19 *The mill*

The essence of this exercise is balance, flexibility, scope (height of legs) and timing (sense of rhythm). The mill is so called because the exercise should evoke the picture of an old-fashioned windmill: (the wind being the horse, who hopefully 'blows' in a regular fashion, keeping an even canter stride). The wings of the mill must have even height, even rhythm, even appearance, even straightness and even speed. The whole exercise must have a fixed point for an 'axle'.

Position

The mill is a *sitting exercise*! In order to correctly execute a mill, the vaulter has to be able to sit in a balanced fashion! Like in the basic seat, he will need to absorb the movement of the canter stride in his pelvis, only this time also sideways and backwards.

The exercise is of course started out of the basic seat position. I tell my vaulters to imagine that they are sitting on a *small* cookie plate, the exact centre of which is pierced by their tailbone. This is the fixed point, or the axle, of the mill. This centre point must be directly over the horse's spine (about one hand width back behind the surcingle), and the vaulter's bottom must turn on the cookie plate. So there is really no option of where to sit, and *no* sliding around – no seat corrections should occur in a well executed mill.

The mill begins (unless a mount counts into it, when performed outside the block) from the seat astride. In this exercise the vaulter performs a complete rotation on the horse's back in sitting position (left turn), which is executed in four evenly

timed phases, with the dismount started in the same rhythm.

Rhythm

In canter each (except the last leg over) phase lasts four canter strides (when you practise in trot let them count at least to six, otherwise it is too fast). As soon as your vaulters are able to well maintain their balance in all side and backward seat positions, and are actually starting to perform a full mill, *always* insist on their counting the beat (loudly for beginners), as *not* keeping the rhythm in the mill is the fastest way to lose points! *Each* rhythm fault (and you can commit up to five) is good for a one point deduction, and they are cumulative.

Beginners and little vaulters especially will count and stop at their convenience at the stages where the exercise becomes more difficult (and they need more time to complete leg movement and hand changes). It must be quite clear to them that the *horse* with his rhythm sets the rhythm for this exercise, and *not* the vaulter!

'First leg' into inside side seat

From seat astride the vaulter lifts his right leg (and *all* the legs in the mill must be perfectly straight and toes pointed) and carries it over the horse's neck, in an *arc as wide and high* as possible. The leg which does *not* travel stays long, pointed down, so it is positioned under the vaulter's hip (like in basic seat), and *to* the horse. Each grip is released and retaken quickly, as the leg bypasses the hand. The upper body stays erect, the torso may *slightly* lean backwards, but the back may not be rounded to facilitate the lifting of the leg. The control of the leg's movement and height must come from the stomach muscles! The eye should follow the foot in the air, the head should 'lead' the movement.

When the right leg comes down on the inside, both legs are immediately closed (whole length). They should be as long as possible, both put *to* the horse and kept still (not swish along the

horse's body with the canter movement). Shoulders are now pointing towards the lunger, hands are still in the original position.

'Second leg' into backward seat

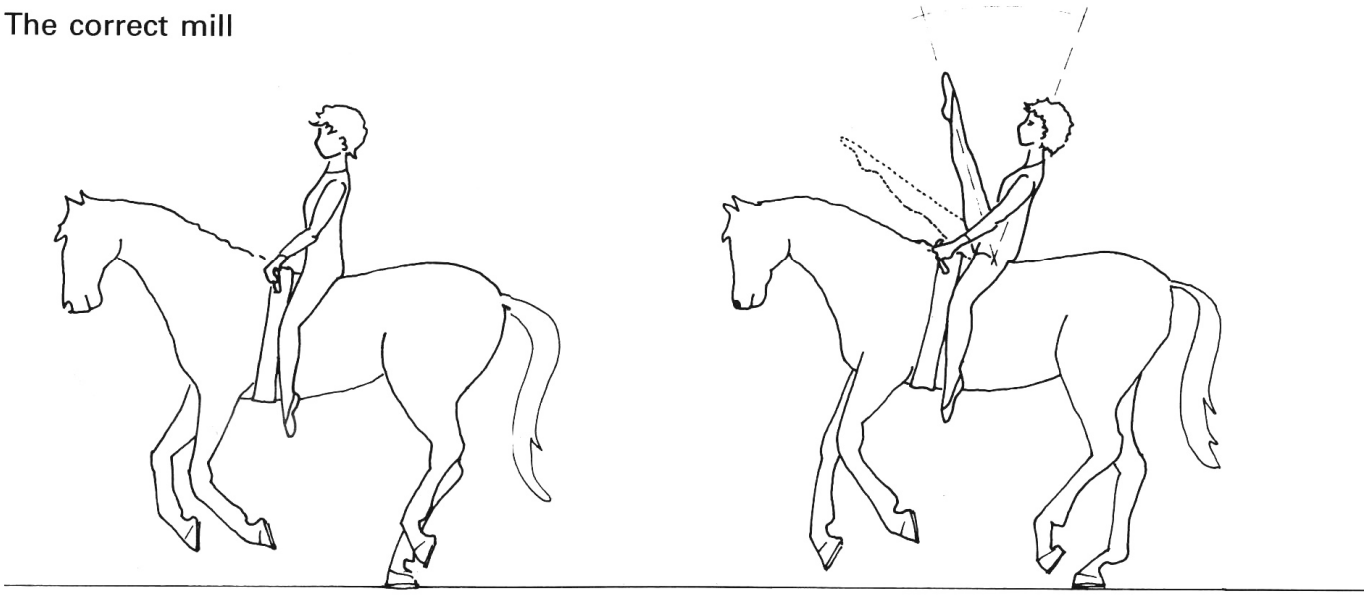
Now the left leg is lifted to be passed over the back of the horse. All the above mentioned criteria apply. *Both* buttocks should remain in contact with the horse's back. As soon as the vaulter reaches the backward seat (and not before or during the movement), the hands are quickly changed. The seat should be erect, with legs long. Don't forget to move the pelvis to avoid bouncing.

