

❖28 PATENTS FILED IN WHICH 17 WERE GRANTED

SL.No	TITLE OF PATENT	Patent Application No. & Date	Patent No.	TECHNOLOGY
1	A process for the preparation of a Fertilizer by U.S.Sarma & Anita Das Ravindranath	745/MAS/98 dated 6 th April 1998	208580	Manufacture of fertilizer from Coir pith
2	A process for the Treatment of Coir retting effluents by U.S.Sarma & Anita Das Ravindranath	746/MAS/98 dated 6 th April 1998	208306	Treatment of effluents coming out of retting of coir fibre/husk
3	A process for reducing the period of retting of coconut husk using COIRRET by U.S. Sarma & Anita Das Ravindranath	747/MAS/98 dated 6 th April 1998	208307	Reduction of the retting period of coconut husk
4	A process for mechanically extracted green husk fibre by U.S. Sarma & Anita Das Ravindranath	748/MAS/98 dated 6 th April 1998	202787	Treatment of machine extracted for fibre for improvement in color
5	A process for producing paper grade pulp from coir bit fibres(Case B) by U.S. Sarma, Anita Das Ravindranath, J. Sunil Dath and Christy Fernandez	64/MAS/99 dated 19 th January 1999	210262	Producing pulp from bit coir fibre for producing paper
6	A process for producing paper grade pulp from coir bit fibres(Case C) by U.S.Sarma, Anita Das Ravindranath, J.Sunil Dath & Christy Fernandez	65/MAS/99 dated 19 th January 1999	210265	Producing pulp from bit coir fibre for producing paper
7	An erosion control blanket (Case A) by Christy Fernandez & U.S.Sarma	588/MAS/2000 dated 28 th July 2000	208689	Producing erosion control blanket from coir fibre.
8	An Erosion control (case G) by Christy Fernandez and U.S.Sarma	843/MAS/2000 dated 5 th October 2000	223500	Producing erosion control blanket from coir fibre
9	A readymade Lawn by Christy Fernandez and K.P. Somanathan Nair	664/MAS/2001 dated 13 th August, 2001	223515	Manufacture of instant soilless lawn from coir materials.

10	A process for composting of coir pith and other recalcitrant agricultural residues, T.A Rajendrabau, Anita Das Ravindranath, U.S. Sarma, Christy Fernandez, P.K.Ghosh	948/MAS/2002 dated 17 th December, 2002	225089	Composting of coir pith in a shorter period.
11	A process of preparation of coir composite board, R.Vasudev, M.Sudhakaran Pillai, U.S.Sarma, Christy Fernandez and P.G.Deshmukh	193/MAS/2003 dated 10 th March, 2003	240751	Preparation of panel board from coir fibre
12	An improved mild steel handloom, T.A.Rajendra babu and U.S.Sarma	548/CHE/2003 dated 2 nd July 2003	222486	Metallic handloom for weaving coir geo textiles by women
13	Treatment of coconut fibres, U.S Sarma, P.K.Ravi and A.K. Mukharjee	1177/KOL/2005 dated 23 rd December 2005	208415	Softening process for coir fibre
14	A process for dyeing of coir pith natural dyes, U.S.Sarma, P.K.Ravi, I.R.Anto, V.A.Sebastain and R.Sunilkumar	369/CHE/2003 dated 2 nd July 2003	241328	Dyeing of coir with natural dyes
15	Pneumatic loom for weaving mat and mattings, (Provisional) T.A. Rajendra Babu and U.S.Sarma	1178/KOL/2005 dated 23 rd December 2005	268095	Loom for weaving all types of coir products, operated by compressed air
16	A fully automatic coir spinning machine to spin coir fibres into yarn, Application No. Renjith Kumar K K, Sudheer N S, Ajith G, Biju C, A Radhakrishnan, C R Komalakumar, T A Rajendrababu, S Radhakrishnan, Das Anita Ravindranath, P K Ravi and U S Sarma	502/KOL/2012 dated 7th May 2012,		A fully automatic coir spinning machine to spin coir fibres into yarn
17	A method for preparing injection moulded chairs from coir fibre reinforced thermoplastic material, Sumy Sebastian , Anita Das Ravindranath, Varghese TO, Radhakrishnan C P	201841001242 dt 09.06.2021	368924	Injection moulded chairs from coir fibre reinforced thermoplastic material,

