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## Cost Accounting in the Production of Motion Pictures

William R. Donaldson

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**NATIONAL ASSOCIATION  
of  
COST ACCOUNTANTS**

Affiliated with The Canadian Society  
of Cost Accountants



**Official Publications**

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Vol. V    December 1, 1923    No. 6

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**Cost Accounting in the  
Production of Motion  
Pictures**

**BUSH TERMINAL BUILDING  
130 WEST 42nd STREET, NEW YORK**

# NATIONAL ASSOCIATION OF COST ACCOUNTANTS

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## Official Publications

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Vol. V, No. 6

December 1, 1923

## Cost Accounting in the Production of Motion Pictures

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New York City

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BUSH TERMINAL BUILDING  
130 WEST 42nd STREET, NEW YORK CITY

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DECEMBER 1, 1923

# National Association of Cost Accountants

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## COST ACCOUNTING IN THE PRODUCTION OF MOTION PICTURES<sup>1</sup>

Little published data are available on the principles and the practices of cost accounting in the production of motion pictures. Such a condition is easily understood, for the industry is a comparatively new one and its methods have but recently approached any basis of stabilization. This "infant industry"—born within the lifetime of most of the readers of this article—has had a prodigious growth. Today, it is one of the foremost in the country, motion picture theatres in the United States alone numbering about 15,000, the attendance at which is estimated at over 50,000,000 per week. As a mass agency of popular appeal the "movie" takes its place with the daily newspaper and the public library, the contribution it has made to civilization and the influence it wields in the life of the people being most aptly described in the following excerpt from an article in the *New York Times*, July 1, 1923:

"Of all inventions, the alphabet and the printing press alone excepted, those that have shortened distance have done the most for humanity", wrote Macaulay. When he wrote he referred particularly to the application of steam to land and sea travel. He did not refer to—by the nature of the case he could not foresee—that system of the shortening of distances which operates not by transferring the individual to far places and peoples, but by bringing those places and peoples to the individual. This the motion picture theatre has done, and the system of distribution is such that hundreds of thousands of people are literally witnessing the same scenes, participating in the same dramatic action at the same time.

"In estimating the mental influence of the moving picture theatre, it is well to remember that when one goes to the movies today he does not sit down only with his neighbors. He mingles with peoples from all parts of the earth."

Realizing that so little has been told of the story of that matter-of-fact but nevertheless most important phase of this great and fascinating industry—accounting for the cost of the photoplay—this article attempts to outline the principles and the practices applicable thereto, going into some detail in the hope that thus may be established the basis for developing, under the auspices of the National Association of Cost Accountants, further contributions to this branch of cost accounting. Most of the members of the Association will find that the manner of making a motion picture

<sup>1</sup>This article is based upon a paper read before a meeting of the New York Chapter.

is so different from the processes in the fundamental industries with which they are occupied that there is little they can borrow to solve their own problems. This is the excuse, therefore, for presenting this story in somewhat different fashion than prior official publications.

### DIVISION OF ACTIVITIES

The motion picture industry is divided into three major activities: Production, distribution and exhibition. Several of the larger organizations (three of which have their stock listed on the New York Stock Exchange) engage through numerous subsidiary corporations in all three activities, maintaining studios on the Pacific Coast and in the East, distributing exchanges in twenty-five to thirty key distribution and railroad centers in the United States; and owning large theatres in the principal cities and towns. Furthermore, these organizations through their foreign subsidiaries carry on operations in all countries of the world. Some organizations maintain studios and exchanges only, their product being exhibited entirely in independently owned theatres. Other smaller organizations merely produce, distributing through independent companies or the distributing branches of the larger organizations, usually on the basis of a percentage sharing in the gross rentals with a guaranteed advance from the distributor equivalent to the cost of production.

### HOW A PICTURE IS MADE

Like all things theatrical the making of a movie has a curtain of glamour thrown about it, which is naturally the part of good business, as in the popular phase it is designed to amuse—to create illusions and to stir the imagination. In brief, then, stripped of its glamour, this is how a photoplay is made: A suitable story must first be secured—one with lots of action and good situations. It may be an original one or it may be based upon a book or magazine story. Stories are oftentimes picked with leading actors or actresses in mind to play the principal roles and these parts must conform, or be made to conform, to their types and characteristics. In many instances, of course, where the book rather than the star is to be the appealing feature, the play must be cast to conform to the characters of the book. A skilled writer with a knack of visualizing a story is set to work to prepare what is called "the continuity." This describes in detail each scene in sequence, so that the document when completed presents the writer's idea of the whole picture as it should be projected on the screen. A director is selected to make the picture, and he and the continuity writer get together and discuss the continuity and exchange ideas. They call in the cameraman who is to do the photography, the technical man or art director, as he is called, who is to design and arrange the settings, furnishings, costumes, mechanical effects, etc., and the assistant director who among other things is to assist

