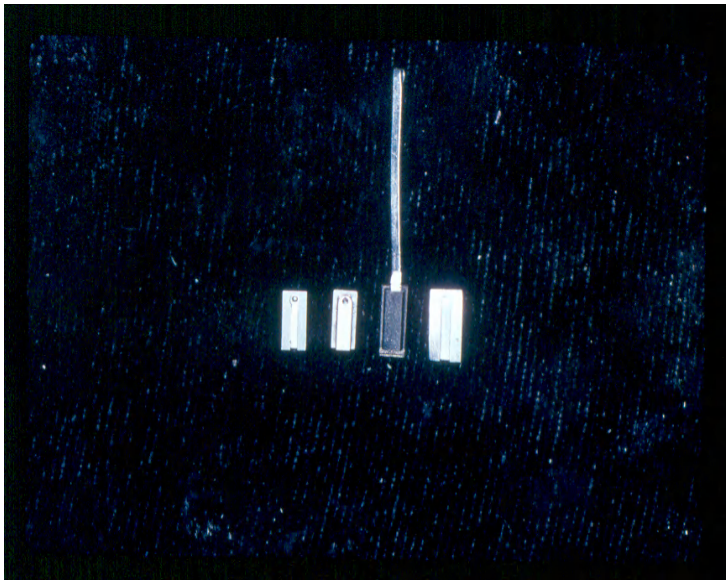


About the Sterngold Precision Attachment  
Edward Feinberg, DMD

The Sterngold #7 attachment is one of the oldest precision attachments in Dentistry—it was invented in 1906 and I believe that Sterngold received the patent for it in 1921. There are more documented cases of success with this attachment than any other. My father, Dr. Elliot Feinberg, and his teacher Dr. I. Franklin Miller, made *thousands* of cases using this attachment, and Dr. Elliot Feinberg provided the documented evidence of success with this attachment for the Sterngold Company to present to the FDA.

Unfortunately the #7 attachment was discontinued for economic reasons, and the closest copy of this attachment is the Sterngold *Latch* Attachment. The latch is comparable to the #7 in that it consists of a precision fit male and female. Unfortunately, it is smaller in both length and width. However, because the latch can be loosened so that it really does not lock the partial in place, it can be used in the same manner as the #7 attachment to achieve similar success.

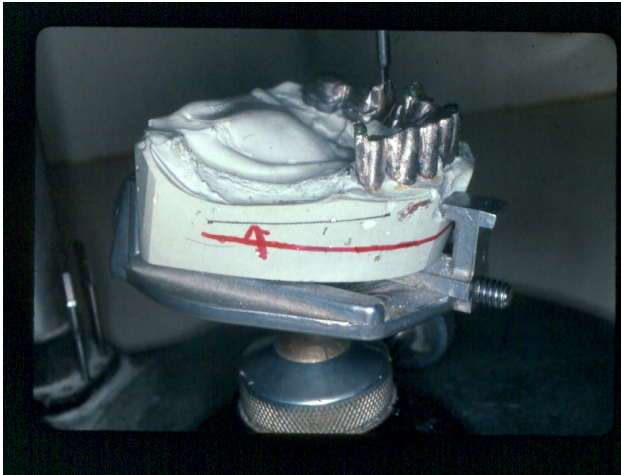


*Figure 1:*  
*Left: The Sterngold Latch*  
*Female and Male*

*Right: The # 7 Male and*  
*Female*

Almost every attachment on the market is designed to “lock in”, clasp or grip a partial in place. These types of forces are destructive to abutment teeth--teeth that must carry the extra load of a partial. The #7 attachment was one of the few attachments that was originally designed *without* a retentive mechanism.

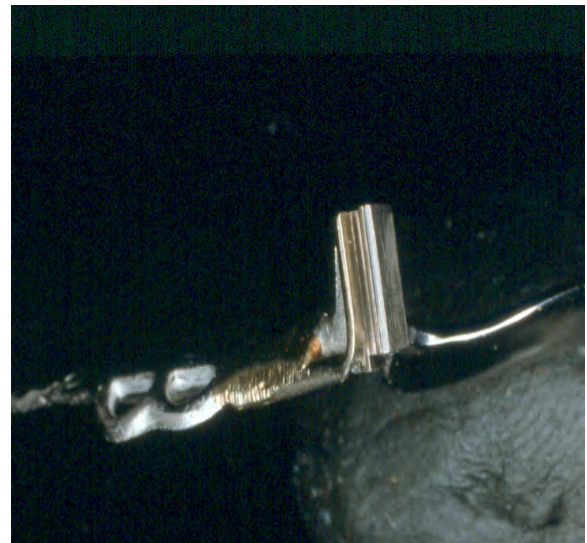
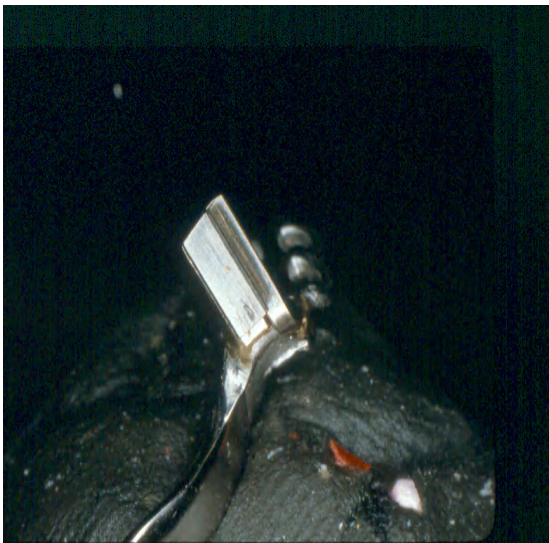
However, excellent retention was achieved by creating a path of insertion that is double-tilted. In other words, the attachment is placed, not only with an antero-posterior tilt, but with a lateral tilt (either mesially or distally) as well. The muscles and gravity cannot pull in two different directions simultaneously to dislodge the partial. When a stress is applied to a partial, it can move slightly in a vertical direction to release that stress, but it can't come out.