PATENT PENDING		Patent Application No. & Date	TECHNOLOGY
1	A process for the treatment of coconut fibre after separation from husk	620/KOL/2007 dated 20 th April 2007	Softening of coir fibre by biological method
2	A mobile coir fibre extraction machine extract from green/dry coconut husk. A Radhakrishnan, C.R.Komalakumar, T.A Rajendrababu & U.S.Sarma	286/KOL/2010 dated 22 nd March 2010	A Small mobile fibre machine for extraction of coir fibre from husk and moved from one place to another easily
3	A versatile automatic rotor based coir fibre spinning machine to spin coir fibre obtained from green/dry coconut husk. U.S.Sarma, T.A.Rajendrababu, C.R. Komalakumar, A Radhakrishnan 23 rd April 2012		Automatic ratt for making 2 ply coir yarn
4	Compact PVC tufting machine to produce small mats, T.A. Rajendra Babu, U.S.Sarma, Gopalan Balachandran and Payaningal Aboobackar Koya, Wheel free Calicut	433/Kol/2014 dated 03/04/2014	Compact Mini tufting machine for making tufted coir mats
5	An ecofriendly process of softening/bleaching of coir fibre, coir yarn, mats and matting. Gopalan Balachandran, U.S.Sarma, Anita Das Ravindranath	462/Kol/2014 dated 16/04/2014	Process for softening/bleaching coir fibre
6	An ecofriendly process of manufacturing handmade paper of coir fibre, Gopalan Balachandran, U.S.Sarma, T.A.Rajendra Babu	485/Kol/2014 dated 23/04/2014	Process for making paper from bit coir fibre.
7	A fully automatic Power Loom to weave coir Geo textiles, Renjith Kumar K K, A Radhakrishnan, Gireesh Kumar G, Rejimon P Mathai, Ajith G, Hareesh H, Biju R, Das Anita Ravindranath and Radhakrishnan C P.	Application No. 201741041316 dated 18th November 2017,	A fully automatic Power Loom to weave coir Geo textiles.

8	Binderless Boards from Coir Pith” with Indian Patent Sumy Sebastian, Das Anita Ravindranath, M.Kumaraja, Chairman Coir Board	Application No. 202041012403 dt. 23/03/2020,	Binderless Boards from Coir Pith
9	"Coir fiber reinforced “fully green” polymeric composites for automotive and domestic applications" Indian Patent K. A. Rajesh, T. O. Varghese, Anjana S. Panicker, Sumy Sebastian, Anita Jacob, M Kumararaja,	Application No. 202241012201 dated 07.03.2022 ,	"Coir fiber reinforced “fully green” polymeric composites”
10	PROCESS FOR THE PREPARATION OF FUNCTIONALIZED WEATHER-RESISTANT AND SLOW-DECAYING GEOTEXTILES. US Vadakkethonippuathu Sivankuttynair, Anju Padinjareveetil, BRAHMAKUMAR, Methalayil, Ravindranath, Anitha Das, Sumy, Sebastian	APPLICATION NUMBER: 16999551 FILING DATE: 08/21/2020,	Preparation of functionalized weather-resistant and slow-decaying geotextiles.
11	A PROCESS FOR THE PREPARATION OF FUNCTIONALIZED WEATHER-RESISTANT AND SLOW DECAYING GEOTEXTILES. European Patent PRASAD, Vadakkethonippuathu Sivankuttynair, Anju Padinjareveetil, BRAHMAKUMAR, Methalayil, Ravindranath, Anitha Das, Sumy, Sebastian	Application EP 3783148A1 dt 21.08.2020.	Preparation of functionalized weather-resistant and slow decaying geotextiles.