'Third leg' into outside side seat

This is the move most affected by centrifugal force – and where beginners often involuntarily dismount! So the weight should be shifted very slightly (and invisibly to the judges) to the inside of the horse's spine to counteract it. So run along with the little ones, when they do the mill in canter for the first time, to ensure they have sufficient balance to maintain control in this position. It could be dangerous for them to fall during this turn, as they are either backward or half turned and in a sideways, twisted position and might land under the horse.

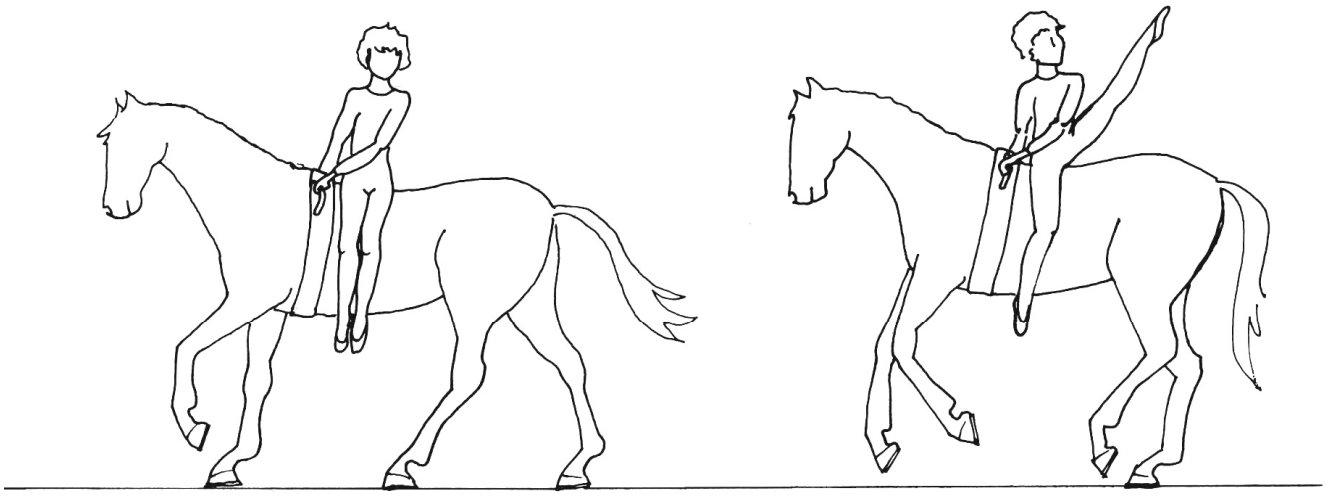
The right leg is lifted again and carried over the croup and the vaulter lands in the outside seat, where his legs must be immediately closed (all the way). This 'third' leg is for many the most difficult one to lift, because of the wide straddle backwards position, so teach your vaulters to pay special attention to bringing it as high as the other legs. It is also the turn, where most buttocks lift off, because the vaulter tries to facilitate lifting the leg by transferring weight onto his arms. Indeed, a good mill should not need the help of the hands at all, it should be fully balanced out of the sitting position. The hands stay in previous position, until the rotation of this leg is almost finished, then they are quickly changed. Shoulders face the outside.

The correct mill



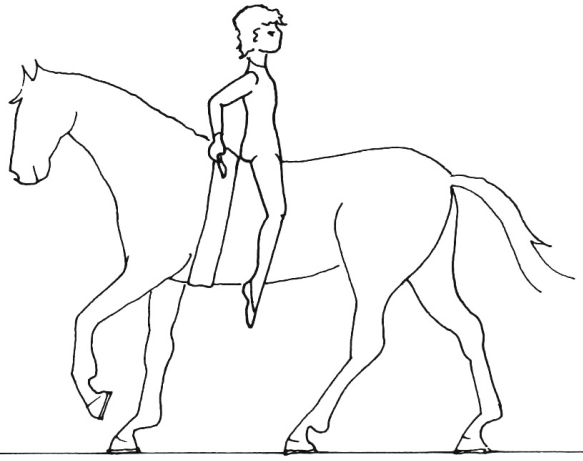
From correct basic seat...

