

WE MAKE THE MOVIES

Edited by

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The camera on a camera boom, operated by man power, and perched on a truck to achieve greater height. The truck can be moved forward on its tracks so that the camera can make a "boom shot" or a shot swooping around the set in photographing this dance sequence from "Cain and Mabel." (Courtesy of Warner Brothers Pictures.)

consisting rather of the gradual but continuous improvement of each of the units comprising the chain of equipment from microphone to theater loud-speakers. The ultimate aim of the recording engineer is to secure such a degree of realism in recording and reproduction that sound from the screen appears to be identical with the sound which originated during the photographing of the scene.

XIII

CUTTING THE FILM

Anne Bauchens

MANY people ask me what film editing is. I would say it is very much like a jigsaw puzzle, except that in a jigsaw puzzle the little pieces are all cut out in the various forms and you try to fit them together to make a picture, while in cutting films you have to cut your pieces first and then put them together.

I think this can be more clearly outlined if I start at the beginning of our work on each production. What I outline here, however, is not a set rule for all studios, as no two studios work exactly alike. Besides, different directors and producers work differently with their editors. Some directors stop work on a picture after the last scene has been shot. Then the producer takes the responsibility and does all the editing with the cutter or editor in the projection room. Other directors work very closely with the cutter and follow the film through until after the preview. A few insist on cutting their own pictures. But they are very scarce.

In most studios a cutter or editor, as he is sometimes called, and an assistant, are assigned to the picture about a week before production starts. In some studios, a first and second cutter are assigned, the second cutter being qualified to make a rough assembly of the picture as well

as doing the work of an assistant. The first cutter acts in the capacity of an editor.

A script is given to the cutter which he or she reads and studies to get a general idea of the type of story: dramatic, comedy, musical or spectacular, each of which is handled in a slightly different manner.

Generally the editors work very closely with the producer and as much as possible with the director. In some studios the editor stays on the set during the shooting. In that way he keeps in close touch with the director and has a better opportunity of learning why he shoots his scenes the way he does. Sometimes he makes suggestions if he feels the need of additional close-ups to help in editing. He is always watching for places where protection shots might be needed. These are shots taken from different angles which cover the action so completely that no retakes will be necessary. Protection shots are also used in editing to give variety to the telling of the story.

At the beginning of every scene a slate is photographed, on which the number of the scene to be shot, the production number and the cameraman's name are written. The same numbers are written on the sound track, so that the picture and track can easily be identified. When the scene is ready to be shot, after it has been slated, a mark of synchronization is put on the film in the camera and on the sound track in the recording room, so that the picture and sound will be in perfect synchronization. This *sync* mark, as it is called, can be made either by punching a hole in the picture and track, before the scene is shot, or by having the assistant cameraman clap two pieces of wood, or a *clapper*, together, so that the picture and corresponding sound are in sync at the beginning of the scene.

During the shooting, the script girl keeps an accurate account of each scene as it is made, its number slated on the film, the script scene to which it belongs, the number of cameras shooting (if more than one camera is being used, each with a different lens, to record long shots, medium shots and close-ups, simultaneously), the footage, a description of the scene and the dialogue. At the end of the day's shooting, a copy of the above is sent to the editor to aid him when he receives the rushes or daily. This daily is then sent to the laboratory, where it is developed and a positive print is made of both the picture and sound track. The scenes are then assembled on reels, the picture on one reel and the sound track on another. Since the motors of the camera and recording machine are interlocked, once the beginning of a shot is put in sync the whole film will be in sync also. The laboratory need only start the two reels of picture and track at the sync marks, and the rest of the film is automatically synchronized. The following day the film is sent to the cutting department with a laboratory report on the number of scenes included.

