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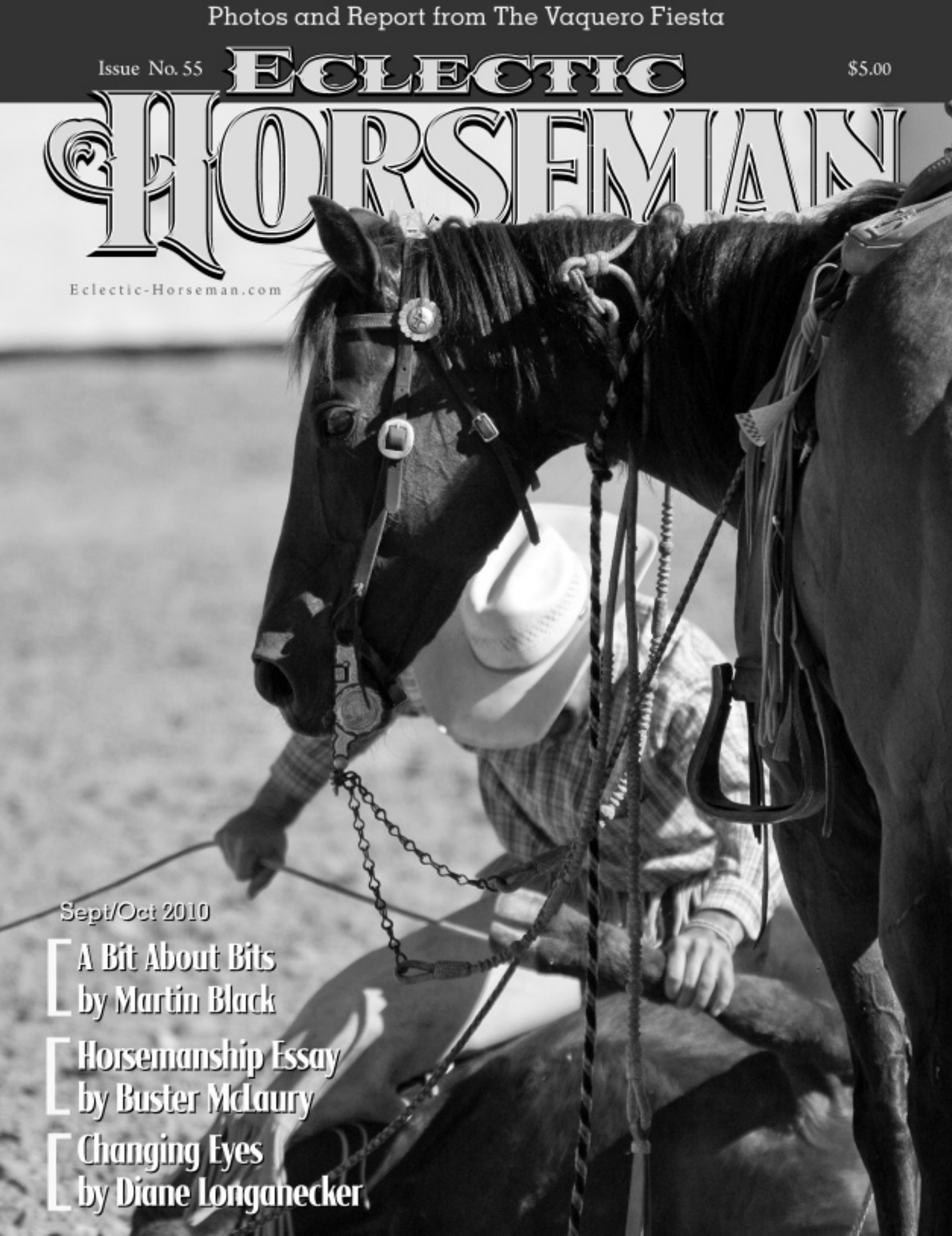

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- A Bit About Bits by Martin Black
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How Horses Work

Installment #5: The Magic of Draping Reins

by Deb Bennett, Ph.D.