...the vaulter carries the first leg over. Hands release and retake grips as leg swings by. The 'down' leg (here the inner leg) must not cling, but stay long and relaxed. Upper body stays erect and in near vertical position throughout, the eye follows the foot. The smaller the angle between torso and leg, the better. All legs should achieve the same height

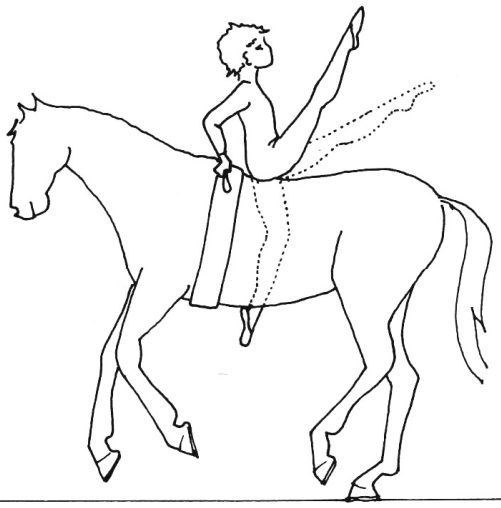


Establish balance in the side seat: shoulder, head and hips face the lunger. Legs are long and together touching the horse's body with their full length

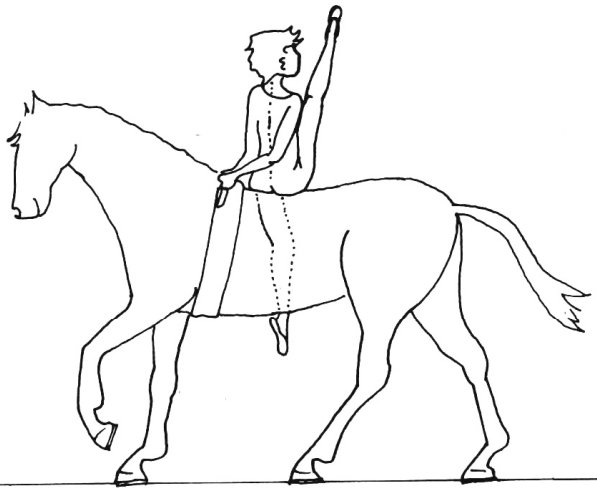
The right leg must not cling, and stay still. The seat is never shifted from its centre position. Hand change happens *after* the leg is passed over



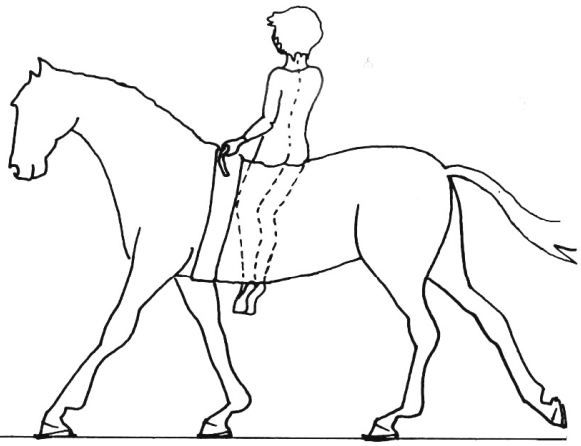
Balanced backward seat: legs are long, pelvis absorbs the movement, head stays erect



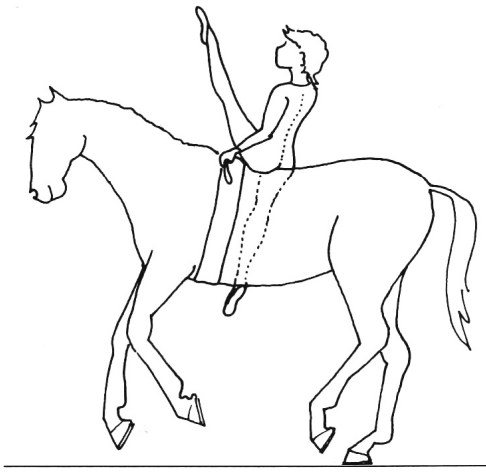
Shift weight very slightly to the inside before passing the next leg over, to counteract centrifugal force



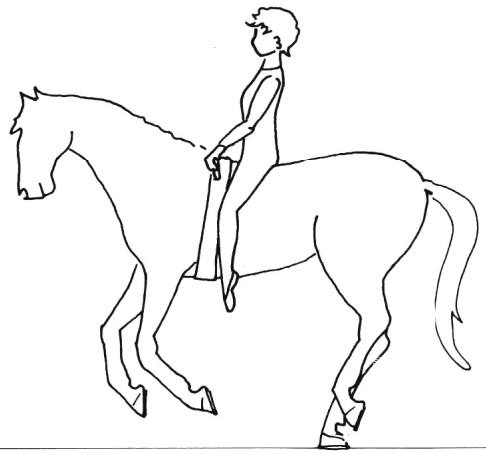
Both buttocks stay in contact with the horse's back as leg lifts over. Hand change happens *after* the leg movement, when outside seat is reached



