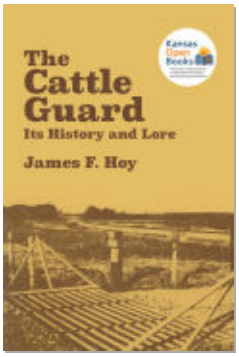
7. Lore about Cattle Guards



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LORE ABOUT CATTLE GUARDS

At first, my reason for studying cattle guards was to explore their role in the folk life of the Great Plains. Although the scope of this study has expanded greatly since then, its original thesis has proven to be accurate: the cattle guard has played and still plays a significant role in the folklore of range country. Its major folk characteristics include anonymity of invention, traditional transmission of form and concept, variation within a formularized construct, lore regarding its use and efficacy, aesthetic considerations, and humor. Also within the context of lore about cattle guards is their role in popular culture—such things as social attitudes toward cattle guards and their appearance in literature and the visual arts.

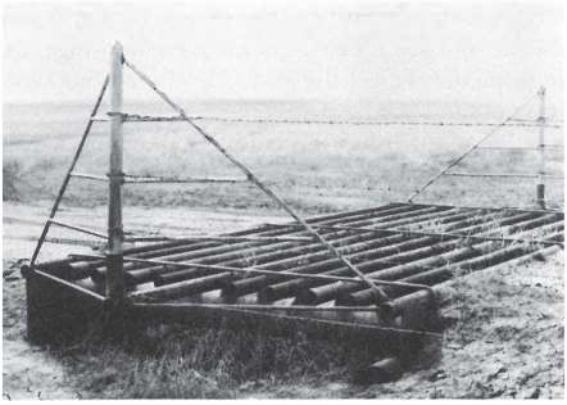
The cattle guard is a prime example of folk technology—that is, of a mechanism or device (or the concept for that mechanism or device) that is generally built according to directions transmitted orally (although sometimes the concept is carried in the popular press) and that is built by its users from materials at hand (as opposed to commercial production from printed plans and standardized materials). Log-cabin construction techniques are a prime example of folk technology. So are stone walls, rail fences, and sod houses. In short, almost any noncommercial technology used by any subculture (i.e., a folk group) within the population would qualify as folk technology.

Folk technology is sometimes adapted to games and the construction of playthings, but often it is used to help folk groups adapt to certain conditions

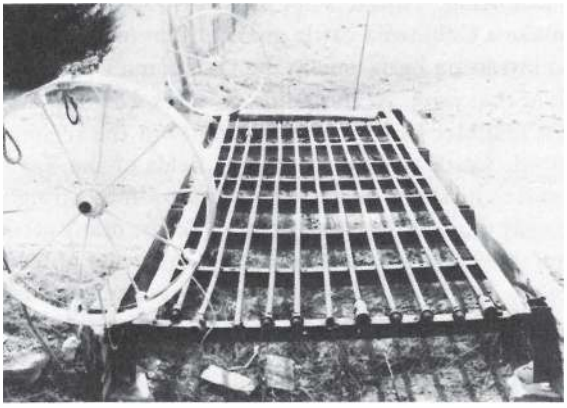
within their environments. The extensive use of sod-house technology on the high plains, for instance, was the direct result of dry, treeless conditions there. So, too, the cattle guard can be seen as a response by fence-dominated agrarians in a motorized society (as opposed to agrarians living under true open-range conditions) to the problem of gates. As seen in chapters 2 and 6, the origins of the cattle guard are traceable to cemetery gates and stone stiles in Cornwall, to ingenious treatments of gaps in rail fences, and to the moat in either its dry or its wet form; but the actual inventors of these devices are lost in the mists of history. One correspondent, T. Elwess of Chadron, Nebraska, has even suggested that Jacob invented the cattle guard. As related in Genesis 30:31-43, Jacob and his father-in-law, Laban, reached an agreement whereby Jacob would have all spotted livestock, and Laban all the solid-colored ones. In order to increase the size of his herd, Jacob erected some sort of structure of rods and gutters: "And Jacob took him rods of green poplar, and of the hazel and chestnut tree; and pilled white strakes in them, and made the white appear which *was* in the rods. And he set the rods which he had pilled before the flocks in the gutters in the watering troughs when the flocks came to drink, that they should conceive when they came to drink." Jacob probably intended the white-streaked rods to function as some sort of sympathetic magic that would make the livestock varicolored, not as fencelike structures that would allow some animals to pass through but hold back others. Still, Jacob was attempting to practice some kind of selective breeding and was employing, in the process, what at least Elwess thinks could be called the first cattle guards.

The concept of using an open pit to deter aninals was readily implemented, again anonymously, by the people involved in the development of American railroads during the 1830s. We do know the names of some people who invented cattle guards, but the spontaneity and anonymity that are characteristic of folk transmission are evident in the way the automotive cattle guard appeared all over the Great Plains and beyond at roughly the same time and without apparent causal links. In other words, the concept of using spaced bars over a pit as a deterrent to livestock was conveyed in a traditional manner. Even today, despite its modern, mass-produced manifestations, the cattle guard is in a very real sense an item of rural folk life.

