

Title (en)  
SHAFT

Publication  
**EP 0408569 B1 19920527 (DE)**

Application  
**EP 89902254 A 19890210**

Priority  
DE 3805899 A 19880225

Abstract (en)  
[origin: WO8908193A1] A shaft (15), whose ends (2, 8) have a diameter less than or equal to that of the central section of the shaft, is used in a turbo-engine (1) comprising impellers (7), a protective sleeve (6) for the shaft, a distance sleeve (5) and the like. A bearing (3) arranged in the drive portion (2) of the shaft supports the parts (5, 6, 7) arranged on the section of the shaft (15) of constant diameter. A clamping device (10) provided at the free end (8) of the shaft urges, by means of intercalated springs (11), the parts (5, 6, 7) located on the shaft against the bearing (3), which may be a movable or fixed bearing.

IPC 1-7  
**F04D 29/20**

IPC 8 full level  
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