in finding suitable players for the minor parts, and sometimes also the star when he or she possesses ability along lines of preparation. The continuity is then studied and discussed with each one's particular field in mind. When the continuity is in final working form, it is indexed to show each scene which must be enacted on each set or background, frequently fifty and more scenes occurring on the same set. A production schedule is compiled to show the dates when the respective sets and exterior locations are to be available, and when the photography on those sets should commence. Well-organized companies have a business manager for each production. His duties are to estimate the cost to produce the picture, to watch expenditures and to be the financial guide, so that the picture may be produced as economically as possible and within the budget set for it. Up to the date when the first photography is to be done, each of the persons mentioned is busy in preparing his part of the work. The star is fitted to new clothes and costumes; the technical man and his assistants design the sets, select the "properties"—i. e., the furnishings, draperies, costumes, etc.—either out of the studio's stock or in the local stores from which properties may be rented. He also consults with the location man to discover suitable outdoor places conforming to the requirements of the continuity. If such are not available, then he must arrange to have them constructed on the "lot," i. e., in the fenced-in open land adjoining the studio, where replicas of French villages, New York streets, etc., may be erected. The cameraman plans lighting and photographic effects. The director works with and supervises these assistants, selects his cast and generally studies the continuity and its proper unfolding. When all this has been arranged and construction of the interior and exterior scenes is underway in accordance with the plans, the photographing or "shooting" as it is called begins. There is ordinarily no sequence to the shooting; the last scene in the play may be the first shot. As a rule the set or location which is first available determines where the photography shall commence.

The director rehearses and takes and retakes the same scene in many ways and shadings, at first following the continuity and then using his own imagination when he feels that the scene can be improved. It is also customary to take "still" photos of the important scenes to use in advertising, and for lithographs, etc. All the action taking place on one set or location, whether at the beginning or end of the story itself, is usually done in sequence. At the end of each day's work in the studio or immediately upon return from location, the negative film is delivered to the laboratory (the stills to the so-called "Still Room"), where it is developed and positive prints made which are projected on the screen the following evening to enable the director and his assistants to discuss each "take," and decide upon which is the best. If none is suitable, the director orders a retake and the cast is re-assembled and goes through the same scene until it is satisfactory. The

set may then be "struck," i. e., torn down to make room on the studio floor for another set of the same or another picture. Exterior sets are as a rule left standing as the ground space is not generally necessary for immediate use. They are struck or altered when the space is needed.

When photography has been completed, it becomes necessary to cut the scenes and arrange them in the order called for by the continuity. Ofttimes, scenes are longer than it was expected and it is essential then to eliminate many of them so that when finally cut and titled, the footage will be within the amount planned. For example, average feature pictures run about six reels or 6,000 feet; extraordinary productions which constitute a whole evening's entertainment, run about 12,000 feet. "Titles" are made and photographed—i. e., insertion of the words necessary to explain the situation or show the dialogue ensuing. Many times, so-called "Art Titles" are prepared, i. e., titles with decorative borders or backgrounds. The negative is then complete and turned over to the Head Office—the cost being transferred from the studio to the Head Office books. (Frequently, two negatives are taken of large and important productions to facilitate foreign distribution; and, when stored and shipped separately, to afford insurance against loss by fire, etc.) From the negative as many separate positive films are printed as are required for distribution throughout the country, from 80 to 100 sets or more. This latter service is ordinarily performed in independently conducted laboratories which specialize in this work.

The cycle from the time the director takes active charge to the delivery of the completed negative to Head Office is about two months for the average feature picture. Extraordinary productions of course take much longer time.

#### MAJOR CONSIDERATIONS IN DESIGN OF SYSTEM

It should be kept uppermost in mind that photoplays are in no sense standard, and that as a result a comparison of costs between them is only of relative value. Furthermore, price setting (ordinarily one of the predominating reasons for securing accurate information) is not determined by the cost of the picture. Any system of accounts installed in a studio, however, should be sufficiently complete and accurate to serve as a proper control of assets and liabilities, including a perpetual inventory of stores and fixed assets, and to permit compilation of reasonably accurate costs of productions made. Since a unit is not standard, no attempt was made in the early years of the industry to strive for accuracy in costing out productions, and producers were content to run their accounts on a cash disbursement basis.

The very unique situation exists of "consuming" many thousands of feet of lumber, hardware, valuable furnishings, costumes, etc., to manufacture sets and yet having them all still on hand and almost as good as new when the picture is completed and



delivered. The product of the motion picture "factory" is nothing more than a narrow strip of negative film several thousand feet in length from which positive copies may be made for use in the projection machines of the exhibitor. Condensed into this footage is \$100,000 and more, expended for salaries and wages, for lumber, hardware, properties, etc., and for the fixed charges of the studio. Much of the left-over materials may be used on subsequent pictures or sold, and represent real asset values. It was the desirability of reflecting some fair value for these assets that induced producers to correct this deficiency in the statements they furnished their bankers. Even then, until recently it did not become important to differentiate carefully the costs entering into the respective pictures being processed at any one time. Following the crisis of 1920 and the period of shutdown of most studios, the industry was deflated with the result that prominent directors, stars and authors are in a sense in partnership with their producers, receiving part of their compensation in a percentage of the income after the picture has cleared its cost. With this sort of arrangement on the increase, it is becoming more and more important to ascertain just what is the correct cost of the individual photoplay.