The Reins Come Alive

Something that always fascinated me about watching riders who gave Ray Hunt or Tom Dorrance the chance to help them was a phenomenon that I call "rein length convergence". Those of you who remember Larry Mahan's horse TV show will have watched the segment where Tom teaches Larry how to cause a horse to stop "rounded up" and in balance. When Larry succeeds, I can't tell any difference between the look of his palomino-colored mare decked out in "western" tack, and a properly-schooled "English" horse. Her mouth is softly closed, her face is vertical, her neck is fully arched, her back is softly rounded, and her loins elastically coil as the hocks and hind feet come under. As she steps into her stop, the reins are neither slack nor taut but "draping".

It can work the other way around, too. I can't tell you how many times I heard Ray Hunt say to this former "English" rider, "Debbie—you could loosen them reins some, Debbie." In other words, the "western" rider who often rides on reins that are slack, and the "English" rider who often rides on reins that are tight, wind up "converging" under expert coaching to a place in-between. But don't let my choice of words deceive you. This place "in between"—where the reins are neither slack nor tight, but draping—only appears on the surface to be an intermediate. What draping reins really are, is not intermediate but OTHER—because they arise not from releasing tightness, nor from taking up slackness, but rather from the rider ceasing to direct the reins to the mouth, and instead effectively connecting them to the feet. So, even more often than I heard "Debbie, you could loosen them reins," I heard "Debbie—you're not getting to the feet, Debbie. You have to get to the feet."

What Is Rein Contact?

One of the most common questions I hear from students is "how much pressure should I have in my hands" or "how much pressure should I have in the reins." The student reveals his status as a beginner by putting the question in terms of pressure. Pressure could only be a factor if the horse's mouth, the reins, and the rider's hands were separate parts. But in fine riding, as Ray used to observe, "my horse's body is my body." The rider and the horse are to become one, are to think and function as one. Therefore, pressure could no more be a factor than between, let us say, your chest and your arm. A question such as "how much pressure should I use to hold my arm on" obviously makes no sense—until a horrible accident occurs where you get your arm caught in a piece of farm equipment and you are asking the question of a paramedic as you clutch the bleeding organ while riding in the ambulance on the way to the hospital! In other words you don't normally think of "holding" your bodyparts together, because they are already one body, already harmoniously a single entity.

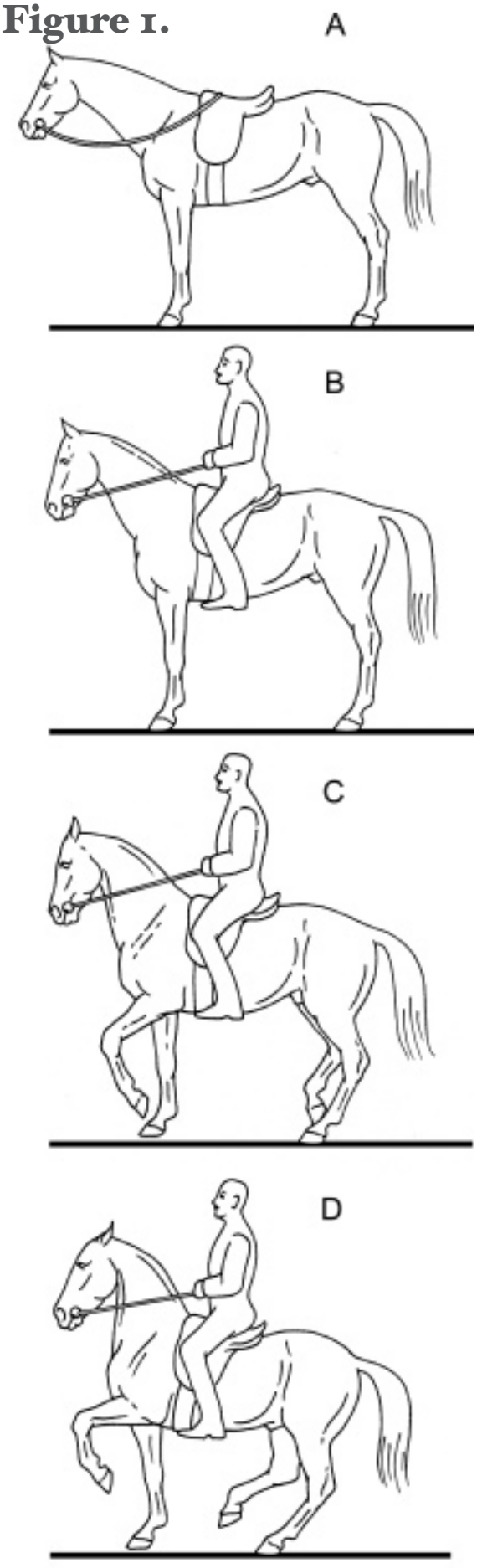
"My horse's body is my body." That can only mean one thing—your body, your arms, your hands, the reins, and the horse's body are seamlessly one. Just as your arms and legs "come alive" when you dance, in some mysterious way the reins also "come alive" when rider and horse function as one body. To begin with, "contact" means that the rider is feeling of the horse's tongue, for it is on the tongue that the bit rests (no matter what kind of bit—all bits). A rein is an "organ" that extends the rider's feel into the horse's mouth, and the bit is the terminal part of this organ. How much pressure does it take to be able to feel your horse's tongue? How much pressure does it take to be able to feel your fingers or toes? Pressure is just what it doesn't take!