At the end of the shooting day the director, producer, editor, cameraman and sometimes the principal actors, assemble in the projection room assigned to them and run this daily, which comprises the scene shot on the previous day. I might explain here that sometimes in difficult scenes more than one camera is used, each lined up to get a different angle of the scene: one a long shot, another a close shot, perhaps a third from the side and a fourth from above. While three or four different shots are made of this scene, only one sound track is necessary, as the dialogue and action will be the same for all the shots. When the reels of daily are lined up for projection, each of these

shots, which have the same sync marks, are placed on separate reels. But all of them correspond with one track. Each scene has the same slate number at the beginning, but a different letter. For example, if the scene number is 23, one camera will use number 23A for a long shot, another 23B for a medium shot, and so forth. When these dailies or rushes are run in the projection room for the director, 23A will be run first with sound track number 23. Then, at the end of the projection, the operator will rewind the reel of track and run it with 23B, and so on, for as many takes as there are of this one scene.

The director then selects the take he wants. He can also see whether a scene could be improved by adding extra scenes or by retaking it. If this is the case, he makes the additional scenes on the following day.

The film is now turned over to the editor and his assistant, who takes the reels of the daily to the numbering room. There are generally two numbering machines to each room. The assistant puts the picture on one machine and the sound track on the other, threading it through as you would a projecting machine. He takes as his starting point the sync mark on the first scene of the reel, then fixes the number dial on each machine at 000 and starts the motor running. Automatically, every foot is numbered at the edge of the film until the end. The first foot from sync would be 001, and the last, if there were 800 feet on the reel, would be numbered 800. This numbering system always enables the cutter to keep his scenes in sync, so that the words will be spoken at the split second that an actor moves his lips to speak them.

The assistant cutter then breaks down this reel of scenes on to what is called a *flange* or split reel, which is put on the *rewind*, or metal support for the reels, on the cutting

bench. When he gets to the end of a scene he cuts it off with a pair of scissors, and by reversing the rewind he takes it off the flange in a roll, marks the slate number on the film, and puts a rubber band around it to hold it in place. After the daily has been completely broken down into rolls of film in this manner, it is usually lined up on the editor's bench in numerical order. The editor is now ready to start work.

One of the mechanical aids to the cutter is the *Moviola*, which is similar to a projection machine only much smaller. The picture is seen through a magnifying lens on one side, and the sound is heard on the other. The picture and track can be run together or separately. By using the *Moviola* the editor can be sure his cut on the sound track is right, and that he has not cut into the middle of a sentence. Similarly, he can be sure of not cutting into a movement which should be completed, and of matching action when going from one scene into another.

He assembles the scenes according to the script. He does not select the various shots merely to give variety to the picture. Each shot expresses a different phase of emotion or interest, depending on the type of story. Knowing this, he now tries to tell it by using each of these shots as effectively as possible. For instance, a long shot is an establishing shot to give the geographical location of the sequence. It could cover a battlefield, a city viewed from a hilltop, or a street or café. You might use ten feet of it, or again, you might use twenty-five or fifty feet, depending entirely on its beauty and how long you feel it will interest your audience.

Your next cut depends on where the interest in your story lies. Perhaps the camera has moved closer to any of the above scenes or closer to a group of people, so that

you would use a semi or medium shot. If your interest is focused on a group of people, a medium shot will help the audience to see distinctly what they are saying and doing. As your story grows more intimate you use closer shots, perhaps of two people or perhaps a large close-up of one of them, to accompany an interesting line of dialogue. If an important thought is to be registered you might use a close-up just of the eyes or the hands or any object which you want the audience to see clearly, such as a flower or a pistol. Then you might cut back to a medium shot of several people reacting to it.

You must always keep the audience's eyes focused on the main point of interest. There is no set rule how or when to use these various shots and angles. You know from experience that you cannot express a deep emotion or tell an important thought in a very long shot. It is not always necessary to tell it in a close-up of a face, but you should be able to see your character and know what he is thinking.

Much has been said about how directors waste film and shoot entirely too much which is never used. This may be true on rare occasions, but generally all this film is necessary. Most scenes are shot overlapping each other, so that there will be the same action on your group shot as on your individual close-ups. You can never be sure exactly which of these will best tell your story until you have cut it one way and then, if it does not look right, tried it another. The director who protects his picture in this way generally turns out a better picture than the one who is conservative and tries to cut his picture while shooting his scenes.