Outlining any system to be installed in a business that is truly an art, where the products and their component parts are in a great measure entirely dissimilar and where the real value to be measured is rather the "idea" and the brain effort expended to crystallize it into photographed action, makes the problem a peculiar one. To set up in a production the cost of "ideas" is impossible, though a considerable portion of the huge amounts expended as salary is paid to persons for the purchase of such ideas and their translation into photographs. While such a person is present in the studio presumably employed upon a certain production, he may be actually formulating ideas for use in succeeding ones. This is further complicated by the fact that during what may be termed "lost time" (when the employee is absent or unassigned or when he is resting between the completion of one picture and the commencement of a new one, a frequently occurring situation representing large items of cost) such ideas will continue to be formulated and will be embodied in future productions, together with ideas developed entirely outside of "office hours."

#### CHART OF ACCOUNTS

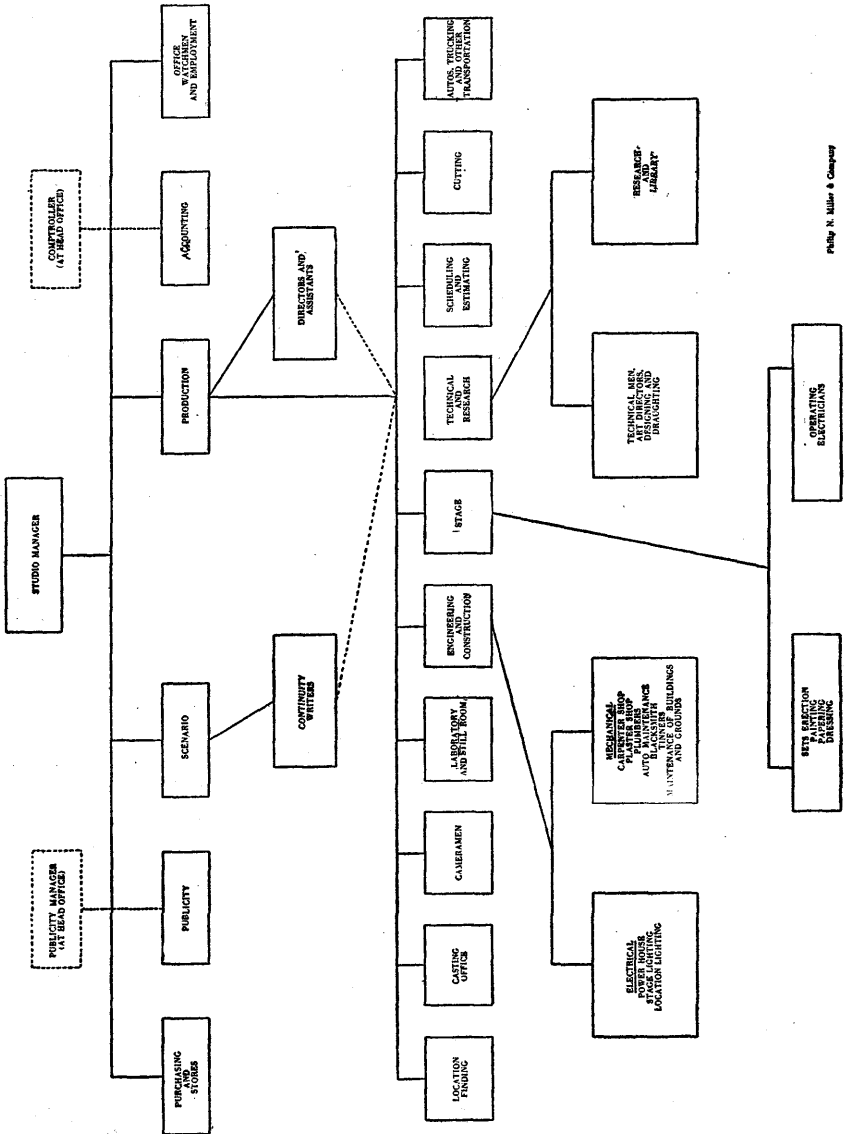
This outline of the "manufacturing process" forms the basis for the system of accounts and records built around a studio's operations to effect the general purposes outlined.

The chart of organization reproduced on page 8 requires no extensive comment. It represents a typical departmental and divisional arrangement of a large studio, working on say eight

to twelve pictures at a time, which is equivalent to turning out a product costing about \$5,000,000 or \$6,000,000 per annum.

Two typical statements appear on pages 9 and 10.

TYPICAL CHART OF ORGANIZATION OF A MOTION PICTURE STUDIO



Patly H. Miller & Company

**TYPICAL STATEMENT OF COST ITEMS  
COMPRISING A MOTION PICTURE PRODUCTION**

(Subsidiary Ledger to Control Account in Studio General Ledger-  
Inventory of Productions in Process)

