oblique stop surface such as 21 which marks the mechanical end of each groove.

The group head 8 is a body of annular overall shape having a free central space 22 occupied by the head 6 of the distributor 7 when the group head is mounted on the fixed upper mechanical unit 2.

The injection unit 1 also has, by way of attached component, a special seal 23 positioned around the central projection 4 that forms the body of the distributor 7, as figures 3, 5 and 10 show. This seal 23 is composite, made up of an O-ring 24 housed in, and held by, an annular gasket 25 made of a material which is flexible but harder than the material of the O-ring, as depicted in figures 8 and 9. This annular gasket 25 serves as a protective housing for it. It is open over the entirety of its internal lateral face.

This seal bears against the upper interior peripheral lateral surface of the filter basket 11.

The group head 89 is mounted on the fixed upper mechanical unit 2 of the injection unit 1 via a resilient-effect connecting device or means, for example, as depicted in the figures, formed of several mounting screws, for example three screws 26, 27 and 28, with a spring effect to absorb variations in the height of the grounds 13. Thus, variations by 1 to 3 grams, which correspond to the variations encountered between the various doses in common use resulting from coffee mill spread, can be tolerated.

As can be seen in figures 1, 3 and 5, each mounting screw 26, 27 and 28 provides working or adaptation latitude because of its resilient-effect sliding device but allows a longitudinal adaptation travel "d" for adapting to the possible variations in the height of grounds 13, through movement of the group head 89.

The pivoting movement is limited by the straight or oblique end-of-travel surfaces such as 21 that mark the mechanical limit of each groove 17, 18 and 19. Each surface 21

constitutes an end stop for each corresponding retaining lug 14, 15 and 16 of the portafilter 9.

It can be noted here that ~~that~~ there is absolutely no need to force the issue with clamping because the resilient-effect attachment of the group head 8 to the fixed upper mechanical unit 2 partially compensates for clamping force with a view to obtaining a seal and with a view to ensuring that the end-of-travel position is properly delimited by the end-of-groove stops and is so irrespective of the quantity of grounds 13 present in the filter basket 11.

Sealing is guaranteed by the composite seal 23 described above against the external contour of which the upper zone of the interior face of the lateral wall of the filter basket 11 delimited by its peripheral rim 12 bears during the pivoting movement of the handle.

As already indicated, this composite seal device 23 may, for example, take the form of an annular gasket 25 with an open interior lateral surface serving to house an O-ring 24 as visible in figures 3 and 5.

The annular gasket 25 is pressed against the exterior lateral surface of the head 6 of the distributor 7 or is mounted in a peripheral shoulder such as 29 or in a groove surrounding this head.

The various advantages associated with the invention stem from the peculiarities of the composite seal 23

## CLAIMS

1. An injection unit (1) for a coffee machine of the espresso type, comprising a fixed upper mechanical unit (2) having a central projection (4) forming a hot water distributor and to which is fixed a removable part known as a group head (8) the interior surface of which has a cavity (22) in which there is mounted a portafilter (9) comprising an operating handle (10), and a housing for accommodating a filter basket (11) containing coffee grounds (13) for the preparation of coffee of the type referred to as "espresso", the portafilter (9) being mounted on the group head (8) by the collaboration of lugs in grooves during a pivoting movement, the filter basket (11) bearing in a sealed manner against a seal surrounding the central projection (4), characterized in that:

   - the group head (8) is mounted~~fixed~~ to the fixed upper mechanical unit (2) of the injection unit (1) by a resilient-~~effect~~ connecting device that provides working or adaptation latitude and affords the group head (8) a distancing travel with respect to the fixed upper mechanical unit (2),
   - the seal (23) surrounding the distributor (7) bears against the upper interior periphery of the filter basket (11) thus creating a seal as the operating handle (10) is pivoted.

2. The injection unit (1) as claimed in claim 1, characterized in that the resilient-~~effect~~ connecting device is made up of at least three screws (26, 27, 28) passing through the group head (8) and screwed into the fixed upper mechanical unit (2) opposite, and in that the screws (26, 27, 28) are each fitted with a spring (30) that becomes compressed by the downward movement of the group head (8).