

Women mostly walk with their legs close together, protecting the crotch, resulting in not much up and down action on the head and body. Skirts also restrict their movement.

Mr Macho, however, because of *his* equipment, has his legs well apart so there's lots of up and down head and body action on each stride.



BUT

WE CAN TURN A VERY MASCULINE WALK INTO AN EFFEMINATE ONE JUST BY CROSSING OVER THE FEET ACTION.

GETTING THE WEIGHT

WE DON'T GET WEIGHT BY A SMOOTH LEVEL MOVEMENT.

When we trace off a live action walk (the fancy word is rotoscoping), it doesn't work very well. Obviously, it works in the live action – but when you trace it accurately, it floats. Nobody really knows why. So we increase the ups and the downs – accentuate or exaggerate the ups and downs – and it works.

IT'S THE UP AND DOWN POSITION OF YOUR MASSES THAT GIVES YOU THE FEELING OF WEIGHT.

WE FEEL THE WEIGHT WHEN THE MASS OF THE BODY COMES DOWN -



- ESPECIALLY WHEN IT'S PRECEDED BY A STRAIGHT - WHERE THERE'S NO WEIGHT ON IT YET.



CONTACT

THEN IT TAKES THE WEIGHT

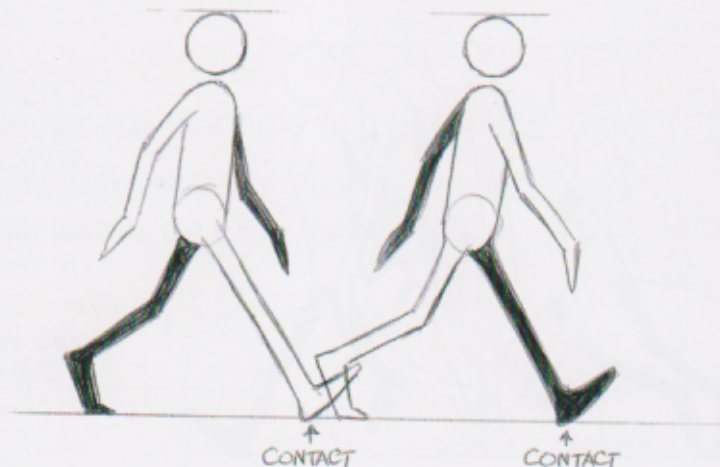


AND WE GET THE 'CHANGE'

IT'S THE DOWN POSITION WHERE THE LEGS ARE BENT AND THE BODY MASS IS DOWN - WHERE WE FEEL THE WEIGHT.

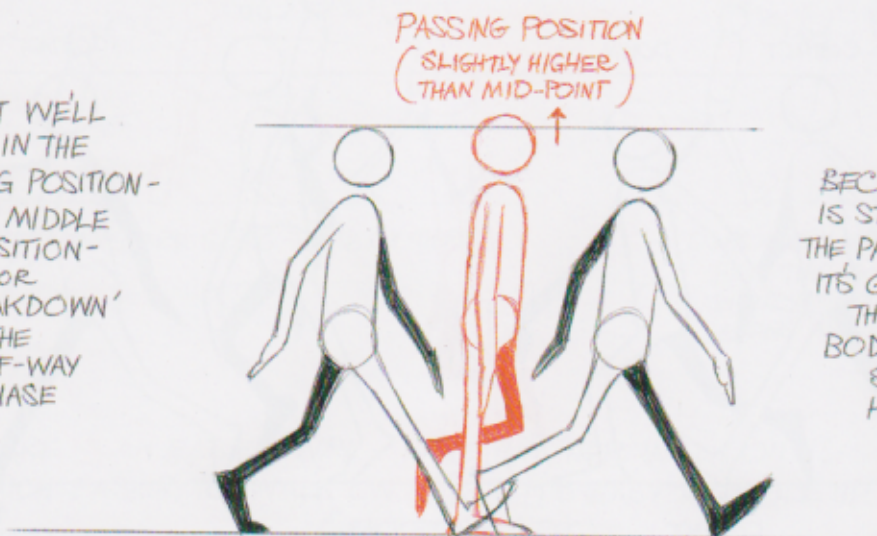
Before we start building walks and 'inventing' walks - here's what happens in a so-called 'normal' walk:

FIRST WE'LL MAKE THE 2 CONTACT POSITIONS -



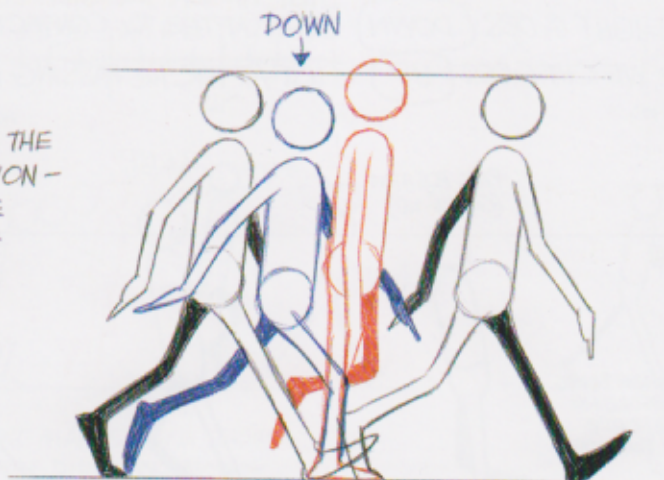
IN A NORMAL, CONVENTIONAL WALK, THE ARMS ARE ALWAYS OPPOSITE TO THE LEGS TO GIVE BALANCE AND THRUST.

NEXT WE'LL PUT IN THE PASSING POSITION - THE MIDDLE POSITION - OR 'BREAKDOWN' - THE HALF-WAY PHASE



BECAUSE THE LEG IS STRAIGHT UP ON THE PASSING POSITION, IT'S GOING TO LIFT THE PELVIS, BODY AND HEAD SLIGHTLY HIGHER.

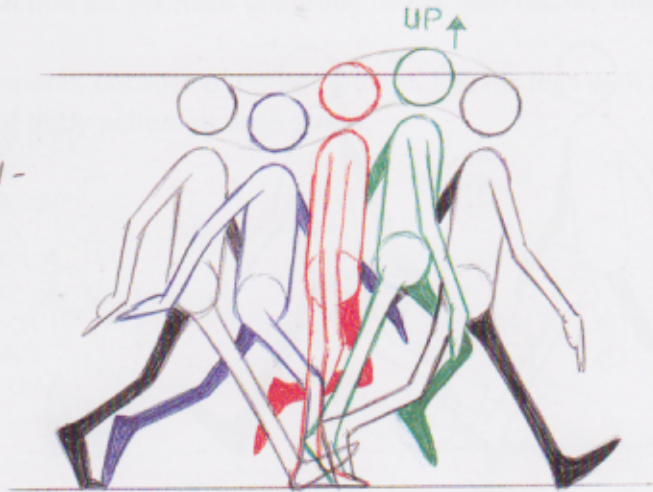
NEXT COMES THE DOWN POSITION - WHERE THE BENT LEG TAKES THE WEIGHT



AND JUST TO COMPLICATE LIFE - IN A NORMAL WALK THE ARM SWING IS AT ITS **WIDEST** ON THE DOWN POSITION (AND NOT ON THE CONTACT POSITION AS WE'D PREFER.)