Account Number	Item	
01	Salaries - Star	
02	“ - Artists	
03	“ - Director and Staff	
04	“ - Extra Talent	
05	Sets - Interior:	
	(a) Material	)
	(b) Labor	)
	(c) Properties - Stock	)
	(d) “ - Rented	)
	(m) Miscellaneous	)
06	Sets - Exterior:	
	(a) Material	)
	(b) Labor	)
	(c) Properties - Stock	)
	(d) “ - Rented	)
	(e) Autos and Cartage	)
	(f) Railroad Fare	)
	(g) Hotel	)
	(h) Lunches	)
	(j) Location Rental	)
	(m) Miscellaneous	)
		} Separate accounts for each set
07	Properties not Chargeable to Single Set	
08	Costumes - Stock	
09	“ - Rented	
10	Animals	
11	Electric Current and Expense	
12	Negative Film	
13	Positive Film	
14	Laboratory Expense	
15	Still Expense	
16	Titles	
17	Cutting	
18	Book	
19	Scenario and Continuity	
20	Miscellaneous	
21	Apportioned Stores and Wardrobe Departments Salaries and Expenses	
22	Apportioned Stage Overhead Salaries and Expenses	
23	Apportioned Other Indirect Salaries and Expenses	

**TYPICAL CHART OF ASSET AND LIABILITY ACCOUNTS  
OF A MOTION PICTURE STUDIO**

**ASSETS**

**CURRENT:**

Cash in Bank  
 Petty Cash Fund  
 Extra Talent Cash Fund  
 Advances to Assistant Directors  
 and Business Managers  
 Accounts Receivable  
 Loans and Advances Receivable-  
 Employees  
 Inventories:  
     Productions in Process  
     Scenarios and Continuities in  
     Process  
     Scenarios and Continuities  
     Completed  
 Raw Stores and Supplies  
 Negative with Cameramen  
 Positive in Laboratory  
 Unexposed Negatives in Still  
 Room  
 Rights to Books, Plays and  
 Stories

**FIXED ASSETS:**

Land  
 Buildings  
 Camera Equipment  
 Electrical Equipment  
 Machinery and Tools  
 Office Furniture and Fixtures  
 Autos and Trucks  
 Properties and Costumes  
 Less - Corresponding Reserves  
     for Depreciation  
 Construction in Process

**DEFERRED CHARGES:**

Fire etc., Insurance Prepaid  
 Life Insurance on Stars and Di-  
     rectors prepaid  
 Taxes Prepaid  
 Unassigned Salaries  
 Extraordinary Repairs  
 Miscellaneous

**LIABILITIES**

**CURRENT:**

Accounts Payable  
 Extra Talent Payable  
 Unclaimed Salaries and Wages  
 Accrued Items

**LONG TERM:**

Loans Payable - Secured by Mort-  
 gages

**HEAD OFFICE CONTROLLING  
ACCOUNT**

**DEFERRED CHARGES OR**

**CREDITS:** (Burden - Under or  
 Over Absorbed)  
 Electrical Current and Expense  
 Use of Autos and Trucks  
 Sale of Laboratory By-Products  
 Stage Overhead } When absorbed on  
 General Overhead } predetermined rate.

**SOURCES OF CHARGES TO PRODUCTIONS IN PROCESS**

*Salaries*—Star, Artists, Directors and Staff: These charges are obtained from weekly distribution of time as reported by department heads. A form may be designed which will become the Accounting Department record and serve in itself as the payroll and distribution.

*Salaries*—Extra Talent: This item is obtained from Daily

**Report of Extra Talent Employed.** The Assistant Director or Business Manager lists the names of the extras reporting. They are paid a full day's compensation even if engaged but part of the day or though not called upon to act. On dismissing talent for the day, they are furnished with vouchers entitling them to call at the Cashier's Office for their pay. The vouchers issued should agree with the list turned in to the Accounting Department. Entry is made *charging* Productions in Process with total of the list and *crediting* Extra Talent payable. The cashier draws from the general cash the total of the daily list.

As vouchers are exchanged for cash they are stamped "paid" and checked off the list. After about ten days the list is returned to the Accounting Department with the paid vouchers and the cash for the unpaid items. Entry is then made clearing these accounts by *crediting* Extra Talent Cash Fund and *charging* Extra Talent Payable for the amount of the day's list. The cash returned is *charged* to the general funds and Unclaimed Salaries and Wages *credited*, the unchecked items on the daily lists constituting the detail of the account. Subsequently presented vouchers are paid out of general cash and charged to the Unclaimed Salaries and Wages account.

Extras hired on location are paid out of funds advanced to Assistant Directors or Business Managers, and the *charge* to pictures is made from reports of disbursements made on location turned in from time to time.

*Sets—Interior—(a) Material:* The material cost of interior sets is obtained, from Requisitions for Material showing the items drawn and the picture and set chargeable. Requisitions are forwarded to the perpetual inventory clerk, who prices, extends and deducts them from stores cards. A weekly summary furnishes the basis for posting to pictures and individual sets, and to proper debit and credit controlling accounts.

*(b) Labor:* The labor cost of interior sets is obtained from Job Time Tickets. Carpenters, painters, plasterers and other studio workmen ring clock cards at the Studio entrance. At the close of the week these cards show attendance, and when rated and extended form the basis for the pay-roll in the customary manner. All time should be accounted for by separate job tickets showing hours spent on individual sets. Job tickets are issued to employees by foremen or their assistants, indicating the work to be done and the picture and set chargeable, and are rung in on job clocks at the commencement and conclusion of work. Job tickets are extended and balanced with the clock cards at the close of pay-roll period, it being necessary also to account for idle time. Pay-roll and distribution form the basis for entry *charging* Productions in Process and *crediting* Accounts Payable—Pay-roll.

