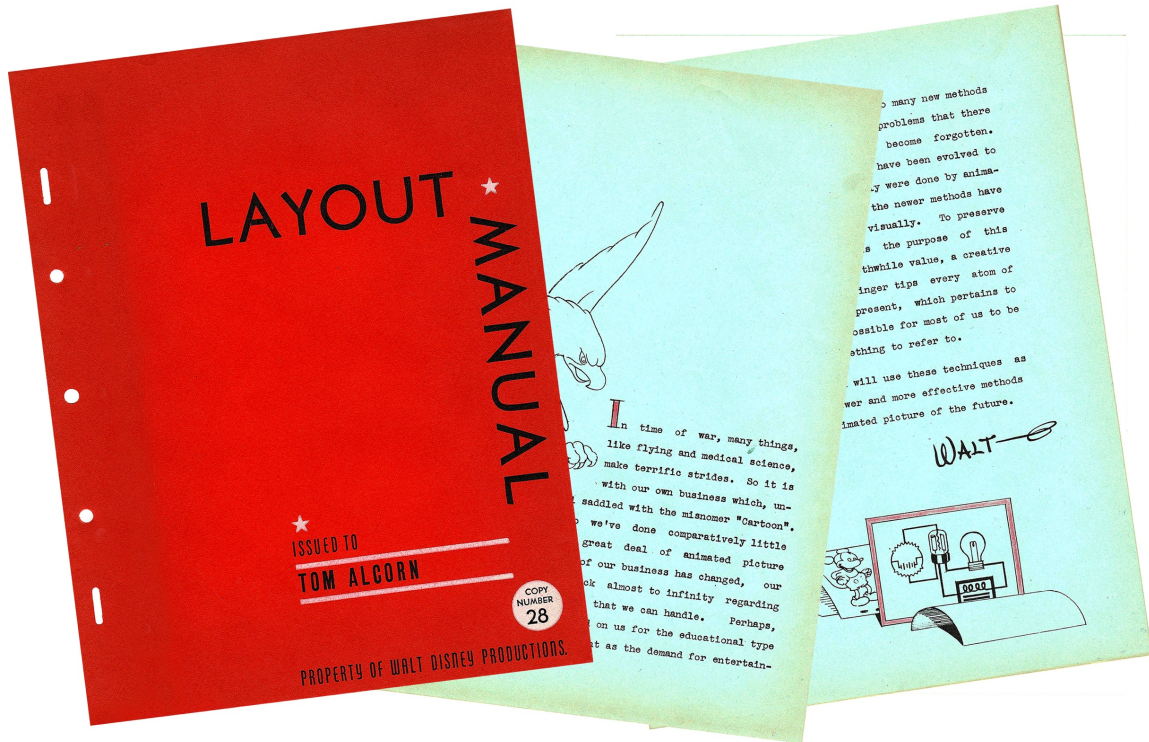


Walt Disney Classified: The Layout Manual, Part 1

By David Bossert



(Walt Disney Productions Layout Manual, 1943, cover and Walt's letter. This copy was originally issued to Tom Alcorn a member of the animation checking department.)

As the United States plunged into World War II (WWII) after the Japanese bombed the U.S. Pacific Fleet at the Pearl Harbor Naval Base in Hawaii on December 7, 1941, Walt Disney Productions in Burbank, California, had already been creating educational films to support the war effort for Canada.ⁱ The studio had completed and released *The Thrifty Pig* (11.19.1941) for the National Film Board of Canada and was in production on *The Seven Wise Dwarfs* (12.12.1941), *Donald's Decision* (1.11.1942) and *All Together* (1.13.1942)ⁱⁱ to help the Canadian government sell war bonds to their citizens to finance Canada's efforts as part of Commonwealth of the United Kingdomⁱⁱⁱ, which had already entered the war in 1939. Walt Disney saw it as a necessity to produce a manual for the animation staff,

especially after his studio was declared a “defense plant^{iv},” that documented some of the time and cost saving methods for producing animated and live action films quickly and efficiently.



(Title Cards for Walt Disney's *The Thrifty Pig* (1941), *The Seven Wise Dwarfs* (1941), *All Together* (1942) and *Donald's Decision* (1942) for the National Film Board of Canada.)

In what was called the LAYOUT MANUAL, Walt Disney added an introductory letter explaining his philosophy and purpose for the manual stating, “In time of war, many things, like flying and medical science, make terrific strides. So it is with our business which, unfortunately, is still saddled with the misnomer “Cartoon.” It is clear that Walt chaffed at the idea his studio was turning out mere cartoons, which implied a less important role in the film industry. He goes on to say, “In the last year or so we’ve done comparatively little “cartoon” work, but a great deal of animated picture work.” Walt is elevating the animation art form to a higher level by referring to it as “animated picture work” and hence instilling a moniker of respectability he feels their work deserves. He continues, “The Technique of our business has changed, our horizons have rolled back almost to infinity regarding the educational material that we can handle. Perhaps, in the future, the demand on us for the

educational type of film will be as important as the demand for entertainment alone.”^v This passage gives the sense of importance that Walt bestows on creating educational films using animated techniques as he brings them to the same level as the entertainment films the studio had produced up to that point.

