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# Shadow puppets

Chuck Gamble

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**MASTERS THESIS**

**"Shadow Puppets"**

**by**

**Chuck Gamble**

Submitted in Partial Fulfillment of the  
Requirements for the Degree  
MASTER OF FINE ARTS

MFA COMPUTER ANIMATION PROGRAM  
SCHOOL OF PHOTOGRAPHIC ARTS AND SCIENCES  
ROCHESTER INSTITUTE OF TECHNOLOGY

April, 1992

Jack Slutzky, Chairperson  
School of Fine and Applied Arts

Erik Timmerman  
School of Photographic Arts and Sciences

Chris Comte

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**"Shadow Puppets"**

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Chuck Gamble  
April 12, 1992

s h a d o w   p u p p e t s

by  
c h u c k   g a m b l e

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## G E T T I N G I T

So, I needed to start my thesis. This was my chance to put twenty-one years of schooling to use! No more assignments or homework. Total freedom. "Make a movie," they said. And that was all. Of course I wanted to do something meaningful. Something that had personal value yet expressed some of my ideas and beliefs to the viewer. The first thing I thought of was the short film I did last year: "PINK TRUMPET." That grand and glorious statement about life and living life! The sum of my sentiment on display for all to see! No one got it. It was so obvious! No one got it. What was the problem? I understood it. It all made perfect sense to me. I got it. Could it be that "PINK TRUMPET" was too personal? Symbols and motion and colors that only I could understand? Sure. So I learned something. A personal film was worthless if no one understood it. That doesn't mean that something has to be understood if it's to be considered valuable. Random, ambiguous forms are great for creating moods and emotions but it's difficult to put concrete meaning behind them. If you want to communicate something specific, it must be placed in a structure that is generally discernible to most viewers. However, you also need to avoid being overly blatant, thereby depersonalizing the film. I don't want to force a totally obvious statement onto the audience thus taking away the individual

interpretation because that would relieve the viewers of thinking about what they saw. If they didn't have to think about it they didn't have to personalize it. If they didn't personalize it they wouldn't understand it. If they didn't understand it they wouldn't learn from it. They had to get it.

## S T R U C T U R E

I decided that my thesis film would represent my philosophy of life. That should be easy since I've known myself a long time and have a pretty good idea about what I think. So how do I take personal, internalized experience and reveal it to the public without being either too obscure or completely blatant? I need to be both subtle and direct while I guide the viewer into seeing what I see. I conclude that a standard narrative form would be best. A story. Everyone likes a story. Stories are comfortable. They start at the beginning and tidy up at the end and have all that stuff in the middle. Even if the viewer doesn't catch the message I intend them to see, they at least have the narrative to think about. This gives them the opportunity to discover their own meaning of the film. A narrative is formal and familiar. The viewer would remember it. A story would be good.

## F I R S T T R Y

My first attempt at actually writing the story fails. After two weeks of agony I came up with a few sentences about this little, unhappy guy. All my thoughts about myself and life amounting only to one gloomy paragraph? It couldn't be true! I'm a happy guy. I'm optimistic. The magnitude of my thesis has got me frustrated and angry. The opportunity to have total creative freedom after years of guidelines is intimidating. I'm not relaxed. I need to approach this thing from the peripherals, not head-on. So, I start over. I put down random words and phrases that apply to my thoughts. No structure or framework, just the natural form of ideas dripping onto the paper. This seems to work. Over the next week or so I come up with a compilation of drawings and scribbles that begin to reveal a common theme. A theme about the suppression

of creative freedom and the effort to overcome that suppression. I have a direction and I have inspiration. Now I can finally start writing my story.

## " T H E S C R E W "

"There's this little guy who builds a flying machine from the discarded junk he finds in the city dump. The town folk hate him because he's always picking through their garbage and because he seems to be generally happy while they are always miserable. He builds his flying machine in hopes that it will carry him away to a better place. However, his creation doesn't work because it's missing one vital part...a screw. To reach the freedom he craves, the little guy must find the screw among the infinite piles of garbage, and escape the mob of angry town folk. He does. At the last minute he finds the screw and flies away to a far off land." So that's it. That's my thesis story. It's approved by my committee and I'm ready to go. When I actually begin working on my project something happens. I decide It's not right. It's kind of a cute little story but it doesn't really express what I want it to. I work with it for a few weeks hoping to correct the problems, but I never really define what the problems are. I can't. I don't know. I start designing characters hoping it will inspire or direct me to resolve whatever's wrong with the story. I even storyboard the whole thing to test it visually. It still isn't right. The feedback from my thesis committee gives me a few good things to think about but it still doesn't come around to my satisfaction. Then, one night, while driving home from RIT at 2:30 in the morning, I realize what's wrong. "THE SCREW" is about how I've felt in the past two years at RIT. Struggling to retain my creative edge while being bogged down by education. About how I've been unhappy because I was being buried by external situations that didn't allow me to be me or to do the things I wanted to. These were situations that arose with my starting graduate school. I had thought being a grad student would allow me to focus creatively on one thing without the outside intrusion of "education." Reality turned out to be the opposite as I found myself struggling to be creative amid the quicksand of computer programing, liberal arts, financial aid and the registrars' office. That



doesn't mean I don't like school, I love learning and going to school, but it wasn't what I expected. RIT is a great place, but it put a real damper on my imagination. I need time to relax for me to think creatively and allow my ideas to flourish. I didn't have much of that in the past couple of years. I thought about the two film ideas I've had while at RIT. "PINK TRUMPET" - about rediscovering the childlike state of mind buried within everyone, and "THE SCREW" - about escaping from the clutter of modern life to release creative freedom. These are both strong subjects that affect my life, but there is something they both have in common. Something deeper. Something more comprehensive. Not gained from recent experience but rather gained from my whole lives' worth of experience. I wanted my thesis to be about the philosophy of my entire life, not my philosophy of life over the past two years. I needed to find that link. The binding force behind my ideas. The missing screw that would let my machine fly.

## H A P P I N E S S

"THE SCREW" gets thrown out. I start over a second time. Looking over my list of scribbled thoughts and phrases once more, I begin to trim it down. Several words are immediately erased because they deal strictly with RIT related feelings. I dump a few more because they seem a little too personal to convey. I now want a more general viewpoint. One that can be applied to everyone and understood by everyone. A few more cuts and I'm left with one concept. "Make your own happiness." That's the one. That's what I've really wanted to say. Everyone is responsible for their own contentment. Creatively, mentally, in life, love, school, and work. Despite the forces that oppose you, you can be happy. A combination of all the things I believe put into one simple sentence. I have my theme. I'm happy.

## S E C O N D T R Y

I now start another list of words and phrases focused more on my new theme. The list forms quickly and I start thinking of the actual story. I want to show someone suffering a traumatizing event and yet recovering by strength of spirit.

Internal happiness. I also want to include something about artistic freedom. With that general theme I start to sketch ideas for characters and situations (see appendix D). Out of these scribbles comes the inspiration for my final story. One of my drawings is of a man with his hands locked in a box. That's part of what I want to express. The character symbolizes the restriction of creative expression. I now need to build the traumatic event that will demonstrate the character's ability to conquer any situation with his internal strength. I write the story.

## " S H A D O W P U P P E T S "

"A factory pumps smog into the sky. Inside the factory the workers punch buttons, pull levers and move about in a robotic fashion. All except one. One worker whistles while he works. Eventually the time bell rings and the workers begin filing into a line which exits out of a single door. As they leave, a metal box is locked onto their hands. Outside the factory the line moves slowly down the street to their apartments. The whistler hurries past the others and quickly enters his apartment and closes the door. Once inside, the hero takes a hidden key from beneath his mattress and unlocks the box from his hands. He reaches up and unscrews the single light bulb illuminating the room. Everything goes black. Suddenly a flashlight clicks on and the grinning hero is illuminated in the beam. He arranges the light on the floor so that it shines onto the wall in front of him. He then begins doing shadow puppets. His smile grows with each new creation. Finally, he does a simple bird. As he makes it fly within the circle of light a peaceful look comes to his face. Then, suddenly, there is a pounding on the door. A huge figure bursts into the room, the light from outside flooding in behind him. The hero vibrates with fear as he realizes he's been caught with his hands out of his box. The figure moves to the hero and pummels him into unconsciousness. When the hero wakes he finds his hands are again locked in the metal box. He sighs with despair for an instant but then sees the key laying in the shadows next to him, just out of the beam from the still glowing flashlight. He picks

up the key with his teeth and joyfully unlocks the box again. As it falls a look of horror comes over his face. All his fingers have been cut off! He has nothing left but stubs. He stares at his hands in disbelief and then slowly lifts them into the circle of light on the wall. The hero tries desperately to make the shadow puppets but, of course, cannot. The shadows of his now useless hands sink from the light. Then, after a few moments, they come back into the beam of light. Only now they're whole again! He begins making shadow puppets once more as a huge grin stretches across his face. He's taken off his shoes and is using his feet."

## T H U M B N A I L S

With the narrative now roughed out I could begin to design the flow of visuals. I wanted this to be the next step before a more detailed rewrite of the story because it would allow me to visually test "SHADOW PUPPETS" and help point out the weaknesses and strengths. The first thing I did was thumbnail sketches of an approximate narrative flow ( see Appendix A ). At this point I wasn't really concerned with the way the characters looked or how the camera angles were set up, I just wanted to layout the story. This was a very necessary step. The story, mood and characters were clear in my head but those visions needed to be transferred paper. Something others could see and understand as I did. This was the most difficult part of the whole filmmaking process. It was kind of like telling someone about a really cool dream you've had. You know you can convey the story but the "feel" of it is hard to express. The thumbnails were the first step in pulling out those internal visions. I tried to avoid dictating angles and shots in the thumbnails because I didn't want that to interfere with the transfer of ideas from mind to paper. The story in my head was made up of feelings and ideas seen from all angles and shots. If I tried to pick the best ones at this point I would lose the story. So I sat down with a story board pad and started drawing. After about an hour I had the first real visual idea of what my thesis would look like. The drawings were rough but effective. I could see the movie and show it to others in a form they could understand.