*(c) Properties—Stock:* The cost of properties issued from stock for interior sets is obtained from Requisitions for Stock Properties, Costumes, etc. Requisitions are forwarded to the per-

petual inventory clerk who prices, extends and makes entries on his cards, moving such cards into an "Out" file as record of their withdrawal from stock. A weekly summary is the basis for *charging* pictures and individual sets, and *crediting* proper Reserves for Depreciation. On return of "props" the "Return Memo" is forwarded to the inventory clerk who removes card from "Out" file and replaces it in the "In" file.

Most studios carry many thousand dollars worth of valuable articles in stock, consisting of furniture, rugs, draperies, house furnishings and utensils, doors, windows, "flats" (for walls), gowns and sundry costumes. It was (and to a great extent still is) the practice to charge the production for which these articles were originally purchased or constructed with the entire cost thereof. Many of these articles may be used over and over again, frequently without change and sometimes with slight alterations, repainting, etc. The practice of charging the entire cost to the first production manifestly overcosts that production and undercosts subsequent ones making use of these stock articles.

This condition, coupled with the fact that these articles will actually produce income through rental to other producers (in accordance with the custom of studios to rent "stock props," as they are called, to each other), seems to require the formulation of some method by which fairer and more accurate absorption can be made. Stock props, costumes and scenery are a part of the fixed assets and as such should be depreciated. But depreciation as used here has not the usual significance, for the very age and shabbiness of some property may make it even more valuable than if new. Properties and costumes will be reused less often in proportion to their striking and bizarre character. A maid's costume of black dress, apron and cap can be used a dozen times, whereas a gorgeous dancing gown of exotic design can be filmed in but one picture. Similarly, a common kitchen chair can be used many times, while a medieval throne can be used but once. This is not due entirely to adaptability to the general nature of the pictures produced, but more particularly to the fact that the "movie-fan" dislikes to see a repetition of gowns or furnishings, commenting that "Susie Somebody wore the same dress in her last picture," or that "Harry Hairbreadth has that same big chair in his room that he had in the picture he was in last winter." In theory each picture should be charged with a proportion of the cost of the props it uses, plus some small allowance for the regular depreciation of the stock as a whole. Such a calculation is most intangible, but the rule provides the basis for arriving at a method that seems to be the best under the circumstances. When a property is purchased or constructed, determine about how often it may be used, and with this as a base, fix a rate for each use which will absorb slightly in excess of its cost over the estimated times of use, charging this rate to the respective productions either as a "weekly rental" charge or in one lump amount. The

credit side of this entry acts as a "Reserve for Depreciation" offsetting the gross asset account on the balance sheet.

Many studios absorb depreciation on stock props, costumes, etc., as a charge to the burden account on a percentage basis of 20% to 33 $\frac{1}{3}$ % per annum. While this is the easiest way, it does work inequity between pictures. For example: A picture in which most of the action occurs in the "great outdoors," drawing but little on the studio stock, is charged equally with a picture in which most of the action takes place in "interiors" in the studio, drawing heavily on the studio's stock. Where it is the practice to charge depreciation into "stage overhead" on a percentage basis, and thereby absorb into productions making use of stages, this inequity is not quite so patent, but nevertheless it may well be that one type of picture requires rented props almost exclusively, while another is able to make use of the studio's stock. In such a case it is evident that the former picture would bear a double burden.

When properties are rented to other studios, the net profit should be *credited* to Head Office to be picked up as an item of profit and loss. Against the gross rental received should be *charged* the depreciation (same type of charge as made to the cost of a picture using the article), the proper reserve for depreciation being credited.

(d) *Properties—Rented*: The cost of rented properties is obtained from the copy of the Rental Order, showing notation of receiving clerk that articles have been received. A weekly rent is paid to the lessor for this service which is a *charge* to Productions in Process, and a *credit* to Accounts Payable, liability and charge being booked at once and usually in advance of receipt of lessor's invoice. The invoice when received is matched against and attached to a copy of the Rental Order.

Since retention during subsequent weeks involves additional liability, a diary system should be maintained to enable a check up of unreturned props with a view to returning them promptly, or if necessary to hold them over, to form the basis for an entry *charging* Productions in Process and *crediting* Accounts Payable. In its simplest form this record consists of an extra copy of the Rental Order filed behind guide cards of the date returnable. As props are returned, the return receipt should be forwarded to the same clerk who originally handled the requisition and who refers to his file and stamps opposite each item the date of return. The day preceeding the expiration of the week he examines the file for the succeeding day, and in conference with the proper operating man, determines if any or all of these props (against which no return date appears) can or will be returned. Additional rental for props held over is then charged to Productions in Process and *credited* to Accounts Payable through a "Hold Over" memo invoice.

*Sets—Exterior—(a) Material*: The cost procedure for the

material cost of exterior sets erected on the lot is the same as for Interior Sets.

Sets erected on location are charged through a report of the Assistant Director or Business Manager of the expenditures made for material.

