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NOTES ON
FILM IDENTIFICATION
BY THE EXAMINATION OF COPIES

by

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CONTENTS

I. Introduction

II. Identification of Date and Producer

1. Plain Markings on the Film
2. Styles of Main and Sub-titles
3. Frame Lines and Aperture Shape
4. Exposed or Clear Margins
5. Step or Continuous Printing
6. Use or Absence of Tinting
7. Perforations
8. Stock Manufacturers' Marks
9. Censors' Certificates
10. Internal Evidence
11. Length
12. Characteristics of Producers

III. Clues to Duping History

I. INTRODUCTION

To provide a complete and accurate identification and description of a film for cataloguing, there are two main sources of information, the first of which may again be subdivided under two headings as follows:

1. The film itself.

- (a) Examination of the film copy.

- (b) What is seen on the screen
(in other words, internal evidence).

2. Documentation or testimony concerning the film (which may be published, or simply written, or oral information from those concerned in its production or original exploitation).

All of these sources are to be used in conjunction, illuminating, confirming and correcting each other.

Before we can make use of documentation, however, we must first be sure of the identity of the film with which we are concerned. It is dangerous to assume, for example, that the advertisements and reviews of an American Vitagraph film of 1913, called Deception, refer to a surviving copy of a film with that title, until we have eliminated the possibility that it might in fact be a copy of the British Hepworth film called Deception which was made in 1912.

Recent or well-known films present no such problem. Their identity is clear and well-established. The collections of film archives, however, go back to 1895, and their earlier and less-well-known films can often be extremely difficult to identify with precision. In the decade before full-length films appeared (about 1911-12) hundreds of single-reel films were being made every week in all the main producing countries, and issued without any indication of their directors or cast or country of origin. Plagiarism was common, and the same story description could apply equally to different productions.

These films were sold on the open market (not hired out by a single distributor as films are today) and their titles were frequently changed, either in passing from one country to another, or to give old goods a new name, or simply because damaged or lost titles needed to be replaced. And as if all this were not enough, out of the comparatively small number of these films which still exist, many have survived incomplete and with their main titles missing altogether, (the beginnings and ends of film always suffer the greatest wear and tear). In these circumstances identification can sometimes require a skill and experience in research comparable to that applied to ancient manuscripts or prehistoric monuments.

The present paper is really no more than a series of notes, mainly on the data which may be gleaned by an examination of surviving film copies themselves, although some observations on internal evidence (what can be seen on the screen by way of dates on letters, styles of dress, etc.) have also been included.

The basic information which we need to identify a film precisely consists of the following:

- (a) Original title
- (b) Date of production
- (c) Country of origin

Where we are uncertain or ignorant of this information, we can often be assisted by a careful examination of any surviving copy or copies for clues to the date of production and to the name of the producer; we can also often determine the generation or duping history of the copy, and so arrive at a decision as to the probable nature and date of the copy first made.

Anyone used to handling films can tell broadly, of course, whether they are new or old, even if it is only a matter of distinguishing silent films and sound films. The ability to arrive at a more exact estimate of the age and other features of a film, however, depends on the observation not of one, but of several characteristics and on the exclusion of misleading possibilities rather than the positive establishment of particular information. Thus one characteristic may indicate that a copy cannot be earlier than a certain date, and another may show that it cannot be later than another date, so that a range of time within which it must have been made is established.

On examination of the copy alone, one may be able to go no further than this, but at least the area of speculation and of further research has been reduced to an approximate period of time. It is necessary to recognise this inexactitude in order not to be disappointed about what is possible by these methods.

It is also desirable to make here three further points. The first is that the characteristics of a copy which may be useful in revealing information about the films of one era may be of no value in another. Secondly, to every general statement made in these notes there is certain to be some exception, although to have listed them all would have made the paper complicated and unwieldy. And thirdly, while I have almost certainly made some statements which are obvious or well-known, it may nevertheless be convenient to make them for reasons of clarity, logic or completeness.

The notes which follow are restricted to data which may be obtained from early 35mm silent films, since it is these, on the whole, about which more information is lacking, and identification is more difficult. Even within these limits, they present no more than a sketch of the possibilities. Much more work could be usefully done to work out these, and other ideas, in greater detail, and I very much hope that other FIAF members will be encouraged by this paper to record their own discoveries and their own experience, so that they can be pooled for the benefit of us all.

II. IDENTIFICATION OF DATE AND PRODUCER

1. Plain Markings on the Film

These fall broadly into two kinds:

- (a) Marks embossed or perforated on the beginning of the film.
- (b) Marks photographically printed in the margin.

Concerning embossed and perforated marks; this practice was confined to the earlier years, i.e. up to about 1905. It should be noted that a name embossed on a copy may not be that of the producer but only the name of a dealer who sold that particular copy. Nevertheless it may be useful, taken with other evidence.