# D E S I G N S

After the thumb nails were viewed and commented on by my thesis committee I began to do the actual story boards. This would allow me to flesh out the details and make improvements in the story at the same time. I did about four storyboards before I got tired of it and quit. I was bored with pre-planning and putting all this stuff onto paper. I needed a break from the structure of the 3x4 ratio. I just wanted to draw. So that's what I did. I started working on character designs and creating the look of the movie. I went back to my sketch book and started doodling and scribbling. I used a permanent marker so that I couldn't erase anything. I had learned that sometimes bad ideas end up being the best ones. I couldn't erase the marker so I would be able to go back to any of those original drawings. The only guideline I set for myself was that I wanted to keep the designs simple ( see Appendix D ). I started with the hero character. I wanted him to be a small, unimposing figure with a sense of reluctant confidence. He knew he was different and more fortunate than the rest of the workers, because of his inner strength and happiness, but was hesitant to show it for fear it would deflate them even more. He also needed to have really long, bendy fingers. After a day or so of sketching I had the perfect one. I knew immediately that the little guy in the coveralls was it. That was easy. Now I had to come up with the look of the other workers. It was simple, they needed to look the opposite of the hero - tall and despondent. OK, now the cops. I put a little more thought behind the design of them because they needed to represent cruelty, control, insensitivity, despair and all the other things which drag down the spirit. First of all they had to be huge and imposing to represent a formidable obstacle for the hero. They also had to look cruel - not just mean, but sadistic. The final design I used in the film was very similar to the one I did in the thumbnail sketches. That original design was a subconscious doodle that almost perfectly fit what I wanted to show. The phallus/missile head represented the intentional and inescapable destruction of man and earth by our own cruelty and shortsightedness. That is the biggest obstacle in the way of being happy. It's amazing that anyone can truly be content knowing that, someday because of our own

stupidity, stubbornness and prejudice, we will destroy ourselves. Some people have the fortification of ignorance which keeps them happy, but for the rest it is a burden of avoidance. The thing that keeps people going is the hope that things will improve. If you lose hope you become part of the problem and add weight to the scales against life. So, anyway, they had to look really, really mean. That completed my character designs and I could now move forward to actually working on the computer.

## U N C O M P U T E R

I had decided early on that I didn't want to use a 3-D system to do my thesis because I didn't want it to look like it was done on a computer. I found MacroMind Director (MMD) for the Macintosh to be the best program for what I intended to do. I knew through my experience with the program that I could make an image that looked hand drawn, not computer rendered. The paint program and animation features were very similar in function to traditional cel animation. At this point I started drawing on the Mac so I could determine the best look I could get from the program. I had planned to do my thesis in black and white because I liked the simplicity it would allow. The lack of color would let me be more creative with the shadows and subtle forms. I also chose to letterbox my thesis. This was more for my own entertainment than anything else. I was tired of working in the relatively square confines of the TV ratio and decided to try the long horizontal screen. After all, I would be working on this for a year and anything I could do to keep up my enthusiasm had better be done. I did several test drawings on the Mac trying to determine what style and method would be most effective. I found that to get the look I wanted I had to draw everything twice. Once to do the original drawing and again to smooth and blend the picture. It would become a tedious process, but in the final product, well worth the effort. Using the smudge function, in the MMD paint program, I could smear the picture much like wet paint. It gave the image a fluid look that added life to the images beyond their primary motions. I wanted the film to have constant movement. To almost vibrate. It was a style I had used in my drawings and paintings for years and I wanted to try it in

the film medium as well. It gave a nice consistency to the film and also helped distance the film from its computer origins. I was several shots into creating my thesis on the computer when I realized that I had better finish the storyboards first. It was extremely difficult to pull away from the process of actually creating my thesis and go back to the planning level, but I knew it was necessary. So back to pre-production.

## R E - P R E - P R O D U C T I O N

I had been examining my thumbnail sketches for a couple of weeks while experimenting on the computer and, with the help of my thesis committee, had decided on what needed to be done. First off, the film needed to start inside the factory not in the streets of the city. The city was unimportant. The factory was the focal point for the beginning. I also needed to show more of the workers and the repetition of the jobs they did. This would allow me to reveal the emptiness of the workers and the happiness of the hero thus immediately separating him from the masses. Then I needed to represent in greater detail the process of locking up the workers' hands as they left. This was a key point and needed emphasis. So I added some close-up shots. Another change was the elimination of the window shade sequence. I thought that these workers probably should be deprived of as much as possible and having an apartment window to gaze out would be a luxury they would not be afforded. In the beating sequence I decided to eliminate one of the cops for simplicities sake. The frame seemed too cluttered and I thought the second cop was unnecessary. One looming figure could portray society. Other than that I just fluffed everything up by determining camera angles and shots. I went over each thumbnail and broke it down into parts. Some of the thumbnails were already set up as independent shots and didn't need to be expanded. Others needed to be drawn out over several shots. When I was done I had taken those 33 thumbnails and turned them into 110 panels of storyboard. At this point I started to realize that my thesis was going to be a little longer than four minutes. It ended up at ten and a half.

# A N I M A T I N G

So I sat down at the computer and started to animate. My original plan was to start at the beginning and work forward through the scenes. I saved my animations on two Syquest 45 megabyte storage disks( \$75 bucks a piece, but my only real expense). The animation files were huge because I was smudging the black and white together which meant that almost all of the 256 available shades of grey were being used. The first month of animation was almost over and I had about 15 shots. Everything was moving along nicely. The smudging was working out as I had planned and the letterbox format kept me interested in the compositions. I even had borrowed a computer from a friend and was able to work at home. I found that my storyboards were saying what I wanted them to and thus I didn't need to stray far in the translation. Jump ahead a few months. I seem to be losing steam. I'm about two thirds finished. I've had the files on my Syquest lost and then recovered (thanks to Lisa Bickerstaff and Dave Emlen ) and my work schedule has only allowed me to animate late at night. I'm real sick of this movie. Time for a change. About now I decide that I should try to test edit what I have. This proves to be a great idea. Not only does it let me get away from the computer for awhile it lets me actually see my work on video. It takes me about ten hours to prepare my files on MacroMind Accelerator and dump them to video. Each MMD file was so big that it took some of them up to 20 minutes to accelerate. The scenes were transferred from the computer to 3/4" video. The 3/4" video was then dubbed down to VHS. I then did a quick edit at school. This original rough edit reveals several faults. I show my film to some people and they seem to miss a few important parts. The biggest problem is the hands being locked in the box. It still isn't clear enough. I also find that the repetition of shots I used in the factory isn't working. My intent was to show the repetition of the job but the reaction I got from the viewers was that I was just repeating shots. Having gathered criticism about my thesis I now return to the animation to correct the problems. Jump ahead another few months. I think I'm about done with the animation. I go through the process of accelerating, dumping

to tape and editing again. I want to check my film one more time before I commit to the final edit. After viewing it myself and showing it again to several people I find a few more minor problems that need to be dealt with before I can do the final edit. I improve the hand locking sequence by adding a couple of close-ups. I also create a few extra random shots of things that I can cut into the film if needed. Now I'm ready for the final dump to tape.

## T H E B I G D U M P

I've been working on the computer for over a year and I find it hard to commit to finally putting this stuff onto tape. I feel there are a lot of corrections and improvements that I should make before I really go ahead. Eventually I realize that I'm just freaking myself out. I'll never be satisfied with this project. I don't think that anyone is ever 100% happy with what they've done. But if I keep trying to improve it I will never finish it. It really is good as is. I just need to let it go and complete the job. So I do. I had made arrangements to post my film where I work at PCI Recording. The boss has agreed to let me do it and I've found an editor and sound engineer to help me. Frank Muto, the editor, advises me to dump the animations onto M II to get better quality than 3/4". I borrow a portable M II deck from work and hook it up at school. The accelerating and taping process takes about 14 hours this time because I make two copies of each shot. I want to have a back up copy with no generation loss in case of any major drop outs or problems with one of the tapes. When I'm done I have about 35 minutes of animation to edit.

## E D I T S

Frank Muto and I set up a night to do the edit. We start at 5 and figure on being done at 9. I've prepared a click track drum beat to use as a timing guide for cuts. My original intent was to put the music to this beat and thereby have it time out with the shots. This would not be the case, but I'll get to that later. So we start to edit. Our format is M II source to 1" master. I use my storyboards as a guide but follow the natural



flow of the movie. It goes well. At midnight we've finished two medium pizzas, several Mountain Dews and about half my thesis. I schedule another night of editing. The second night we finish. The flow had been established the first night so it moved along quickly the second time. It looks great but I am so sick of watching it. I really need to be done with this soon.

## S O U N D S

The next step was the sound. I had a lot of experience with animating , storyboarding and editing so felt comfortable with those aspects of my thesis. Sound was a new experience for me. I was really excited about putting on the audio and had been giving it a great deal of thought. Tom Backus had viewed the edited version of "SHADOW PUPPETS" and liked it enough to help me out with the sound. I had worked with Tom a couple of times and knew he would do a good job so we proceeded. I told him what my ideas for the sound were and then let him go. We worked on and off over the next couple of weeks and I would check in periodically to OK the progress or suggest changes. This was a great time for my thesis. I had grown tired of my movie, having worked with it visually for so long, but now I began to enjoy it again as this new territory of audio was revealed to me. Soon the soundtrack was almost done. All that was left was the music. I had planned from the start to do my own music and had been working on some compositions with a portable 4-track recorder. Bob Mickschl, a friend of mine back in Wisconsin, was helping me with the music. We sent a tape back and forth, each of us adding a track and then returning the tape to the other. As I had stated before, my original plan was to use a drum beat for pacing the edits and matching the music. After we put on the sound effects I changed my mind. I liked it as it was. We had used a lot of ambient noise and subtle sounds that gave the film a kind of desolate feel. It worked well and I didn't want to destroy it with an overly intrusive music track. I totally cut out the drums and decided to start over with the music. My living room became a sound studio. I set up a keyboard and 4 track recorder in front of my TV and popped a copy of my thesis into the VCR. Then I

watched and played. When music was appropriate I put it in. I tried to keep it very subdued and ambient to match the existing sound. After about two weeks I had completed the score. Tom added this music to the soundtrack and it was done.

## F I N I S H E D

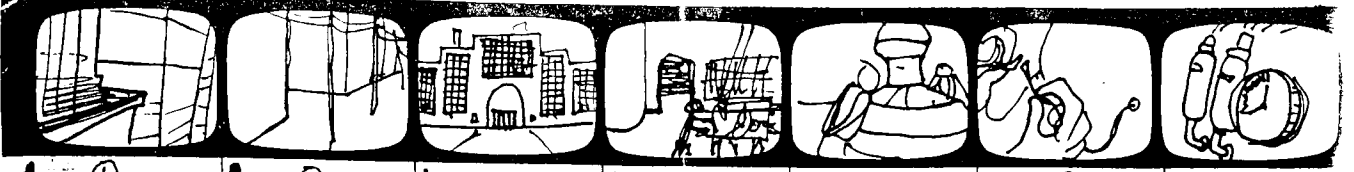
My thesis is done! I can't believe it! Two and a half years of school and I'm done! All that time and money and effort contained within a 10 1/2 minute video tape. But it's good! I love it! And it is done. All that's left to do is make dubs, find a few festivals to enter and enjoy the great feeling of accomplishment. I have made a movie. Not just a rinky dink little super 8 thing but a real film. It looks professional. I have triumphed in much the same way as the hero of "Shadow Puppets" had. I have kept my spirit and dedication through 30 months of little or no sleep, gigantic student loans, working two jobs, not seeing my wife, and a million other frustrations and complications. But it is worth it. And now I have my MFA degree. I am a Master of the Fine Arts. Oh no, I still have to write that paper!