I have often been asked what methods are used in cutting different types of scenes, such as dramatic and com-

edy scenes. I cannot say there is any particular method or rule for cutting. Sometimes the length of the scene, sometimes its action, creates the tempo. My opinion is that we handle the feel and tempo of the picture entirely by instinct and feeling, and not by any set rule. We know that an emotional and a comedy scene must be cut differently. In a comedy you can cut back and forth much more often, since comedy is played in a much faster tempo. But you must be careful not to kill a laugh by cutting away from it too soon. For an emotional scene you use a much slower tempo, particularly if it has been well acted and directed. Sometimes you can hold an emotional scene for quite a long time on the screen.

Drama may be expressed in many different ways. When the suspense of the story is great, you can use many kinds of cuts to play it up and postpone the climax for a long time. For example, a *montage* might be used to heighten the suspense. This is a fast-moving group of short scenes, some symbolical, some real, which, when combined, represent some emotion or event. In *The Emperor's Candlesticks* a montage was used to hold the suspense until the final unraveling of the plot. Here were two spies, each of whom had an important document hidden in one of a pair of candlesticks, and neither knowing of the other's secret. The candlesticks are stolen, and they both set out to find them. For suspense, the candlesticks have been pawned. Each spy learns the address of the pawnbroker and meets there only to discover that the candlesticks have been sold to a collector. From then on the story follows both characters in a search for the missing candlesticks. These scenes might have been monotonous, and lacking in suspense, if the cutter had not made a montage of the following shots: Trains tearing through the country, wheels

of trains, names of hotels, faces of clerks behind hotel desks shaking their heads in negation, shots of a man and woman's feet walking rapidly along streets, and shots of the present owner of the candlesticks, always a jump ahead of the spies. This montage was carried as long as the suspense held. Then, when the man finally locates the missing pair being auctioned off at an antique dealer's and is about to buy it, he is intercepted by the woman spy, who appears and tries to outbid him.

Battles are often successfully presented by using montage. Here the horror and thrills are told more through suggestion than by actual scenes, such as flashes of faces in agony, feet stepping into mud, gun flashes and the wheels of cannon. The sound here often supplies as much of the psychological effect as an actual battle scene.

The process of cutting a film involves a number of mechanical steps. You begin with a *leader* or short strip of blank film, one for the picture and one for the track, marking on it the number of the reel you are cutting. Then you cut in your first scene, possibly a long shot, with its corresponding track, always running it through to make sure it is in sync. You attach the beginning of the cut film to the leader with an ordinary paper clip. Then, when you are ready to cut in your next shot, you carefully examine the scene to be sure you are not cutting on a word or bad movement. You mark the place you want to cut with a grease pencil. Then you take the scene you have decided will follow this and match its action as closely as possible with your last shot. If it is a long shot of one character sitting in a chair and another turning away from him, you must be certain that your second shot, which might be a medium shot, matches the action of the man's

turning. Otherwise the transition between the two shots will be too jerky.

The pieces of film which are cut away as waste are called *trims*. These are hung on small nails in the bin beside your cutting bench. The bin is a wooden or metal box, about six feet long by three feet wide and about four feet deep. A narrow wooden piece, about one and a half inches wide, is fastened to each end of the bin, and extends above it about three feet. A rack is formed by a crosspiece which joins the two ends, forming a frame. Fine hooked nails run along both sides of this rack, on which you hang the ends of the trims, letting the balance of the film fall into the bin.

After you have finished a sequence the assistant rolls up these trims, marks them for identification, and puts them in metal cans which he then files away in special racks. When we want to make changes or use any part of the scene we have not already used, or if we want to lengthen a cut, we can always find the trims quickly. Now, you fasten the long shot and the medium shot together with a clip, in the same way that you fastened the long shot and the leader, and continue this process with each cut until you have assembled a full reel of scenes.

