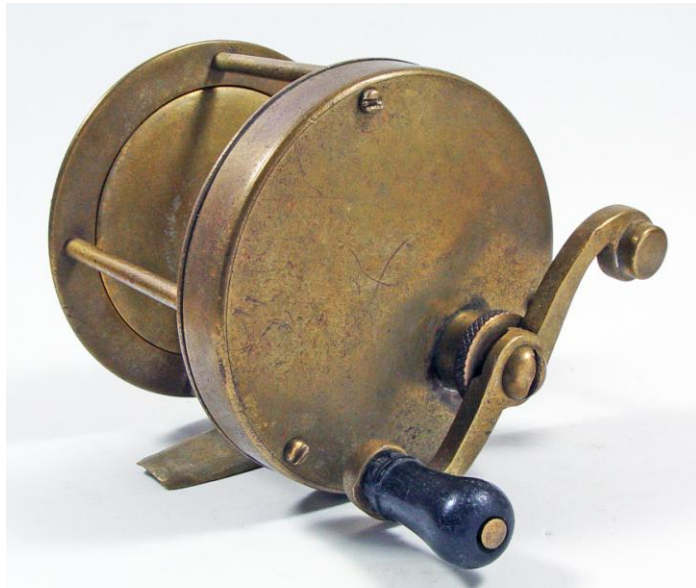


Fredrick Wilkie's Clutch Hit

Steven K. Vernon

On April 23, 1895, Fredrick Wilkie, of New York City, patented a simple freespool clutch for a fishing reel. The reel's crankshaft was mounted slightly off-center in a cylindrical block within the crank collar. The block had a wide, knurled head located between the collar and the crank, which enabled the angler to rotate the block. When the block was turned, the crankshaft-mounted main gear was shifted either toward or away from the pinion. Wilkie provided detents to limit the block's rotation to 180°. The clutch was an adaptation of an ancient mechanism for converting rotary to rectilinear motion.



A brass S-handle reel that has been fitted with a Wilkie clutch

Many clutches that separated the main and pinion gears had already been invented for reels, but they relied on systems of levers, pivoting gear bridges, and assortments of parts that required machining and complex assemblies. Only John Kopf's lever-operated clutch seems to have caught on—it would be adapted by other manufacturers, as well—before Wilkie's invention was submitted to the Patent Office.¹ Wilkie's clutch was relatively easy to manufacture and had as good a chance of working properly as any then available. For these reasons, it seems to have enjoyed a longevity that is unusual for nineteenth-century reel clutches.

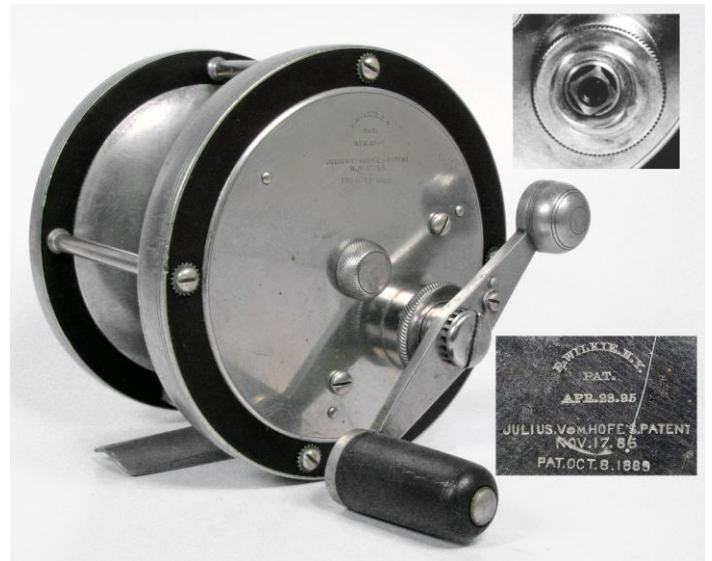
What appears to be the earliest example of Wilkie's clutch that I've encountered was used in a brass, New York-style reel with an S-handle. The reel itself seems too old to have been "factory"-equipped with the 1895 clutch, so I suspect that some capable angler added the clutch to