Some producers embossed serial numbers onto the copies. These seem to relate sometimes to the catalogue number of the subject and sometimes to the serial number of the particular copy. I have not been able to study this feature to the extent of forming any firm conclusions.

According to our present knowledge, marks in the margins are more informative.

Some precise information on producing company and some clues to date may be obtained in some cases from the form of the mark placed by producers in the margins. (These marks should be distinguished from the film stock manufacturers' marks q.v. which may also be found on the same films).

As an example of what is possible we give the case of Pathe films from 1905 to 1913.

In 1905 Pathe started to print "PATHE FRERES PARIS 1905" in both margins. The date 1905 was subsequently omitted, presumably at the end of that year, and the mark continued in the form "PATHE FRERES PARIS" on both edges until about April 1907. From that time until 1909 the mark was "PATHE FRERES" on one margin and the address "14 RUE FAVART PARIS" on the other. From the beginning of 1909 onward the mark was, on one edge, "PATHE FRERES, 14 RUE FAVART PARIS" and on the other "EXHIBITION INTERDITE EN FRANCE EN SUISSE EN BELGIQUE".

In about 1911 the words "EN ITALIE" were added and at about the same time the style of lettering was changed. The earlier films have an upright "stencilled" style of lettering with pronounced serifs. Of the later ones, some have sloping "stencilled" letters with serifs and others have solid letters with thin strokes and no serifs.

Some other producers similarly printed their names in plain language on the margin, and it may well be that there are variations in the form of those occurring at different times, which could with some study be determined and used to date the films, as precisely as is possible with the Pathe films of the pre-war period as indicated above. Among other people who so marked their films at some stage were "Gaumont" - "Selig Polyscope" - "Vitagraph" - "Cines" - "Ambrosia" - "Messter" - "Sascha". Very broadly this practice was confined to the years from about 1905 up to the war period. I think it is unknown in the post war period except for a few Pathe newsreels immediately after the war. Thus the mere presence of these names gives an indication that the date of the film lies within those years.

Other cases are:

- (a) Eclair, in the period immediately preceding the 1914-1918 war printed their initials and the year on the margins thus "F.E. 1911".
- (b) Films with the letters "C.U." along the margin were issued by the Charles Urban Trading Company.
- (c) During the "Patents War" in U.S.A. in the period from 1909-1914 the companies associated with Edison marked some of their prints "LEASED FOR USE ONLY ON MACHINES LICENSED BY MOTION PICTURE PATENTS CO" on one margin. Clearly prints so marked belong to this period.

2. Styles of Main and Sub-titles

Features of titles which can help in identification and dating include:

1. Design of lettering.
2. The use and design of decorative borders.
3. The presence or absence of the title of the film on each sub-title.
4. The tinting of titles.

These are aspects which various film makers of the one-reel period changed from time to time and by which different companies' product may be recognised, and dated to some degree.

Firstly, the presence of a title at all offers some clue to date since the earliest films, before about 1903, did not as a rule have titles on the film copy.

To demonstrate how the style of sub-titles can be used to give information on dates I take the case of the films of the Vitagraph Co. of America. It has been possible by an extensive study to relate styles of titles to years of production as set out below and illustrated on the attached photographic plates.

1907 A decorative style of lettering was used on a plain background. The sub-titles were black and white (no tinting). Fig. 1.

1908 The lettering is less ornate and sometimes the trade mark appears. They are still black and white. Fig. 2.

1909 Sub-titles used a similar style of lettering but were tinted amber. This required that titles were all spliced into the copies, so that there is a join at the beginning and end of every sub-title. In this year also the edge mark "VITAGRAPH CO. OF AMERICA" or "VITAGRAPH CO. PARIS" was introduced. Fig. 3.

- 1910 The 1909 style seems to have continued into 1910, but in this year was introduced a new style with the wording placed in a decorative border. These titles were nearly always tinted blue, otherwise amber. Fig. 4.
- 1911 I find no distinguishable difference. I considered whether the presence of the trade mark on the sub-titles was significant but it seems to be included just when there is not much wording.
- 1912 There is a similar decorative border but the title of the film appears on the sub-titles. Sub-titles still tinted normally blue but occasionally amber. Fig. 5.
- 1913 No distinguishable change found.
- 1914 The 1912-1913 style continued a little into 1914 but in this year the word 'Vitagraph' is introduced into the decoration at the bottom of the border. Fig. 6.
- In this year also the edge mark was abandoned. Films issued early in this year had the edge mark, while those issued later are without it. We have two copies of a certain 1914 film and one copy has the edge mark while the other has not.
- Apparently at the same time another new practice was introduced. Up to this time all the titles were spliced into the copies. Now the titles were inserted into their places in the negative and printed on one continuous piece of stock with the adjacent picture, so that (apart from joins due to damage) there are no joins at the beginnings and ends of titles. A corollary of this is that the titles in each different tinted section have the same tint as that section and are not all tinted blue as formerly.
- 1915 No known change in sub-title style. There seems to have been a reversion to inserting titles into the prints and also some move towards less use of tinting of picture and adopting black and white. Sub-titles were tinted blue.
- 1916 The word 'Vitagraph' remains in the decorative border, but different styles of border are used, and the film title is not always included. Fig. 7.