So it doesn't take pressure to be able to feel your horse's feet through the reins—it takes awareness. Whatever the feet do—especially the hind feet—should be instantly detectable by the hands. The communication between horse's feet and rider's hands should be completely open and free. The hands should direct the movements of the legs; the haunches and hind feet should completely submit to the direction of the hands. Unfortunately what we often see is just the opposite—the hands cause a brace in the horse's neck or back which chokes off communication. The steps become short and stiff, and the horse will raise its head as the hindquarters, instead of softening at the request of the hand, just keep on shoving forward in an effort to push the bit and the hands out of the way.

What Is Collection?

Collection is necessary before a horse can perform more strenuous, more complex, or more beautiful maneuvers. Collection comes in all degrees, from the minimum "rounding up" to the maximum seen in the High School horse or

Figure 1.



True Collection

I have put only the minimum information in this article concerning the anatomy and biomechanics of collection, because I have already published extensively on this subject. Readers who are interested in more information will find it by going to www.equinestudies.org. Click on "Knowledge Base" and download the free articles entitled "True Collection" and "The Ring of Muscles."

the reined cow horse. Assuming your horse is healthy and sound, he'll "collect up" for you very happily just as soon as you clarify what you're asking.

Here is a definition of collection. A definition tells "what something is":

Collection is the posture in which weight bearing is easiest on the horse.

Let's unpack this definition by expanding on some of the terms:

Weight bearing: means bearing weight in the freespan of the back. The "freespan" is the part of the horse's back that is not supported directly beneath by a leg, and therefore the part most liable to sag under weight.

Easiest on the horse: means making the least demand upon bones, joints, ligaments, tendons, and muscles, so that the horse is best enabled to resist downward pressure on his back, and likewise the back suffers the least long-term damage from bearing the weight.

Posture: means the shape assumed by the chain of spinal bones – the vertebrae. The posture best adapted for weight bearing is one in which the vertebrae of the freespan are aligned in an arch. When the horse makes the effort to collect himself, not only his back but his tail arches to make a "rainbow tail," and his neck arches also.

If we re-write the definition of collection in terms of these expanded terms, we get a fairly complete picture:

Collection is an arched shape assumed by the chain of spinal vertebrae that makes upholding weight in the freespan easiest, and that best promotes the longevity of all the horse's anatomical parts.

Now we need to describe more fully what this optimal weight bearing posture actually looks like. This is best done by breaking the act of "collecting up" into three phases:

1. Collection starts from, and is always primarily the product of, coiling of the loins.
2. Collection is continued when, as the loins coil, the freespan of the back rises into an arch.
3. Collection is completed when the horse raises the base of the neck.

The most important term in this set of descriptions is coiling of the loins, which means flexion of the lumbo-sacral joint. This effort produces a "humping" or rounding of the rear part of the freespan where it joins onto the haunches. Reining and roping competitors sometimes call this "breaking down in back," meaning that the croup appears to flex or "break" downward.