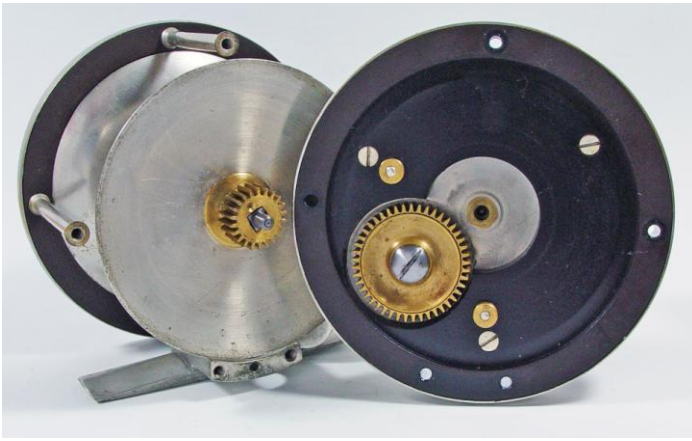
The inside of the brass reel. A missing brake spring was attached at the hole near the pillar and its pin extended through the hole near the pinion. The brake lever rim groove is near the main gear but is barely discernible in the photo.

his favorite reel. Supporting this view is the presence of a couple of headplate holes and a headcap rim groove that suggest that a spring brake had been removed from the reel to make room for the movement of the main gear. I would like to think that the reel was Wilkie's prototype, but what are the odds?

Julius Vom Hofe produced at least two German silver/hard rubber reels with variations of the Wilkie clutch. One is almost indistinguishable from many of Vom Hofe's typical large casting reels, except that there is a knurled wheel around the crankshaft. The reel is marked with the dates of Wilkie's patent and two Vom Hofe patents. The second Vom Hofe reel incorporates an



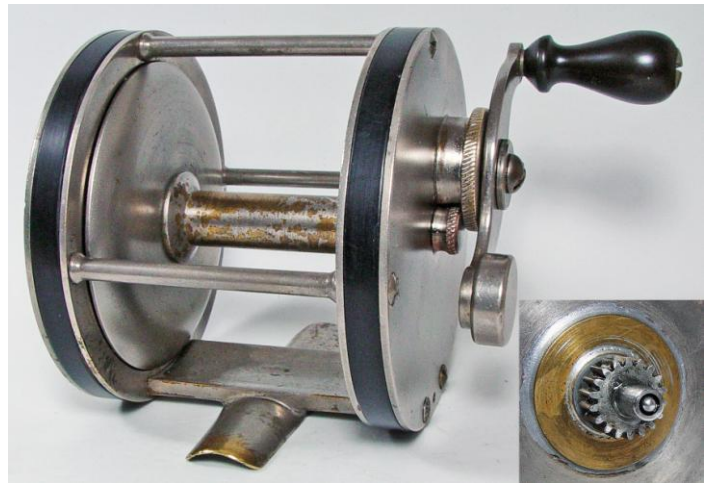
A Julius Vom Hofe reel employing the Wilkie clutch. The upper inset shows the eccentric mounting of the crankshaft. The lower inset shows the patent date markings.



The nicely finished inside of the Vom Hofe reel

improved version of Wilkie's clutch. The main gear is journaled in a perforated plate that slides back-and-forth between a pair of guides. A lever-operated latch is provided to anchor the plate when the gears are meshed. This version stabilizes the clutch but is obviously more difficult and expensive to manufacture.

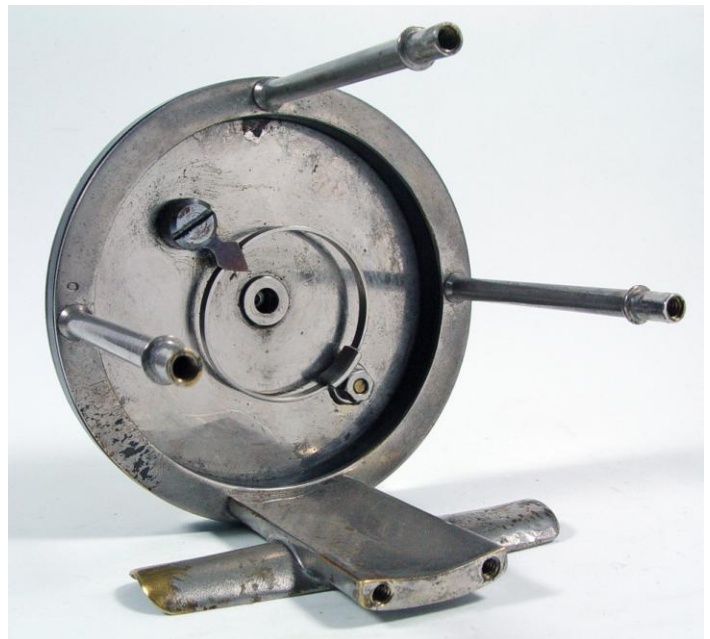
A fourth version of the clutch was used in a mysterious reel of unknown origin, prompting me to write this article and plead ignorance. The German silver/hard rubber reel has a one-piece, cast foot and sandwiched plates with rubber spacers. The pillars are shouldered and extend through the sideplates, just like those patented by William Shakespeare, Jr., in 1905.² The click has an unusually heavy, flat spring. Remarkably, the spool is symmetrical; the pinion and click gears are cut and mounted similarly, so the spool can be reversed if one gear is worn. Both spool journals have tiny, single-ball bearings at their ends. And