1917- There seem to have been very few Vitagraph films in
1919 these years. Those in our possession are all comedies
and have sub-titles of the styles illustrated in Fig. 8.
At this time Vitagraph used the convention (later widely
adopted) that narrative titles are put in a border,
Fig. 8(a), but that dialogue titles have plain back-
ground, Fig. 8(b).

I have studied some other producers' title styles with a
view to recognition and dating, with varied success, as set
out below.

<u>Hepworth</u>	1907-1908	Main Fig 9(a) and sub-title Fig. 9(b) tinted green.
	1909	Tinted pink. Fig. 10.
	1910-1912	Tinted amber and with the name 'HEPWIX' in the border. Fig. 11.
	1913	Titles are similar but have 'HEPWORTH' in the border. Fig. 12.

Films of the Sheffield Photo Company are recognisable by
titles in a block capital style and with one line of wording
diminishing in size while the next increases in size. Fig. 13.

The American Biograph Company's sub-titles preserved the same
style from 1905 to 1914, except only that from 1912 onward the
name of the film appeared on the sub-titles.

Similar studies could usefully be made of other producers'
titles. Some other features which it is suggested might be
investigated are:

- (i) Numbers placed in the corners of titles. These
are probably serial numbers of productions, and
if the numbers of sufficient known films could be
placed in order, some indication of the date and
identity of others might be obtained.
- (ii) In the corners of some sub-titles there appears a
series of letters. It is suspected that these may
be the initial letters of the title of the film, most
probably in the language of the country of origin.
Some comparison of such letters with any lists of
films by people familiar with the language involved
might lead to identification. Thus may even so slender
a clue be of service.

Some producers numbered their sub-titles serially throughout the film. This can help in confirming whether sequences are in the correct order. Hepworth, instead of a plain number, used a system of dots and dashes, comparable to Roman numerals. Thus the titles are marked in order one dot - two dots - three dots - four dots - one dash - dash and dot etc. These marks are incorporated into the top of the decorative border.

3. Frame Lines and Aperture Shape

These are features which will help with earlier rather than with later films, and with determining which producer, rather than with date.

The principle here is that each frame of film is photographed in a camera through an aperture more or less the size of one frame. Today there are very precisely formulated international standards for the dimensions of the camera aperture, so that virtually all cameras and the film exposed in them are identical in this respect, but in the earlier years of the industry there was no precise standardisation and the exact size and shape of aperture varied from maker to maker and from user to user. Some producers adhered to camera aperture characteristics of their own, by which they may be recognised.

Thus:

- (a) If the camera aperture is of somewhat less height than the length of film used for each frame, there will be a line of unexposed film between each frame of negative. This will appear as a dark line on a positive print (a wide frame line). If the aperture height is exactly equal to the length of film used for each frame, then there will be no unexposed "frame line" and each frame of picture will exactly meet the adjacent ones. It is also possible for the aperture height to be greater than the length of film used and so each frame will overlap the next, and between each frame there will be a strip exposed twice. This is found only rarely, however. In this case the "frame line" area will appear lighter than the adjacent picture on the positive print.

- (b) The width of the camera aperture may be exactly the width of film between the two rows of perforations. It may be less, in which case the picture will not extend the full width between the perforations and there will be a blank border each side, which will be transparent in negative and black in positive. The aperture may be greater than the width of the film between the two rows of perforations, and then the picture will extend into the perforated margins.
- (c) The rectangular shape of the aperture may be a perfect sharp-cornered rectangle; or the corners of the aperture may be rounded to greater or lesser degree.

The negatives made in the cameras were printed. There are two basic methods of printing.

- (a) Frame by frame (or step) printing.
- (b) Continuous.

In a step printer each frame of negative is held stationary in an aperture more or less like a camera aperture and in contact with the positive stock while the exposure is made. Then the light is obscured and the next frame of negative and the next section of positive stock is brought to the aperture and the light uncovered to expose that frame, and so on. In a print made by this kind of printer the printing aperture also images its shape on each frame of the film, in a manner similar to the camera aperture.

In a continuous printer the negative and the positive raw stock move smoothly past an illuminated slit and the positive is thus exposed. There is no printer aperture to print its shape onto the frames of positive stock.

There is a further feature to look for in this connection. This is the position of the frame line in relation to the perforations. For many years past the position of the frame line has been standardised midway between two perforations, but during about the first 20 years of the cinema, while some makers had the frame line between the perforations, some had it across the middle of the perforations, and indeed it might fall on any intermediate position. This is a further characteristic which points to a film being made by certain particular producers.