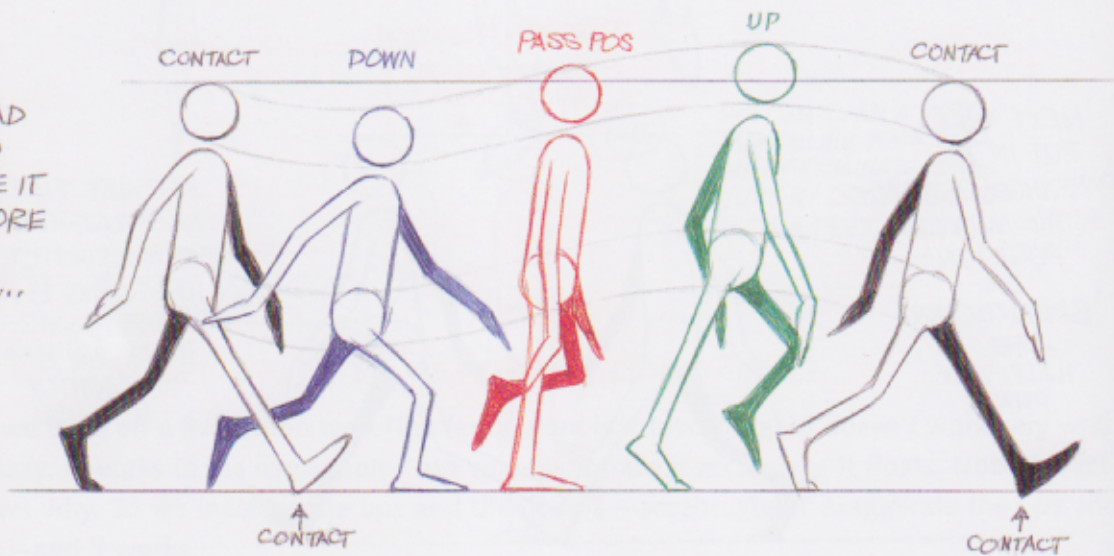
WE CAN IGNORE THIS AS WE PROCEED BUT WE MIGHT AS WELL UNDERSTAND THE NORM BEFORE WE START MESSING AROUND.

NEXT WE PUT IN
THE UP POSITION -
-THE PUSH-OFF.



The FOOT PUSHING OFF
LIFTS THE PELVIS,
BODY AND HEAD UP
TO ITS HIGHEST POSITION
- THEN THE LEG IS THROWN
OUT TO CATCH US ON
THE CONTACT POSITION
- SO WE DON'T FALL
ON OUR FACE.

LET'S SPREAD
IT OUT AND
EXAGGERATE IT
A LITTLE MORE
SO IT'S
CLEARER...



SO, IN A NORMAL 'REALISTIC' WALK

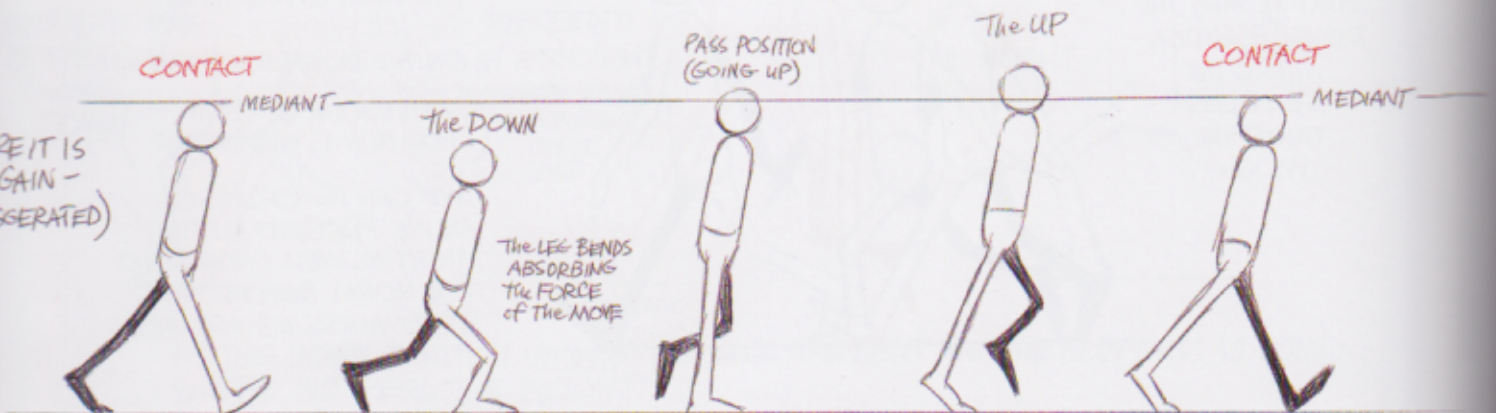
THE WEIGHT GOES **(DOWN)**

JUST AFTER THE STEP -
JUST AFTER THE CONTACT.

AND THE WEIGHT GOES **(UP)**

JUST AFTER THE PASSING POSITION.

HERE IT IS
AGAIN -
EXAGGERATED)



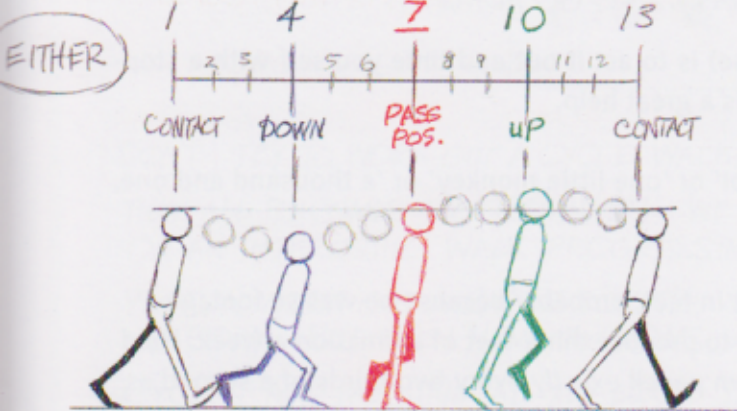
SET THE TEMPO

The FIRST THING TO DO IN A WALK IS SET A BEAT.

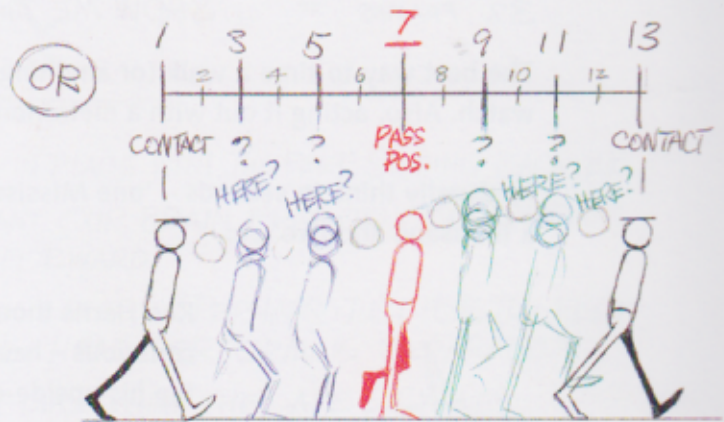
GENERALLY PEOPLE WALK ON 12'S - MARCH TIME (HALF A SECOND PER STEP. TWO STEPS PER SECOND.)