Coiling of the loins is the true cause of "engagement of the hindquarters." Note that when the loins coil, the rear part of the pelvis is brought forward. The action brings the hip socket forward, and thus automatically draws all the other parts of the hind limbs forward, too: the stifle joints, hock joints, and hind feet are brought up under the

body from back to front. Many people will say that to get their horse to collect, they want him to "bring his hocks up under the body," but this demand reveals a partial, or even a wrong, conception of how the equine hindquarters are made to work. It is quite possible for a horse—think of the typically hollow-backed five-gaited competitor—to bring only the stifles, hocks, and hind feet up under the body—without coiling the loins. Good horsemanship demands, instead, that the stifles, hocks, and hind feet be brought forward as a side effect of the primary effort, which is to coil the loins.

Death to the Frame!

I am not merely harping upon a point of style or expressing an aesthetic preference here. What I am saying is that in the absence of loin-coiling, any demand for the horse to "bring the hocks forward" actually hurts him. The equine hind limb contains, as part of its unique anatomy, a reciprocating system of parallel ligaments and ligamentized tendons which, acting like the parallel springs in a drafting lamp, constrain the animal's loinspan, stifle joint, and hock joint to work in coordination. The key point to grasp is not merely that "whatever the stifle does, the hock must do," nor even "whatever the loinspan does, the stifle joint would be most comfortable doing." The key point is that unless the loins coil, the joints of the hind limbs cannot freely flex. A coiled loinspan is the one and only thing that will "unlock" the horse's hind limbs, enabling him to "squat." Only when the loinspan, stifle joint, and hock joints are able to flex can the animal "sit down behind"—the action which is the origin as well as the most essential action of collection.

Note that, while it is helpful to "conceptualize" collection as consisting of three parts, in actual fact the coiling of the loins precedes the raising of the freespan and the raising of the base of the neck by only a fraction of a second. The coiling effect ripples through the horse's spine from back to front. Collection comes from the spine—it comes from deep within the horse! Higher degrees of collection come from higher curvature of the three arches that compose the horse's spine. Hence draping reins!

This is an extremely important point, and, I rejoice to say, it is death to the whole concept of the "frame." There is no such thing as a "frame" and never has been, and every conscientious riding instructor and horsemanship clinician should immediately delete the term from their vocabulary. Collection cannot be achieved by compressing the horse's body by any force—such as legs and seat which drive the horse forward into restrictive hands. Collection cannot be achieved by any force which would be applied "from the outside" like a frame or a vice being cranked tighter and tighter. Any "collection" achieved by compressing the horse's body from back to front (or from front to back—it makes no difference) is no collection at all, but false, and bringing with it many dangers to the horse's spiritual and mental well-being as well as his long-term soundness.

I am sure that there is one glaring omission from this description of collection that will not have escaped your attention: nowhere have I mentioned "capturing the horse's face" or "getting the face vertical." That's because, in fine riding, you don't make any effort whatsoever to capture the face. You don't pull back at any time with both hands equally. You don't offer or use a "square feel." Instead, you twirl the head. You practice untracking. You use the horse's inside hind leg to flex and supple him through the rib cage as you "steer from the rear." All of these exercises and activities with your horse, which were detailed in the first four installments of this series, are intended to take the brace out of all the muscles that invest his poll, neck, freespan, and haunches. When there's no brace in the horse, and he stops as Larry Mahan's horse did, elastically, with good balance and rhythm, with coiled loins, a freespan that rises to "fill" the rider's seat, and an arched neck, then the head will adopt a vertical or near-vertical position all by itself, without you having to do any "capturing." Indeed—the reins will be draping!

Fine riding takes all the "war" out between rider and horse. When you learn to induce the horse to round his back and raise the base of his neck, you will already have won the war without ever having to go to war. There is no prisoner to capture, for the prisoner will already freely and wholeheartedly have given himself to you.