As examples of how these features differ and can be used to help identify the makers and dates, we show:

- I. Nordisk film of 1908. The characteristics of this are not particularly distinctive. Fig. 28.

Nordisk film of 1909 is very easily recognisable. Fig. 29.

- Note 1. rounded corners of camera aperture.
2. exact height of printer aperture.
 3. sharp corners to printer aperture.
 4. wide black frame line.
 5. picture does not occupy whole width of film between the two rows of perforations.
 6. frame line lies between perforations.
 7. note also the perforations; the dimension 'C' is less than in the other samples.

Nordisk film of 1911-1914. Fig. 30.

- Note 1. wide frame line.
2. picture extends slightly onto the two rows of perforations.
 3. frame line lies between perforations.

- II. Itala film of 1909-1911. Fig. 31.

- Note 1. thin black frame line.
2. rounded corners to camera aperture.
 3. sharp corners to printer aperture.
 4. there is usually visible, but not always, a very fine clear line across the black frame line.
 5. the picture occupies virtually the whole width between the two rows of perforations.
 6. the frame line is between perforations.

III. Gaumont of c1908-1916. Fig. 32.

- Note 1. the picture extends onto the perforations.
2. the frame line is very thin (sometimes just non-existent).
 3. the frame line runs through the perforation.
 4. Gaumont fiction films commonly had the name 'Gaumont' printed along the margins, but news material did not normally have this.

IV. Pathe of c1908-1916. Fig. 33.

- Note 1. the thickness of the frame line.
2. slightly rounded corners to picture.
 3. there is a darker line within the frame line..
 4. frame line lies between perforations.
 5. normally the picture does not encroach on the perforations.
 6. Pathe fiction material normally had edge marks as described in Section I. This was not normally printed on news films.

Again it is realised that the above descriptions deal with only a few producers; but it is believed that sufficient data is given to indicate that it is possible to learn to recognise the appearance of the films of various producers, almost as one recognises the faces of one's human friends.

4. Exposed or Clear Margins

One of the most noticeable features which helps to distinguish the producers of very early films is whether the margins are black or clear.

In the early prints of both R.W. Paul and of Edison, the margins were black. The margins of prints of most other early producers were transparent. The earliest prints of Pathe had black margins but after 1901 they were clear. The prints of Paul and Edison may be distinguished from each other in the following way:

In the case of Edison prints (Fig. 14), the image of the perforations of the negative can be discerned lying between the perforations of the positive. In Paul's prints (Fig. 15), the negative and positive perforations are usually very nearly superimposed, so that only a little part of an image of the perforations of the negative can be seen on the prints.

Paul prints of these early years are sometimes discoloured a pale yellow, but I cannot recall ever seeing an Edison print thus yellowed.

5. Step or Continuous Printing

Among the pioneer producers, both methods were used, by different people. Thus R.W. Paul's early prints were made on a continuous printer, and a study of the prints will usually reveal parts of some frames where the image is blurred in a band right across the width of the picture, where there has been some momentary slipping between the negative and print film during printing.

Most other producers used frame by frame printers. In this case each frame is printed separately while the negative and the print film are held stationary in an aperture. The precise shape and size of this aperture as shown by the exposed and clear areas of the print may reveal whose product the print is; thus the Hepworth (Fig. 34) and Warwick (Fig. 35) companies both used printers which left deeply rounded transparent corners to the frame, and transparent frame line spaces between the frames. The corners of Hepworth's prints are more deeply rounded.

Lumière made his "Edison perforated" prints on a step (or frame by frame) printer, and they can usually be recognised as Lumière's even when the mark "LUMIERE LYON DEPOSEE" which was usually printed in purple ink in one margin is missing. The Lumière negative has one circular perforation on each side of each frame, and usually some slight image of this perforation is printed onto the positive as a dark segment of a circle. Fig. 36.

Here arises a point which illustrates the difficulty of describing some identifying features. Some early (pre 1902) Pathe films were also shot on negatives with 'Lumière' type perforations and prints made with 'Edison' type perforations, Fig. 37. The description above might easily apply to either, and yet once seen they are quite clearly distinguishable. Compare Fig. 36 and Fig. 37. In Fig. 37 the image of the circular perforations is not easily seen, but may be detected with care near the point of the arrow.

The Pathe prints are usually of greater contrast than those of Lumière, whose prints are also commonly, but not always, somewhat discoloured an amber shade, which Pathe prints rarely, if ever, are.

6. Use or Absence of Tinting

During the one-reel period some companies made much use of tinting, while others rarely employed it. So it may be useful to list the most notable users and non-users of tinting.

1. Users

Vitagraph, Edison, Cines, Itala, Nordisk used tinting in most of their films.

2. Non-Users

Flying 'A', American Biograph, Essanay, Kalem, Williamson, Clarendon rarely used tinting, and then, as far as I can recall, only blue to indicate night scenes.