The assistant takes the reel to the splicing room and splices each scene together with film cement. In making your cuts you have allowed exactly two *sprockets*, or half a frame, over the end of the picture and sound track and the beginning of the next scene and track for this purpose. The two ends are placed on the splicing machine in the grooves made for it, and the emulsion scraped off one side with a blade. The assistant puts a little cement on the scraped edge with a small brush, and quickly clamps down on it with the side of the machine holding the other scene.

He holds down the machine a second, then releases it and a splice has been made. He must be careful to see that the frame line of one scene exactly fits the frame line of the next. Otherwise, when the film is projected, it will be thrown out of frame. He repeats this process all through the reel at every cut, replacing the clip with a splice. This work print, or *rough cut*, as it is called, is then ready for projection. We generally run it through alone first, to be sure that every scene is properly synchronized and to see whether we can improve any of the sequences. Sometimes we must recut certain scenes before showing the film to the director and producer. Then, after recutting it, we run it for them in the studio projection room, and they give their criticisms and suggest any changes. At this point the director expresses any effects he would like to accomplish through the editing. The conference over, we take the film back to the cutting room, and again go through it and recut it. We do this until all agree that the picture feels right. Now it is ready for the final stages before being previewed in a local theater.

The various devices used in films for bridging time lapses or marking transitions between scenes, such as fades, dissolves and wipes, must be inserted here. A fade-out is used at the end of a sequence to denote a lapse of time or a complete change of thought. It is made in the laboratory by a chemical process used on the negative, which literally fades the scene off the film at the place indicated by the cutter, and leaves the film black for whatever footage we may require. This same process, when used for the beginning of a sequence, is called a fade-in. Here the process is reversed: the film starts as black and clears until the image becomes distinct. The two processes are always used

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together: when you fade-out on a sequence, you always fade-in on the following sequence.

Dissolves, wipes and all trick shots are made by the special-effects department. In a dissolve, the scene you are entering is blended over the scene you are leaving. This may run from four to twenty feet, depending on the desired effect. The majority of dissolves are from four to six feet long. To illustrate: you might start with a full figure of Cinderella dressed in rags and dissolve over this her image dressed as a princess. There would be a few feet in which both figures are seen simultaneously, but the effect would be that of the princess emerging from the poor girl.

A wipe or wipe-off is a device used to shift action from one scene to another or from one location to another within the area of a single frame. For instance, a person may walk out of a scene, moving from left to right. In the next scene, he might enter a room far from the last. But he would be moving in the same direction, because the special-effects department would give the effect of the first scene wiping out from the left to the right and the second scene moving in in the same direction. If a person is going up in a building, the wipe would move from the bottom of the screen to the top, or vice versa if the person were coming down. There are many kinds of wipes, *fan wipes* and *angle wipes* being two of the most common. They are all made by using masks in front of the film. Any other trick shots would be made by the special-effects department.

We always have printed titles on film of whatever effect, such as a fade, wipe or dissolve, we wish to cut into the picture. These are temporarily spliced into the picture at the designated places on the film. At this point,

also, any *inserts*, which are objects used to symbolize a thought or idea to help express the story, such as letters, newspaper clippings, clocks, etc., are cut into the picture. When we feel that our working print is really right, and all effects have been made and inserted, we send the film to the laboratory where the negative is cut to match our working print. Now a new print is made from this negative, which we call the *feeler print*.

Now we are ready for the dubbing or re-recording. Here we add any sound effects which were not included when the scene was shot, either because we did not have those effects or it was better not to record them at the time. Music is also added at this point to whatever scenes are considered necessary. In some studios there are sound cutters, who do much of the work of assembling the various sound tracks. In other studios the editor does this work himself.

Perhaps a battle scene might best illustrate a difficult phase of dubbing, such as the Battle of Acre in *The Crusades*. When the scenes were originally made, only the dialogue and a few minor sounds were recorded. This track was then synchronized with the picture. Now the following sounds were added: the fire balls whizzing through the air and finally hitting some object or person, the creak of the heavy wooden war implements, the cries of the men when hit, the screams of the horses, the hiss of hot oil being poured down the walls, the sound of the arrows being shot and hitting, the sound of men's feet and horses stampeding, and music through the entire battle. Eight separate tracks were necessary for this re-recording. Each of these tracks is then taken to the sound department to a separate sound-recording machine or dummy.