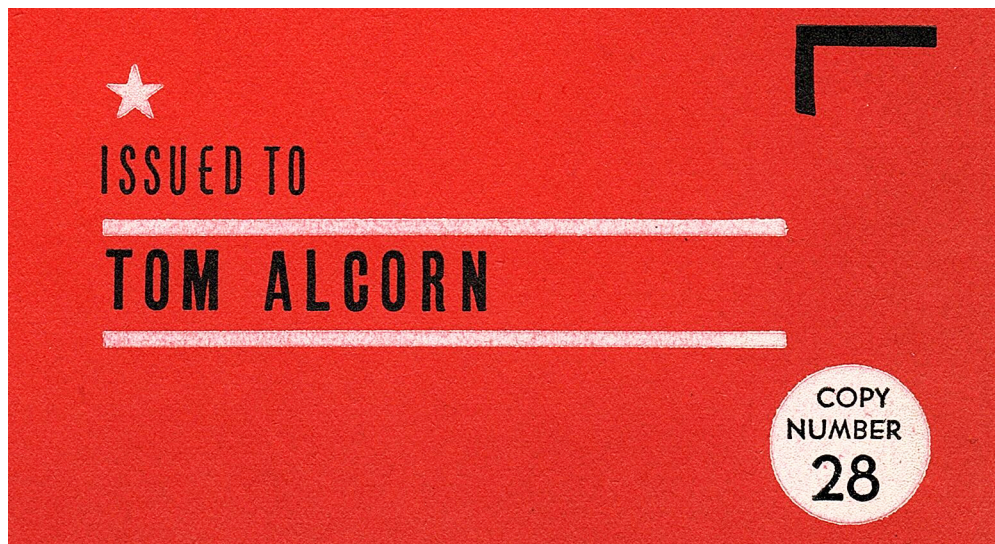


(Walt Disney was in Washington D.C. on January 7, 1942, a month after the U.S. entered WWII, meeting with Military personnel. Pictured (L to R) Colonel George J. B. Fisher, Colonel Maurice E. Barker and Walt.)

Walt Disney’s message in this LAYOUT MANUAL marks the transition for the studio from solely entertainment production to a defense plant turning out training films. Walt writes, “During this transition period, so many new methods have been created to solve new problems that there is a danger many of these may become forgotten. Many simple, inexpensive ways have been evolved to achieve effects which formerly were done by animation.” Walt is referring to the many advanced camera techniques that have been developed saying, “in some instances, the newer methods have proved even more effective visually.” Not only had Walt embraced new technologies but he is acknowledging the fact that many of these methods and techniques are better suited visually than through the use of traditional animation. Then he gets to the crux of why the manual has been created, “To

preserve these in reference form is the purpose of this manual, for, to be of worthwhile value, a creative man must have at his finger tips [sic] every atom of information, past and present, which pertains to his job, and it's impossible for most of us to be that good without something to refer to.”^{vi} Walt has realized that there had been so many advances in animation methods and camera techniques that it all needed to be documented in one reference volume. By that point, Walt, his artists and technicians had been on the leading edge of developing animation to the pinnacle of the art form.

Many of the techniques and methods developed at Walt Disney Productions were proprietary to the studio, which dictated that the manuals be distributed numbered and with the artists name printed on the cover. The author has copy number 28, which was issued to Tom Alcorn, a checker at the studio. He was also a member of Walt Disney's extended family on his wife's side. Alcorn married into the Bound's family and worked at the studio on and off for many years. By 1965, he was listed as being in the camera department.^{vii}