"The Ring of Muscles". — Figure Captions

Figure. 1. This set of four images reads from top to bottom. In this illustration I have reproduced, in simplified form, a series first published in 1937 in Wilhelm Müseler's book *Rittlehre* (*Riding Logic*). It was this series of drawings that originally gave rise to the concept of the "frame."

The "frame" concept was not Müseler's, but rather got started when an American dressage instructor popularized it. She discovered (by golly!) that if you drew a box around each successive image in this series, the box got narrower from A through D—in other words, the horse's butt got closer to his nose. The main problem with the "frame" concept is that it gives riding students the false and destructive idea that how to collect a horse is by pushing with the leg and seat while holding or restricting with the hand—ever so tactfully and patiently, to be sure. But no matter how tactful and patient a rider may try to be, all that this approach ever produces is horses with stiff backs, posturally broken necks, braced jaws, stiff haunches, crabbed movements, and cranky attitudes.

Apart from clarifying where the "frame" concept actually came from, I present this series so that you may see that Müseler himself did not really understand the physical mecha-

nism and deep origin of collection. In A, he does not bother to even put a rider on the horse—as if the fact of weight bearing upon the freespan were of no consequence. In B and C, you note the "peaked" look where the loins turn over into the haunches—a sign that the horse's back is stiff. In these two views also, you note the neck subtly "breaking" in the wrong place, at the third joint. In D, the neck is not only broken in the wrong place but the rider is pulling back so hard that the neck is also breaking backward at the base. The horse's back is dropped and he is out of ideal balance—overweighting the hocks.

You will not have missed, either, I am sure, that the only view in this series where the reins offer the horse any relief is A (where the rider is absent!). The rider himself sits with a hollow back and his chin stuck out. In short, this is not a picture of harmony, and I myself would never under any circumstances place a horse in the hands of any rider like this one, who has never discovered that the energy flow within the reins must always without exception go from the rider to the horse. The rider should freely encourage the life in the body to rise upward and flow forward within the reins, for it is by this means that the reins "come alive."

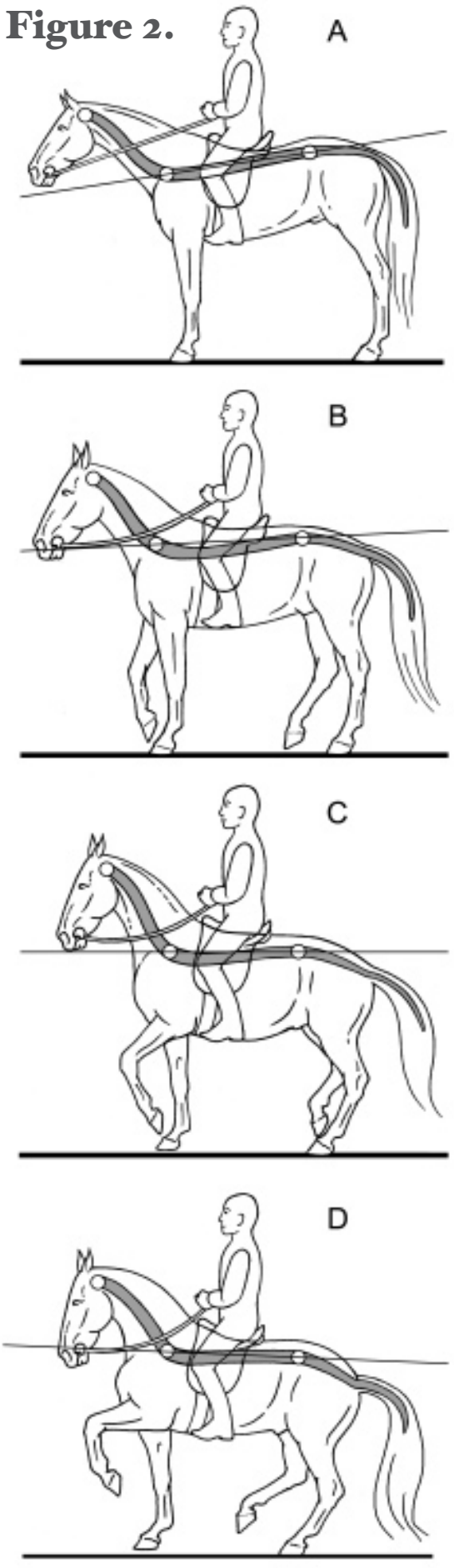
Figure. 2. This series represents the true mechanism and correct approach whereby a rider may induce a horse to collect underneath him. Note first that in A the rider adjusts the reins to find out the straight-line distance between the hand, held in the correct relationship to the body, and the horse's mouth. This distance is 2.37 units (as measured on-screen in Photoshop). In B, C, and D it is 2.16, 1.83, and 1.78 units respectively. In short—the horse "throws the reins back to the rider", and the rider in his turn pushes his hand forward slightly to thank the horse and acknowledge and credit his effort. Thus, the reins drape more the more highly collected the horse becomes.