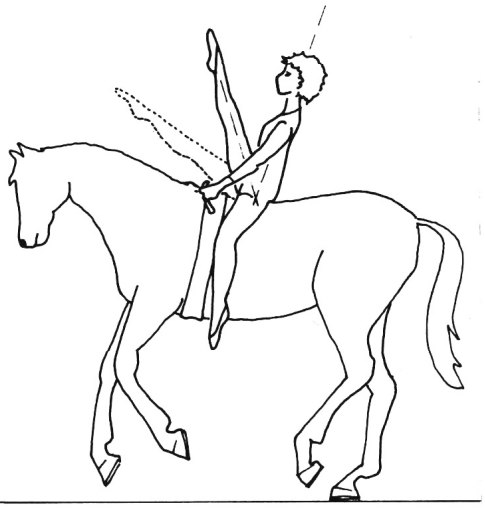
Balanced outside seat: shoulders, head and hips face the outside, knees and feet are together legs long and relaxed



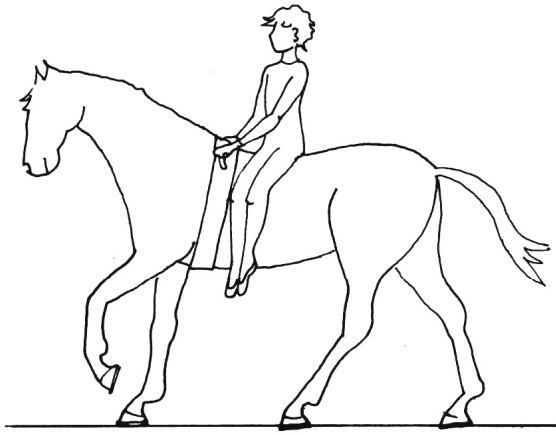
Hands release and retake grips as leg moves by. Outer leg stays long, both buttocks stay on the horse's back. Eye follows foot



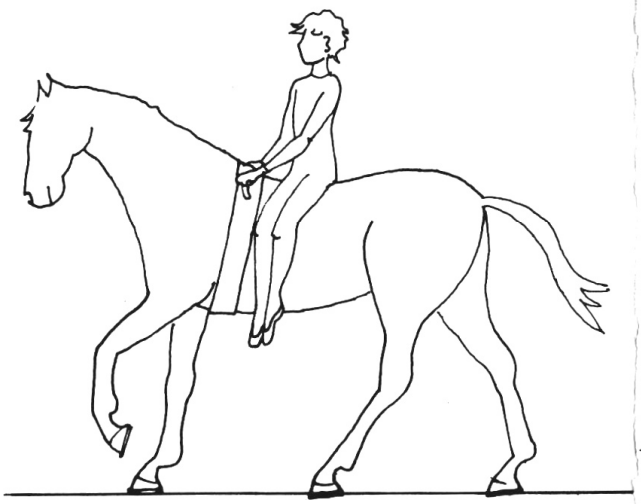
Back in the basic seat, but the vaulter continues to count in the four-beat rhythm



The 'fifth' leg moves like the first, but...



...this time the vaulter keeps his shoulders to the front (direction of travel) to dismount



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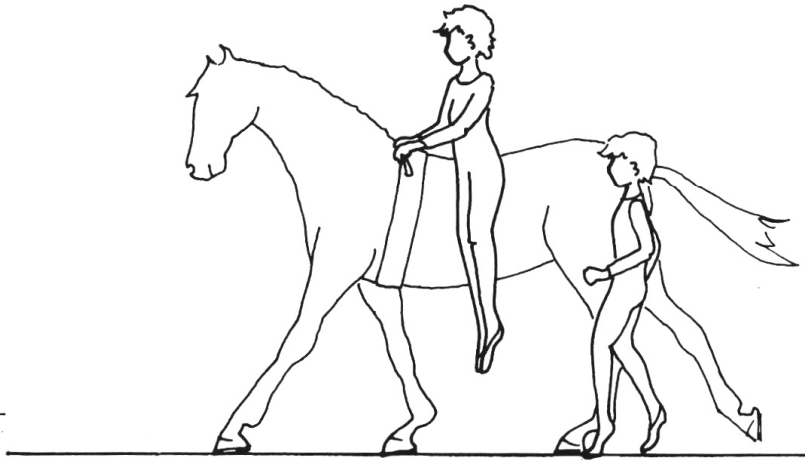


Then follows a slight push away from the horse and to the rear, soft landing, and continuation of the forward motion after the dismount

'Fourth leg' back to seat astride

In the outside seat the legs must again touch each other for the whole length. The 'fourth' leg, again the left one, is then lifted over the front, landing in seat astride as when s/he started. In this move the vaulters most often 'leave their shoulders behind', meaning that they do not turn the torso and the hips together. (Try it without taking the grips.) Insist on balance, rather than pulling on the grips with force.

