

## When a Lost Oswald Cartoon is Found, the Restoration Process Begins

By Dave Bossert



*(These are before and after cropped still images, not identical frames, from the Oswald the Lucky Rabbit short SLEIGH BELLS, which was released on July 23, 1928. ©Disney)*

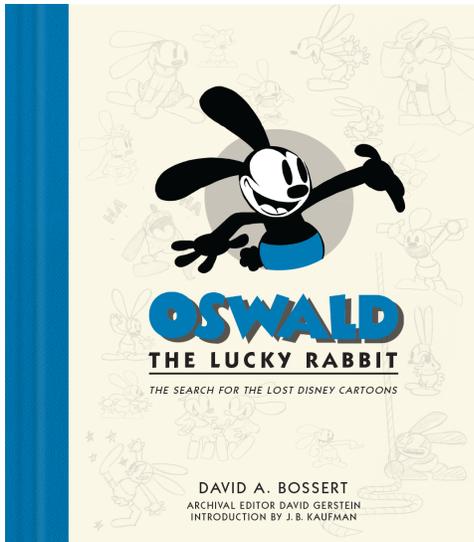
Since first getting involved with finding lost black and white cartoons, I have been amazed at some of the conditions, both good and bad, that these films have been in. Think about it, a cartoon from 1927 is ninety-years-old this year. Yet, some of the finds have been beautiful prints and others are fragments or partial film clips, which may require locating a second print of the same title to cobble together a complete cartoon.

So, when a lost Oswald the Lucky Rabbit cartoon is found, either full or partial, that's when the real work begins with restoration and preservation. Most of the lost Oswald cartoons that I have helped to recover over the years have typically been 16mm or 35mm film prints. These have been located, with the help of my friend and colleague David Gerstein, in various public and private archives or with an individual film collector, either in the United States or Europe. Once a title has been identified and verified, a simple agreement is put in place with the owner of the short, allowing for access to the print for a nominal fee in order to get a digital scan of the complete film element.



*(A restored image from the Oswald short EMPTY SOCKS, released on December 12, 1927; ©Disney)*

In some instances, the entity that owns the print may have the capability to do the film scanning at their facility. This was the case when *Empty Socks* was found at the National Library of Norway. That element was an untitled 35mm nitrate film print, which was archived in two separate fragments and thought to be a Felix the Cat short. Thanks to David Gerstein, who recognized the plotline, he could identify the film as the missing Oswald short *Empty Socks*.



*(“Oswald the Lucky Rabbit: The Search for the Lost Disney Cartoons” by Dave Bossert will be released on August 29<sup>th</sup>)*

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With the advent of the digital age, there is no longer a need to physically own an actual film print, unless you are a collector, because a digital film scan is all that is needed. In other words, a high-resolution digital copy suffices. Getting the 4K scan was more than sufficient to do the necessary restoration and preservation of these films. (The term *4K resolution* simply means that the digital image scan is horizontally 4,000 pixels wide by 2,000 pixels vertical; it is the motion picture industry standard set by Digital Cinema Initiatives [DCI]. DCI is a joint organization formed by the major Hollywood studios to set technical standards for digital cinema. And 4K is a very high-resolution image that makes for a better image quality and is often what is archived for preservation purposes.)

Many view film preservation and restoration as the same thing, but they are two different processes, subtly different but different nonetheless. Restoration is the rehabilitation of celluloid film images using current digital technology, usually for presentation to audiences. Preservation is about taking the necessary steps to protect the actual physical film print. This has become less of an issue since the work is being done digitally and there is no need for the actual film prints. In fact, many studios would prefer not to have to store a physical film print if they don't have to. Yes, a digital master is set aside for preservation.

The early films were on nitrate film stock, which is highly flammable and decays over time. When the Oswald short *Africa Before Dark* was located at the Austrian Film Museum under a German title, it was a 35mm nitrate print that had been well taken care of, including being in cold storage, low humidity, and ventilated film storage containers. The other saving grace with nitrate is that the black and white prints have a longer lifespan than the color nitrate prints, which

contain more chemical compounds. That is one of the issues with nitrate is that the chemical composition of the film prints decays—breaks down over time until the print is no longer salvageable.