## T H A T P A P E R

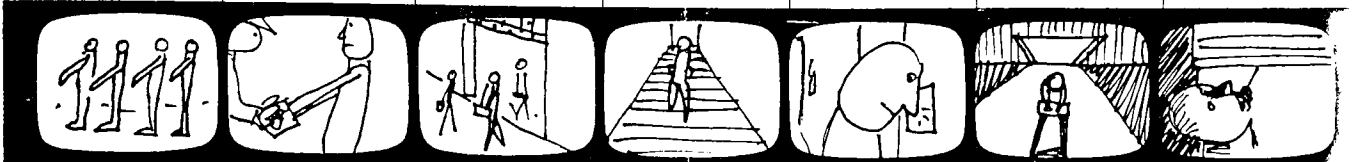
I have tried to put this out of my mind but I knew eventually it would catch up with me. Time to write about my experience in grad school and the process of making my film. Luckily I kept a journal along the way. "So, I need an idea for my thesis..."



APPENDIX A  
THUMBNAILS



①	①	①	②	②	②	③
Pan across skyline	M.T. streets	Factory	inside factory	people working	CU. on hands working	CU on whistle



④	④	⑤	⑤	⑥ (L)	⑥	⑦
workers line up to leave.	Boxes are locked onto workers hands as they leave	LINK rides horse through the streets		pushes button with nose to open door	Enters + closes door	walks to window to open shade with mouth - light comes in.



⑦	⑧	⑧	⑧ (L)	⑧ (L)	⑨	⑨
Link sits on floor and pulls his hands out of box	wiggles fingers + smiles - then makes shapes with hands	shadows on far wall	CU on shadows	CU on his happy face	Door kicked in	Police



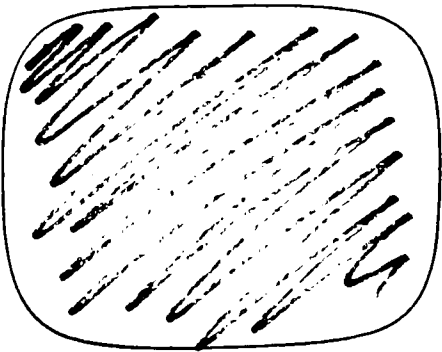
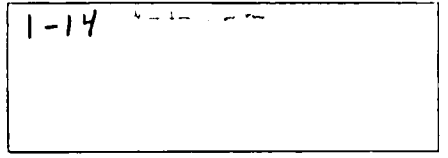
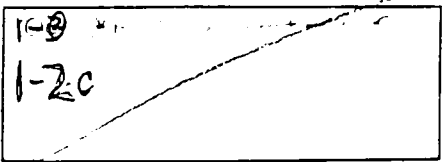
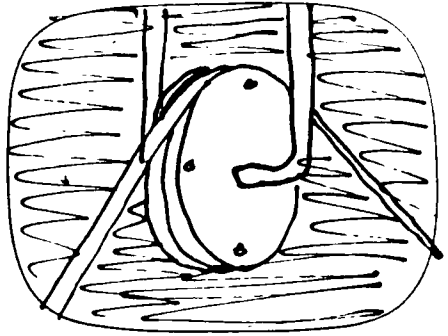
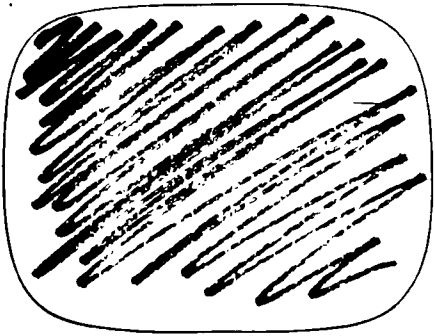
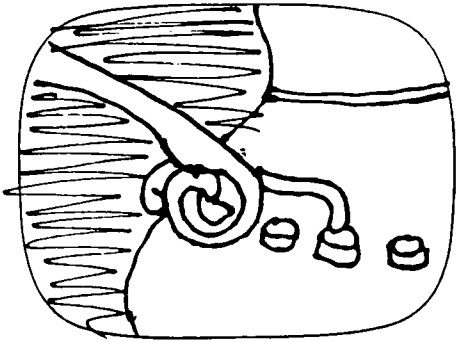
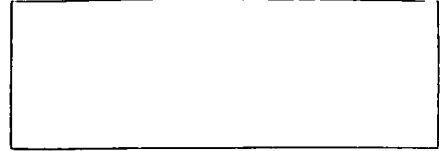
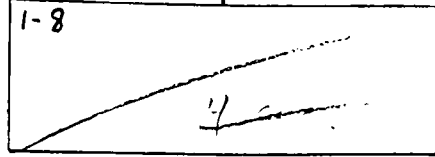
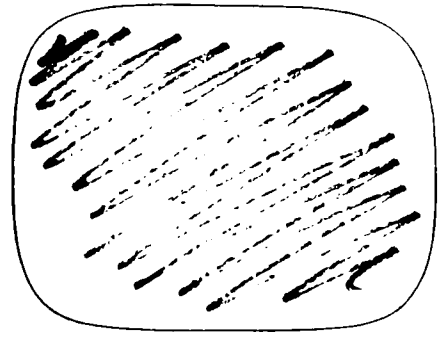
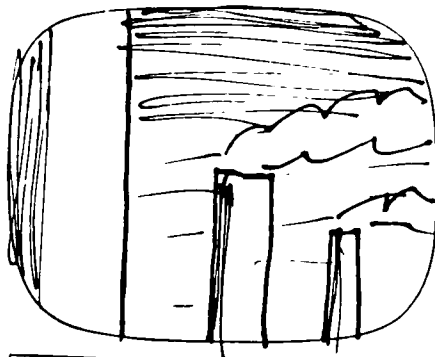
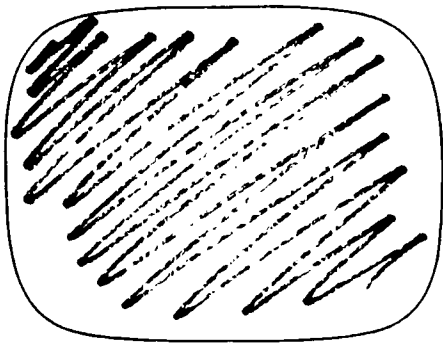
⑨	⑨	⑨	⑩	⑩	⑩	⑩
They see his hands out of the box	CU. Link's face	They beat him up	Link wakes up the box locked on his hands again.	He sits up Takes off box again	Takes off <del>the</del> C.U. on his face	His fingers are gone!



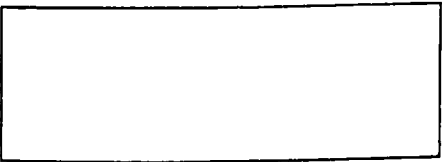
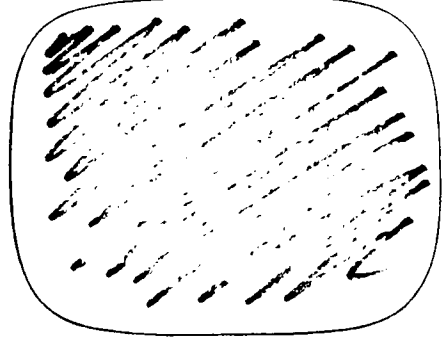
⑩	⑪	⑪	⑪ (L)	⑪	⑬	⑭
Reverse angle he stares at hands	Shadows on wall - He can't make any shapes - Hands slowly stop & drop out of frame	suddenly they come back in and are making shapes	Link is on back walking shadows with feet!	C.S. of room with Link doing shadows		



