

A Clutch Assembly



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सत्यमेव जयते

क्रमांक : 044129748
SL No :



भारत सरकार
GOVERNMENT OF INDIA

पेटेंट कार्यालय
THE PATENT OFFICE

पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

पेटेंट सं. / Patent No. : 366033
आवेदन सं. / Application No. : 4252/CHE/2012
फाइल करने की तारीख / Date of Filing : 11/10/2012
पेटेंटी / Patentee : INDIAN INSTITUTE OF TECHNOLOGY MADRAS (IIT
Madras)
आविष्कारक (जहां लागू हो) / Inventor(s) : 1.TARUN MEHTA 2.G. SARAVANA KUMAR 3.SANDIPAN
BANDYOPADHYAY

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित A CLUTCH ASSEMBLY नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 11th day of October 2012 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled A CLUTCH ASSEMBLY as disclosed in the above mentioned application for the term of 20 years from the 11th day of October 2012 in accordance with the provisions of the Patents Act,1970.



अनुदान की तारीख : 04/05/2021
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 11th day of October 2014 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 11th day of October 2014 and on the same day in every year thereafter.



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एकस्व/PATENTS|अभिकल्प/DESIGNS|
व्यापार चिह्न/TRADE MARKS|भौगोलिक
उपदर्शन/GEOGRAPHICAL INDICATIONS



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एकस्व कार्यालय / THE PATENT OFFICE
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वेबसाइट / Website: <http://ipindia.nic.in>

सं. \ No. 4252/CHE/2012

दिनांक \ Dated the 04/05/2021

सेवा मे, \ To :

Address of Service:- SHRI. D. MOSES JEYAKARANK, ADVOCATE & PATENT AGENT, 245/105, METTU STREET, AYANAVARAM, CHENNAI - 600 023.

Email Id:- mjeyakaran@yahoo.com

विषय :- पेटेंट आवेदन संख्या 4252/CHE/2012 के संबंध में अधिनियम की धारा 43 के तहत पेटेंट अनुदान तथा पेटेंट रजिस्टर में प्रविष्टि की सूचना

Sub :- Intimation of the grant and recordal of patent under section 43 of the Act in respect of patent application no. 4252/CHE/2012

महोदय/महोदया,

Sir/Madam,

आपको सूचित किया जाता है कि पेटेंट अधिनियम, 1970 की धारा 12 व 13 तथा उस आधार पर बने नियम के तहत उपर्युक्त पेटेंट आवेदन के परीक्षण [व 23/02/2021 को हुई सुनवाई] के उपरान्त एतद्वारा पेटेंट अनुदान किया जाता है। तथा पेटेंट अनुदान की प्रविष्टि 04/05/2021 को पेटेंट रजिस्टर में कर दी गयी है।

This is to Inform you that following the examination of above mentioned patent application under section 12 and 13 of The Patents Act, 1970 and Rules made thereunder [and hearing held on 23/02/2021] a patent is hereby granted and recorded in the Register of Patents on the 04/05/2021. The Patent Certificate is enclosed herewith.

पेटेंट संख्या \ Patent No	: 366033
आवेदक का नाम \ Name Of Applicant	: INDIAN INSTITUTE OF TECHNOLOGY MADRAS (IIT Madras)
पेटेंट दिनांक \ Date of Patent	: 11/10/2012
पूर्विका तिथि \ Priority Date	: 11/10/2012
परीक्षण हेतु अनुरोध दाखिल करने की तिथि \ Filing date of Request for examination	: 10/09/2013
शीर्षक \ Title	: A CLUTCH ASSEMBLY
दावों की संख्या \ Number of claims	: 10

उपर्युक्त पेटेंट के अनुदान का प्रकाशन अधिनियम की धारा 43 के तहत पेटेंट कार्यालय के आधिकारिक जर्नल में किया जाएगा।

The grant of above mentioned patent will be published in the Official Journal of the patent Office under section 43 of the Act.

पेटेंट अधिनियम 1970 यथा संशोधित पेटेंट (संशोधन) नियम, 2005/ पेटेंट नियम, 2003 यथा संशोधित पेटेंट (संशोधन) नियम, 2016 की धारा 142 की उप-धारा (4) के प्रावधानों के तहत उपरोक्त प्रविष्टि की तिथि से 3 माह के भीतर इस कार्यालय में नवीकरण शुल्क जमा किया जाना चाहिए।

The payment of renewal fee is required to be made at this office within three(3) months from the aforesaid date of recording according to the proviso in sub-section(4) of Section 142 of The Patents Act,1970, as amended by The Patents (Amendment) Act, 2005 / The Patents Rules, 2003 as amended by The Patents (Amendment) Rules, 2016.