Some makers always tinted their titles whether or not the picture was tinted. These included Patho, Gaumont, Itala, Nordisk, Hopworth, Vitagraph.

7. Perforations

Until about 1905 the size of perforations was smaller than the present standard 'negative' or 'positive' perforations, Figs. 22(a) and 22(b). From that time a change to larger perforations, similar in shape to the present negative perforation, took place, Fig. 22(c).

Perforations of this shape and size were then used for all films, both negative and positive until 1924. In 1924 Kodak introduced the familiar large rectangular perforation for positive projection prints. After that time negatives continued to have perforations like Fig. 22(c), but the use of this perforation for positives died out within the next five years.

Throughout the period from 1905 until the end of the silent era, the Pathe organisation used a perforation of distinctive shape. This was larger than the perforation of Fig. 22(c) and the corners were also rounded, as may be seen in Fig. 33.

In about 1909 the Nordisk films had perforations similar in shape to Fig. 22(c), but noticeably narrower. See Fig. 29.

8. Stock Manufacturers' Marks

It has for many years been the custom of film stock makers to photographically print their names and sometimes other marks in the margins of the films.

The practice appears to have commenced in 1913 with the Eastman Company, who then printed the word 'Eastman' in large "stencilled" letters on one margin, Fig. 19. This style was continued until about the middle of 1914 when the lettering was changed to a smaller style, and a dash was included 2 or 3 frames from the name, Fig. 20. This continued throughout 1915. Thereafter the form was 'Eastman Kodak' on American made film stock and 'Kodak' on British made stock.

I am conscious of the name Agfa on stock first in the early 1920's. Through to 1923 the name was printed in letters with thick strokes and 'A's with flat tops (Fig. 17(a)). From 1924 onward the strokes of the letters are thinner and the 'A's have pointed tops (Fig. 17(b)).

Film marked SEL0 in letters with pronounced serifs appeared about 1928 and continued until about 1933. (Fig. 25).

The mark 'Brifco' appears on film made in the years 1920 to 1925. It usually appears only very faintly. (Fig. 26).

Our illustrations show three forms of 'Gavaert' edge marks:

- Fig. 16(a) is from a film of 1920
- Fig. 16(b) is from a film of 1921
- Fig. 16(c) is from a film of 1923

We have not yet located any film on Govaert stock which is known to be 1922. The same mark as in Fig. 16(c) was used in 1924, but we have so far no information on any later marks until quite recent times.

It may be observed that many of the specimens are on titles. These titles all come from newsreels of events whose dates were easily ascertained quite precisely, so that we can accurately date the film, and relate the edge marks to the dates.

The same method has been applied to dating Pathe stock of the 1920's according to certain figures printed in the margin. The words 'Pathe Cinema France' or 'Pathe Cinema Paris' are followed by a 4-digit number and then by one or two smaller groups of numbers. Consider the first 2 digits of the 4-digit number:

Then:

16	=	1921	23	=	1923	30	=	1926
17	=	1921	24	=	1923	31	=	1926
18	=	1922	25	=	1923	32	=	1927
19	=	1922	26	=	1924	33	=	1927
20	=	1922	27	=	1924	34	=	1927
21	=	1922	28	=	1925	35	=	1927
22	=	1923	29	=	1925	36	=	1927

The above numbers are applicable only to positives. The numbers on Pathe negatives follow a different series which we have not so far related to date.

It may be noted that this series of marks terminates at 1927; the year in which the raw stock manufacturing facilities of Pathe were acquired by Kodak. Thereafter the name Pathe still appeared on the film but not the same number series.

It may be observed that some of the marks are read from the emulsion side of the film, and some from the base side. I have not been able to attach any significance to this.

The National Film Archive, London, has received certain other information, in confidence, from stock manufacturers on their dating codes. It could be useful for other archives to enquire of stock makers whether they are able to supply information about the dates of changes in edge marks. It is to be hoped that any such information which is not given in confidence would be made known to other archives.

Footage Numbers

Under our present head may be put the introduction of footage numbers (Key numbers or edge numbers). As far as I have been able to determine these were first used on the negative film in about 1920. They were thereafter sometimes printed through onto the margins of release prints. Hence any film bearing an edge number, or the image of an edge number, cannot be earlier than 1920. Further, since it was not customary before the introduction of edge numbers to print through the edges, it may reasonably be inferred that any copy (apart from primitives such as mentioned in Section 4) which has been printed on the edge, even if no footage numbers appear, was made after about 1919.

We have considered the possibility of relating footage numbers to date. We have not been able to do this, but have only made very slight investigation which does not eliminate the possibility of finding a relation.