(b) *Labor*: For the labor cost of exterior sets erected on the lot, the same cost procedure as for Sets Interior is followed, except that use of a job clock may not be feasible, in which case handwritten time for commencing and finishing job must be accepted. Labor on location is usually paid out of the fund advanced to the Assistant Director or Business Manager. Forms should be provided, similar to a pay-roll record, to support these expenditures.

(c) *Properties—Stock*: See page 11 under Sets—Interior for treatment of Stock Properties.

(d) *Properties—Rented*: For rented properties of sets on the lot, the same cost procedure as for Sets—Interior is followed.

Sets on location are *charged* through a report of the Assistant Director or Business Manager of expenditures made for rented props.

(e) *Autos and Cartage*: The cost of the item Autos and Cartage is derived from the Report of Autos and Trucks used. Weekly reports are made to the Accounting Department of the time spent by each auto and truck, and the picture chargeable. Predetermined rates per hour of use are set for the different machines, which take into consideration the entire operating expenses—gas, oil, chauffeur's salary, depreciation, etc. Rates are multiplied by the hours used and Productions in Process so *charged*, *credit* being made to Auto and Trucks Burden Account into which all actual expenses are charged as incurred. (See Burden Schedule page 17.)

Expenditures made on location for hired transportation are charged through the report of the Assistant Director or Business Manager.

(f) *Railroad Fare*, (g) *Hotel*, (h) *Lunches*, (j) *Location Rental*: These four items are usually chargeable through a report of the Assistant Director or Business Manager of expenditures made on location. Location Rental is paid sometimes by check direct from Studio, in which case entry is passed on proper authority to *charge* Productions in Process, and to *credit* Accounts Payable.

*Properties Not Chargeable to Single Sets*: See page 11 under Properties for treatment of cost of properties not chargeable to single sets. The reason for this account lies in the fact that sometimes certain props are not confined to any one set, but may be used on several.

*Costumes—Stock*: The cost of costumes taken from stock is obtained from Requisition for Stock, Properties, Costumes, etc. See comments on page 11 under Sets—Interior—(c) Properties—Stock.



*Costumes—Rented:* See comments on page 13 under Sets—Interior, and Sets—Exterior—(d) Properties—Rented.

*Animals:* The charge for animals ordinarily comes through the pay-roll, the name of the trainer who cares for the animal being shown, viz.: "John Jones and Dog." It may also come through as a daily charge similar to extra talent; or where hired apart from trainers or owners (for example, a canary) it may be covered by a Rental Order.

*Electric Current and Expense:* The cost of electric current and expense is taken from the Report of Operating Electrician. This report made out by the operating electrician assigned to the picture is in handy card form and is turned in daily. It lists the various types of lamps and lighting devices and opposite each item is shown the hours of service. Predetermined rates are set in consultation with the lighting engineer. These rates combine all elements of electrical expense: Kilowatt consumption, hours of life of tubes and arcs; depreciation of wiring, power house machinery and similar equipment; repairs; salaries of electrical workers (other than the operating electricians who are assigned to specific pictures); etc. Daily reports are rated and extended, weekly summary forming the basis for entry *charging* Productions in Process and *crediting* Electrical Current and Expense Burden Account. Into this latter account are *charged* all the actual electrical expenses as incurred.

*Negative Film:* The cost of negative film is obtained from the Laboratory Receipt for Exposed Negative. Copy of this form, the original of which goes to the Cameraman on delivery of his exposed negative to the Laboratory, forms the basis of entry (by weekly summary) to *charge* the picture with the cost of the raw negative exposed and to *credit* the Cameraman, who has previously been charged with the footage and value of the raw negative stock drawn from stores. Copy of Cameraman's Daily Report is turned into the Laboratory with the negative. This report shows each "take" and instructions for disposition, i. e., "N. G.," "Print," "Hold," etc.

*Positive Film:* From Laboratory Weekly Report which shows the positive footage consumed for each picture, entry for the cost of a positive film is made *charging* Productions in Process and *crediting* Positive in Laboratory, it having previously been charged with footage and value of the raw positive stock drawn from stores.

*Laboratory Expenses:* From Laboratory Weekly Report *charge* is made of the laboratory expense for the week. Total expense of laboratory, per the books, is *credited* by distribution over the negative and positive processed on a footage basis, after giving effect to the estimated reclaim value of waste hypo, etc. On sale of waste, actual return is credited to the same account as was charged when the estimate was set up. Excess debit or credit balance is deferred and adjusted from time to time.

*Still Expense:* From Still Room Weekly Report the cost of still expense for the week is *charged* to the various pictures on the basis of prints made, Still Room Expense Account being *credited*. The cost of negative plates used is also *charged* through this report and the Still Room Stock *credited*, as it was previously charged with the quantity and value of the negative plates drawn by it for sub-stores.

*Titles, Cutting and Book:* From Pay-roll distribution of Title Department and from Requisitions for Raw Materials and Supplies the cost of titles is obtained; from pay-roll distribution of Cutting Department the cost of cutting is determined; and from voucher authorizing purchase the cost of "book" is ascertained.