A P P E N D I X B  
S T O R Y B O A R D S

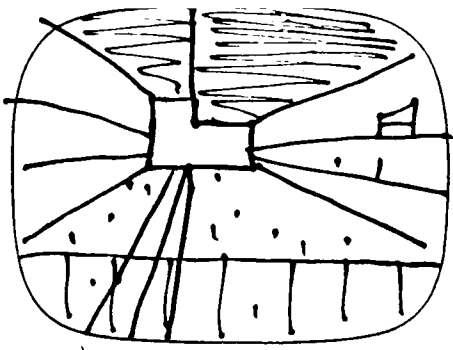


shadow puppets

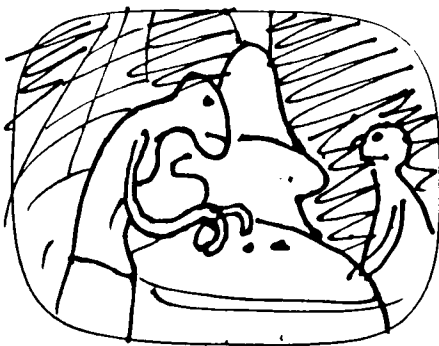


Title Anti-Align

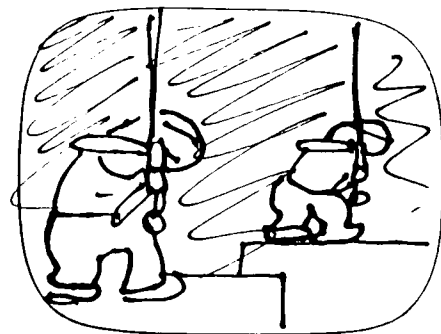




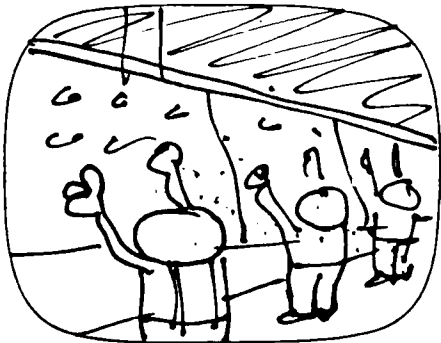
~~1-1~~ slower



~~1-2a~~  
1-2a



~~1-29~~  
1-33



~~1-4a~~  
1-4a



~~1-6a~~  
1-6a



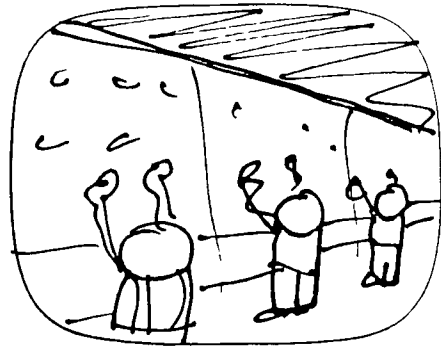
~~1-6d~~  
1-6d



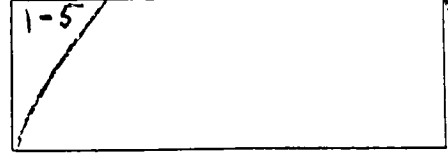
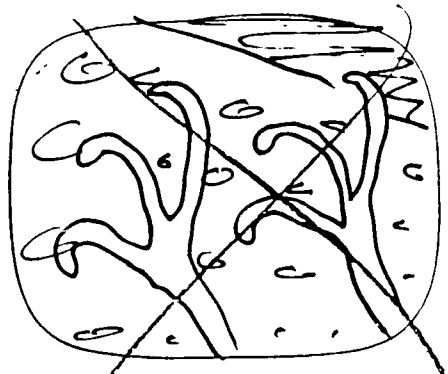
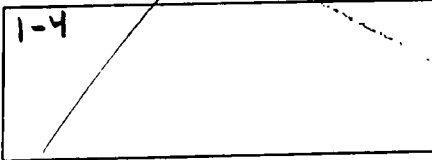
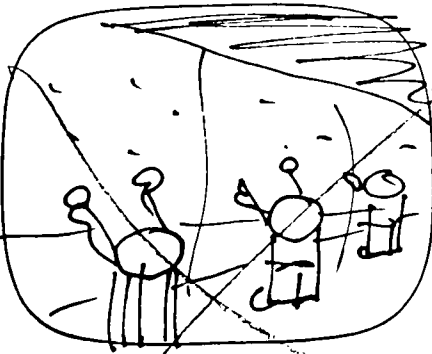
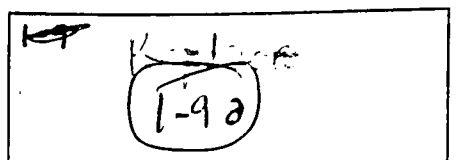
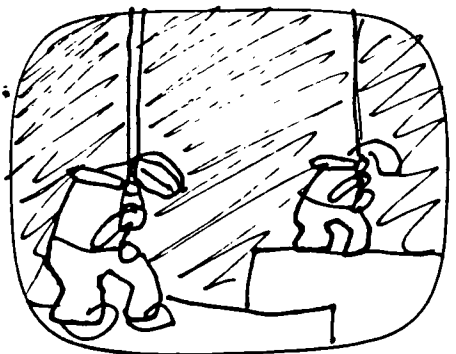
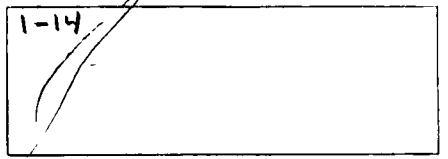
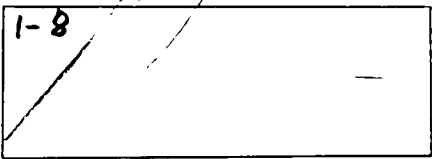
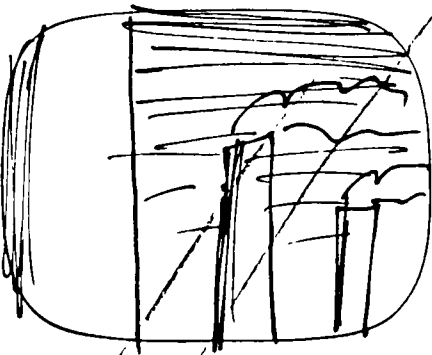
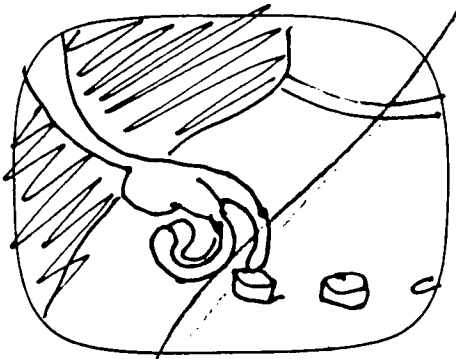
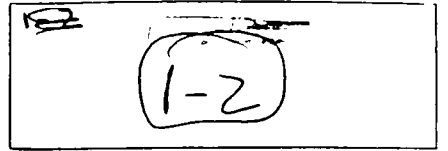
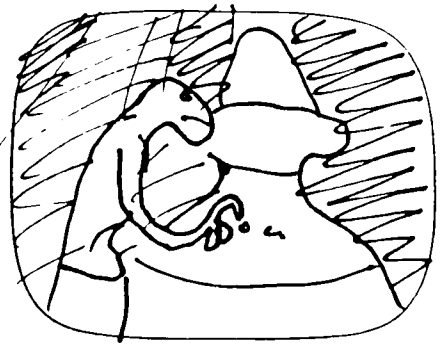
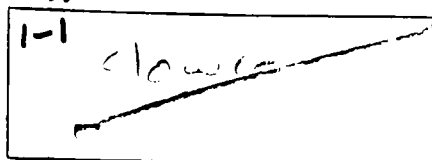
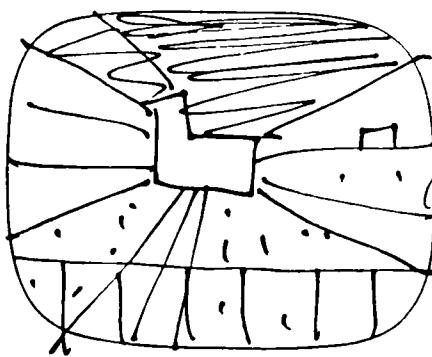
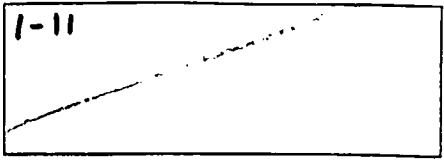
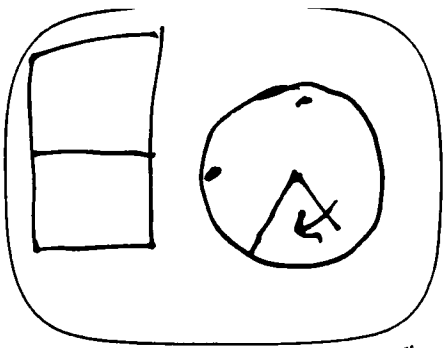
~~1-6a+b~~ + frame flatter  
1-6d+e



