[9] In particular, the joining bushing 180 aims to limit the quantity of particles resulting from braking which could slip into the gap at the interface between the friction wear plate 102 and the brake head 103, and especially to prevent air flow from the outside to enter the hole 138 via this gap, which would degrade the suctioning by the suction device. For this purpose, the flange 182 has, at its radially outer end, a lip which is folded back towards the tube 181. The depth of the annular housing 139 (along the main axis A) is less than the height of the flange 182 at rest, such that the flange 182 protrudes above the bottom 151 of the slide 105. When the profiled section 104 of the wear plate 102 is inserted into the slide 105, this profiled section 104 presses on the bushing 180 along axis A such that the lip of the flange 182 is deformed to fill the housing 139. The flange 182 thus comes to bear against the profiled section 104, ensuring the seal between the friction wear plate 102 and the brake head 103. The flange 182 thus constitutes a return mechanism 109 which presses the flange 182 against the profiled section 104.

[10] Advantageously, the tube 181 is extended at its end opposite to the end carrying the flange 182, by a plate 184 which fits against the lower face 132 of the brake head 103. When the tube 181 is housed in the hole 138, the plate 184 thus bears against the lower face 132. The advantage of this configuration is that the creation of the seal between the brake head 103 and the wear plate 102 is achieved in a simple manner by inserting the tube 181 and flange 182 in the hole 183, with no need to use a separate return mechanism.

[11] In addition, the bushing 180 is held in place in the hole 138 by means of the plate 184.

[12] As shown in FIG. 7, the plate 184 carries two joining bushings 180. The tube 181 of each of the bushings 180 is thus extended at its end opposite to the end carrying the flange 182, by the plate 184.

[13] The brake head 103 is shown in a perspective longitudinal section view (in the vertical plane Y-Z) at its middle, meaning at the middle of the slide 105. The assembly of the plate 184 and joining bushings 180 is shown in an exploded perspective view. The two bushings 180 are intended to be inserted into the holes 138 along the main axes A, in the direction of the vertical axis Y.

[32] [Fig. 3] is an exploded perspective view of the friction assembly of FIG. 2;

[33] [Fig. 4] is a perspective view of the brake head and the wear plate of a friction assembly according to one embodiment of the invention;

[34] [Fig. 5] is an exploded perspective view of the brake head, the wear plate, and the part, of a friction assembly according to one embodiment of the invention;

[35] [Fig. 6], already described, is a cross-section of the brake head, the wear plate, and the plate of a friction assembly according to the prior art;

[36] [Fig. 7], already described, is a perspective cross-section view of the brake head and the plate of a friction assembly according to the prior art.

Detailed description of the invention

[37] With reference to FIG. 5, a friction assembly 1 is described which comprises a brake head 3 which supports a friction wear plate 2. The brake head 3 extends longitudinally in a longitudinal direction Z, and transversely in a transverse direction X. The brake head 3 comprises, in the X-Z plane, an upper face 31 intended to accommodate the friction wear plate 2, and a lower face 32. The axis perpendicular to these two faces and to the X-Z plane is a Y axis.

[38] The friction wear plate 2 comprises a friction face 21 which carries a friction pad. This friction pad is intended to be in frictional contact with the disc (not shown) integral with the wheel or axle, in order to exert braking force when a driver actuates the braking system. Generally, railway rolling stock have two friction assemblies, arranged one on each side of the disc so as to grip, or in other words sandwich, the disc in order to compress it on both sides. The friction wear plate 2 also comprises an opposite face 22. The friction wear plate 2 is integrally secured to the brake head 3 by securing means such that the opposite face 22 is facing and at least partially fitting against the upper face 31. In the current case, these securing means consist of a profiled section having a convex dovetailing projection 4 on the opposite face 22, and a receiving slide 5 on the upper face 31 of the brake head 3, this profiled section 4 being configured to engage with the receiving slide 105. The receiving slide 5 extends in the longitudinal direction Z. In FIG. 5, the brake head 3 is shown in a perspective longitudinal cross-section view (in the vertical plane Y-Z) at its middle, meaning at the middle of the slide 5. For clarity, the wear plate 2 is