Manivasakam Ramaswamy

(नियंत्रक पेटेंट)

Controller of Patents

टिप्पणी / Note :

1. संशोधित नवीकरण शुल्क हेतु कृपया महानियंत्रक पेटेंट, अभिकल्प एवं व्यापार चिह्न की आधिकारिक वेबसाइट www.ipindia.gov.in पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की प्रथम अनुसूची (शुल्क) देखें।

For revised renewal fees kindly refer to the First Schedule (fees) of The Patents (Amendment) Rules 2016 available on the official website of Controller General of Patents, Designs and Trade Marks www.ipindia.gov.in

2. कार्यालय द्वारा पेटेंट प्रमाणपत्र की कोई भी कागजी प्रति अलग से जारी नहीं की जाएगी।

No hard copy of Patent Certificate shall be issued separately by the office.

We Claim:

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1. A clutch assembly comprising a primary shaft (1), a sprocket plate (2), a pair of clutch plates (3, 9), a back plate (6), one or more spring loaded cylinders (10) and one or more cylindrical shells (4, 5) wherein, the said assembly is characterized by positive engagement with a single lever operation thereby transferring higher torques.
2. The clutch assembly as claimed in claim 1, wherein the primary shaft (1), which is coupled to the clutch plates (3, 9), engages with the sprocket plate (2).
3. The clutch assembly as claimed in claim 1, wherein the sprocket plate (2) is mounted on a bearing placed over the primary shaft (1).
4. The clutch assembly as claimed in claim 1, wherein the clutch plates (3, 9) contain cylindrical shells (4, 5) within them which hold spring loaded cylinders (10) having springs mounted over their back side (16).
5. The clutch assembly as claimed in claim 1, wherein the cylinders (10) have outer threads (11) which allows them to assemble within the appropriate slots in the clutch plates (3, 9).
6. The clutch assembly as claimed in claim 1, wherein the spring loaded cylinders (10) travel linearly and engage themselves within the slots (14, 15) drilled in the sprocket plate (2) and thereby locks the clutch plate (3, 9) with the sprocket plate (2).
7. The clutch assembly as claimed in claim 6, wherein a larger torque would be encountered in the forward motion and hence a higher number of forward slots (14) are provided.
8. The clutch assembly as claimed in claim 1, wherein the disengagement of the clutch is by pulling the cylinders (10) back from the slots (14) drilled in the sprocket plate (2) by pulling the back plate (6).
9. The clutch assembly as claimed in claim 1, wherein the one or more cylinders (10) engage together to transfer high torques.
10. The clutch assembly as claimed in claim 1, wherein the said assembly is designed especially for low speed, high torque applications

Dated at Chennai this Feb 18, 2021

Signature: 

D. Moses Jeyakaran
Advocate & Patent Agent
IN/PA — 369

We Claim:

1. A clutch assembly comprising a primary shaft (1), a sprocket plate (2), a pair of clutch plates (3, 9), a back plate (6), one or more spring loaded cylinders (10) and one or more cylindrical shells (4, 5) wherein, the said assembly is characterized by positive engagement with a single lever operation thereby transferring higher torques.
2. The clutch assembly as claimed in claim 1, wherein the primary shaft (1), which is coupled to the clutch plates (3, 9), engages with the sprocket plate (2).
3. The clutch assembly as claimed in claim 1, wherein the sprocket plate (2) is mounted on a bearing placed over the primary shaft (1).
4. The clutch assembly as claimed in claim 1, wherein the clutch plates (3, 9) contain cylindrical shells (4, 5) within them which hold spring loaded cylinders (10) having springs mounted over their back side (16).
5. The clutch assembly as claimed in claim 1, wherein the cylinders (10) have outer threads (11) which allows them to assemble within the appropriate slots in the clutch plates (3, 9).
6. The clutch assembly as claimed in claim 1, wherein the spring loaded cylinders (10) travel linearly and engage themselves within the slots (14, 15) drilled in the sprocket plate (2) and thereby locks the clutch plate (3, 9) with the sprocket plate (2).
7. The clutch assembly as claimed in claim 6, wherein a larger torque would be encountered in the forward motion and hence a higher number of forward slots (14) are provided.
8. The clutch assembly as claimed in claim 1, wherein the disengagement of the clutch is by pulling the cylinders (10) back from the slots (14) drilled in the sprocket plate (2) by pulling the back plate (6).
9. The clutch assembly as claimed in claim 1, wherein the one or more cylinders (10) engage together to transfer high torques.
10. The clutch assembly as claimed in claim 1, wherein the said assembly is designed especially for low speed, high torque applications

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Signature: 

D. Moses Jeyakaran
Advocate & Patent Agent
IN/PA — 369

A CLUTCH ASSEMBLY

Abstract

5 The present invention relates to a clutch assembly comprising a primary shaft, a sprocket
plate, a pair of clutch plates, a back plate, one or more spring loaded cylinders and one or
more cylindrical shells wherein the said assembly is characterized by positive engagement
with a single lever operation and designed especially for low speed, high torque applications
though it can be readily modified to be suitable for other applications too

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