

Title (en)

FRICTION REDUCTION DEVICE TO REDUCE FRICTION BETWEEN PISTON AND CYLINDER IN GAS-TYPE REPLIC GUNS

Title (de)

REIBUNGSMINDERUNGSVORRICHTUNG ZUR VERMINDERUNG DER REIBUNG ZWISCHEN KOLBEN UND ZYLINDER IN NACHGEBILDETEN GASPISTOLEN

Title (fr)

DISPOSITIF DE RÉDUCTION DE FROTTEMENT POUR RÉDUIRE LE FROTTEMENT ENTRE UN PISTON ET UN CYLINDRE DANS DES COPIES DE PISTOLETS DE TYPE À GAZ

Publication

**EP 3708943 A4 20210707 (EN)**

Application

**EP 17931574 A 20171108**

Priority

JP 2017040318 W 20171108

Abstract (en)

[origin: EP3708943A1] To provide a friction reduction device to reduce friction between a piston and a cylinder. A friction reduction device to reduce friction between a piston and a cylinder has a piston into which a gas flows and that retracts in order to load the next bullet, a cylinder that accommodates the piston so same can move, and a piston rolling body that is rotatably disposed in the piston. The piston rolling body is rotated by the piston rolling body rotatably disposed in the piston being in contact with the interior of the cylinder when the piston is retracting.

IPC 8 full level

**F41B 11/73** (2013.01); **F41B 11/62** (2013.01)

CPC (source: EP)

**F41B 11/73** (2013.01); **F41B 11/62** (2013.01)

Citation (search report)

- [IA] JP 2003302196 A 20031024 - SHERIFF KK
- [A] JP 2004205053 A 20040722 - TOKYO MARUI KK
- See also references of WO 2019092820A1

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

DOCDB simple family (publication)

**EP 3708943 A1 20200916; EP 3708943 A4 20210707; EP 3708943 B1 20240724**; JP 7006965 B2 20220124; JP WO2019092820 A1 20201203; TW 201918685 A 20190516; TW I795459 B 20230311; WO 2019092820 A1 20190516

DOCDB simple family (application)

**EP 17931574 A 20171108**; JP 2017040318 W 20171108; JP 2019551813 A 20171108; TW 107139337 A 20181106