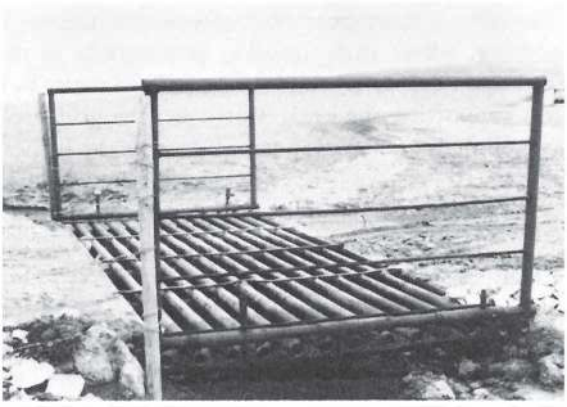
Not only has the concept of cattle guards been transmitted by tradition; use of them has also been a matter of custom. Traditionally, cattle guards consist of four parts: (1) a rectangular grid of bars (usually of pipe or rail), (2) a pit dug in the fence line (ranging in depth from a few inches to several feet), (3) a base or foundation upon which the grid rests, and (4) wings on either end of the grid which connect the guard to the fence. The *sine qua non* of a cattle guard is the grid. Sometimes a grid is placed directly on the ground, without any pit at all. Sometimes a grid is placed directly over a pit that has



A western-Kansas cattle guard showing the four-part structure: grid, wings, base, and pit



A cattle guard made of sucker rod, intended exclusively for car traffic, on the David Miller farm, Albert, Kansas



A rectangular wing, Ellis County, Kansas

no foundation other than dirt. Sometimes during the early years the grid took the form of troughs or ladders. And some cattle guards have no wings, the fence coming directly up to (sometimes into) the grid. But there is no cattle guard that does not have a grid of some sort.

Other types of variation also exist within this traditional design. Variations may take several forms, some of which result from the idiosyncracies of individual builders but others from local conditions or local opinions of efficacy that in turn help to create true distinctions, sometimes subtle, in cattle guards. These distinctions are to a degree regional, to a degree occupational (i.e., depending upon the major intended users—oilmen, loggers, miners, or cattlemen), and to a degree dependent upon the kind of stock to be held behind the cattle guard.

Some of my observations suggest that regional variations in the construction of cattle guards do indeed exist, even though I cannot yet offer enough documentation to confirm this belief. Thus it is not possible to specify, for instance, the elements that make a California cattle guard different, say, from one in Oklahoma; or on an intrastate basis, one in the Oklahoma Panhandle from one in the Osage Hills of that state. At this point, in other words, a field guide to cattle guards is not feasible. I can, however, point out the regional variations that I have noticed. Cattle guards in the gas fields of the Texas Panhandle, for example, tend to be short, and their wings are almost straight up and down, slanting out only slightly. In north-central Texas, many cattle guards are framed by elaborate entryways, often complete archways of brick or native stone, while in the hill country north of San Antonio, concrete wings are common. Many cattle guards in southwestern Missouri lack true wings, that function being taken over by rectangular panels of board fence. New Mexico cattle guards on the frontage and access roads along Interstate 40 have heavy pipe wings, sometimes triangular, sometimes rectangular, that are painted in alternate stripes of aluminum and black, apparently to increase visibility for night drivers. One of the most clear-cut regional distinctions in cattle guards exists in Wyoming, where many guards, particularly in the north-central area, are placed upon extremely solid bases, with as many as a dozen heavy I-beam stringers supporting the grid. Moreover, the grid itself has bars that are spaced exceptionally far apart—as much as eight inches. Guards that I have seen in other states generally have spaces ranging from two to five inches; in these areas the eight-inch gap is the exception, not the rule, as it is in the Wyoming guard.

Perhaps the fact that logging and mining trucks use these Wyoming guards helps to explain the heavy-duty underpinning of the grid. Guards on oil leases are usually less heavily built than those used on mine property but are more substantial than those used strictly at entrances to farms or ranches. One also often finds wider gaps on cattle guards intended for use with horses; those used exclusively with cattle tend to have a narrower space between bars.

TABLE 7.1

A Comparison of Cattle Guards
Used in the Flint Hills and in the Gypsum Hills of Kansas

	Flint Hills	Gypsum Hills
Material used in bars	*Percentage*	*Percentage*
Pipe	80.00	67.00
Railroad rails	11.00	25.00
I-beams	1.50	8.00
Bridge planking	5.00	
Other	2.50	
Size of bars	*Inches*	*Inches*
Average	3.11	3.00
Smallest	1.50	1.75
Largest	6.50	5.00
Median	2.50 and 3.00*	3.00
Spacing of bars	*Inches*	*Inches*
Average	4.08	4.36
Narrowest	1.75	2.50
Widest	8.00	7.00
Median	3.50	3.00
Number of bars per grid		
Average	12.32	11.50
Least	4.00	6.00
Greatest	22.00	17.00
Median	11.00	13.00
Length of grid	*Inches*	*Inches*
Average	181.71	221.25
Least	93.00	168.00
Greatest	360.00	360.00
Median	168.00	180.00
Width of grid	*Inches*	*Inches*
Average	80.67	78.71
Least	40.00	60.00
Greatest	120.00	96.00
Median	84.00	60.00 and 84.00*
Depth of pit	*Inches*	*Inches*
Average	18.39	15.71
Least	0.00	3.00
Greatest	98.00	32.00
Median	16.00	15.00

* Equal number of each.