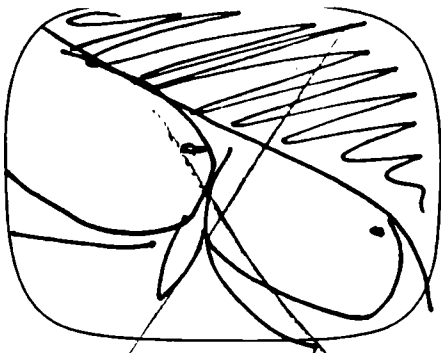
1-5 + fix motion  
~~check~~



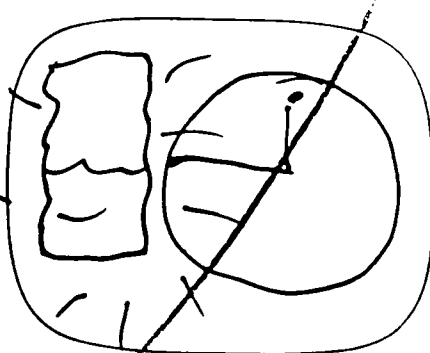
~~1-4a~~  
1-4a



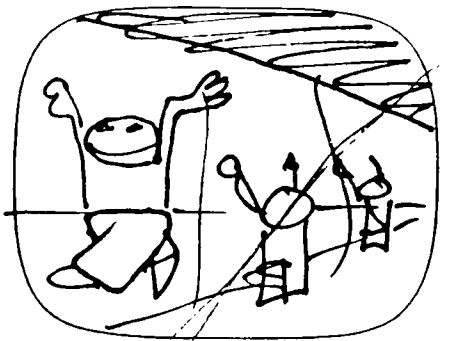




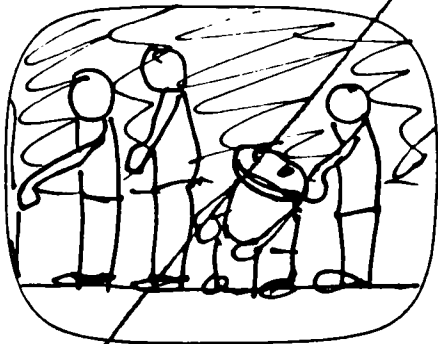
1-10



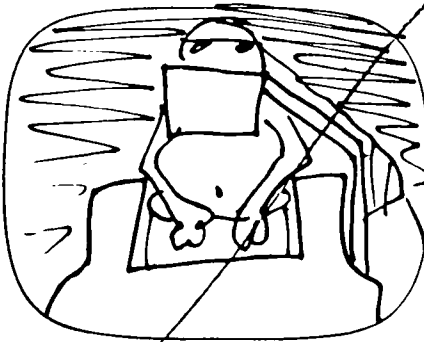
1-17



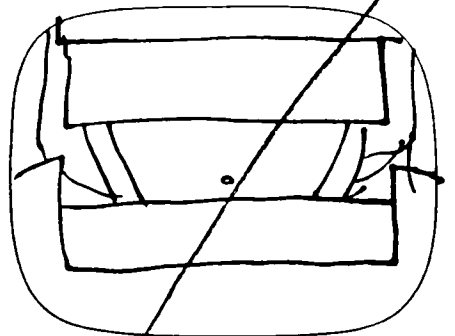
1-18



1-20



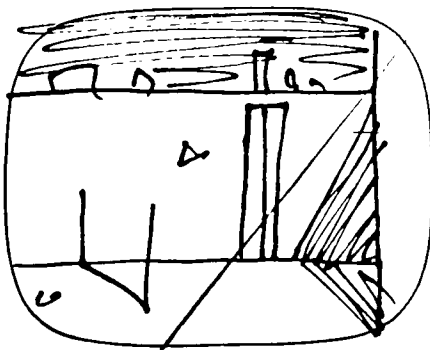
1-21-OK



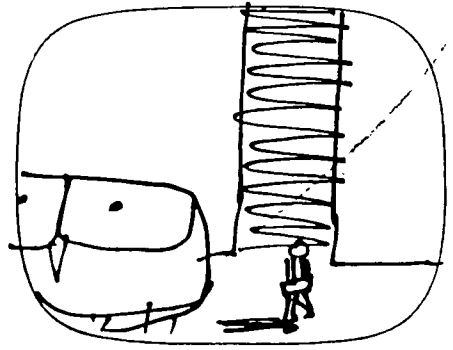
1-22  
check



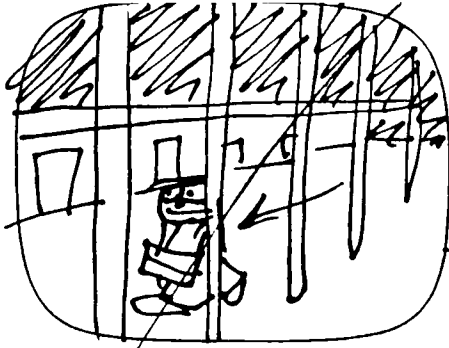
1-21-OK



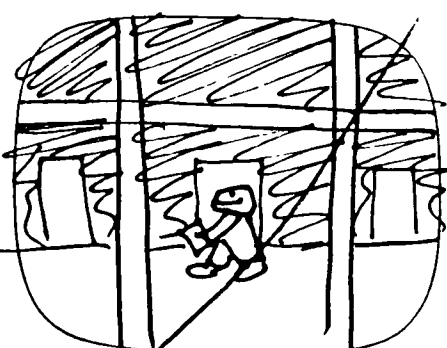
2



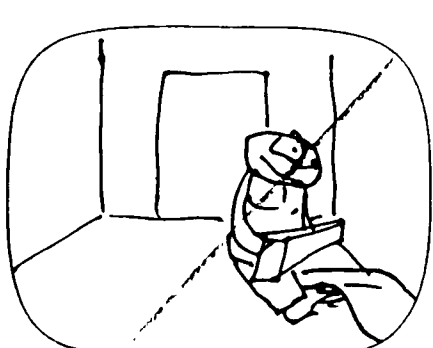
2-11  
2-7-11  
1 1 1



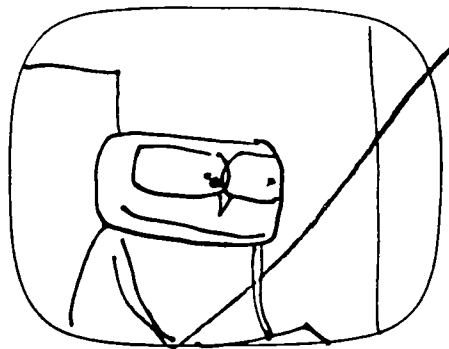
2-5  
2-3



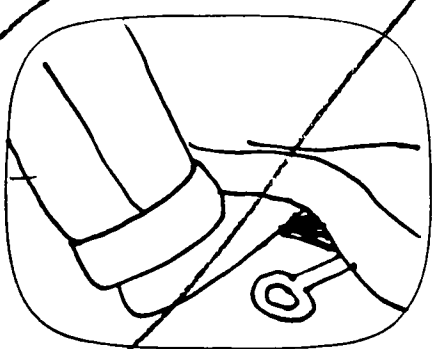
2-6  
2-4  
... für ...  
... ..



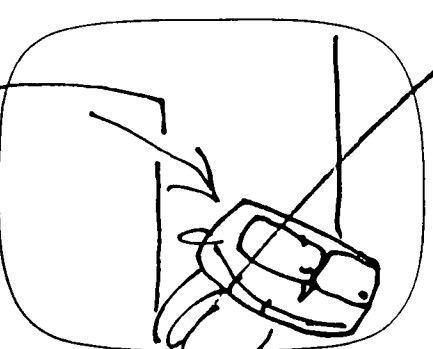
2-7  
2-5



2-8  
2-6  
... ..



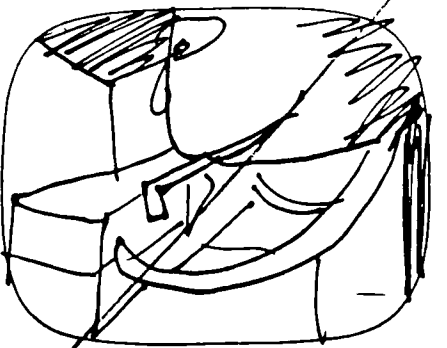
2-9  
2-7



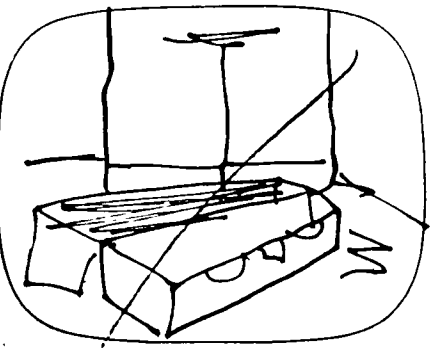
2-10  
2-8



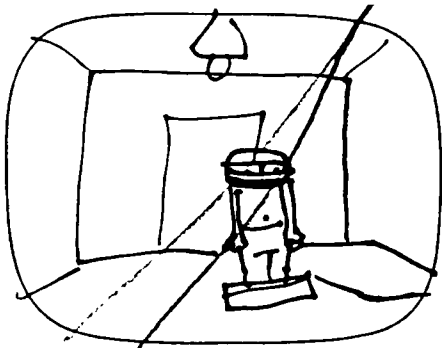
2-11  
2-9



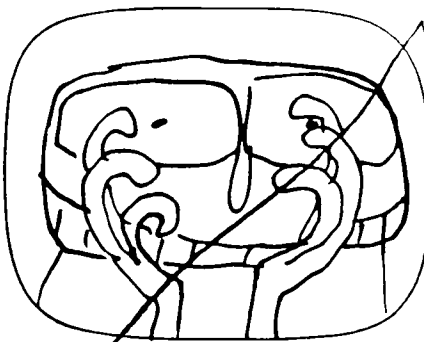
2-12  
2-10



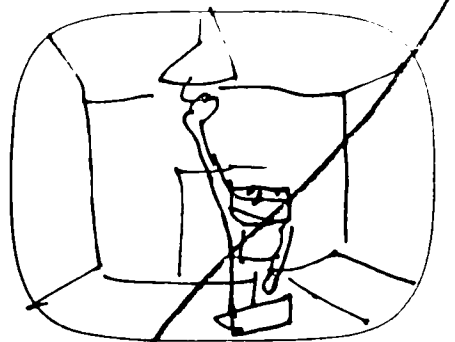
2-13  
2-11



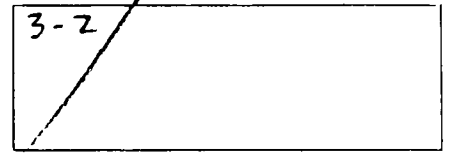
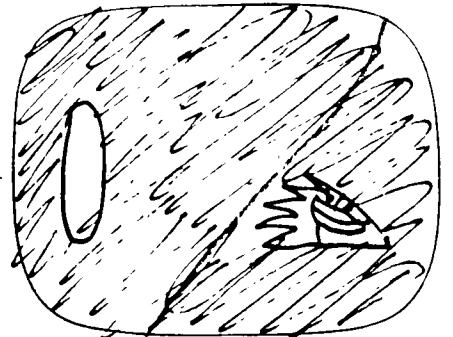
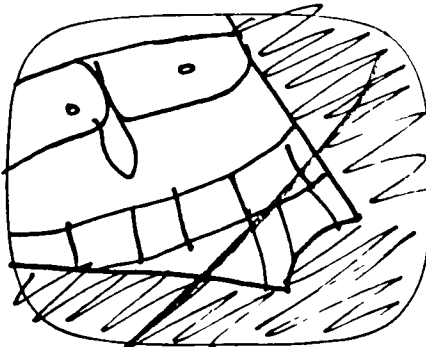
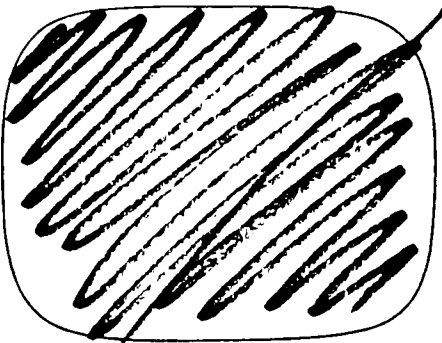
~~2-8 \* 4.1.16 - hand-drawn sketch  
2-12~~