BUT LAZY ANIMATORS DON'T LIKE TO DO IT ON 12'S.

IT'S HARD TO DIVIDE UP. YOU HAVE TO USE 'THIRDS' - THINK PARTLY IN THIRDS.



THE IN BETWEENS ARE GOING TO BE ON THIRDS.



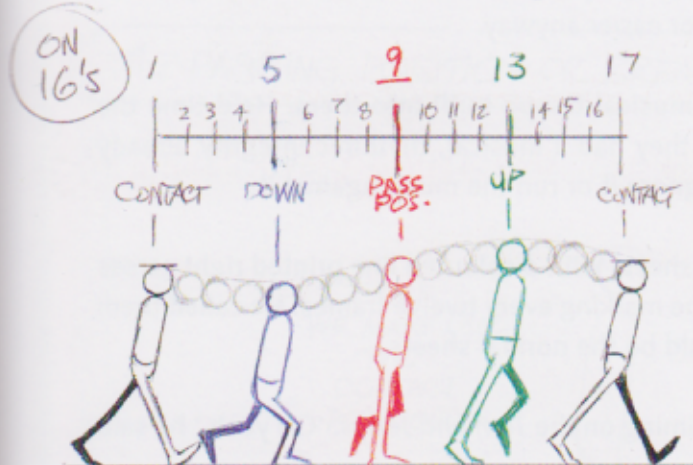
OOPS - NOW WHERE DO WE PUT THE DOWN OR UP?
HEY, THIS IS GETTING HARD - ESPECIALLY WHEN WE GET INTO THE ARMS AND HEAD, AND 'ACTING' AND DRAPERY - MAYBE THERE'S AN EASIER WAY?

THERE IS AN EASIER WAY - HAVE HIM/HER WALK ON 16'S - OR WALK ON 8'S.

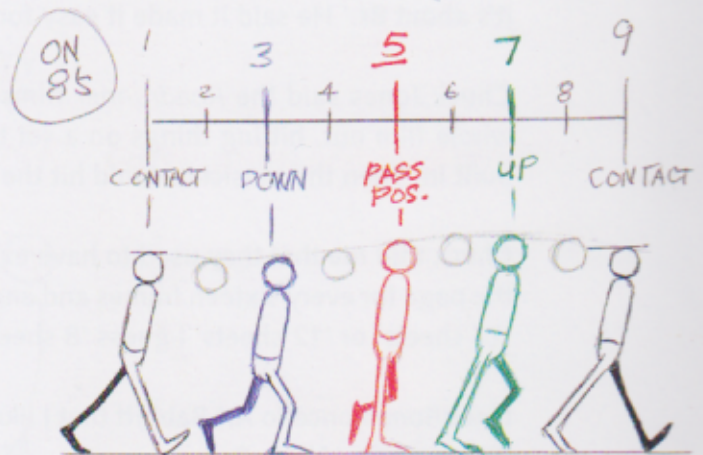
MUCH EASIER TO WALK ON 16'S - IT'S EASY TO DIVIDE UP - SAME THING ON 8'S.

(EACH STEP = 2/3 SEC)

(3 STEPS PER SEC.)



WHEW, THAT MAKES LIFE EASIER. NICE EVEN DIVISIONS NOW -



(REDUCED UP AND DOWN ACTION - SINCE ITS TAKING PLACE IN A SHORTER TIME)

THIS IS WHY CARTOON WALKS ARE OFTEN ON 8'S. BUMP, BUMP, BUMP, 3 STEPS A SECOND.

SO, WE SET A BEAT:

- 4 FRAMES = A VERY FAST RUN (6 STEPS A SECOND)
- 6 FRAMES = A RUN OR VERY FAST WALK (4 STEPS A SECOND)
- 8 FRAMES = SLOW RUN OR 'CARTOON' WALK (3 STEPS A SECOND)
- 12 FRAMES = BRISK, BUSINESS-LIKE WALK - 'NATURAL' WALK (2 STEPS A SECOND)
- 16 FRAMES = STROLLING WALK - MORE LEISURELY ($\frac{2}{3}$ OF A SECOND PER STEP)
- 20 FRAMES = ELDERLY OR TIRED PERSON (ALMOST A SECOND PER STEP)
- 24 FRAMES = SLOW STEP (ONE STEP PER SECOND)
- 32 FRAMES = ...'SHOW ME THE WAY, ... TO GO HOME'...

The best way to time a walk (or anything else) is to act it out and time yourself with a stopwatch. Also, acting it out with a metronome is a great help.

I naturally think in seconds - 'one Mississippi' or 'one little monkey' or 'a thousand and one, a thousand and two' etc.



Ken Harris thought in feet, probably because he was so footage conscious - having to produce thirty feet of animation a week. He'd tap his upside-down pencil *exactly* every two thirds of a second as we'd act things out.

Milt Kahl told me that on his first week at Disney's he bought a stopwatch and went downtown in the lunch break and timed people walking - normal walks, people just going somewhere. He said they were *invariably* on twelve exposures - right on the nose. March time.

As a result, he used to beat off twelve exposures as his reference point. Anything he timed was just so much more or so much less than that twelve exposures. He said he used to say 'Well, it's about 8s.' He said it made it easy for him - or *easier* anyway.

Chuck Jones said the *Roadrunner* films had a musical tempo built into them. He'd time the whole film out, hitting things on a set beat so they had a musical, rhythmic integrity already built in. Then the musician could hit the beat, ignore it or run the music against it.

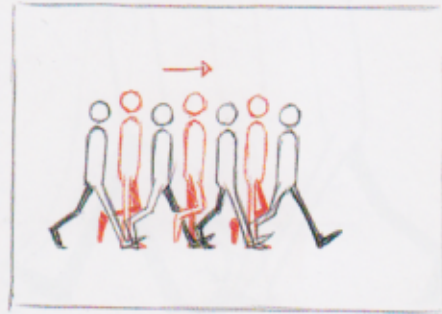
Chuck told me that they used to have exposure sheets with a coloured line printed right across the page for every sixteen frames and another one marking every twelve frames. He called them '16 sheets' or '12 sheets' I guess '8 sheets' would be the normal sheets.

I mentioned once to Art Babbitt that I liked the timing on the *Tom and Jerrys*. 'Oh yeah,' he said dismissively, 'All on 8s.'

That kind of tightly synchronized musical timing is rare today. They call it 'Mickey Mousing' where you accent everything - it's a derogatory term nowadays and considered corny. But it can be extremely effective.

In trying out walks, it's best to keep the figure simple. It's quick to do and easy to fix – easy to make changes.

ALSO, IN DOING THESE WALKS – TAKE A FEW STEPS ACROSS THE PAGE OR SCREEN –



DON'T TRY TO WORK OUT A CYCLE WALKING IN PLACE WITH THE FEET SLIDING BACK, ETC. THAT ALL BECOMES TOO TECHNICAL. WE WANT OUR BRAIN FREE TO CONCENTRATE ON AN INTERESTING WALK PROGRESSING FORWARD.