'Fifth leg' and dismount

Now don't forget that the 'fifth' leg (the right one going into the dismount), although not part of the mill, *must* be started on the *same* beat rhythm as all the others. This is where most rhythm mistakes occur, because the vaulter has the impression that the job is done, once landed back in seat astride. Not so... But the vaulter does not have to sit out four strides, the dismount should be performed fluently and in one movement, as any delay in the sideways seat will receive deduction points in competition.

The dismount is carried out as described in the 'basic dismount', or else, if all the compulsories are performed in sequence, this dismount ends in a 'touchdown' with immediate remount (which counts into the next exercise).

The balance

If beginners are always gripping the handles, they may not really understand the necessity of balance in the mill. A good way to train for this understanding is to let them do the mill with arms crossed in front of their chest – first on the barrel, then on the horse in walk. More advanced vaulters should then practise in canter to let go both hands immediately after swinging the leg over and then sit the three following canter strides with arms crossed – and fully balanced.

The height of the leg in the mill largely depends on the

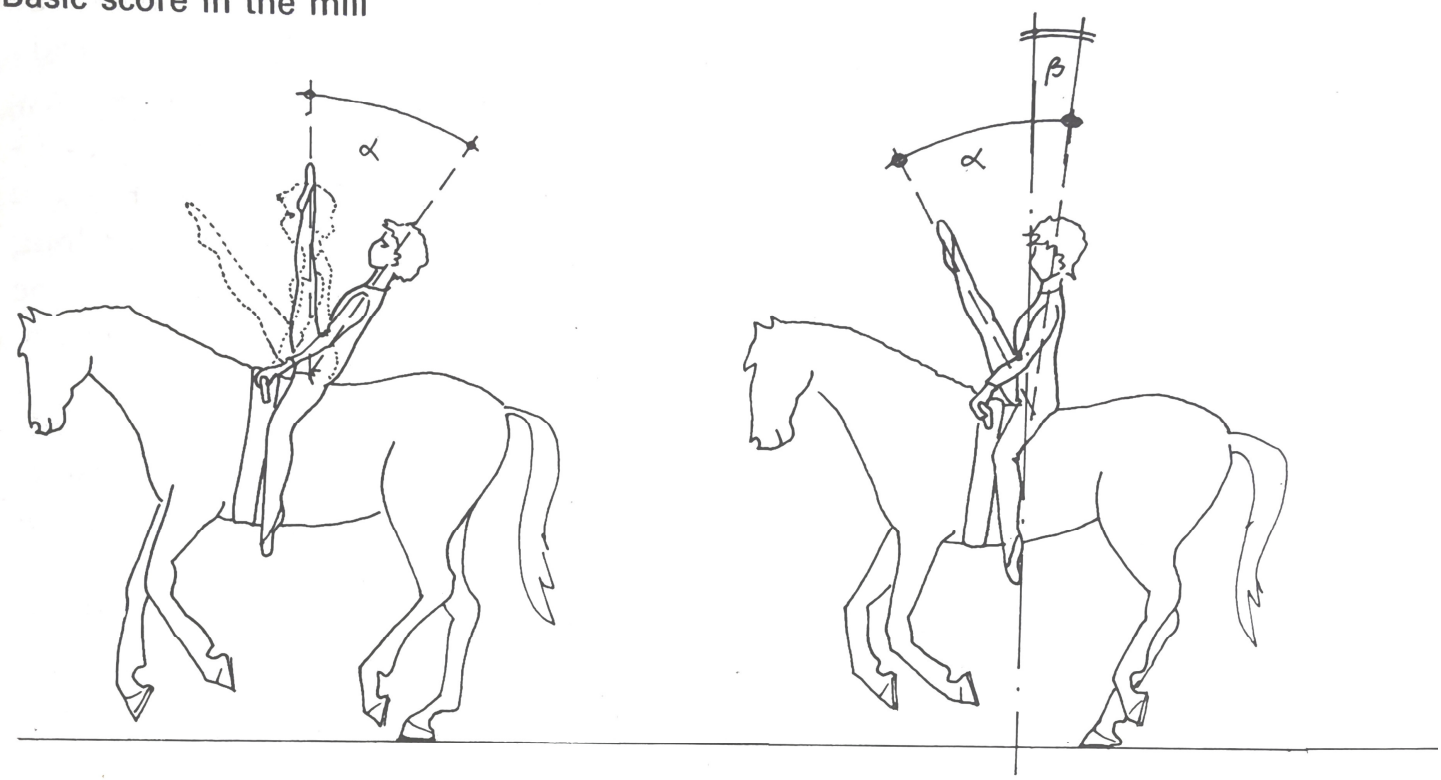
flexibility of the vaulter, but even many very high mills are nevertheless not achieving good scores, because the vaulter can't 'sit' the mill. The vaulter should learn that balance is the beginning of everything in this exercise: only when fully balanced can legs be lifted and carried around with ease and in good rhythm and equal height, only then can the other leg stay down and long without clinging. Only then will the shoulders rotate with the hips evenly and the buttocks not lift off, when the leg comes up. And the list goes on.