*Scenario and Continuity:* By transfer from account Scenarios and Continuities Completed and from pay-roll distribution of Scenario Department when scenarist or continuity writer works with director in production, the cost of scenario and continuity is determined.

Scenarios and Continuities are written prior to production, as described on page 4 of this article. The time spent thereon is *charged* through the asset account, Scenarios and Continuities in Process, to the particular story worked on. When finished, this account is *credited* and Completed Account *charged*, from whence it is transferred on commencing production into picture cost. Should the story be sold or scrapped the account is closed out to Profit and Loss through transfer to Head Office account.

*Apportioned Stores and Wardrobe Departments, Salaries and Expenses:* The cost of this item is obtained from distribution of actual expenses on basis respectively of amount of requisitions filled (Stores Summary Distribution) and of costume cost during period.

*Stage Overhead:* (For detail accounts of Stage Overhead see "Burden Accounts" schedule on page 18).

From Weekly Report of Stage Use showing pictures and sets occupying stages and portions thereof, extended at predetermined rate per day for each stage, the stage overhead is obtained. Actual expenses of the nature shown in the schedule are *charged* against the credits arising through use of predetermined rates.

When Stage Overhead is combined with General Overhead, the accounting is as explained on page 18.

*General Overhead:* (For detail accounts of general overhead see "Burden Accounts" schedule on page 18).

The method of absorbing the general overhead of a studio offers a wide field for discussion. One thing seems true, however, that the common practice in other industries of using the basis of direct-labor hours or direct-labor value or machine-hours is not applicable here.

Two separate practices are followed. Each has its advantages and disadvantages. Both are presented to the reader and he may make his choice. One method is to absorb overhead on the basis

of the total of all costs of each picture for the accounting period, less the salary of star and the cost of "book." This cost of course, is the cost before adding the apportioned general overhead. Salary of star and price of "book" are omitted as these costs are in ratio to the already advertised and selling value rather than to real worth from the viewpoint of pure production. This method has been investigated in detail by the writer and in the particular studio seemed to very fairly measure the indirect effort and expense. It has the effect of carrying into inventory each period the entire general overhead. Our friends who are staunch supporters of standard costs and normal burdens may not like this method. For them there is the other method of determining camera day capacity, estimating normal burden, and arriving at a rate per camera day, using say a factor of 80% of capacity. The unabsorbed burden by such method would find its way direct to Profit and Loss.

It is possible to conceive of several other treatments of general overhead. A prominent producer has a weighted scale manner of absorption, taking in the burden on one percentage for say the first \$10,000 of direct cost for the period, another percentage for the second \$10,000 of cost and yet a different percentage for the third \$10,000, and so on. At any rate, we have followed the cost of a picture down to this final step. Experience shows that each company's production problem is sufficiently different to warrant dissimilar methods of apportioning general overhead. This one thought should be kept in mind; namely, the increasing tendency toward using the "cost of a picture" as a basis for measuring advances by distributors and for stating the amount which a production must return to the producer before commencing to share rentals with stars, directors, authors, etc., makes it advisable to carry into the cost of each particular picture every element which can possibly be classed as an expense of production.

### BURDEN ACCOUNTS

The following is a list of burden accounts and the method of apportioning each item.

Nature	Method of Apportionment
Electrical Current and Expense	By predetermined hourly rate
Autos and Trucks	By predetermined hourly rate
Laboratory Salaries and Expenses (Less-Sale of laboratory by-products)	Footage processed during period
Still Room Salaries and Expenses	Number of Prints made during period
Wardrobe Salaries and Expenses	Costume cost during period
General Stores Salaries and Expenses	Cost of Material requisitioned during period
Property Stores Salaries and Expenses	Cost of Properties (Stock and Rented) during period



the rest following a production is more properly chargeable to that production. It will be found in practice that it is important to close costs immediately on completion of the negative, and since on the average the cost of the rest will be quite equitably distributed against various pictures, if charged in the manner proposed, no great harm results from this practice.

#### SCRAP VALUE OF SETS

As pointed out, after an interior set is struck, a large part of the lumber, etc., may be restocked and used on succeeding pictures. It was the custom generally to disregard this element on the theory that while the first picture will be heavy in cost, each subsequent one will "give and take" such used material and hence work out on the average. Where accurate costs are not sought and particularly where costs of individual sets are not secured, this question is not of vital importance except that the balance sheet reflects only such value for this material as may be buried in the cost of the pictures produced. Where accurate information is required of the direct costs of sets for purposes of managerial control and of estimation of the costs of similar sets in future productions, it is essential that this element of scrap value be properly treated on the books. Several methods are suggested: (1) On striking a set, value the material and put through a "Return to Stores" slip, charging stores and crediting cost of the particular set. (Lumber in standard sizes may be restocked and revalued as second-hand lumber in three or four value classifications, depending on the physical condition and equivalent roughly to what it would cost to acquire such lumber elsewhere). (2) Another method has been suggested by which a stores account, "Second-hand material in sets," should be opened to which will be charged (when material is requisitioned) that proportion estimated to be the scrap value of the set when struck. For example, charge 60% to the cost of production and 40% to the "Second-hand" account. In this way the periodic costs of pictures reported to the Head Office will not be inflated by the value of the material to be returned to stores when sets are struck. On striking, the material returned to stores is cleared out of "Second-hand material in sets." If this account is carefully watched, but little adjustment will be required on taking the physical inventory at close of the fiscal year. The method to be followed depends very much on the size and scope of the particular studio's operations. Several other methods may be suggested but it is sufficient to outline the problem to this extent, leaving the particular treatment to the judgment of the accounting executive as to the simplest and best system in his own case.