WE CAN WORK OUT A CYCLE FOR THE WALK LATER ... PERHAPS JUST FOR THE FEET AND BODY. BUT THEN HAVE THE ARMS AND THE HEAD PERFORMING SEPARATELY.

CYCLES ARE MECHANICAL AND LOOK JUST LIKE WHAT THEY ARE – CYCLES.

CHUCK JONES TELLS OF HIS TINY 3 YEAR OLD GRANDDAUGHTER SAYING, "GRANDDAD, WHY DOES THE SAME WAVE KEEP LAPPING ON THE ISLAND?"

Incidentally, if you are using colours as I am here, it works just fine when you film them. I often have a lot of colours going at first, and you still see the action clearly.

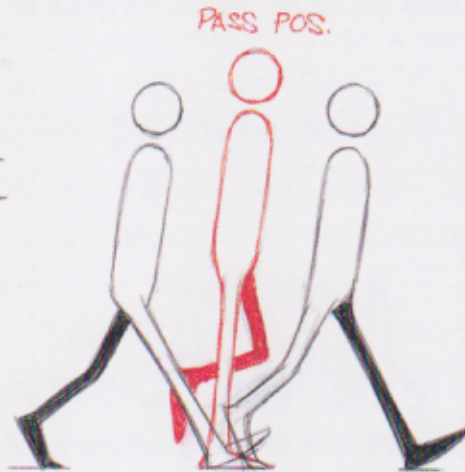
Now we're going to start taking things out of the normal:

The PASSING POSITION OR BREAKDOWN

THERE'S A VERY SIMPLE WAY TO BUILD A WALK. START WITH JUST 3 DRAWINGS –



THEN PUT IN
The MIDDLE POSITION -
The PASSING POSITION -
OR
BREAKDOWN



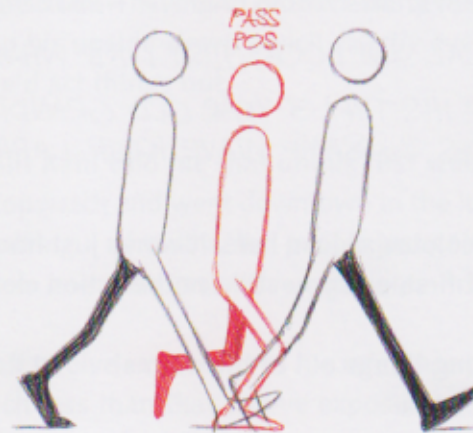
THIS TIME
WE'RE RAISING IT
HIGHER THAN
PREVIOUSLY.
WE'RE MAKING IT
THE UP POSITION -
-THE HIGH.

(WE'VE OMITTED
THE BENT LEG
TAKING THE WEIGHT
AND OUR CONTACTS
WILL ACT AS
THE LOW

When we join these up with connecting drawings, the walk will still have a feeling of weight because of the up and down. We can make tremendous use of this simple three drawing device.

BUT LOOK WHAT HAPPENS IF WE GO DOWN ON THE PASSING POSITION!

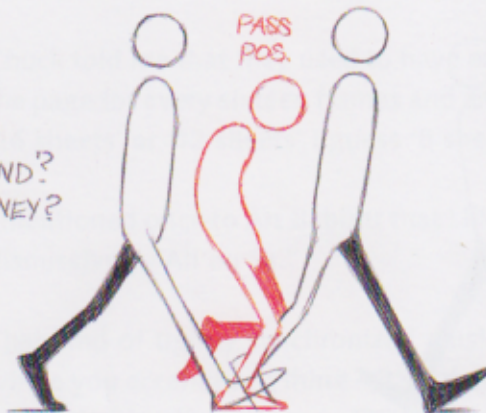
WE GET A VERY
DIFFERENT WALK -
A 'CARTOONY' WALK



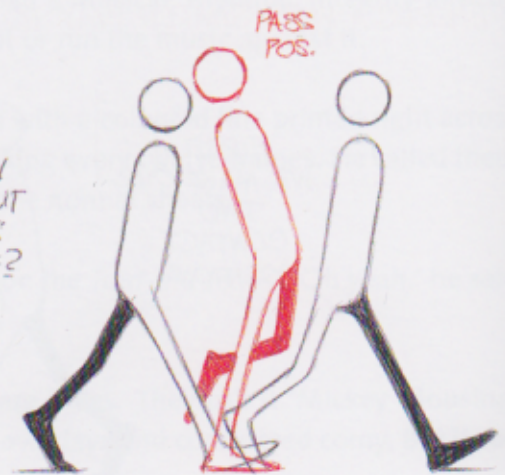
NOW THE PASSING
POSITION IS THE
LOW AND THE
CONTACTS ACT
AS THE HIGH -
STILL GIVING A
FEELING OF
WEIGHT.

THE CRUCIAL THING IS THIS MIDDLE POSITION AND WHERE WE PUT IT.

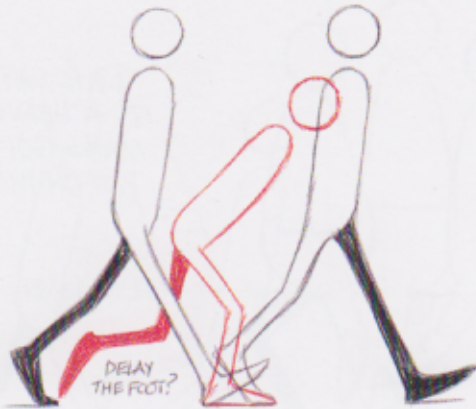
SQUASH
WITH A BEND?
LIKE A KIDNEY?



HOW
ABOUT
THIS
ONE?



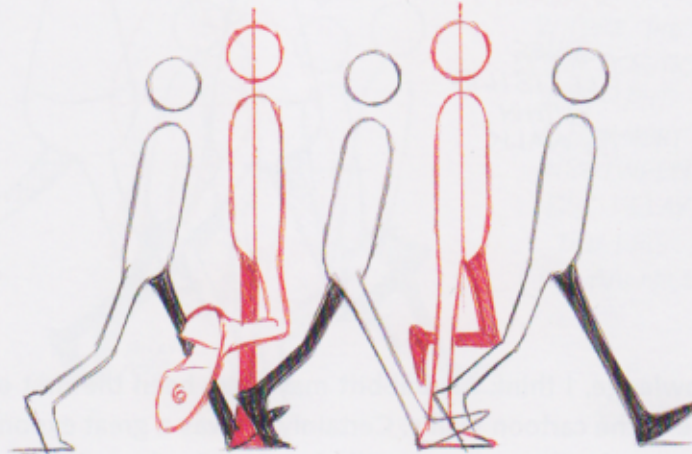
THESE CONTACTS ARE ALL THE SAME BUT THE MIDDLE POSITION UTTERLY CHANGES THE WALK.



