

Passing Shots

The pistol/rifle camera in photographic history, 1858-1938

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As soon as dry-plates and hand cameras appeared on the market, the image of the photographer rapidly, and radically, changed. For the first time, the photographer could snatch a picture of a person without his/her agreement or participation. With the snapshot camera anyone at any time could be the victim of an embarrassing or incriminating picture. And the amateur knew and capitalized on this fact. It became the rage to capture unsuspecting people in awkward poses. Photographers ignored the restraints of common decency and good manners.

The public retaliated by writing irate letters to the press, calling for a law banning photography of people in public, forming vigilante groups to "protect" decent citizens from the outrages against proper behavior perpetrated by smug and callous snaphooters, advocating violence against the equipment, and person, of an offending photographer.

Photographers fought back. Their journals encouraged the enthusiastic amateur to "take the precaution to carry a thick stick as part of their equipment, otherwise they may find their cameras reduced to a wreck in consequence of their inability to defend themselves. "

One writer advocated "that a small revolver may on occasion be a not altogether undesirable addition to the [photographic] kit; or perhaps some enterprising inventor will 'combine' a shooting instrument with a shutter. " (1)

The only combination of camera/revolver in the history of photography, of which I am aware, was invented in 1938 by A. Kurnick. (2)

The tiny metal camera, weighting only six ounces, was loaded with enough film for six exposures, each frame approximately 5/32 x 3/8 inch in format. The shutter was fired and the hexagonal spool was rotated to the next frame each time the trigger was pulled. The camera was fitted to the gun with a single screw, immediately beneath the junction between the barrel and the revolver's frame. The camera could be used in conjunction

with most police-type revolvers, such as the .38 special caliber. This combination of camera and revolver, as one review stated, "should get its man either with a bullet or on sensitive film." The idea was that even if the shot missed the lawbreaker, then a negative was automatically available which was adequate in quality to be of value to the police in identifying and arresting the criminal.

Cameras that fired a bullet (or revolvers that took a picture) might be rare in reality but the idea seems to have fulfilled a fantasy of fiction writers. There are quite a few of these deadly image-makers in novels, short stories and movies. Perhaps it is no coincidence that E. W. Hornung's The Camera Fiend was written just a few years after the suggestion, quoted earlier, that a combination camera/revolver would be useful for the photographer. The Camera Fiend is a mad scientist/photographer who invents a stereoscopic camera, one half of which hides a revolver which shoots the victim, who is immediately photographed by the normal lens in the other half of the instrument.

The theme persists in many subsequent novels such as Game Bet, by Stockton Woods and published in 1981. The hero "shoots" the President with a camera mounted on a rifle.

Cameras which mimic the appearance of a revolver or rifle, but which do not fire a bullet, are much more common in photographic history.

Probably the earliest, and most interesting, pistol camera was the invention of Thomas Skaife, of London, who developed and modified this unusual apparatus between 1856 and 1859. In its final form the Pistolgraph, as he called it, was an all-brass camera measuring only 1 5/8 x 2 5/8 x 3 inches, and made circular negatives on a 1 1/8 x 1 1/2 inch glass plate. (3) The shutter, powered by a rubber band, gave an exposure of around one-tenth of a second. Such a brief exposure could only be achieved with the wet-plate emulsion if the lens had an extraordinary wide aperture. A special Dallmeyer lens produced for the Pistolgraph had an effective aperture of $f1.1$, an exceptionally wide aperture even by today's standards.