A well executed mill in canter should look as if the hands were not necessary to perform the exercise. The vaulter must express in his body posture that he is indeed independently balanced and straight throughout the exercise.

The rule says that each leg must be carried 'fluently without rushing and without interruption'. There is no set rule concerning *how long* the vaulter should *keep* the leg suspended in the air. However, it is clear that it is easiest to throw the leg around in a quick motion (on the 'one' beat) and then sit for the next canter strides (two to four). This can result in quite a nice looking mill, especially with very flexible, but rather weak children (weak in the stomach muscles). Best scores are naturally never achieved by evading difficulty: therefore an experienced vaulter tries to *carry* the leg in a controlled fashion on the canter beats one to three, and only uses stride four for hand changes, while sitting still. In a high-scoring mill the body and the head are turned *while* the leg is travelling through the air, not via seat corrections, when the leg is already around. This is the part that makes the mill difficult, as it requires the excellent balance and control, which is needed to make the vaulter look perfectly at ease during the turn.

If the compulsory exercises are performed all in one block, the vaulter will dismount and re-mount via a touch-down directly after the mill. The technique for the touch-down is very similar to that of a correct mount, the jump-off is the same. So the vaulter will slide off the horse with both legs stretched and

Basic score in the mill



Angle α means angle between torso and up-leg, i.e. is a measure of flexibility Angle β measures the leaning of the torso, i.e. the deviation from the vertical

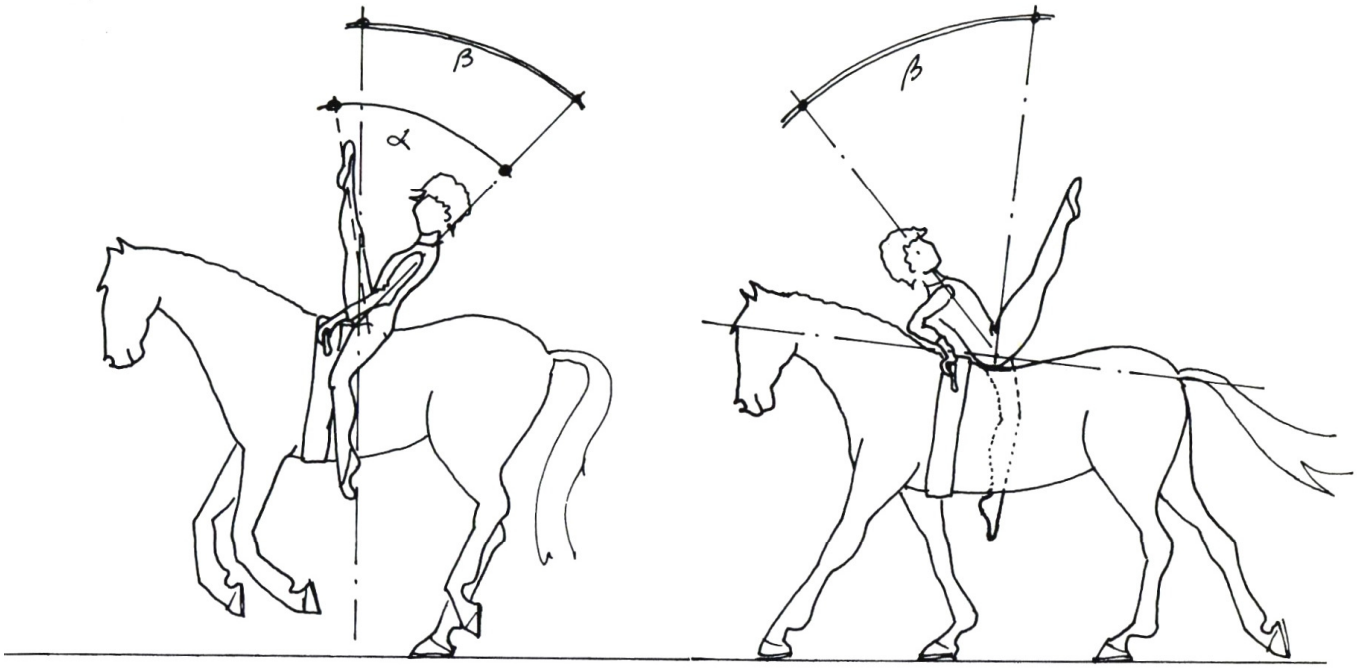
Same angle α between torso and leg will be scored higher here, since leaning angle β is smaller

extended slightly to the front, to hit the correct jump-off point approximately one foot ahead of the surcingle. The re-mount will count into the next exercise.

Basic score

Obviously it is very desirable to reach very high leg elevation in the mill, as one of the essence points in the mill is flexibility. The main faults in the mill stem from putting too much emphasis on high legs alone – the vaulter tries to make up for lacking flexibility by introducing more mistakes.