(OBSVIOUSLY WE'LL NEED THE TIME TO ACCOMODATE BROAD MOVES LIKE THIS)

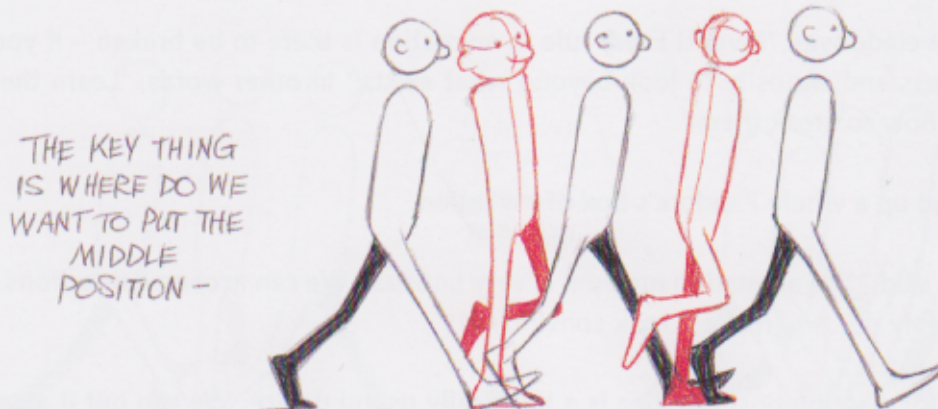
IN A SLOW STEP WE MIGHT GO AS FAR AS THIS - ALMOST A SNEAK.

WHAT IF THE FEET SWING OUT SIDWAYS ON THE PASSING POSITIONS?



AND MAYBE STRAIGHTEN THE BODY ON THE PASS POSITIONS?

OR JUST TILT THE HEAD AND SHOULDERS SIDWAYS ON THE PASS POSITIONS -



THE KEY THING IS WHERE DO WE WANT TO PUT THE MIDDLE POSITION -

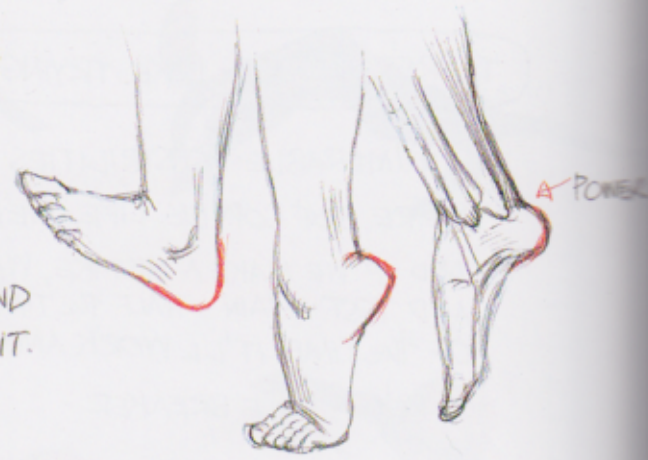
NOT TO MENTION WHAT WE CAN DO WITH THE HEAD, HANDS, ARMS OR FEET -

THE VARIATIONS ARE ENDLESS -

BACK TO NORMALCY FOR A BIT-

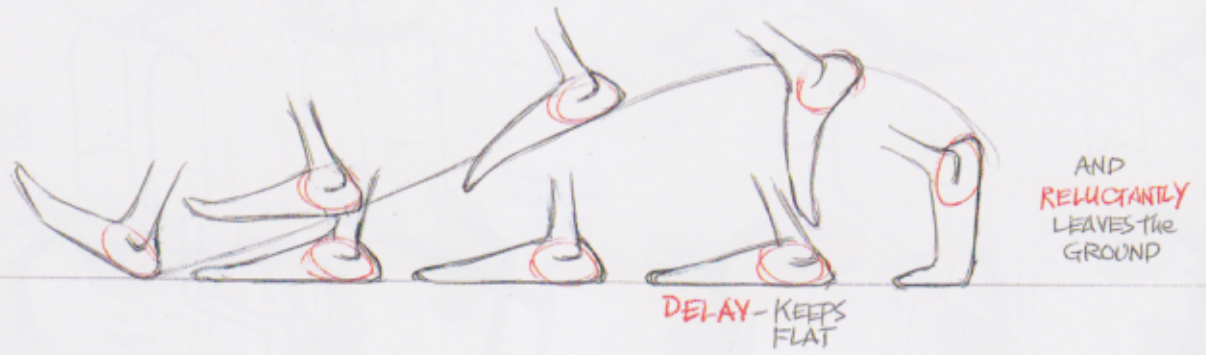
THE HEEL

The **HEEL** IS THE **LEAD** PART.
 The **FOOT** IS **SECONDARY** and **FOLLOWS** ALONG.
 The **HEEL** **LEADS** and the **ACTUAL FOOT** **DRAGS** BEHIND
 and **FLOPS** FORWARD - BUT THE **HEEL** **CONTROLS** IT.

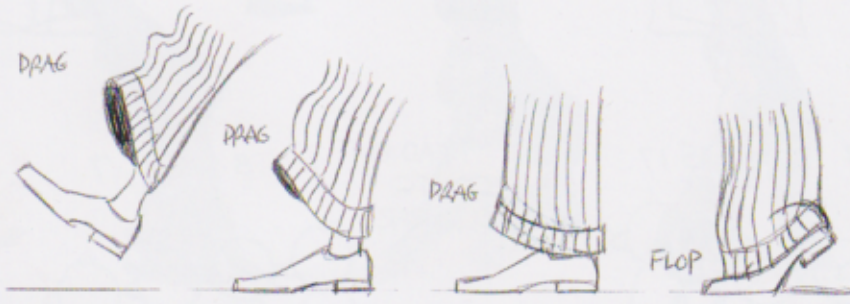


FOR WALKS and RUNS -

LOCK THE **HEEL FLAT** ON THE **GROUND** FOR THE **FEELING** OF **WEIGHT**.
 KEEP THE **FOOT BACK** TILL THE **LAST** POSSIBLE **MOMENT**.



AND **DRAPERY** IS **ALWAYS** **LATE** -

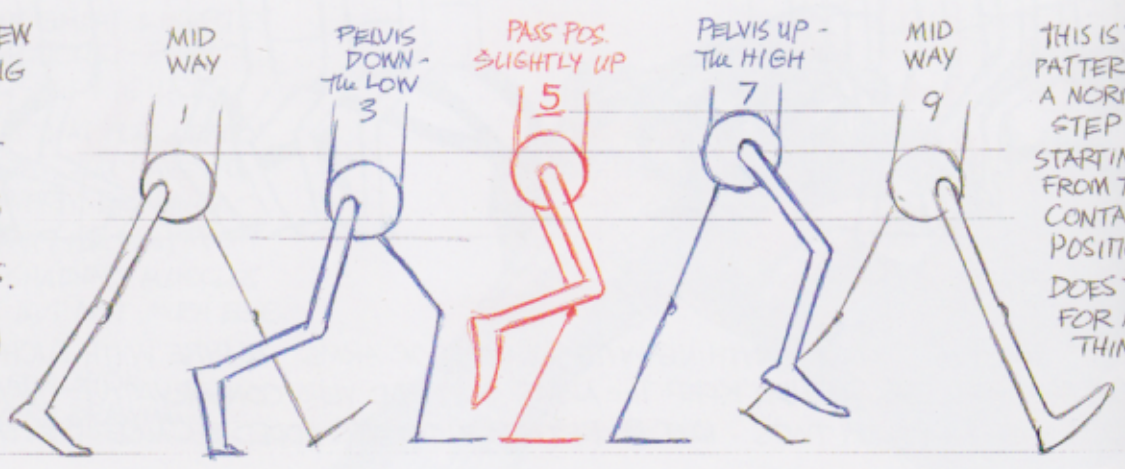


PANTLEG **CATCHES** UP -
 GIVES AN **ADDITIONAL** **BIT** OF **LIFE**

FOOT ACTION

LET'S **REVIEW** THE **PASSING** **LEG** IN A **NORMAL** **WALK** -
 STARTING WITH THE **CONTACTS**.
 (SAY IT'S ON 8'S)