Skaife was asked "over and over again" why he called his camera a Pistol graph: "And over and over again I have replied by saying: - Because the little instrument . . . was in size and shape not unlike a pistol - was held in the hand, and manipulated by means of a trigger, like a pistol: one being constructed to take life, the other likenesses." (4)

In spite of Skaife's justification for the name, there were a good many objections to both Pistolgraph (the camera) and Pistolgram (the small picture made with the camera). The British Journal of Photography was particularly incensed. "Pistolgraph," it snorted, was

a "very barbarous word" and it wanted to place on record "a protest against such a hideous and unscientific compound. " The magazine had an even stronger aversion to "Pistolgram": "which appears to us to reach the culminating point of cacophonous photographic slang. " (5)

Another critic asserted that "I can't think why people can't use common English when they want to name a thing, instead of puzzling one with gibberish that no one understands. " The writer was responding to Skaife's idea that the Pistolgram and its short exposures made it the ideal instrument to use for baby pictures. The critic retorted: "If it be *one-half as terrible as its name seems to imply*, our infant population will be dreadfully decreased. " (6)

An ironic twist to these objections is that the Pistolgraph bore very little similarity to a pistol, at least to modern eyes. But the fact that it could be "aimed" and "shot" when held in the hand was unusual enough, in the wet-plate era, to create the suspicion that it was a gun rather than a camera. That was the conclusion of the authorities when Skaife attempted to take a picture of Queen Victoria near Windsor - he was arrested as an assassin. (7)

The Pistolgraph was popular (8), even though Skaife sold the camera, with its carrying box and darkroom tent, for 10 guineas, a considerable amount of money in the early 1860s when the average income was around 1 pound per week.

A cheaper version was placed on the market in 1860 by the London firm of T. Ottewill. The basic differences were that the Ottewill pistol camera was made of wood, not brass, and featured a simpler single-flap shutter.

Perhaps it was with these cameras in mind that in 1860 Sir John Herschel coined the word "snapshot" - a term derived from hunting with a gun.

The idea of the gun camera for taking instantaneous pictures was "in the air. " Thomas Sutton, an iconoclastic figure in British photography during these years, had suggested the use of a pistol-type instrument in 1859 (9), and Skaife was much indebted to Sutton for several characteristics of the Pistolgraph. Sutton, however, never took the gun camera beyond the idea stage.

More enterprising, if only in this matter, was an Englishman named Thompson (first name unknown). He designed a revolver camera which was patented in France on January 1862, and demonstrated to the Societe Francaise de Photographie in July of the same year.

Thompson's Revolver camera was manufactured by A. Briois, of Paris. It comprised a curved wooden pistol-grip handle against which was abutted a circular chamber holding a single circular glass plate about 3 inches in diameter. Four exposures, each 1 inch in diameter, could be made in rapid succession as the plate revolved inside the chamber. Above the chamber was an eyepiece through which the operator examined the image formed on a ground glass screen by the f2 lens. For use, the lens was slid down a groove into the taking position opposite the chamber.

This looked much more like a revolver with a telescopic sight and must have presented a daunting appearance when aimed at a stranger in public. (10)

Another revolver camera was introduced in 1874 by Pierre Jules Cesar Janssen although it can be quickly dismissed from this brief survey. It was so-named *not* because of its pistol-like appearance but because the circular plate *revolved* in order to take a succession of pictures of the transit of the planet Venus across the sun.

However, Janssen's name is not irrelevant because he did suggest that his camera design could be adapted to the photography of animals in motion, once faster plates were invented. (11) This suggestion was not lost on the pioneer of animal motion photography, Dr. Etienne Jules Marey who reverted to the Janssen type of camera for photographing birds in flight, once dry-plates were available.

The introduction of commercial dry-plates with vastly increased emulsion speeds freed all photographers of the early 1880s from the necessities of the darkroom tent and the tripod. Snapshots became commonplace.

Marey's camera of 1882 was held to the shoulder with a rifle stock and featured a long barrel and open v-sights. It was aimed and shot at flying birds in exactly the same manner as a hunting rifle, which it mimicked in appearance. (12) The chamber of the Photographic Rifle contained a glass plate around the edge of which 12 pictures could be taken in one second, with an effective shutter speed of 1/720 second - a vast improvement over the 1/10 second of the Pistolgraph.

