

Title (en)  
YARN TENSION ADJUSTING DEVICE

Title (de)  
GARNSPANNUNGANPASSUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE RÉGLAGE DE TENSION DE FIL

Publication  
**EP 3753887 A1 20201223 (EN)**

Application  
**EP 20180365 A 20200616**

Priority  
JP 2019112448 A 20190618

Abstract (en)  
In a yarn tension adjusting device (2) that adjusts tension exerted on a yarn (Y) held between opposing surfaces (211 and 221) of first and second disks (21 and 22) opposing each other, the first disk (21) is movable toward or away from the second disk (22) on the same shaft (23). A permanent magnet (24) is disposed on the first disk (21), whereas an electromagnet (25) coupled to a power source to be capable of changing a magnetic pole and electric current is disposed on the second disk (22). A coil spring (27) that constantly urges the opposing surface (211) of the first disk (21) toward the opposing surface (221) of the second disk (22) is contracted between a screw member (28) screwed at a first end of the shaft (23) and a surface of the first disk (21) opposite to the opposing surface (211).

IPC 8 full level  
**B65H 59/22** (2006.01); **B65H 59/24** (2006.01); **D04B 15/44** (2006.01)

CPC (source: CN EP KR)  
**B65H 59/225** (2013.01 - EP); **D04B 15/44** (2013.01 - CN EP KR); **D04B 37/02** (2013.01 - KR); **B65H 2701/31** (2013.01 - EP)

Citation (applicant)  
JP 2002210279 A 20020730 - BROTHER IND LTD

Citation (search report)  
• [IY] WO 9928228 A1 19990610 - IRO PATENT AG [CH], et al  
• [Y] GB 2325246 A 19981118 - SIPRA PATENT BETEILIGUNG [DE]  
• [A] WO 2006074674 A1 20060720 - MEMMINGER IRO GMBH [DE], et al  
• [A] CN 1517465 A 20040804 - CHEN RENHUI [CN]  
• [A] DE 19538138 A1 19970703 - BECK TEXTILMASCHINEN [DE], et al

Cited by  
EP4101965A1; CN115467079A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3753887 A1 20201223**; **EP 3753887 B1 20230315**; CN 112095216 A 20201218; CN 112095216 B 20220809; JP 2020204106 A 20201224; KR 102393164 B1 20220429; KR 20200144485 A 20201229

DOCDB simple family (application)  
**EP 20180365 A 20200616**; CN 202010541805 A 20200615; JP 2019112448 A 20190618; KR 20200071242 A 20200612