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ABSTRACT

The present invention discloses a coupling device for a shaft which includes a
5 coupling disk (1), a disk (2), a force generating member (3), a first and second
concave-convex assemblies (4,5), and a pull rod (14). The first and second
concave-convex assemblies (4,5) are configured to be press engagement
arrangement in which rotational angular displacement and axial displacement
relative to each other is operable. The first concave-convex assembly (4) and said
10 disk (2) are configured to be a press engagement arrangement in which rotational
and sliding angular displacement between said first concave-convex assembly (4)
and said disk (2) relative to each other is operable. An external force association
member (6) is provided between the first concave-convex assembly (4) and an
external force member (7). The external force association member (6) and the
15 concave-convex assembly (4) are configured to be press engagement arrangement
in which axial sliding displacement relative to each other is operable. The
concave-convex assembly (5) is mounted on the coupling disk (1). One end of a
spring (3) is associated with the disk (2), and the other end of the spring (3) is
connected with the pull rod (14). The pull rod (14) passes through the disk (2) so as
20 to be associated with the coupling disk (1). The coupling disk (1) is mounted on the
out-extending shaft (8) or connected with the out-extending shaft (8) through a
shaft coupling member (9). In this way, a coupling device for a shaft is formed in
which the external force member (7) and the out-extending shaft (8) are
associated.

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