Although Marey's rifle camera is often cited in photographic literature because of its sophistication, this fact should not detract from a similar looking photographic gun introduced a year earlier by Charles Sands, a partner in the firm of Sands and Hunter. In a report to the Photographic Society in 1882 Sands specifically mentioned the photography of birds (13) as a major use of his camera, which immediately drew comparisons with Marey's photographic rifle. Sands insisted that the gun was entirely

his own invention and that it was made before Marey's gun had been announced. And he was right - his invention had been demonstrated late in 188. (14)

But any comparison was irrelevant because the two guns were very different in construction and uses, no matter how similar in appearance. The Sands rifle took much larger pictures on separate circular plates, about 1 1/2 inches in diameter. It was not designed for a rapid succession of images but for individual snapshots, of people as well as birds. Marey's motive was a scientific analysis of physiological motion; Sand's motive was to take simple surreptitious pictures for the delectation of fellow photographers.

A later version of the photographic gun was manufactured by Sands and Hunter in 1885 which was loaded with 18 circular plates each 1 1/2 inches in diameter.

Already, the growing fascination for snapshots of strangers had given rise to a vociferous anti-photography movement in the early 1880s. Sands' rifle, aimed at people in public, was not likely to dispel the growing notion that snapshooters were callous, uncaring aggressors. One journal pointed out that its "extremely murderous appearance might cause the user to be subject to rather unceremonious treatment if he were endeavoring to secure a portrait of an Irish landlord or of the Queen." (15)

Ten years later, C. Lawrance, of London, invented an even more realistic-looking camera/rifle. (16) The rifle even "broke" open at the breech in order to load the chamber, with metal sheaths of plates or cut-films, in exactly the same manner used for loading a shotgun. The shoulder stock was fitted with a normal trigger, used to fire the shutter. It is difficult to imagine a more fearsome, intimidating camera - for the "victim" - unless it was the Photo-Revolver of 1882.

The Photo-Revolver de Poche, designed and manufactured by E. Enjalbert, of Paris, looked and functioned just like a revolver of the day. It is very realistic; such a lethal-looking camera can hardly have elicited a pleasant expression from the sitter.

The cylinder held 10 square dry-plates, 2x2 cms in format, pushed forward against the barrel (which housed the lens) by a spring mechanism. Pulling the trigger fired the between-lens shutter. The chamber was then rotated which positioned a fresh plate opposite the lens, moved the exposed plate to a storage container and cocked the shutter for the next exposure. The hammer locked the cylinder, which could be removed in the darkroom for loading and unloading the camera.

Twelve years after the Enjalbert model appeared on the market a British inventor

named Smyth (first name unknown) patented a very similar pistol camera (17) which used circular plates.

These pistol cameras of the late 19th century are usually referred to as "detective" cameras, a term which quickly gained currency to indicate any camera designed to look like something other than a piece of photographic apparatus. Incidentally, "detective" had no special relationship with "pistol." The term "detective" camera was coined by Thomas Bolas in 1881 for snapshot instruments which he designed for the police to take surreptitious pictures of suspicious characters. Detective cameras became the rage for "snapshot fiends" who began using cameras masquerading as parcels, books, handbags, opera-glasses, watches, walking sticks, hats, cravats - and guns.

Pistol cameras, therefore, were antithetical to the prime purpose of detective cameras, which was to take pictures of people without their knowledge. In fact it is arguable that aiming a pistol at a person is a far more conspicuous act than using a normal camera. In addition, the pistol/rifle camera had a far longer history than encompassed by the snapshot craze. It began, as we have seen, in the 1850s and persisted well into the 20th century.

The outbreak of World War I interrupted the gun-camera's application to personal snapshots and was conscripted into the training of gunners. The Lewis Gun Camera was introduced in 1915, and manufactured by the Thornton-Pickard company for the Royal Flying Corps. A lens was fitted inside the barrel of a Lewis gun which threw an image of the target on a standard roll-film placed in contact with a screen marked in circles. The gunner's aim could be checked by referring to the negative or print - the target should be centered within the circles.

