The Pendulum Appliance was created by Dr. James Hilgers, who was looking for an efficient way to distalise molars without depending on patients' compliance - for example in case of using a headgear. This can only be done with intraoral equipment. Working on this topic Hilgers coined the term "non-compliance therapy".
Since the Pendulum appliance was introduced, it has changed numerous times and many modifications appeared, like the Pendex-Appliance, which involves transversal expansion.

A well working version:

The following version is a well-tried standard Pendulum appliance without expansion. In comparison with the Hilgers-version the Pendulum Springs have U-loops, which improve/heighten elasticity and make it easier to insert and activate the device.

The appliance consists of three components: The acrylic plate (Nance bottom) which connects the components, four anterior retentions laying on the bicuspids and the Pendulum Springs with 180° - loops at their ends; as it is known from palatal bars, fitting into regular lingual sheaths. Since such a simple thing will not cause any problems for a technician, we only look at some specialties.

Contrary to the retentions, consisting of usual spring hard 0.7 mm stainless steel wire, the arms are made of .032" (0.8 mm) TMA-wire.
Produkt Information

TMA is more elastic than stainless steel and creates softer force on a long way.

The O-loops of the Pendulum Springs have to be bent in a way, that the coming out parts with the U-loops are above the holding wires in the plate.

Clearly visible in Fig.2: The 180°-loops are located distally to the sheaths in an activated position. The sheaths (their plaster copies) are erased to bring the spring close to the tooth. The appliance is ready to be inserted. Last minimal corrections are easily done by bending the U-loop.

Literature: (Only in German)


Pictures:

Fig. 1: Randall K. Bennett, James J. Hilgers: The Pendulum Appliance: An Update on the Latest Generation of the „Noncompliance Appliance“, Clinical Impressions, Vol.2, 1993)
Fig. 2: Bernd Zinn, Dr.Klee – Laboratory, Potsdam.