In the dubbing or re-recording room a crew of about

four men or more work at a desk where the mixing is done. The editor, sometimes the director or producer, and the musical director assigned to the picture also work with the sound men. In this room the picture is projected on a screen and a sound horn conveys all these tracks simultaneously. The sound expert works his various mixing dials, increasing or subduing the sounds until a general agreement has been reached. This combination of tracks is now re-recorded on to a master track, which is the track that goes into the finished picture and is heard by the audience in the theater.

A simpler illustration of re-recording is shown in the musical comedy *This Way Please*. A roof garden and penthouse on top of a theater were featured in the picture. Some of the scenes were photographed on the roof of a building in Los Angeles, to give the feeling of height. All dialogue recorded in these scenes naturally included the traffic and street noises from below, and these could not be eliminated. A replica of this roof was subsequently built on the studio stage where the musical numbers were made, which could not possibly have been shot on the roof of the downtown building. When the picture was cut and ready for dubbing, the track containing the street and traffic noises was brought in. The songs and music could be given a much clearer recording by this method, and the downtown noises became secondary. Only three dubbing channels were needed for this mixing.

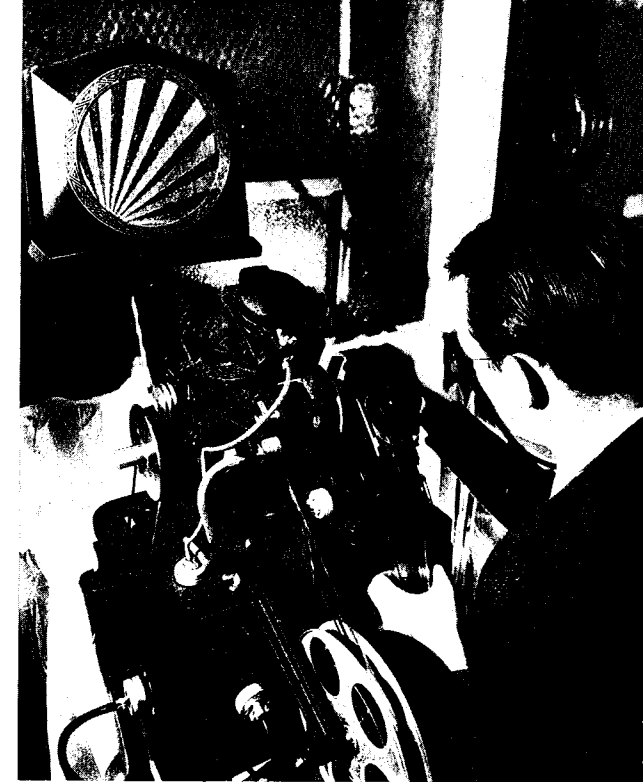
When the sound has been re-recorded on to the master track the negative is recut using the new track, and a print is made at the laboratory which is now ready to run at the theater for a preview. This is called the first preview print. Some of the executives and technical staff, including the cutter, go to the preview and watch the audience

reaction to see where the picture interests and where it drags, where the comedy is good and where it fails to get a laugh.

The average picture runs in length from about six thousand three hundred feet up to twelve thousand feet, which has been selected from a total footage of about a hundred thousand feet. A light comedy or drama might run about six thousand feet. The more dramatic or spectacular story or musical runs on an average of between nine thousand and ten thousand five hundred feet. Very few run higher. There are exceptions, of course. *The King of Kings* ran twelve thousand feet, *The Sign of the Cross* about eleven thousand. At a sneak preview we will show a picture which should run about six thousand feet in about seven thousand feet, and judge what to eliminate by the reaction of the audience.