A similar idea was incorporated in the Hythe Gun Camera, date unknown, which featured a ring graticule which could be adjusted to the gun sights by a thumb screw. The lens was a rapid rectilinear type of 11 inch focal length. The Hythe gun was produced in two models; the Mark I had a between-the-lens shutter, and the Mark II was fitted with a focal-plane shutter.

After the war, the gun camera reverted to its snapshot role for the surreptitious recording of moving people. A finely made example of this postwar camera was Le Photo-Revolver of 1921, designed by D. Krauss of Paris. In spite of its name, it did not have such a close resemblance to the revolver as the Enjalbert model of nearly 40 years earlier. The vague pistol appearance results from the fact that the plate storage chamber is held in the hand and the shutter fired by an exposed trigger. The camera was loaded with 48 plates or with a 100-exposure roll-film back. It featured a three-

speed shutter and an *f*4 lens.

An enthusiast for the camera design which looked like a pistol was H. Steward. He made several attempts during the 1930s to introduce gun cameras. He patented his first model (with partner, H. Covill) in 1931 but the idea was not picked up by a manufacturer. Steward took out another patent for a gun camera in 1937, this time with more success. The Erac Automatic Pistol camera comprised a two-piece, molded plastic case and employed a ratchet-fed roll-film. Again, in spite of its name, the Erac only resembles a pistol in that it is held in one hand by a butt protruding from beneath the camera body and fired with an exposed trigger. On first glance, it looks exactly like an amateur movie camera.

The pistol/rifle camera had a long and fascinating history and it is unlikely to be revived. Today, cameras can be made so small and light, and exposures made in such brief moments, that the original purpose of the idea - snapshots of moving objects - can be made under conditions that would have amazed Skaife and his successors.

Still, if the object is to intimidate a subject by aiming a rifle at them, contemporary gun magazines frequently advertise accessories for attaching cameras to a rifle's telescopic sights. And it is certainly peculiar, and perhaps significant, that so many photographic terms have shooting connotations. The photographer *loads* his camera, *aims* it, *fires* the shutter, and makes a *snapshot*.

Perhaps Susan Sontag was right when she asserted that "there is an aggression implicit in every use of the camera" and that, most devastating of all, "to photograph someone is sublimated murder. "

References:

1. Punch, 5 September 1906, p. 171.
2. Scientific American, October 1938.
3. For a complete description of the Pistolgraph and clear same-size construction drawings, see The Amateur Photographer, 24 October 1890, p. 290.
4. From a talk at the North London Photographic Association, 28 November 1860, reported in The British Journal of Photography, 15 December 1860, p. 968.
5. The British Journal of Photography, 1 May 1860, p. 138.
6. Punch, quoted in The British Journal of Photography, 15 April 1861, p. 147.
7. The Amateur Photographer, 24 October 1890, p. 289.
8. Thomas Skaife issued a pamphlet in 1860, entitled: Instantaneous Photography, Mathematical and Popular, including Practical Instructions on the Manipulation of the

Pistolgraph.

9. Photographic Notes, 1 August 1859.

10. A good illustration of this camera was used by Beaumont Newhall in his article "Landmark Cameras," Popular Photography, 1964, p. 143.

11. Janssen used daguerreotype plates, even at this late date (8 December 1874) because the full transit of Venus lasted nearly an hour, during which time a collodion emulsion would have dried out and become inoperative. His suggestion for recording movement with his camera was made in the Bulletin de la Societe Francaise de Photographie, 1876, p. 105.

12. See La Nature, 1882, p. 328.

13. The Photographic Journal, 25 May 1883, p. 141.

14. The Photographic News, 9 December 1881, p. 588. This report also contains a clear drawing of the photographic gun.

15. Ibid.

16. The Amateur Photographer, 22 April 1892, p. 319.

17. Patent number 16,091, 23 August 1894.

1980. A related article is "Souls on a Plate" (about E.W.Hornung's novel, *The Camera Fiend*) which can be found on this web site.