9. Censor's Certificate

In the United Kingdom, censorship of films was introduced at the end of 1912, and it became the practice thereafter for films (other than topical) to have a Censor's Certificate on the front. The first President of the Censorship Board was G.A. Redford, and he held office for about a year. Thus prints with his name on a censor certificate at the front may be deduced to belong to 1913. (In this connection beware of earlier films "re-issued" or duped in 1913). For the rest of the silent era the President was T.P. O'Connor, so that his name gives no help to date the films of the period 1914 onward. However the Board changed its address from time to time as follows:

75-77 Shaftosbury Avenue	1913-1920
167 Wardour Street	1920-1925
80 Wardour Street	1925-1935
Carlisle House	1935-1941
31 Soho Square	1941-1945
113 Wardour Street	1945-1948
133 Oxford Street	1948-1952
3 Soho Square	1952-

This can help to show when films were released in the United Kingdom.

Another such indication from the British scene is given by "British Quota" which was introduced in 1927. Film copies for a while had a 'Quota Registration Certificate' on the front. This was similar in appearance to the Censor's Certificate, and dates the film to the period of the operation of the quota.

Similar variations in such features in other countries may be worked out to provide clues to date.

10. Internal Evidence

I indicate below some examples of how the subject matter of the film gives information about its date.

- (a) When producing a film representing action taking place "at the present time" it seems to have been customary for producers to put the current date on letters, telegrams and the like. This can serve as evidence of date of production. It is necessary to beware of the possibility that the film is representing some earlier time, (or even a later time in some futuristic subjects), but it is not usually difficult to recognise such cases. Calendars, diaries, railway timetables etc. may similarly provide clues.

- (b) The appearance in a scene of a recognisable technical development gives some information of its date. For example, there are people who can recognise makes and models of motor cars and know in which years they were introduced. This information places an early limit to the date of the film. Other things which can similarly give clues to date are railway locomotives, aircraft, radio sets, gramophones, buses, trams, even bicycles and doubtless many other objects.
- (c) Fashions in dress, of men and children as well as of women, is an obvious case of such evidence. Care is necessary to avoid being deceived by the intended portrayal of the dress of some earlier period.
- (d) **Type of subject.** This point may be typified by saying that short 'chase comedies' were very common around 1908, but that it would be extraordinary to find one made in, say, 1926.
- (e) The incorporation of a trade mark into a scene. The purpose of this was to frustrate the illicit duplicating of films, since while it was no offence in law to copy a film, it was an offence to copy the trade mark. Fig. 24 is an example in which the trade mark is cunningly camouflaged among the pictures on the wall. These marks identify the producer, but also give some slight indication of date as the practice ceased when the open market method of distribution ended.

11. Length

After the distinction between sound and silent films, this is probably the next most obvious broad way of limiting the period in which the date of the film must lie. Indeed it is perhaps too obvious to need stating. Nobody made 6 reel films in 1902 and, apart from isolated newsreel items, nobody made 50 foot films in 1928. If the action of a film is substantially complete, and we can be fairly sure we have not just a fragment from a longer film, our cinema history will tell us that the earliest films from 1895 were about 50 feet long; that most were

still only that long up to the first years of the 20th century; that lengths then tended to increase up to about 1,000 feet through to c1910 when 2 reel films emerged; that short films continued to be produced, but that more longer and longer films were made from the war period onward.

12. Characteristics of Producers

Some producers had practices which were peculiar to themselves and serve to distinguish their films. These were things which are not classifiable under any of the above headings, and I note some of them below:

Hepworth had four such features of which I am aware:

1. In his earliest days he cut the ends of his negatives in a concave curve. The image of this cut may be seen on complete prints (Fig. 18).
2. When he began to make films which were not all one continuous shot he placed a few black frames between the shots.
3. Later, about 1907, some of his films have a black spot over the join between scenes (Fig. 38). This was made by punching a hole in the negative.
4. Later still from about 1910 he used a great many fades in and out between scenes. These fades were very short; being only about 6 to 8 frames long.

Many of Paul's early prints have a peculiar piece of black spacing (or lead) printed on the ends, in which the margins and frame lines are transparent (Fig. 21).

The films of the American Biograph Co. before 1913 had the black image of part of one perforation of the negative on each side of each frame, appearing between the perforations of the positive. (Fig. 27).

III. CLUES TO DUPING HISTORY

It should be stated at the outset that it is not always possible to find evidence of the number of stages of duping which have taken place between the original negative and the copy in hand. It is just that there may be evidence. I will try to describe what the pieces of evidence may be.

In an original camera negative the picture area itself is normally the only area to receive any exposure. An original negative therefore normally has completely clear film apart from the picture itself, and any stock manufacturers marks. In the making of a duplicate negative, it is first necessary to make a positive from the original negative. As described above in Section 3, the positive printing step may introduce characteristics of its own. When from this a duplicate negative is made, the image of these may appear on the duplicate negative. If a continuous printer is used there will be no printer aperture images but the frame lines are likely to have a slight density instead of being quite clear. It is now a common practice to expose the edges of the film when printing. This is done primarily to copy the footage numbers for editing purposes, but it is also frequently done when making duplicating material and release prints and results in any other marks on the edge being imaged onto the new copy. The marks referred to are stock manufacturers names, and any random marks due to wear or damage. These marks are black on the film on which they originate but are then imaged as white (or transparent) on the first copy from it, and black again on the next stage of copying, and so on. It should be remembered that the film stock of each generation is likely to have its own stock manufacturers marks so that the latest copy may have, in addition to its own marks, the image of the marks originating on previous generations. It may be possible to distinguish and count these, sometimes fairly easily, sometimes only with difficulty, if at all.