### TECHNIQUE FOR DUO-PATH OF INSERTION

1. Place master model on surveyor
2. Parallel occlusal plane to surveyor base
3. Raise posterior section of model 10-15 degrees
4. Tilt model laterally 10-15 degrees

In order to compensate for double tilt deficiencies (laboratory errors) that occasionally occur, the buccal wing of the male attachment was routinely replaced with a *spring wire* that could be adjusted for frictional retention against the adjacent wall of the female. In practice this spring wire was *rarely* activated, even after a case was worn for many years in the mouth.



Because the latch attachment is much smaller than the Number 7 attachment, it is not necessary or advisable to remove the buccal wing of the male to make room for a spring wire. In fact, the spring wire is not necessary at all because the latch mechanism can be activated in the event of a double tilt failure. However, if a spring wire is desirable, it can be placed right next to the male. The spring wire can be soldered to the framework when the case is being fabricated, or added to the finished partial denture with acrylic at a later date.

When cases are designed in this manner, there is amazingly little wear on the males, even though patients wear these cases 24 hours a day and the attachments are subjected to continuous function and submerged in saliva (Patients are instructed to remove the partials only to clean them). Males are not generally replaced unless there has been breakage, and breakage is not a common occurrence.

Clinical observation for over 50 years reveals that vertical stimulation by a precision attachment partial designed in this fashion promotes health of the bone around the abutment teeth and of the tissue under the partial. It is amazing how some of the weakest teeth imaginable support attachment cases for many years. My father loved to show one particular case he made for a radio talk show host in which one of the abutments had absolutely no bone around the entire root. He made a precision attachment case for this patient on two of the weakest cuspids imaginable. The case lasted in health until the patient died of chronic pulmonary disease 17 years later. It is unlikely that any clasping or gripping attachment would have allowed the same success—especially in a patient with such poor overall health.

In fact, clinical observation reveals that precision attachment cases designed in the above manner last *longer* than fixed bridgework cases. A precision attachment case is often a *better* treatment option than a fixed bridgework case, because an attachment case is not compromised if a posterior abutment is lost. It does not even have to be remade! Unlike fixed bridgework, precision attachment cases can be altered to fit like brand new when the mouth changes, and they are easy to repair. Clinical observation demonstrates that patients who wear attachment cases enjoy a high level of comfort; and patients who have previously worn temporary clasp partials *know* that their precision attachment cases are a godsend.

A common misconception is that osseointegrated implants make the precision attachment obsolete. Implants are far from a panacea. It is often impossible to place them (especially in the upper posterior region), and some people do not want them. Implants *do* fail where there is poor bone quality and where they are required to carry excessive load. Patients who have waited many months for implants to osseointegrate are not enthusiastic about undergoing grafts and placement of new implants.

Since the same principles of making precision attachment cases work so well on the weakest of natural tooth abutments, they work even better on implant abutments. An anterior implant bridge (on as few as *three implants!*) and precision attachment posterior partial denture is a fantastic treatment option. This type of case is *far* more comfortable than an overdenture that snaps onto an implant-supported bar. After having gone through the expense and surgery to have implants, patients should not be subjected to the dismay of having no teeth when the prosthesis is removed.

Discussions with colleagues across the country indicate that there is renewed interest in making precision attachment cases. More dentists are recognizing that proper diagnosis depends on having great skills not only in one area (i.e. fixed bridgework, implants, removable prosthetics etc.), but many. More often than not, practitioners who only know how to make fixed bridgework promote that treatment option as the most desirable. There are many instances, however, when it is a mistake to create fixed bridgework. Few practitioners recognize that the attachment case is often a superior treatment option for preserving the teeth and supporting structures. Attachments are generally used as a means of retention and esthetics for a removable partial denture, and there is little rhyme or reason as to why one particular attachment is selected over another.

Precision attachment cases are the *Rolls Royce* of Dentistry. When designed according to time-tested principles, they are one of the best treatment options available—for use with both natural tooth and implant abutments.