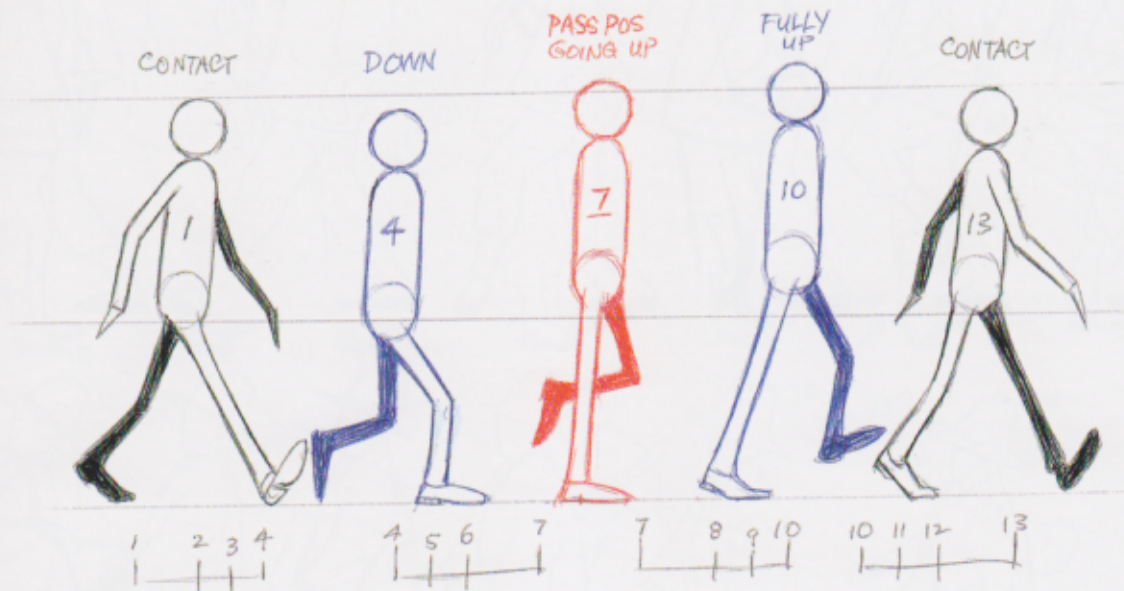
SPREAD **OUT** -



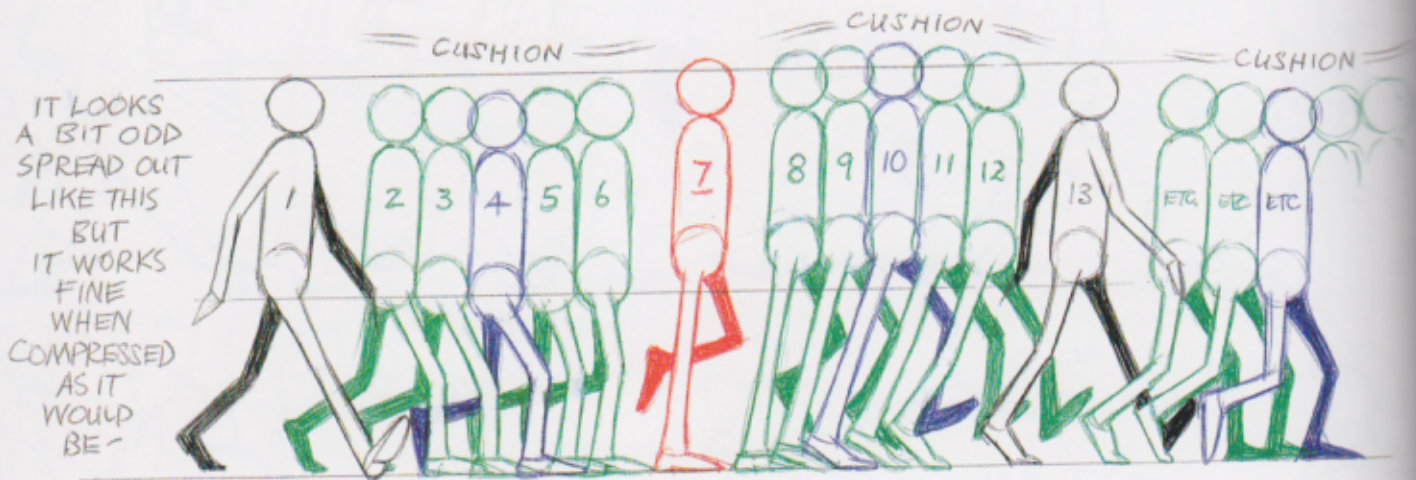
THIS IS THE **PATTERN** OF A **NORMAL** **STEP** **STARTING** FROM THE **CONTACT** **POSITION** -
 DOES THE **JOB** FOR **MOST** **THINGS**.

NORMAL WALK SPACING

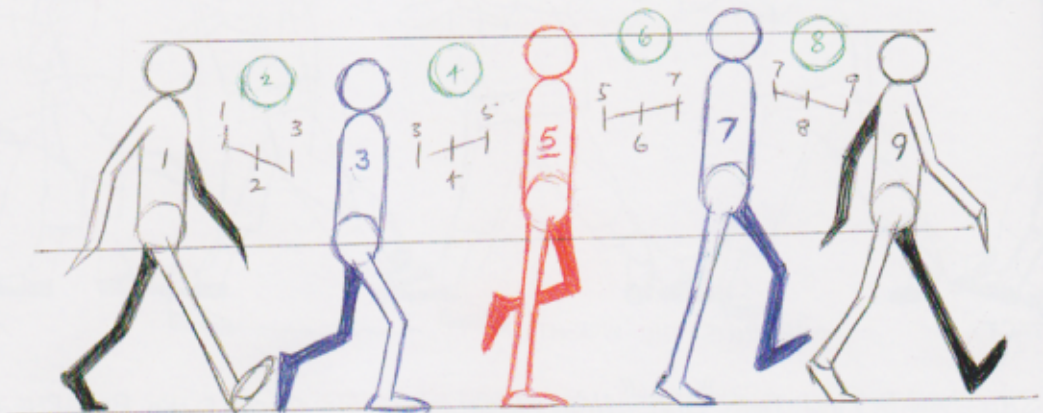
WE HAVEN'T YET QUITE SHOWN THE SPACING AND CUSHIONING ON A NORMAL WALK. HERE'S A FORMULA SPACING FOR THE 'CONVENTIONAL' WALK ON 12'S. (SPREAD APART)



WE SPEED THRU THE CONTACT and CUSHION INTO THE DOWN and EASE OUT OF THE DOWN and SPEED THRU THE PASS POS. and CUSHION INTO and OUT OF THE HIGH