Excessive leaning of the torso is one of them. The angle alpha in the illustrations is an indication of the vaulter's flexibility, but the angle beta shows how much s/he leans from the vertical,



Although the vaulter has excellent flexibility (small α) and legs are near split position, basic score can't be higher than 7.0, because of leaning angle β at 45 degrees – a full 3.0 point deduction

Excessive leaning angle β of 45 degrees or more

approximately perpendicular to the horse's back. (This line will depend on the horse's position according to the canter stride, but is more or less parallel to the ground.)

The basic score can not be higher than 7.0 at the most, if an excessive leaning angle (beta) of 45 degrees is reached, as this constitutes a full 3.0 points deduction. (If this is the only mistake!) The basic score will vary between 4.0 and maximum 6.0 points if two or more of these main faults are committed:

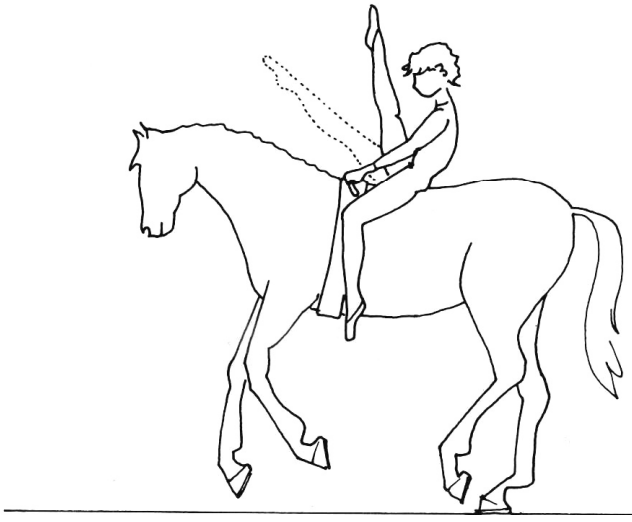
the resting leg is lifted (clinging to the horse to facilitate the lifting of the other leg)

side seats do not rest on both buttocks

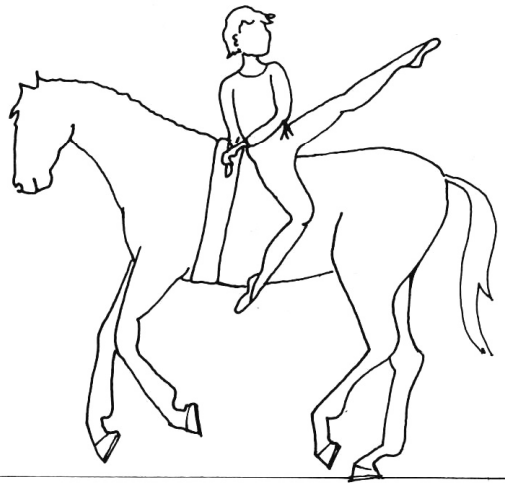
upper body does not rotate with the legs (shoulders lag behind the movement of the leg rotation)

buttocks lift off while leg is carried around

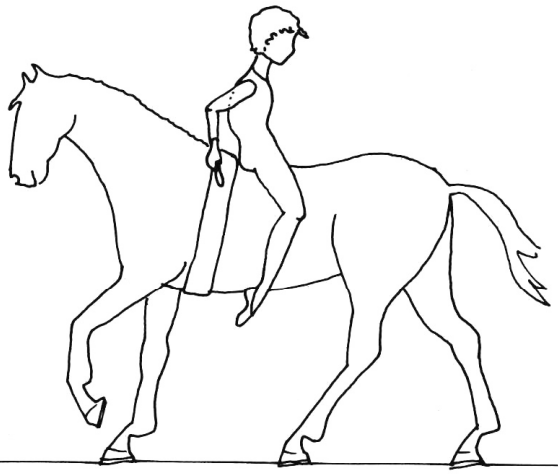
Typical mill mistakes



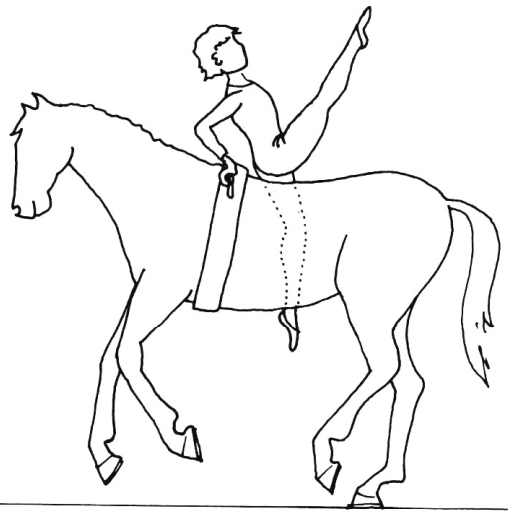
Rounded back means evasion of difficulty
It is easier but wrong to gain height for the leg this way. Inner knee comes up and clings to make up for loss of balance. Dotted line shows what is considered insufficient height