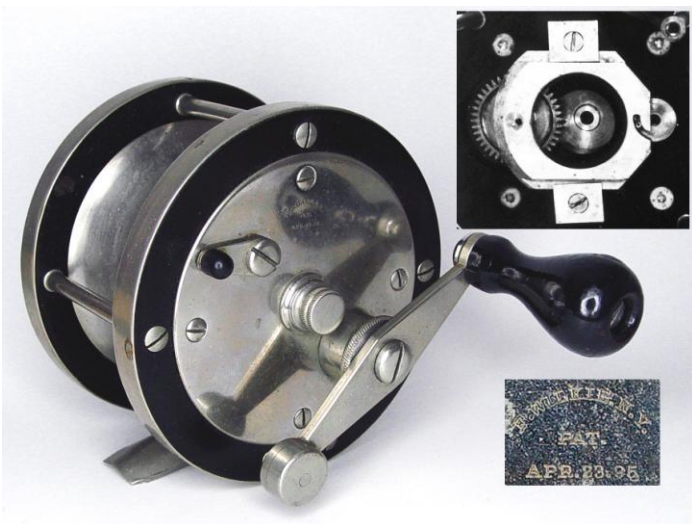
An unmarked reel with the Wilkie clutch. The inset shows the ball bearing in the spool journal and the pinion. The other end of the spool is the same.

oddly enough, the crank and clutch are mounted at 2:00 o'clock, above the spool axis. Even Wilkie's patent drawings show the crank below the axis.

The Wilkie clutch's immortality was assured when Pliny Catucci patented a modified version of it in 1914, cleverly adding an on-off indicating arrow to the device.³ The clutch was used in Meisselbach surf reels.



The heavy click of the unmarked reel. The shouldered pillars extend through the sandwiched plates and are held by screws



Another Vom Hofe reel with a modified Wilkie clutch and a latch to hold the gears in place. The upper inset shows the sliding plate in which the main gear is journaled. The latch anchors the plate at the right end. Wilkie's patent mark is shown in the lower inset.

Fredrick Wilkie is difficult to identify in New York City records; there were a number of people with similar names there around the turn of the 20th century. Census takers tended to add an "e" to Fredrick or to misspell Wilkie. Our inventor was probably the Wilkie listed in the 1900 census as a superintendent of a machine shop, born in New York State in March, 1860. The clutch inventor

earned other patents: an index dividing attachment for lathes (1893), a commutator grinding implement (1899), and a support for arc lamps (1901). He moved to Newark, N.J., by 1910, and he was listed again as a machine shop superintendent there in the 1920 census. Newark directories confuse matters by listing, from 1902 on, at least two different Frederick Wilkies, both of whom were superintendents, although one was finally named as a toolmaker in 1929.

The only thing we know for sure about Wilkie's clutch production is that Vom Hofe thought highly enough of it to use it in a couple of reels. Whether or not its appearances in the unmarked reels resulted from patent infringement or Wilkie's attempts to sell the idea to other reelmakers remains unknown.

I would greatly appreciate any hints as to the makers of the unmarked reels described in this article.

Notes

1. Vernon, S.K., *Antique Fishing Reels*. Harrisburg, Pa.: Stackpole Books, 1985, pg. 107
2. *ibid.*, pg. 92
3. *ibid.*, pg. 113