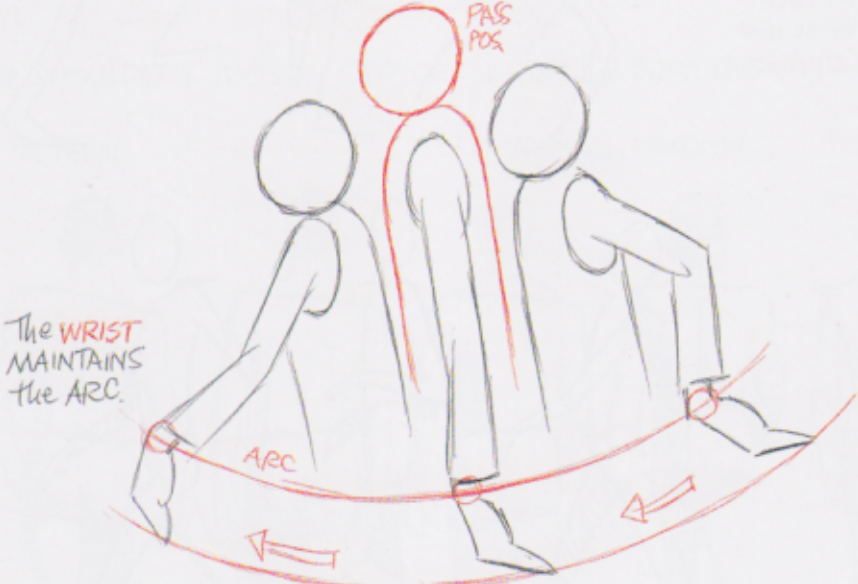


AN 8 FRAME WALK USES EXACTLY THE SAME DRAWINGS - WITH JUST SINGLE IN BETWEEN

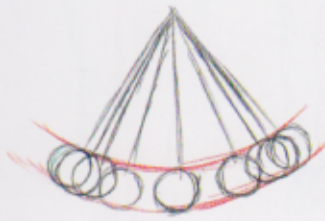


ARM MOVEMENTS

WHILE THE SHOULDER RISES UP IN THE PASSING POSITION THE HAND IS AT THE LOWEST PART OF THE ARC



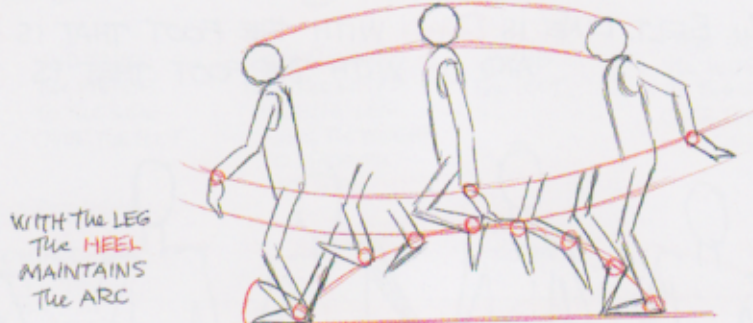
MOST ACTIONS FOLLOW ARCS - GENERALLY AN ACTION IS IN AN ARC



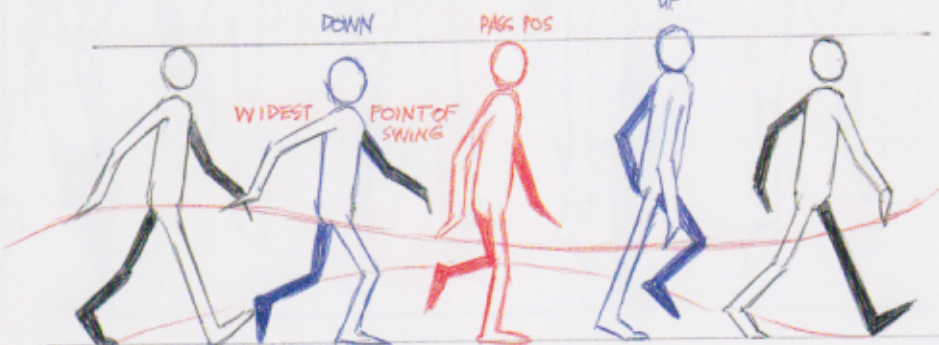
AS THEY SWING TO BALANCE THE THRUST OF THE WALK - THE ARMS WILL TEND TO BE IN A WAVE LIKE PENDULUM - LIKE MOVEMENT.



MOST OF THE TIME THE PATH OF ACTION IS EITHER AN ARC OR A SORT OF FIGURE 8 - BUT SOMETIMES ANGULAR OR STRAIGHT

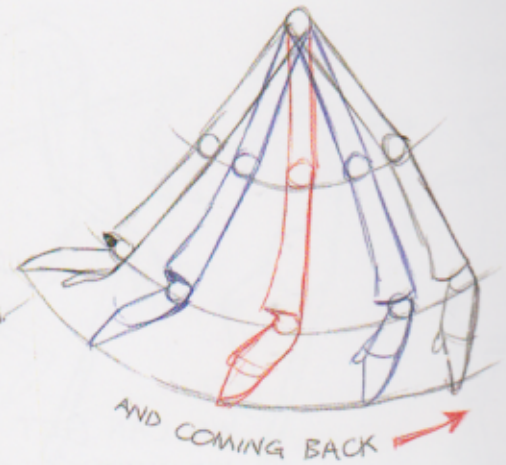
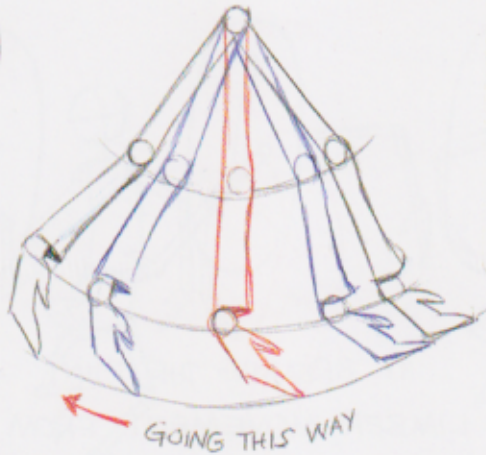
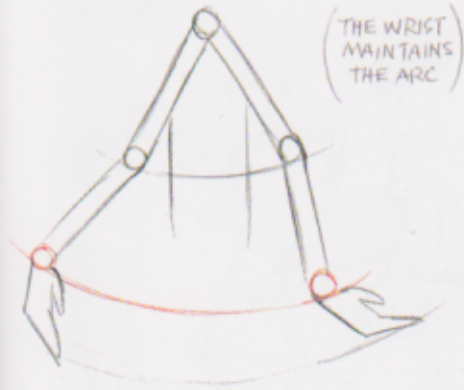


AND JUST TO MAKE LIFE DIFFICULT WE SHOULD REMEMBER THAT 'NORMAL' - THE GOVERNMENT - ISSUE WALK - THE ARM SWING IS AT ITS WIDEST ON THE DOWN POSITION, NOT ON THE CONTACT POSITION.