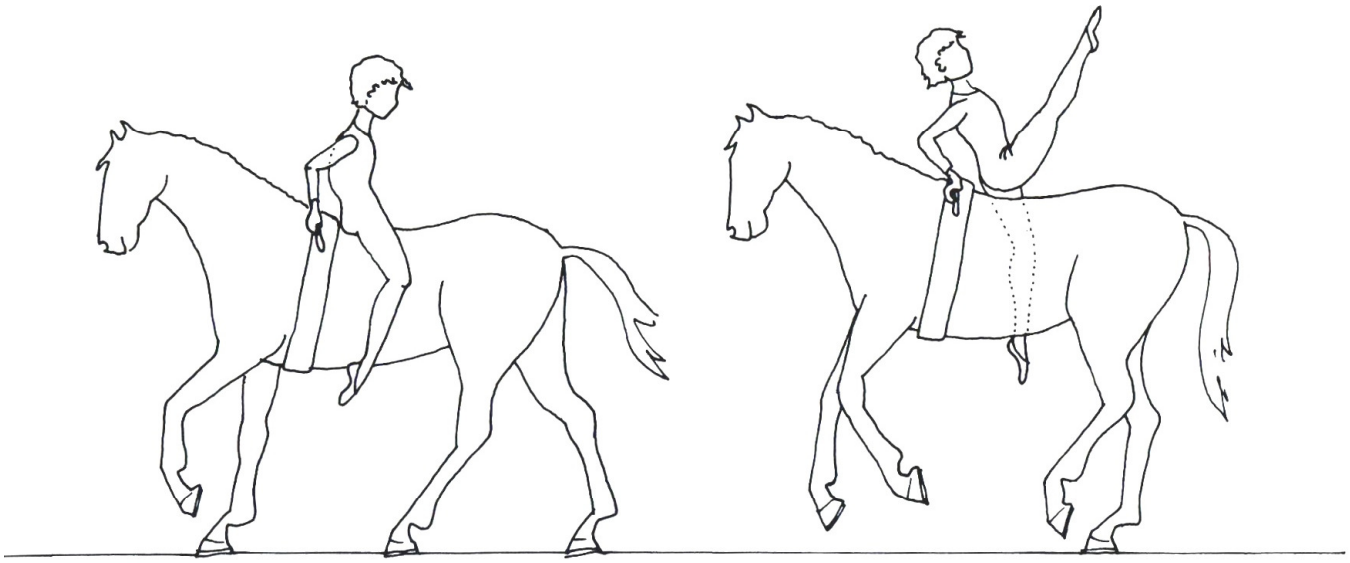
Wrong: excessive leaning and clinging 'down' leg. Vaulter is off-centre



Wrong: slouched back, vaulter will bounce. Lack of absorption of the horse's motion: stiff pelvis. Head is too low



Wrong: excessive leaning of torso. Right buttock lifts off



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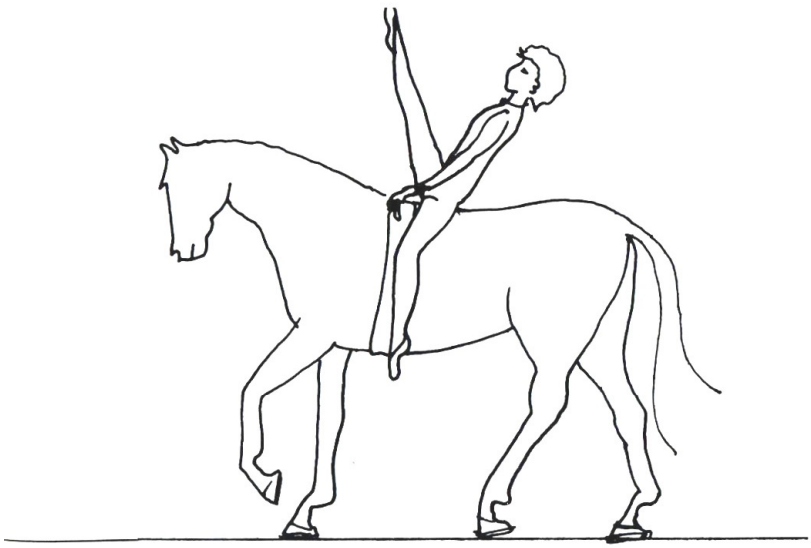

Wrong: excessive leaning, right buttock lifts off

Common faults

- rounded back to make up for lack of flexibility in the legs
- rhythm mistakes in the count
- seat corrections, because the vaulter slides around, following the movement of the legs with his seat
- losing balance to the outside, because centrifugal force was not taken into account
- lifting off with one buttock when leg is passed around
- head dropped
- lacking scope (height of the leg)
- *uneven* elevation of legs in the four phases and the dismount
- lacking posture: chest not out, shoulders pulled up, head down
- lacking form: knees kinked, feet not pointed
- shoulders not turning with the hips in rotation and seat
- shoulders turning to the centre when dismounting (when they *must* stay facing the front)
- arc of the leg not *wide* enough, or asymmetrical 'slicing'
- stopping at top of arc (interruption of fluid motion)

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