~~2-9-10-11  
\* see through! hands  
2-13-14-15~~



~~2-12  
2-16~~





3-6



~~3-7~~  
3-7a  
Dog, ~~bird~~ Bunny, Bird

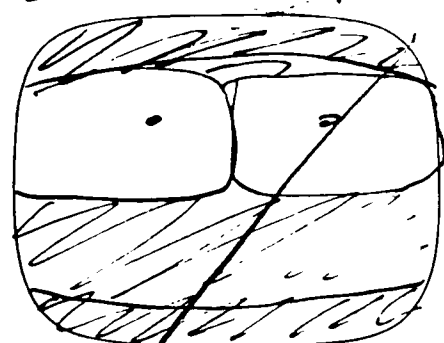


3-8  
3-7a - 1st  
3-7b - 2nd  
3-7c - 3rd

~~3-7~~ ~~3-7~~



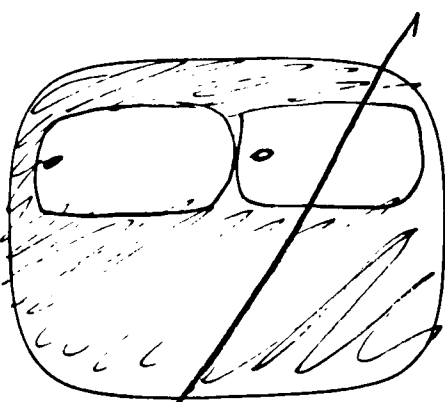
~~3-7b~~  
3-7b into Bird



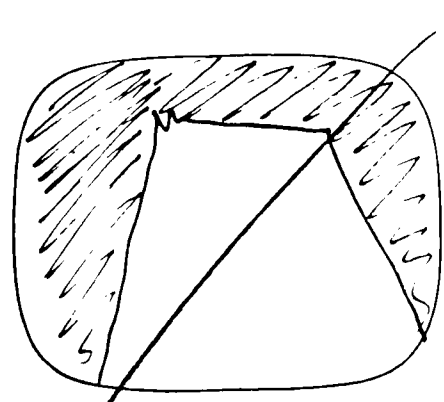
3-10



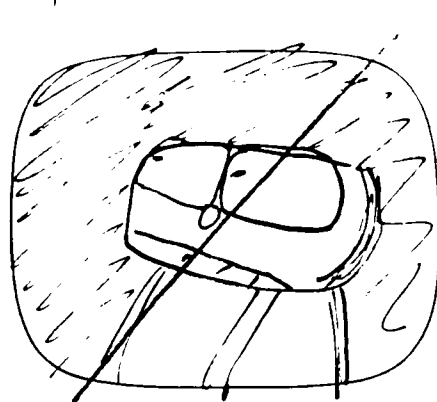
~~3-7c~~  
Just Bird  
3-7c



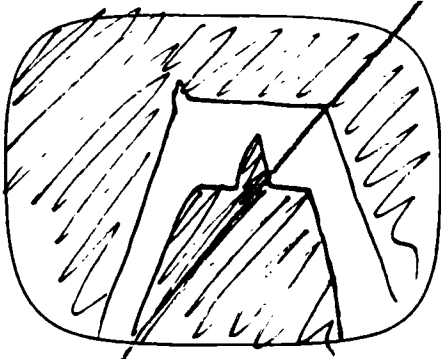
4-1



4-2



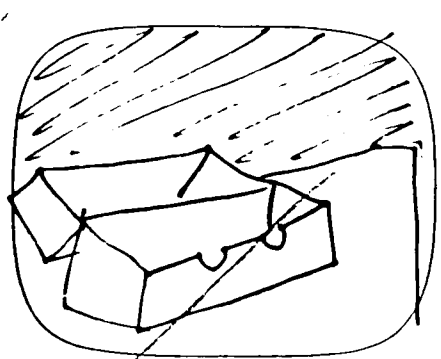
4-3



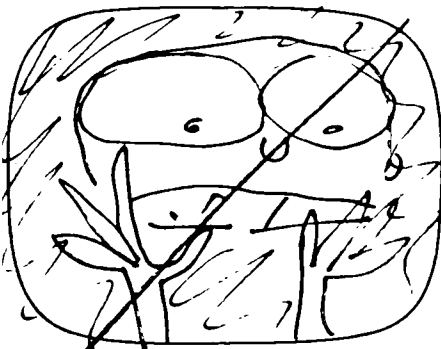
4-4



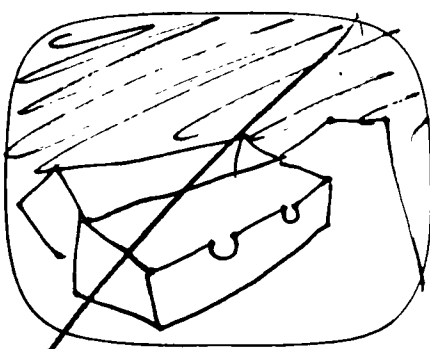
4-5  
sheet 1111



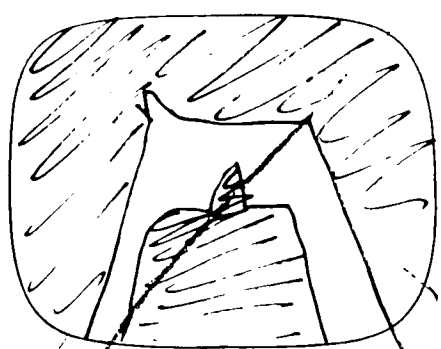
4-6



4-7a x part on holdy



4-6b  
4-6b au. of hands

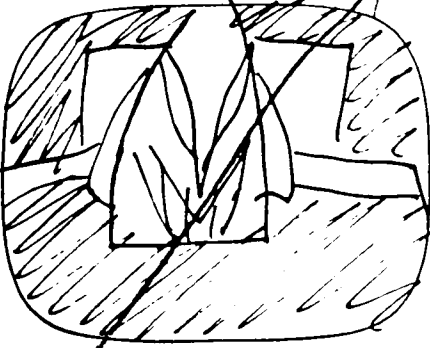


4-4

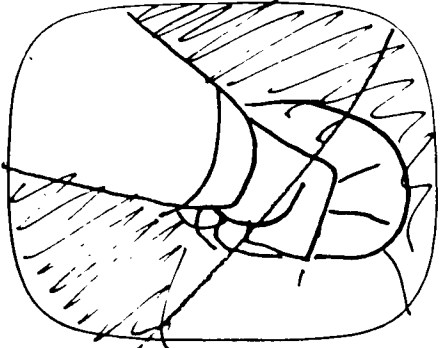
~~4-6b au. of hands~~



4-7a  
hull feature shadow  
curves on - non-habl  
comphend

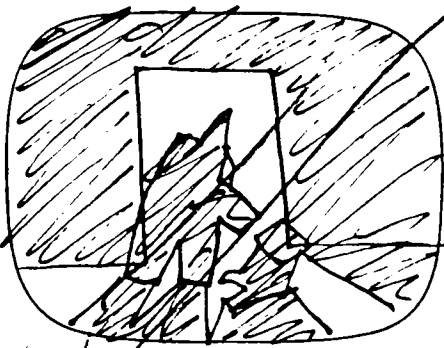


4-4

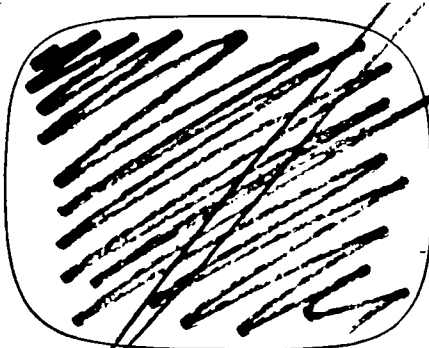


4-7a  
will impact

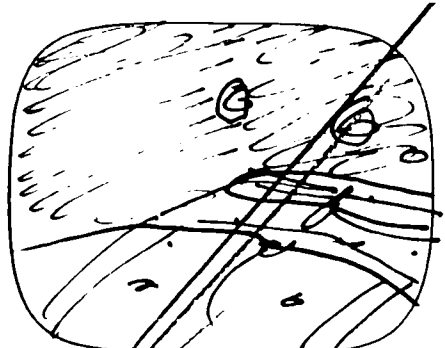
4-7b (shadow doesn't prove)