Another feature which may appear on the edges of films and be imaged into subsequent copies is light change notches. These are not always of the same size or shape, and not always in the same position. It may be possible to infer that there have been certain stages of duping, from the presence of the images of notches of different kinds.

If film did not shrink, as it does in both length and width, it would be more likely that when a copy was made of a film the perforations of the original would co-incide exactly with the perforations of the copy film at the moment of exposing the copy. In fact as film shrinks in both length and width the perforations of the original often lie elsewhere than on the perforations of the copy, and when the printing light passes through the perforations of the original, an image of these, or some part of them, is produced on the copy. If the original film is shrunk in width the images of perforations of the original may appear beside the perforations of the duplicate where the extreme left or righthand side of the picture itself should be. Shrinkage in length may cause perforation images between the perforations of the duplicate. If the duplicate then shrinks and a further copy is made from it, a further set of images of perforations may appear. It is sometimes possible so to distinguish the occurrence of several generations of duping by this means.

There are many occasions when none of these pieces of evidence is available. One may look at the copy in hand, seeking any feature which could not have originated in the copy in hand but must have been copied from some previous generation. Such features are, the images of joins which may appear on the picture area, or within frame lines; images of scratches which have occurred on previous stages and have been imaged in the copy in hand. It has been mentioned in Section 3 that printing on a step printer will image the shape of the printer aperture onto the copy, and it may be possible to observe from close examination of the copy in hand, through a magnifying glass, that there are present the images of one or more printer apertures detectable within or about the frame line.

An inference that some duping has taken place may sometimes be made when none of the above evidence is available. One may have (for instance) a negative of a subject which must have been photographed in, say, 1912 because it depicts a unique event which occurred then, such as a well known news event. If the negative in hand has footage numbers (which were not introduced until 1923) then we know that this negative cannot be the original, albeit we are unable to find any of the indications mentioned in the preceding paragraphs.

Features of film stock which may help in the same way as footage numbers mentioned just above are:

1. Anti-halation backing (gray back) was introduced in duplicating negative stock about 1930.
2. Lavender coating on stock designed specially for duplicating positives also about 1930.
3. From about the time of the 2nd World War the grain of duplicating negative and positive stocks was made finer. One may be able to infer, from the texture of the emulsion surface, that a copy is later or earlier than about this time.
4. The general introduction of safety film in the early 1950's is another, more recent, and very obvious such landmark.

Obviously a negative of a film of an early event which is on a modern type of safety stock must be a duplicate negative.

An indication of duping may be given by the obliteration of a feature which one knows to have been present in the original, see Fig. 40(a) (b), showing an original and duped print of a Biograph film of 1912. In the original, Fig. 40(a), there is the characteristic single black perforation image at each side of the frame. In the duped copy, Fig. 40(b), these have been masked out.

With each stage of duping, whatever else occurs, there is some loss of quality, often details in the highlights or shadows, or both, are lost. There is also an increase of grain. These deteriorations can be extremely slight with modern duplicating materials and methods, but in the earlier years of cinema they were very significant, see Fig. 41(a) and 41(b). These two specimens, one a print from original negative and one from duplicate negative of about 1916, have received identical processing for purpose of reproduction for our illustration. It is obvious which is the duplicate. Indeed one may sometimes be quite sure, from the very lack

of quality, and without an original to compare with that some duping has occurred. This is admittedly a somewhat nebulous thing on which to base a conclusion, but can be of value.

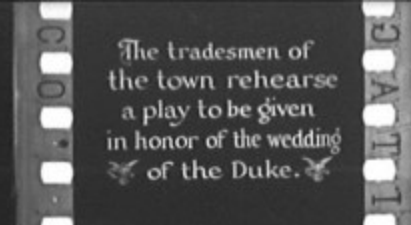
The above are all just some clues, which may be available. One must look for any of them, or any combination of them, and may then be able to determine whether a film is original or dupe, and if a dupe how many times duped.