*(Here is what a decayed 35mm nitrate film looks like, decomposed beyond saving other than maybe some fragments; image from the Library of Congress Film Archives)*

The restoration on the lost Oswald shorts entailed first reviewing, inspecting, and evaluating the 4K scans that were received on a particular title. Once the condition of the film on the scans was accessed, we then determined what level of restoration was needed to bring the short to an acceptable quality that an audience could enjoy it.

It is important, with any restoration, to bring the film back to a level that would maintain the integrity of the time period in which the film was made. In the case of the Walt Disney's Oswald shorts, they were all filmed between 1927 and 1928. There were various technological limitations in the early years of animation. For instance, the electrical current in the 1920s was not as consistent as it is today, nor did technicians have the types of voltage regulators that became available in later years as the animation process was improved and refined.

That voltage inconsistency resulted in camera lights varying slightly in brightness from frame to frame as the animation was exposed onto film. The outcome was a slight flickering when the film was viewed at normal projection speed, which is twenty-four frames-per-second. Add to that a film weave, which is simply the instability of the film moving through the camera during filming. The subsequent viewing of the film shows the picture moving—weaving slightly—from

side to side.

Other anomalies are also inherent in those early animated films, including dust, dirt, and cel scratches. The use of cels creates a natural static electricity, which attracts dust like a magnet. As hard as an animation cameramen tried, it was inevitable that dust and dirt was photographed into the film frames. Cel scratches typically were the result of cels being washed and reused, which was the practice due to the cost of the celluloid/acetate sheets that the animation was inked and painted on.

The cel washing process also caused warping to the celluloid/acetate sheets that could cause “cel flashes,” which are light reflections that might flash on a single frame. There was also a phenomenon known as Newton Rings, more prevalent in color cartoons, which happens when several cel layers are pressed together causing light to refract and the appearance of concentric rainbow colored rings between the cel layers.

These are all by-products of the available technology then and not what the filmmakers intended, but what they had to settle for. Philosophically, restoration should be about restoring the artistic intent that lay behind the making of the film—bringing it back to what the filmmaker had originally conceived and envisioned. Did the filmmakers want dirt, dust, and scratches photographed into the animation? Of course not. Nor would they have wanted flicker or film weave but that was indicative of the times. So, choices must be made to present that films in a way that they “feel” right for today’s audiences.

Having the film available during the restoration process is vital when possible. Anytime that I worked on a film restoration over the years, there has always been an effort to bring in the original filmmakers to the process as well. Oftentimes it has been key animators or an art director (who was usually in his eighties or nineties).

There is also a larger overarching issue to consider: time period. Many years ago, when I was part of the team doing pristine restorations of the Disney animated feature films, we also did a restoration of the Mickey Mouse short *Steamboat Willie*. During that restoration, the goal was to try and make it pristine as well—removing all the dirt, dust, scratches, light flicker, picture weave, and every other anomaly. When the final restoration was viewed, it didn’t look or “feel” right; it was sterile and didn’t feel of the time period. So, to correct that, we backed in some light flicker and film weave, which made it *feel* more of the 1920s—more authentic. Again, the film has to “feel” right.



*(A restored image from the Oswald short AFRICA BEFORE DARK, released on February 20, 1928; ©Disney)*

With each of the lost Oswald cartoons that have been repatriated back to the studio, there has been much care taken in doing an appropriate restoration. The 4K scans of each short go through several steps of digital restoration to achieve the desired result. The first step is an automated, software-based process that is referred to as “dust-busting” that removes most of the obvious dust and dirt.

Next is a manual process that requires a technician, sitting at a computer monitor, to go through frame by frame removing additional artifacts that are deemed not part of the artistic intention of the film. Between each of these steps a team of film restoration experts reviews the film and additional notes are usually called out to fix or touch up a sequence of images.

Once the restoration is completed, there is a digital copy of the original 4K scans made, and the newly restored version is archived for preservation purposes. A digital duplicate file is then formatted and used for the next step, which is adding music to the short, which I will cover in my next article on Oswald the Lucky Rabbit here at Cartoon Research.