4-80x max impact  
4-86 has second  
f...c



4-8c close up  
spy laughing



5-13



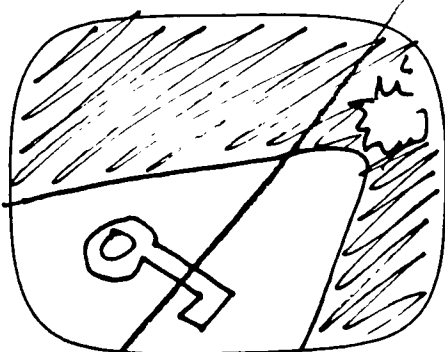
5-10



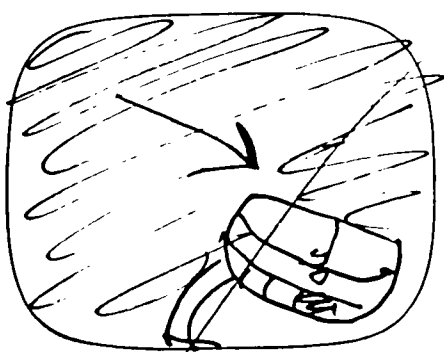
5-2



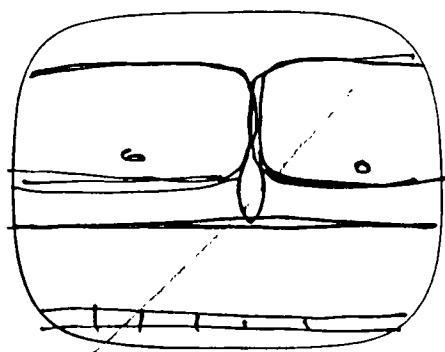
5-3



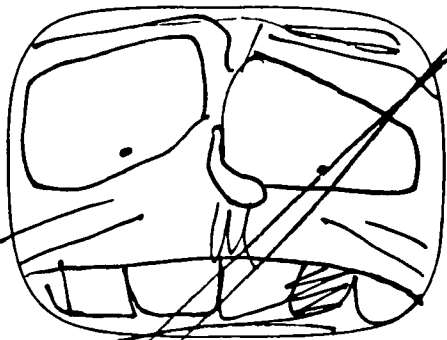
5-4



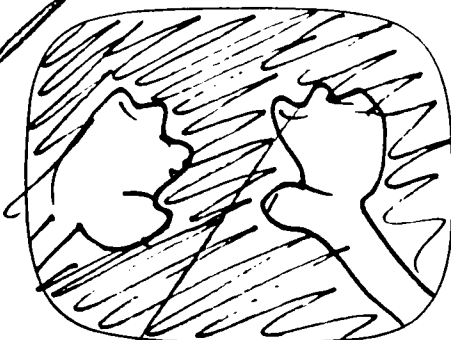
5-5



5-6



5-6b



5-7a



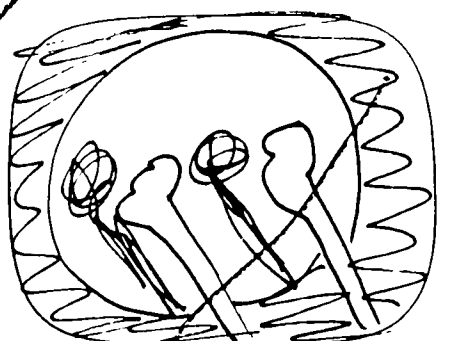
5-7b



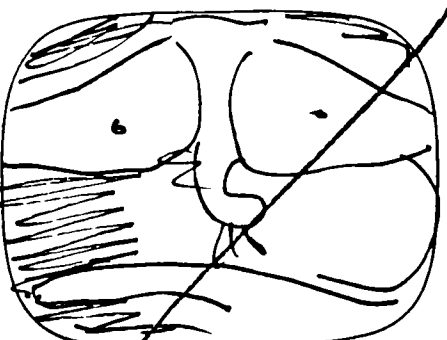
5-7c



5-8 *teeth longer*



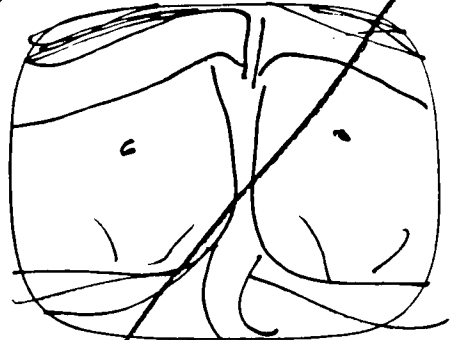
5-10



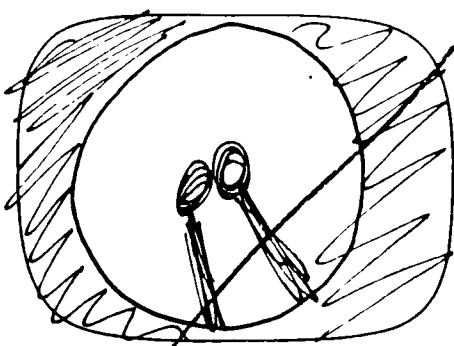
5-11a *fix*



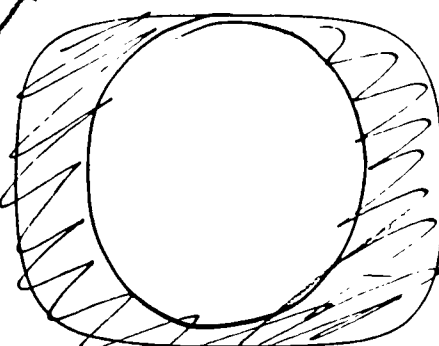
5-12



5-11b



5-12



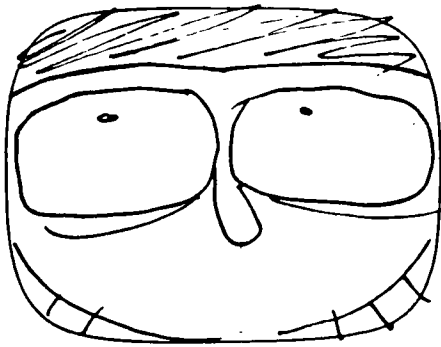
5-12



5-13

5-172

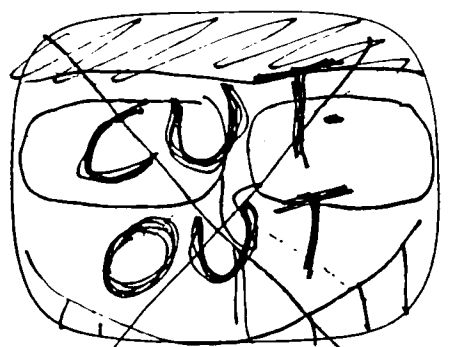
f / /



5-15

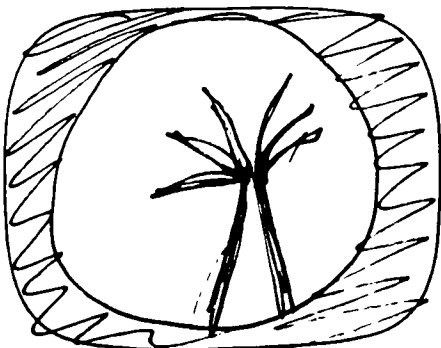


5-14



5-15

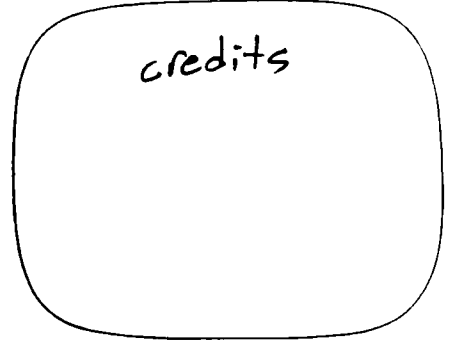
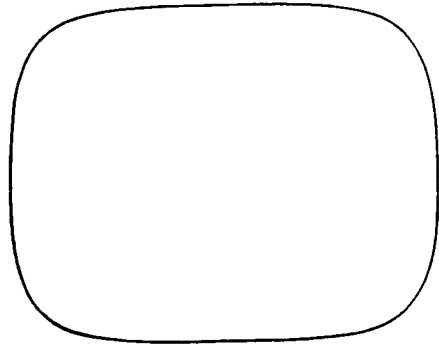
cut



5-16

5-174

for ...  
Ed. +

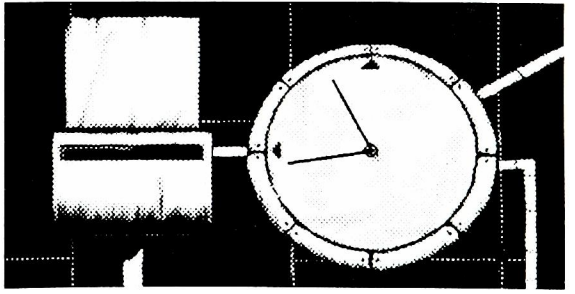
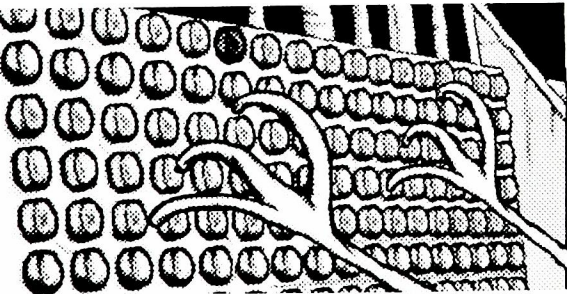
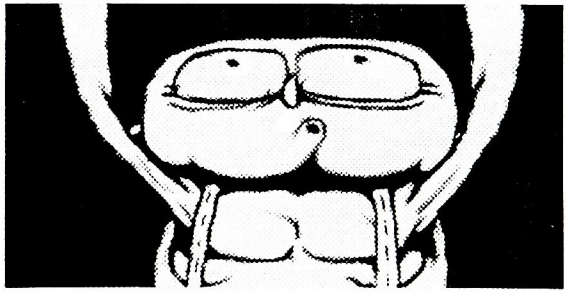
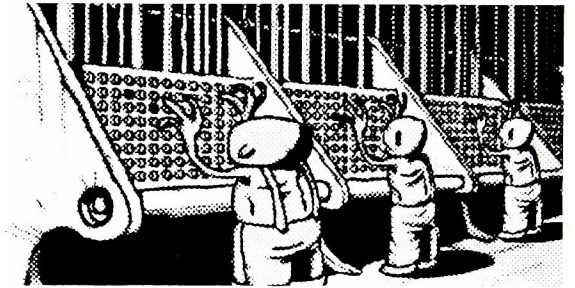
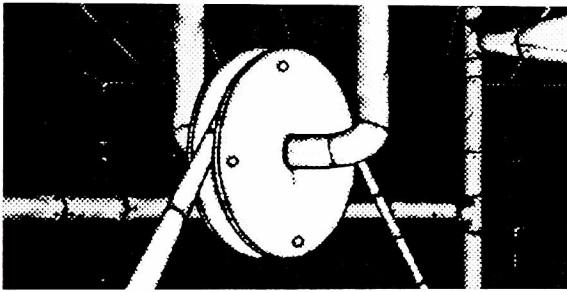
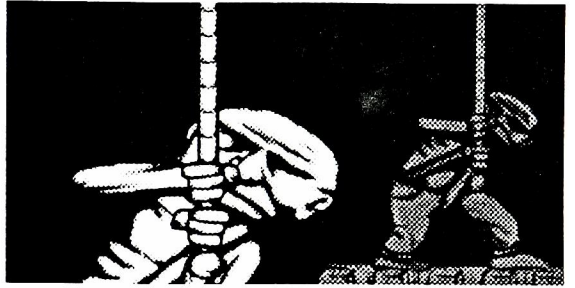
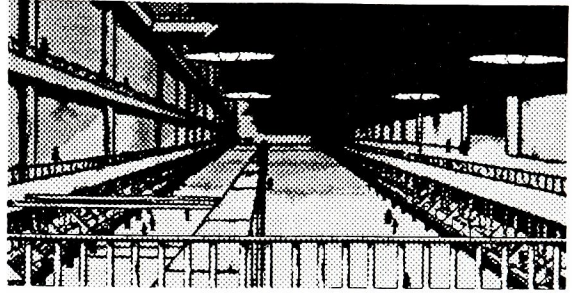


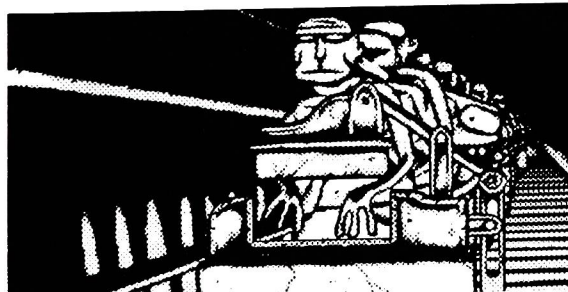
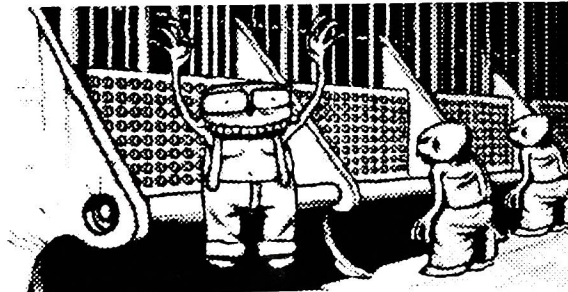
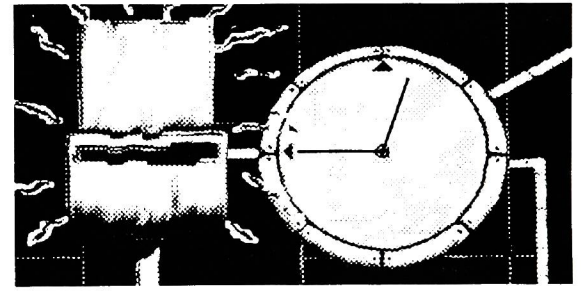
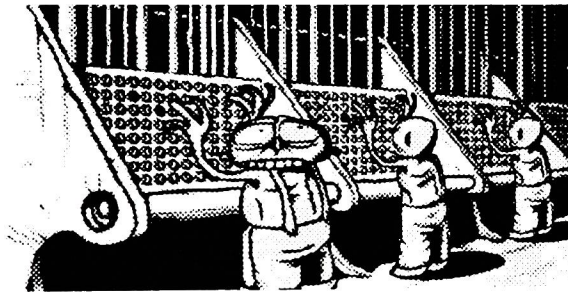
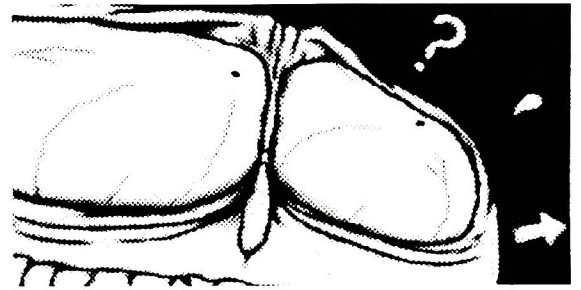
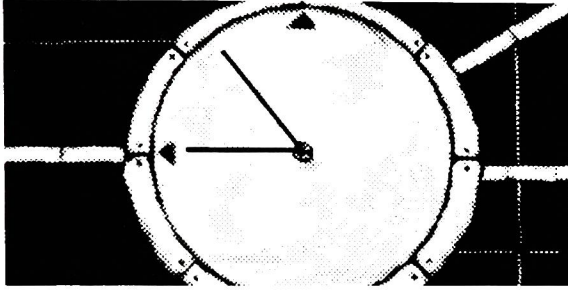
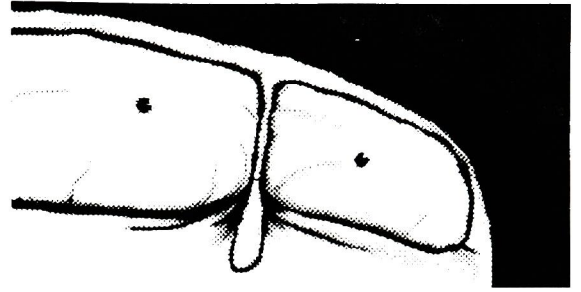
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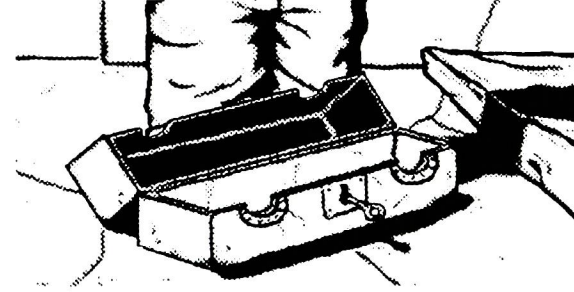
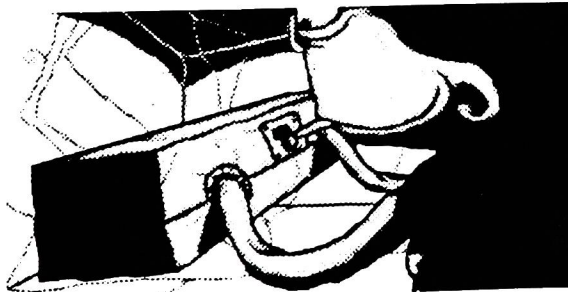
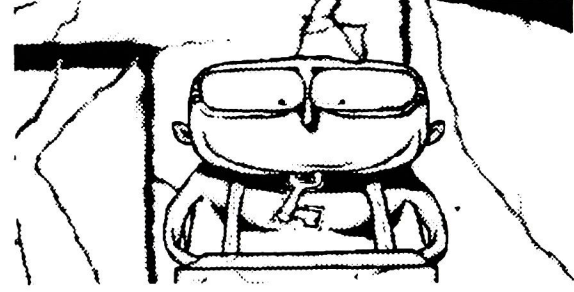
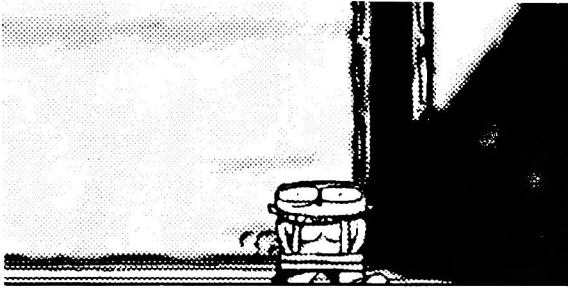
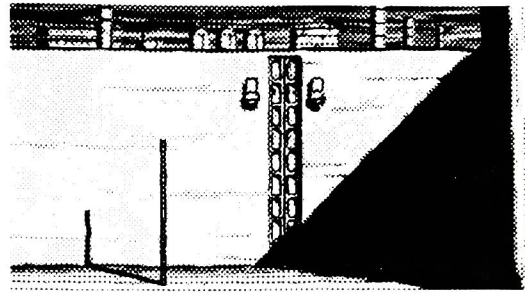
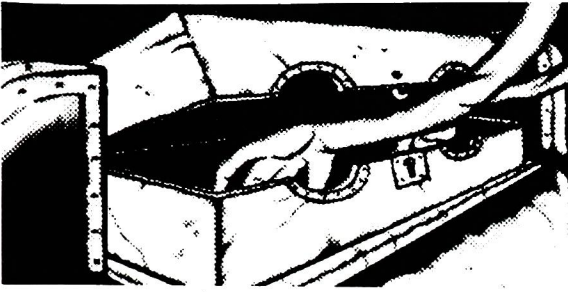


