singh Sagar**

Address of Applicant :School of Engineering & Technology, Jaipur National University, Jaipur-Agra Bypass, Near New RTO office, Jagatpura, Jaipur- 302017, Rajasthan, India. Jaipur -----  
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**3)Divya Gupta**

Address of Applicant :School of Engineering & Technology, Jaipur National University, Jaipur-Agra Bypass, Near New RTO office, Jagatpura, Jaipur- 302017, Rajasthan, India. Jaipur -----  
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**4)Dr. Shiva Soni**

Address of Applicant :School of Engineering & Technology, Jaipur National University, Jaipur-Agra Bypass, Near New RTO office, Jagatpura, Jaipur- 302017, Rajasthan, India. Jaipur -----  
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(57) Abstract :

An automated pipe joining device comprises a platform placed above a ground surface, multiple omnidirectional wheels to impart a motion to the platform, a touch interactive display panel to input the type of operation and the location of pipes, an artificial intelligence-based imaging module and an ultrasonic sensor to detect the dimensions of the pipes, a chamber to store pipe sockets, a primary robotic arm to pick and locate the pipe socket near the pipes, a crimping unit consisting of a handle to enable gripping of the unit and a set of C-shaped frames for accomplishing the joining and installation operations and a secondary robotic arm to locate the crimping unit in the vicinity of a junction of socket and pipes.

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