

Title (en)
OPTICAL DEVICE FOR THE DETECTION OF SHORT WEFTS IN A WEAVING MACHINE

Title (de)
OPTISCHE VORRICHTUNG ZUM ERFASSEN VON KURZEN SCHUSSFÄDEN IN EINER WEBMASCHINE

Title (fr)
DISPOSITIF OPTIQUE POUR LA DÉTECTION DE TRAMES COURTES DANS UNE MACHINE À TISSER

Publication
EP 3587639 A1 20200101 (EN)

Application
EP 19182502 A 20190626

Priority
IT 201800006835 A 20180629

Abstract (en)
An optical device for the detection of short wefts in a weaving machine of the type wherein weft threads (T) are subsequently inserted into the shed formed between warp threads, and hence beaten by a reed (R) against the fabric being formed (C), and wherein a weaving machine control system halts the weaving machine operation when it receives a signal corresponding to the absence of the weft thread in at least one predefined weft thread detection position, includes: a. at least one base optical unit, provided with an optical transmitter and an optical receiver, and a processing unit; b. at least one corresponding optical fibre sensor comprising two prongs (1t, 1b) supporting respective optical fibres (3, 4), each one housed in an own seat; c. a processing unit of said detected signal which verifies the presence/absence of the weft thread.

IPC 8 full level
D03D 47/30 (2006.01)

CPC (source: CN EP)
D03D 47/30 (2013.01 - EP); **D03D 47/3073** (2013.01 - EP); **D03D 51/34** (2013.01 - CN)

Citation (search report)
• [Y] JP H0598543 A 19930420 - TOYODA AUTOMATIC LOOM WORKS
• [Y] US 3907440 A 19750923 - EICHENBERGER WERNER, et al
• [A] JP S60199950 A 19851009 - NISSAN MOTOR
• [A] JP H07279012 A 19951024 - TSUDAKOMA IND CO LTD
• [A] US 5063973 A 19911112 - KITAMURA SATORU [JP], et al
• [A] WO 9930108 A1 19990617 - SCIENT TECHNOLOGIES INC [US]

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 3587639 A1 20200101; CN 110656427 A 20200107; IT 201800006835 A1 20191229; JP 2020002519 A 20200109; JP 3238799 U 20220822

DOCDB simple family (application)
EP 19182502 A 20190626; CN 201910571356 A 20190628; IT 201800006835 A 20180629; JP 2019120263 A 20190627; JP 2022002087 U 20220623