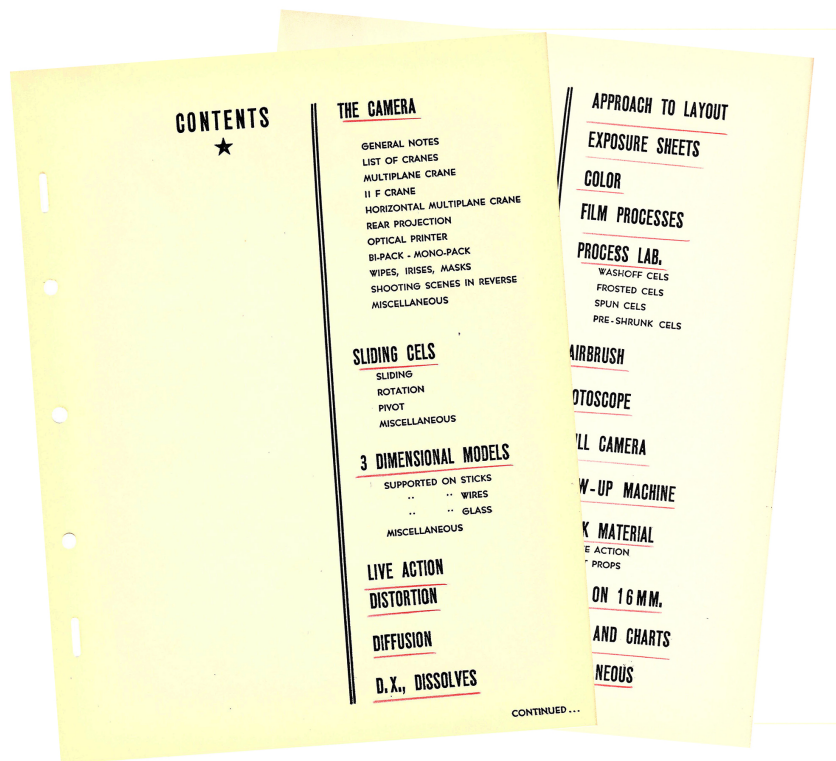
(Close-up detail of the LAYOUT MANUAL cover denoting that it was issued to checker Tom Alcorn and that it is copy number 28.)

Walt then ends his message with, “Shrewd, creative men will use these techniques as foundations for newer and more effective methods of creating the animated picture of the future.”^{viii} Ever the optimist, Walt was always thinking ahead to the future and what it might bring in animation advancements. It is also worth pointing out the use of the term “creative men” a sign of the societal norms of that time period even though there is much documentation and recent research that shows many woman had taken on important roles at the studio during WWII.

Following Walt Disney’s message at the head of the LAYOUT MANUAL, there is a one page preface that goes into more detail regarding the contents and use of the manual. The preface begins, “The examples in this manual are given merely to illustrate certain uses of the facilities which we have at our command. With judgment, imagination, and ingenuity, these principles can be adapted to innumerable uses.” The meat of the page is the second paragraph that states, “In recording and illustrating them, it was not the intention to suggest that these are the only ways to get a particular effect; nor, even, in the event two versions are given, that one is better than the other. Either, or both, may be uneconomical, if not in the layout man’s time—then, perhaps in checking, ink and paint, or camera time—and ALL functions and their costs MUST be considered by the layout man.” Upon reading this, one might get a real sense that it was written by Walt’s brother Roy O. Disney, who handled the business side of the studio, since the emphasis is on being cost conscious. The preface continues, “Saving his own time laying out a scene that calls for a highly complicated and, consequently, costly shooting, is not economy. Nor is it good economy to put in large amounts of his own time in order to achieve a trick effect in an unimportant scene. Consider: Are ripples on the water necessary? Must those trees animate? Do they

add to the PURPOSE of the scenes? Can a sliding cel take the place of animation? Will it be more economical in checking and shooting time to use the 11-Field camera in place of the Multiplane circular disc?" Although there is no signature on the preface, if not Roy O. Disney it was likely a production management or department head that wrote this message as a way of getting the artists to think strategically. Often times artists in one discipline are only focused on what they are doing and not necessarily thinking about how their work will impact other departments after them. Asking those questions was critical to maintaining the "good economy" that the studio was attempting to achieve on the tight budgets that were inherent in making the training films.

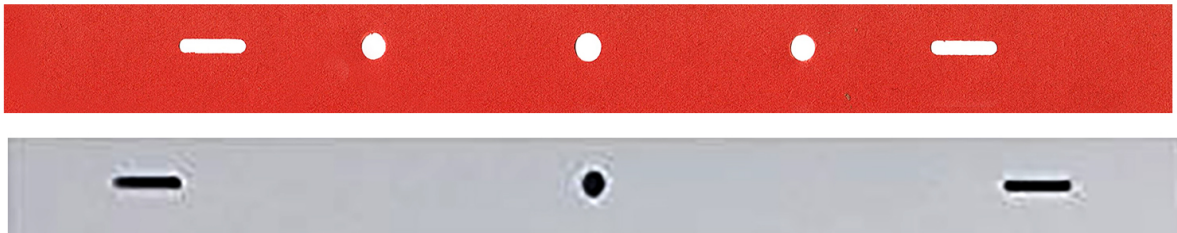
The preface ends with, "COST—PER—FOOT [CPF] is a horrid phrase but it's got to be put up with, like hot spells and taxes. The suggestions in this manual should help keep old man CPF where he belongs—and still maintain the Disney quality which is our most vital asset." Succinctly stated, the age-old battle between art and business—of maintaining the economic efficiency while still protecting the Disney Studios greatest asset, quality. It is a constant tug-of-war between artistry and budgets, even in today's computer generated animated films. But, it was imperative that all aspects of the animation production process operate at the utmost financial efficiencies since in most cases the Disney Studios was being paid "without profit" to produce many of the war related, government funded films on small budgets.^{ix}