The above discussion covers interior sets. Exteriors usually remain standing until the ground space is required for another set. On striking or altering, if any salvage value be present, the Head Office should be credited with the amount thereof as an

item of Profit and Loss. From time to time it is possible to make use in another picture of exteriors left standing. Cost of altering should be charged to the new picture. Whether the new picture should also be charged with a "rental" for the use of the set, is questionable. Occasionally, producers permit other producers to make use of their standing exteriors on payment of a rental charge. This is an item of sundry Profit and Loss. It is possible that in some studios where an independent producer is permitted to make his picture along with the company's own product (because of his contract to distribute that picture through the company), a rental charge for use of exteriors might be proper.

### JOB ORDERS

Orders for the making of stock props, for sundry construction, for equipment installation, etc., are accounted for by job orders. Like all factories, for proper control of repair, construction work, etc., a "plant order" or "job order" system should be installed. Time and material expended should be charged to the proper order through time cards and requisitions. When completed, these orders should be closed out to proper accounts. Balances in expense orders, including standing orders, may be closed out periodically into the proper burden accounts.

### PURCHASES AND RENTALS

Purchases and rentals should be controlled through a Purchasing Department, and all oral and rush orders should be confirmed by proper purchase orders and rental order forms. Copies should be forwarded to the Receiving Clerk and to the Accounting Department for use in checking receipt of goods and in passing invoices for payment.

A copy of each Receiving Slip should be forwarded to the Accounting Department for matching with orders and invoices. Due to irregularity in receipt of invoices and to the practice of closing costs and reporting to the Head Office weekly, some studios set up the liability from the receiving slip itself as soon as received, pricing it from the Purchase or Rental Order data, making whatever adjustment may be necessary, if any, on receipt of the invoice.

### CONCLUSION

The system as described in this article is not in effect in any one particular studio. It is a compendium of the salient features of several systems and outlines what seems to be the best practice. True, it is somewhat complicated as compared with the simple cash disbursement plan of many small producers, but as cost accountants of varied experience must admit, it is a "babe in arms," when compared with the systems required to compile costs in many industries. Any system cannot be much less complex than the processes which it attempts to record, and a glimpse into the

inner workings of a large studio with five or six pictures in course of "shooting," and as many more in preparation or in cutting, will soon convince the skeptic that things are not done in simple operations as might appear from the speed and apparent ease in which scenes are reeled off on the silver screen. It is just as satisfactory to shoot on the stages at night as it is during the day, and enthusiastic directors know no stopping point when things are going right. With mob scenes on schedule, stages are jammed with extras; lights are sizzling on and off; the bell is clanging for silence; gorgeous ball-rooms rise before one's very eyes—the product of high speed carpentry; wondrously gowned women flit across the scenes; the crisp instruction of the director echoes across the stage; and the camera clicks in rhythmic accord gathering into itself a stirring tale of love and adventure.

Complicated as the system may be as applied to a large studio; the smaller producer can refine it and reduce it to the barest essentials for his own particular purposes.

Just as in most factories and shops, when volume and repetition of operations become prevalent, we are able to introduce machinery to smooth the task and to increase the "per man" output, so in the accounting department in dealing with volume of repetitive transactions we can try to apply machinery to its work. Fortunately, a rather unique application of bookkeeping machines is possible which lessens the "cost of cost accounting" and speeds up the periodic closing. This system (originally designed for Metro Pictures Corporation and now installed in other large studios) enables direct posting from accounts payable and journal vouchers to voucher register and to ledger accounts to be charged and credited, beside reflecting continuously the balances in such accounts. The studio general ledger itself and all subsidiary ledgers are kept by machine. Daily proof of postings is obtained through the accumulator wheels and, when ready to close, balances of accounts to be apportioned are available without further effort. In addition, Cash Disbursement records are kept by machine; the filling out of checks, check register and posting to proper charge accounts are all made by one operation. Similarly, Cash Receipts record is compiled and posted by the same operation.

It would take too much space to describe in detail how this mechanical bookkeeping is done, but those acquainted with the principles of this kind of machine can picture fairly well how it operates. Suffice it to say, that the company mentioned, with an accounting staff of nine persons, closes its costs weekly as of Saturday and on the following Tuesday or Wednesday has its financial statement and report of operations in the mail on its way to its New York Head Office.

Before concluding the writer desires to appeal to those more particularly concerned in this field of endeavor. There is no reason why available data should be as scarce as they are. If the cost

accountant in the motion picture field is to occupy the important place that others of his profession hold in other businesses, and if the science is to be advanced in its application to this phase of industry, he should freely and fully offer his ideas and his experiences. It is desired that this article evoke discussion. It affords a good opportunity to those who disagree with parts of it to state their views, and to those who have more to add to build upon its foundation.



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