The most important conceptual innovation in this series is the horse's spine drawn in gray tone. The horse's spine is composed of three segments that each can adopt an upward curve: the neck, the freespan of the back, and the tail. Effort of muscles that invest the spine, especially the longus colli, rectus abdominis, and iliopsoas cause the loins to coil and the segments to curve. Upward curvature of the loins, the freespan of the back, and the neck are what create and maintain collection. The higher the curves, the higher the degree of collection.

There are other important details to note in this series. First, a rider is placed on the first, uncollected horse—so that the student will have a "zero point" for comparison. In view B, the rider is shown initiating collection not with his hands but with his legs. The rider is asking the horse to step off in a walk, and this rider is aware of another teaching of Ray Hunt's: every step counts, even the first one! What is the first part of his body that a horse moves when he steps off from a halt? He raises his back! This is "rounding up"—the first or lowest degree of collection —and it is this upon which we are to build.

Because the rider is not exerting continuous backward traction upon the reins, and is encouraging the reins to "come alive," in view C the horse is able to coil the loins and raise the freespan of the back quite a bit. The base of the neck rises as the horse "sits down" in

Figure 2.



collection. These efforts level the horse's spine – see how the thin line that passes through the core of the loins and the base of the neck changes from view A through view D. Whenever a horse sits behind/raises the base of the neck enough to level this line, he has achieved "full collection."

In view D, the horse does his utmost to coil the loins and raise the base of the neck, thus tilting the line slightly upward. The coiled loins bring the hind limbs more forward under the body—compare this view to the corresponding one in Müseler's series to bring out the fact that this horse performs in comfortable balance; iron-hard hands are not cramming this horse's haunches back over his hocks.

Note the head in all four of these views. I have not concerned myself to make it vertical, although in some horses it would be vertical in every view from B through D. Some horses, on the other hand, are so conformed that even when there is no "brace" in the neck, the head does not fall entirely vertical. In still others, the face may appear to be slightly behind the vertical. The wise rider uses head twirling and untracking to eliminate any brace and, with respect to obtaining collection, simply permits the head to fall as it will, without concern to "capture the face" and without picking too fine a point with horses whose heads want to fall a little bit behind the vertical. If the reins are draping and the muscles of the topline relaxed, this cannot be because the rider is pulling the head into a wrong position. In horses of every conformation, the more the animal is encouraged to go on draping reins, and thus permitted to achieve full and harmonious development of all the muscles of the neck, over time the head will fall more closely to the ideal vertical.

Fig. 3. This set of illustrations shows what happens when the horse, having coiled his loins and raised the base of the neck to the utmost, coordinates muscles on both the upper and lower aspects of his spine to cantilever the forequarter up off the ground. The movement that results is called a "levade" if the angle at which the horse finds his balance is relatively low, a "pesade" if steeper. The dynamics of the spine will also differ according to the horse's intentions. If he makes a levade from which he intends to leap forward into a ballotade or capriole, he will assume a posture similar to A. If the horse only intends to make a levade and then stand down on all four feet again, the spinal dynamics will differ subtly, looking like view B. Hopefully no reader will ever have his horse look like C, which is the levade image taken from Müseler. I invite readers to think and practice by noticing and enumerating the faults in view C, all of which work to the early destruction of the horse.

Next Installment: Pulling Through the Brace

Figure 3.