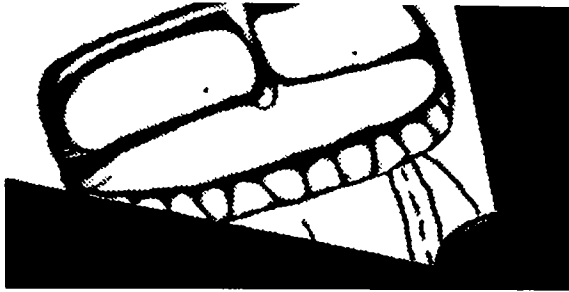
A P P E N D I X C  
S T I L L F R A M E S

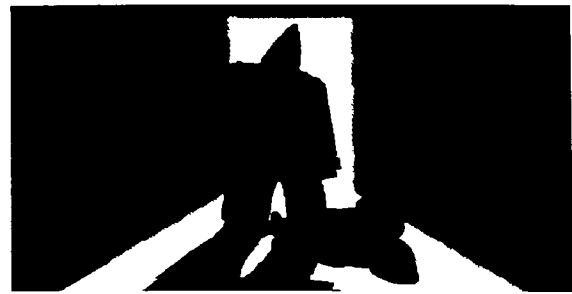
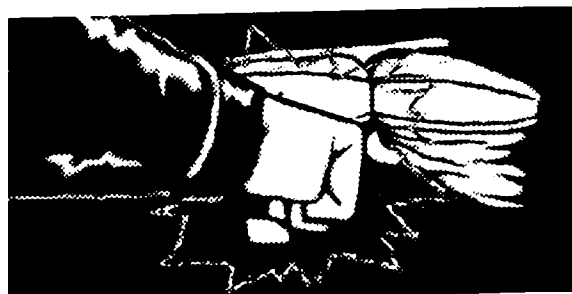
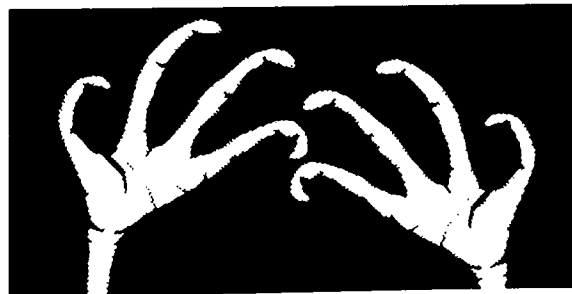
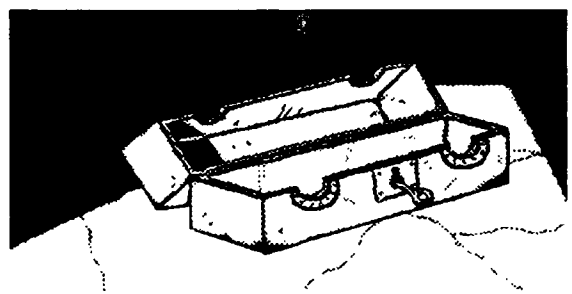
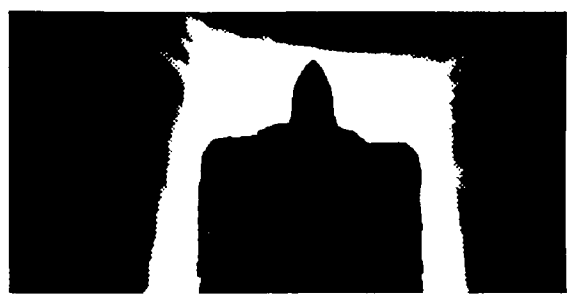
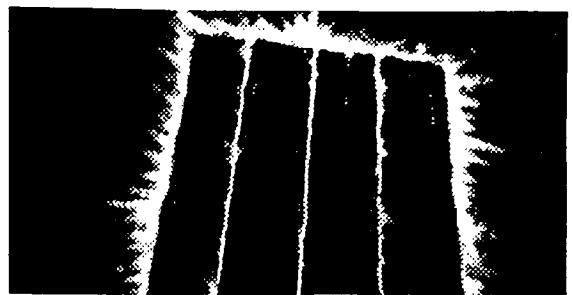
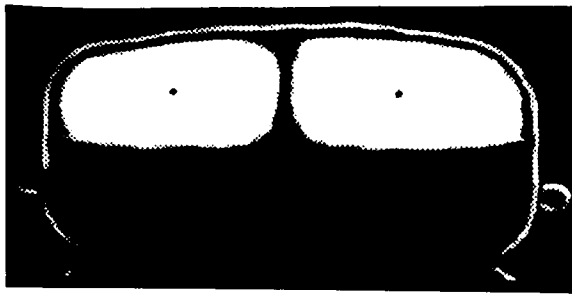
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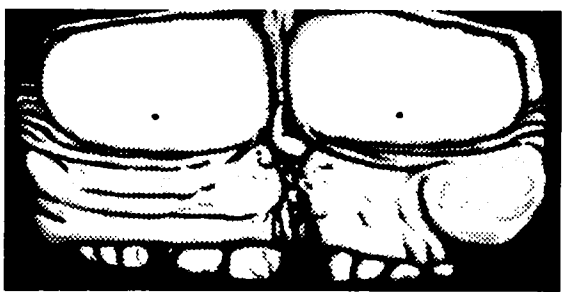
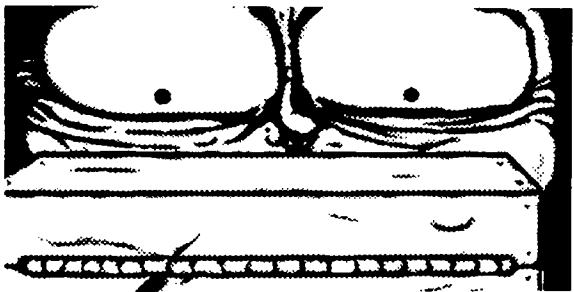
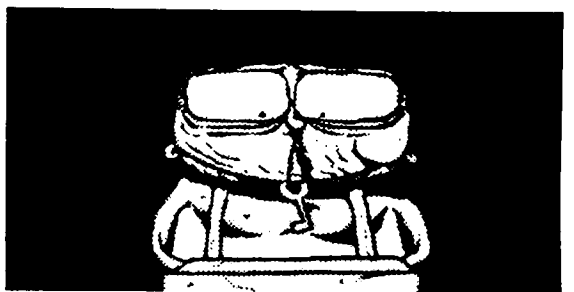
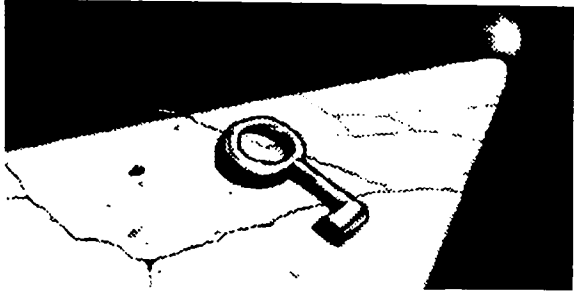
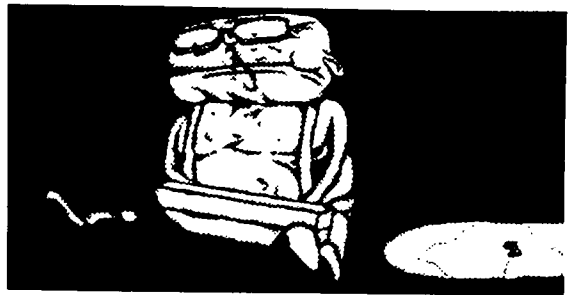


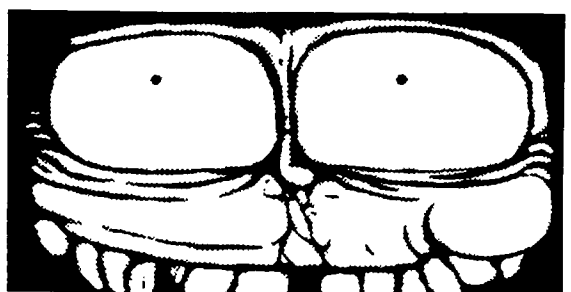












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