After the preview a conference is called and the picture is discussed, with the audience reaction in mind, to see what eliminations should be made and how the weak points may be strengthened. Sometimes it is considered beneficial to retake some of the scenes, but that is only in extreme cases. If this is necessary, the cutter goes through the picture again and prepares it for a second preview. Few pictures are previewed more than twice. Occasionally, however, the producer may feel it necessary to have more than two previews, at entirely different locations, usually in small towns.

Eliminations after the preview may result in that phenomenon known as the "face on the cutting room floor." Sometimes a very good character actress or bit player may just happen to be in one or two sequences which need to be eliminated because they are not sufficiently interesting to include in the picture. Sometimes the perform-



A cutter runs the picture at right, and the sound track at left, through the Moviola. The round disc over the picture track is a magnifying lens. The sound comes through the loudspeaker above. (Courtesy of Metro-Goldwyn-Mayer Pictures.)

Two film cutters examining the sound track before splicing it.



ance of an actor or actress is very bad; then we use every possible method to cut him or her out of the scene. This can be done either by using close-ups of other characters in the scene or by using any shots in which the actor did not appear. Or we may try to cut out portions of the scenes which were bad. Our method depends entirely on how much material the director has given us. This makes me repeat that the director who *overshoots*, or takes more material than would seem necessary at the time, stands a better chance of having a good picture in the end.

Quite often we find that a sequence or scene is much too talky or too long for the phase of the story it should express. If the director has shot a number of different angles and individual close-ups for the scene, it is much easier to eliminate lines and words of a sentence from the sound track. If we want to cut on a close shot of a group of people, we can cut to a longer shot further down in the scene, and by this means we can drop whatever lines are superfluous. However, if the action has changed much in that interval, such a cut is bad, because it will not match the previous scene. For example, if one character has crossed to the other side of the room during the eliminated portion, the first scene of the whole group followed by the second will give the effect of a jump. If the director has provided us with close-ups of the different characters, we can cut to a close-up of a character either listening or reacting to a line spoken just ahead of the one we want to eliminate. In this case we can either jump our sound track to where we again start the dialogue, after the cut, or put a piece of silent track (which every cutter has on hand) over the close-up, and then, when we go back to our group shot, pick it up at whatever point we wish.

Sometimes we find that an actor has said one incorrect

word in a sentence, or that a line would sound much better if a word were changed. To remake the scene would be costly and take too much time. Instead we have the actor who spoke the line make a new recording with the changed word. This is called a *wild track*. Now we do not replace the entire sentence, because this would not synchronize with the scene. Instead we merely replace the word. It is now impossible to detect the change.

This became necessary in a scene from *The Plainsman*. A crowd of people were haranguing Calamity Jane, because they felt she had betrayed the soldiers' route to the Indians. One man spoke the line, "Only eight men out of forty came back." This scene was made before the battle. After the battle was shot, it was decided to have eighteen men survive instead of eight. To remake the scene with the crowd would have cost many thousands of dollars. So the actor who had spoken the line was called in, and he reread it as eighteen instead of eight. At first we thought we could merely add the "teen" to the original eight, but this was impossible, as the space on the track was limited. We finally cut the words "eight men" from the original track and replaced them with the word "eighteen," so that the line now read, "Only eighteen out of forty came back." In another instance I added the letter *s* to the end of a word which the actor had forgotten, because it changed the meaning of the sentence.

And now that the editor's job is over, he hopes that he has told the story as effectively as possible, within the framework of the script, so that the audience will be utterly unaware of his work. The story should flow smoothly and the various shots should match perfectly. Unusual angles should not be employed merely for their own interest, unless they are effective in telling the story. The

moment the audience is aware of the various cuts and devices used, the story will suffer.

We must reinterpret the material given us by the director so that the strips of film will assume a rhythmic flow. Our work is highly individual; no two editors work alike. We must rely on our instinct and previous experience to create the pattern. We must maintain the whole greater than the sum of its parts. If the film is poorly cut, the whole sense of the story is lost. If it is well cut, the effectiveness of the story will be considerably increased and it will possess a new unity which would otherwise exist in the director's mind alone.