1



2



3



4



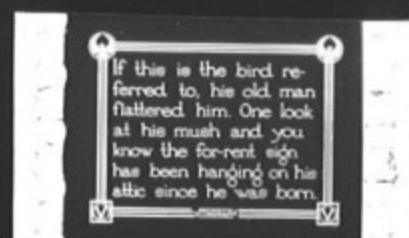
5



6



7



8(a)



8(b)



9(a)



9(b)



10



11



12



13



14



15



16(a)



16(b)



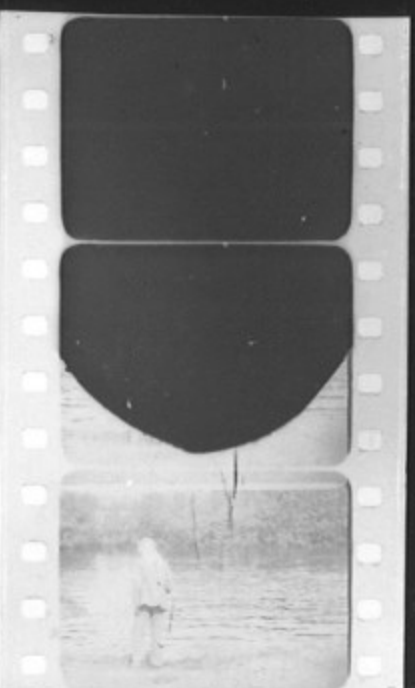
16(c)



17(a)



17(b)



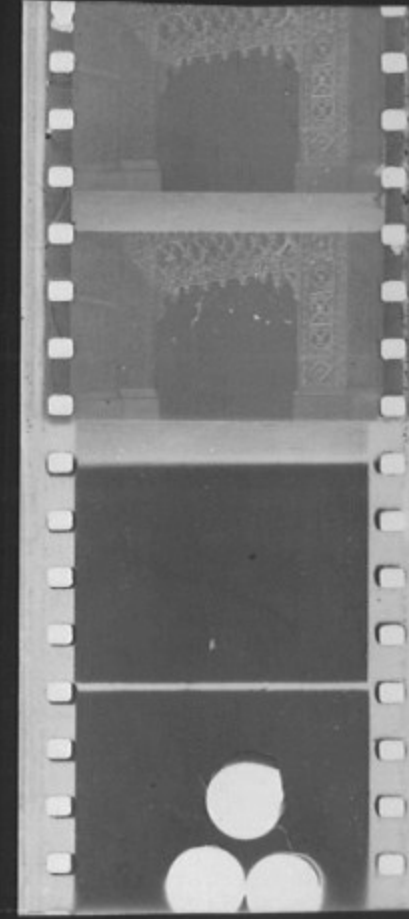
18



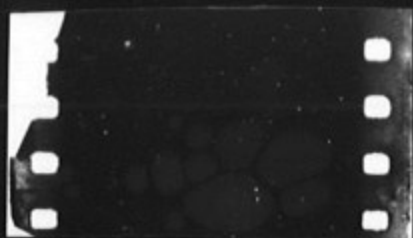
19



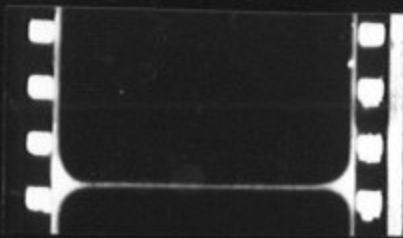
20



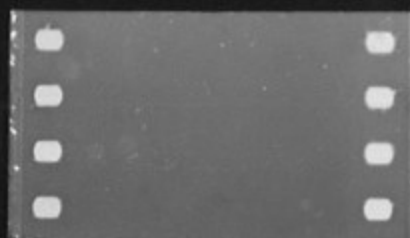
21



22(a)



22(b)



22(c)



23



24



25



26



27



28



*K
C

29



30



31



32



33



34



35



36



37



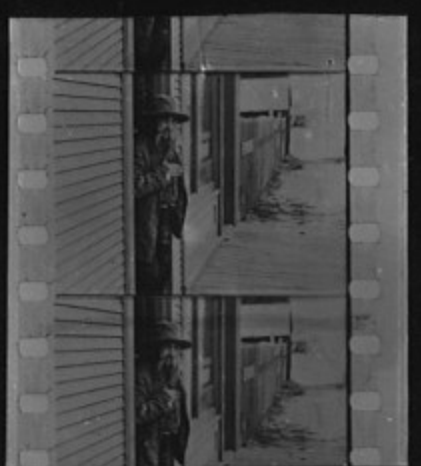
38



39



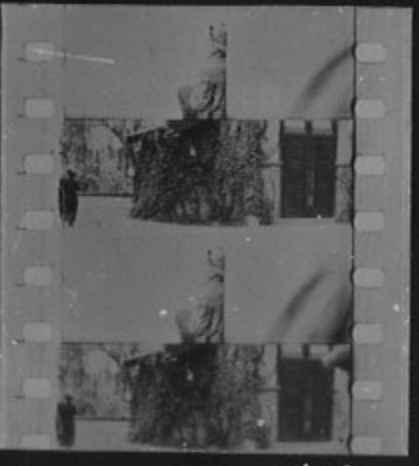
40(a)



40(b)



41(a)



41(b)