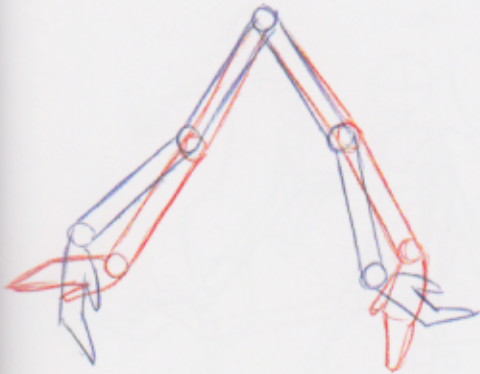


BUT OF COURSE WE'RE NOT STUCK WITH THIS -

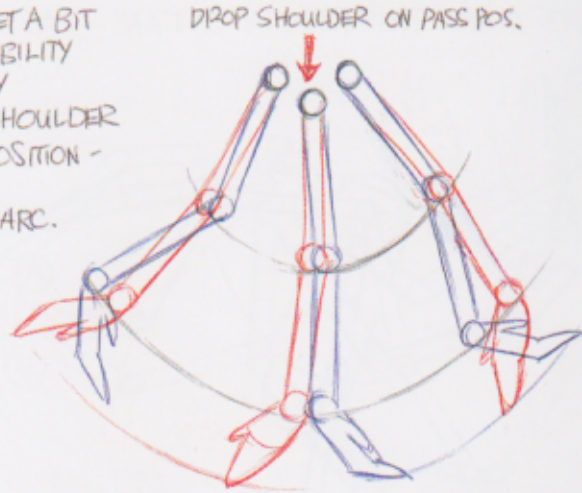
TO GET SOME FLEXIBILITY IN AN ARM SWING WE'D DRAG THE HAND -



AND THIS WILL GIVE US A NICE LITTLE OVERLAP OF THE HANDS AT EACH END OF THE SWING -



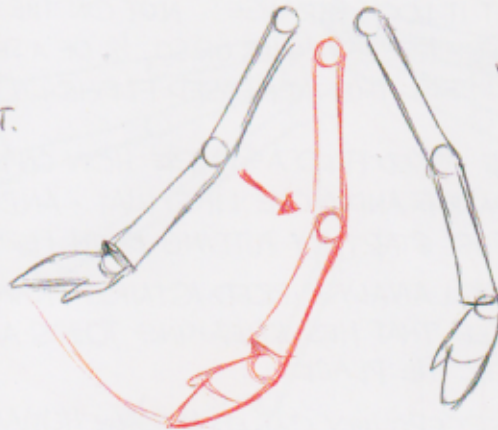
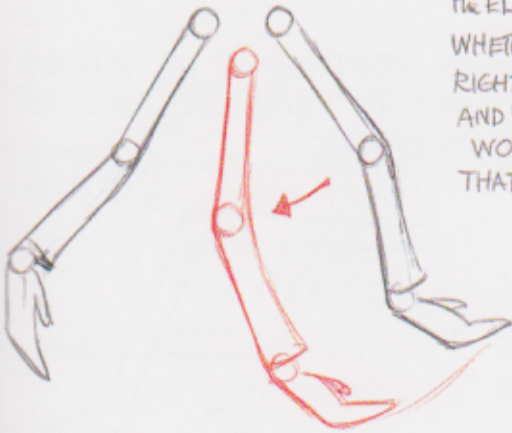
AND WE CAN GET A BIT MORE FLEXIBILITY INTO IT BY DROPPING THE SHOULDER ON THE PASS POSITION - MAKING A DEEPER ARC.



BUT HERE'S THE SECRET -

WHEN WE GO FORWARD WE'LL 'BREAK' (BEND) THE ELBOW JOINT WHETHER IT LOOKS RIGHT OR WRONG AND WHETHER IT WOULD BEND THAT WAY OR NOT.

AND WHEN WE COME BACK, WE'LL 'BREAK' (BEND) IT AGAIN - ALTHOUGH GOING THIS WAY IT LOOKS QUITE NORMAL - A NATURAL 'BREAK' OR BEND.



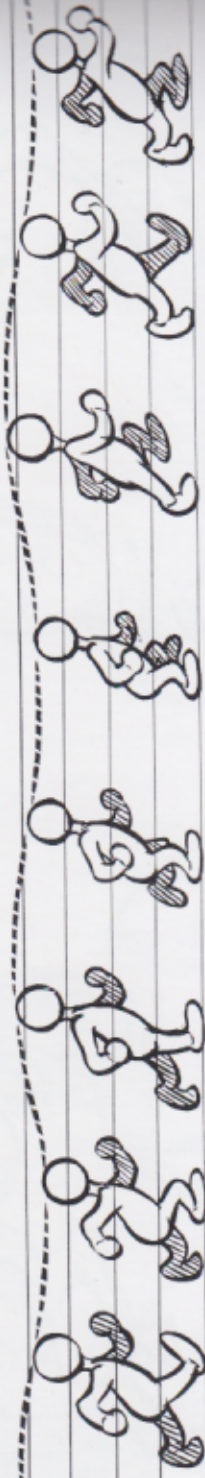
MOVEMENTS OF THE TWO-LEGGED FIGURE

A COMPLETE CYCLE FOR A TWO-LEGGED WALK IS TWO STEPS. DRAWINGS ARE MADE OF THE KEY POSITION OF THE STEPPING ACTION UNTIL THE NEXT DRAWING WOULD BE A REPEAT OF THE FIRST. THE DRAWINGS CAN BE USED OVER AND OVER AGAIN TO MAKE THE CHARACTER WALK AS FAR OR AS LONG AS DESIRED.

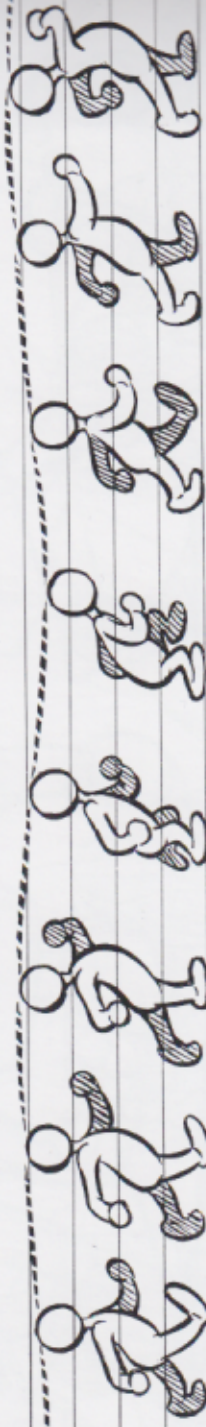
WALK—



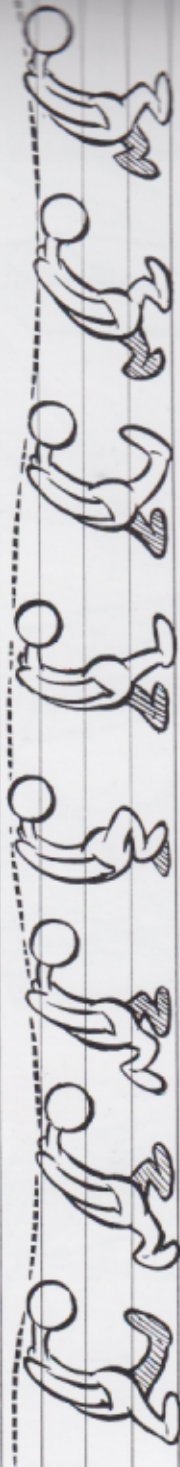
DOUBLE
BOUNCE
WALK—



STRUT—



SHUFFLE—



SNEAK—

