

The History of Six Lever Push Key Padlocks

By Charles Cameron - May 2002

Daniel K. Miller has been acknowledged as the originator of the design for the six lever push key padlock mechanism. On July 26, 1870 patent #105,710 was granted to him and listed his address as Reading, Pennsylvania. While this first patent did not show a push key mechanism, it had a round shaped case, a "pop up" sliding bar or metal bolt (shackle) and a L shaped "dog" that interacted between the levers and the sliding bar to lock or unlock the lock.

On October 21, 1873 patent #143,831 was then issued to Daniel K. Miller now of Philadelphia, Pennsylvania. This patent shows the mechanism used in the production models of the padlocks. One feature of this patent was the feature where the shackle could be released from the body of the lock when it was unlocked. The first padlocks produced by the D.K. Miller Lock Company were plain with the company name and original patent date stamped on the front of the lock. Later the locks were produced with a cast design on the front. The first designs were Miller's and Champion. An option was also offered for an "up charge" where a company could have "their initials" cast on the case instead of the stock design. This probably was the origination of the popular collectable "logo locks."

On April 20, 1886 patent #340,319 was granted to Milton Jackson of Philadelphia, Pennsylvania for the mechanism for the square type of Champion Six Lever padlock. Then on March 11, 1902 patent #695,347 was granted to Frank Soley and assigned to the Miller Lock Company. This patent presented a new design for the shackle and locking dog. This design was briefly used in the 1 3/4" diameter Champion 4 Lever lock and then abandoned. The size of the 4 lever lock was then increased to 2" diameter and used the proven 6 lever style shackle and dog. Another feature of this patent was the use of a through rivet to retain the shackle in the lock body rather than original spring-loaded catch. This change led to what is known to collectors as the "left pin" style of lock due to the visibility of the rivet in the front design of the lock. The use of the rivet eliminated some parts and simplified the shackle spring. This design allowed the case to be riveted closed and finished on the edge without interference from the shackle. The shackle and rivet could then be installed and the front and back of the lock finished producing a finely finished product.

After Miller Lock Company's patent protection expired several other lock companies added the Six Lever Push Key padlocks to their production. This competition probably prompted Miller to add the lower priced brass Empire model (Champion locks were made from "gun metal," a harder alloy) to their line. The Empire model added a balancing rivet spot to the cover design resulting in what collectors call the "two pin" style lock.

On April 2, 1895 William F. Troast of Lancaster, Pennsylvania was granted patent #536,844 for a mechanism that was used in most Diamond Six Lever padlocks. Actually this was not a true Six Lever lock but rather a three lever lock with protrusions (Wards) on the levers which prevented full insertion of a key which did not have the appropriate notches or "windows" cut into the key.

While the Eagle Lock Company did make Six Lever locks like the original Miller locks, they also made six lever locks with two other mechanisms. One such lock was made using a case that was parted in the middle rather than at the top. This lock had a lever mechanism similar to that in

Safe Deposit locks where the levers acted directly on a fence on the shackle. The other Eagle mechanism used a swinging shackle rather than the traditional pop up type. Henry H. Daniels of Philadelphia, Pennsylvania was granted patent #235,750 on December 21, 1880 for such a mechanism but it is not known if this patent applied to the lock which Eagle Lock Company produced for a brief period.

Several companies (Safe, Fraim, Slaymaker, maybe others) made cast iron Six Lever push key padlocks. These companies and a few others also made similar appearing, though less secure, warded mechanism locks using a turning key rather than a push key. On July 14, 1908 Charles A. Erichson was awarded patent #893,316 on behalf of Yale and Towne Manufacturing Company for such a similar appearing round warded lock.