(Layout Manual Content Pages, 1941)

After the preface statement, there are two index pages which outline the contents of the LAYOUT MANUAL. The manual is really a guide to camera techniques, layout methods, live action/3-dimensional models and visual effects. It begins with THE CAMERA section indicating *general notes, list of [camera] cranes, multiplane crane, II F crane, horizontal multiplane crane, rear projection, optical printer, Bi-Pack—Mono-Pack, wipes, irises, masks, shooting scenes in reverse* and *miscellaneous*. The next section is SLIDING CELS which covers *sliding, rotation, pivot* and *miscellaneous techniques*. This is followed by 3 DIMENSIONAL MODELS covering *supported on a stick, supported on wires, supported on glass* and *miscellaneous*. There is a section each on LIVE ACTION, DISTORTION, DIFFUSION, D.X.[double-exposures], DISSOLVES, APPROACH TO LAYOUT, EXPOSURE SHEETS, COLOR,

FILM PROCESSES, PROCESS LAB which covered *wash-off cels*, *frosted cels*, *spun cels* and *pre-shrunk cels*, AIRBRUSH, ROTOSCOPE, STILL CAMERA, BLOW-UP MACHINE, STOCK MATERIAL including *live action* and *art props*, NOTES ON 16 MM., TABLES AND CHARTS and finally MISCELLANEOUS.^x



(An example of the Disney animation peg system on top and the Acme standard peg system, on bottom, used widely in the rest of the animation industry. The Walt Disney Studios converted to the Acme standard in 1985 when work began on *The Great Mouse Detective* (1986). It would allow for some ink & paint and camera service functions to be sent to outside vendors, which was done on *The Little Mermaid*(1989) with some cel painting done over seas and camera work contracted out to other facilities in Burbank, CA.)

It is worth noting that the LAYOUT MANUAL is printed on punched animation paper, which is likely the result of saving costs. Each page in the manual has an oblong peg hole on either side of three round holes centered on the left vertical side of the paper. This peg hole configuration was the Disney Studios proprietary peg system and was used up until the mid-1980s before the studio switched over to the industry standard Acme peg system that consisted of one round peg hole with an oblong peg hole on either side. The manual appears to have had some updates added to it during the war years as evidenced by typed information on strips of paper taped on to specific pages within the manual.^{xi}

The next installment in this series of articles on the LAYOUT MANUAL will delve into the analysis of THE CAMERA section. Camera is one of the most important functions of the animation process because without it, how would audiences be able to view the films. The

animated scenes that make up a film come together as the finished visuals in the camera department where the painted cels, backgrounds and special effects, both drawn and optical, all meld together into the final film.

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ⁱ Ian Westwell and Donald Sommerville, *The Illustrated Encyclopedia of World Wars I & II An Authoritative Account of Two Of The Deadliest Conflicts In Human History With Details Of Decisive Battles And Engagements*; Hermes House, an imprint of Anness Publishing Ltd, 2019, pg. 326.

ⁱⁱ Shale, Richard Allen, *Donald Duck Joins Up: The Walt Disney Studios During World War II*, The University of Michigan, Ph.D., 1976, Appendix B, page 287.

ⁱⁱⁱ W. David McIntyre, 1999, "The Commonwealth"; in Robin Winks (ed.), *The Oxford History of the British Empire: Volume V: Historiography*, Oxford University Press, p. 558

^{iv} David Lesjak, *Service with Character* (Theme Park Press, 2014), pg. 7.

^v Walt Disney's opening letter, *Layout Manual*, Walt Disney Productions, 1943; authors copy.

^{vi} Walt Disney's opening letter, *Layout Manual*, Walt Disney Productions, 1943; authors copy.

^{vii} Individual job title listed and additional information courtesy Joe Campana, some sourced from Los Angeles County Voter Registration.

^{viii} Preface, *Layout Manual*, Walt Disney Productions, 1943; authors copy.

^{ix} Shale, Richard Allen, *Donald Duck Joins Up: The Walt Disney Studios During World War II*, The University of Michigan, Ph.D., 1976, p. 63.

^x Contents index pages, *Layout Manual*, Walt Disney Productions, 1943; authors copy.

^{xi} Evidenced by the actual pages in the *Layout Manual*, Walt Disney Productions, 1943; authors copy.