Thus far I have made a thorough survey (measuring, describing, and photographing) of nearly three hundred cattle guards in the Flint Hills big-pasture region just southwest of Emporia, and I have made an initial survey of two dozen guards in the Gypsum Hills around Medicine Lodge, Lake City, and Sun City. A comparison of the results does not reveal any spectacular differences, but some subtle ones do emerge, as can be seen in table 7.1. Consider, for instance, bar material. In the Flint Hills, four out of every five cattle guards have grids made of pipe, compared to only two out of three in the Gypsum Hills. On the other hand, one out of three cattle guards in the Gypsum Hills is made out of heavy-duty bar material—railroad rails or I-beams—compared to only one out of eight in the Flint Hills. Finally, Flint Hills cattle guards show greater diversity in bar material—bridge planking, railroad ties, T-bars, sucker rods, and concrete. These differences can be explained, at least in part, by the ways the cattle guards are used. Cattle guards on oil leases, for instance, are almost invariably made of pipe, a material that is readily available to builders of cattle guards in oil-producing areas. Such areas are found both in the Gypsum Hills and in the Flint Hills, although the most pervasive oil activity and the most pervasive use of the pipe grids are in Butler and Greenwood counties in the Flint Hills. Moreover, the Gypsum Hills, as the name suggests, contain gypsum mines, and the trucks that carry the raw gypsum demand extra-heavy-duty cattle guards; thus most of the railroad rails and I-beams are found there. As for the diversity of bar material found in the Flint Hills, I can only note that, except for bridge planking, every example of unusual bar material was found on the guards of private ranch and farm roads. Perhaps the stockmen of the Flint Hills are more inclined to use materials at hand or are apt to have more diverse materials at hand than are their counterparts to the southwest. Another area that warrants comment is the length of the grids. Grids in the Gypsum Hills are over four feet longer, on the average, than are those in the Flint Hills. This difference can be explained in part by the greater number of Flint Hills cattle guards found on private ranch or farm roads, roads that are nearly always only one lane wide.

The cattle-guard wings in both regions are similar—most are triangular, made of pipe and rod; a few are rectangular or trapezoidal; a few have single posts; and some are wingless. Guards in the Gypsum Hills occasionally have wooden triangular wings, whereas the only wooden wings found in the Flint Hills survey had a single post. Two wings had individualized touches that deserve special mention. Wings are often used as posts to which the fence wires are attached, but barbed wire can easily slide up or down on the perpendicular endpiece of a wing. One welder in the Flint Hills, however, has countered this problem by sticking half-rings every few inches along the inside of this pipe. The barbed wire is passed through the rings and thus held in place. In

the Gypsum Hills, one guard leading into an oil lease had wings with a reverse slant. In other words, instead of slanting from the top of the end post down *toward* the grid, these wings slanted down *away* from the grid, just opposite from the norm. Because wings are slanted so that automotive traffic will have a slightly wider surface upon which to cross, this particular innovation would seem to serve no practical function.

None of the above observations can prove without doubt that cattle guards, like log cabins, are constructed differently in different parts of the country. But these observations do show that regional variations in the design and construction of cattle guards do exist. Another type of variation in cattle guards is quite important from a folklore perspective—naming. In all, I have collected over fifty terms by which the cattle guard is known in various places, and the list continues to grow. The most widely used term is "cattle guard"; it occurs all over the United States and Canada. In parts of Canada, however, particularly in the prairie provinces, the term "cattle guard" is applied almost exclusively to railroad cattle guards, while automotive guards are called "pit gates," "vehicle passes," or, most often, "Texas gates," apparently because it was thought that, like longhorns, everything connected with the cattle industry must have originated in Texas. Other Canadians have told me that the term came into being after Texas oilmen had introduced cattle guards into the Alberta oil fields. Outside of Canada, I have collected the term "Texas gate" in Texas, Maryland, and Kansas. Steven A. Bealby recalls that the early guards on the ranch where he was reared in Osborne County, Kansas, were made of hedge poles and were called Texas gates, but when his father replaced the poles with pipe grids in the 1960s, the Texas gates became, without any fanfare or conscious thought, cattle guards.

The cattle guard is called a "cattle grid" in England and South Africa, a *"guarda ganado"* in Argentina, a *"mato burro"* in Venezuela and Brazil. In the United States the second most popular type of name usually has the word "auto" or "car" in the title: "auto gate" (particularly common in the Nebraska Sandhills, but also used in other areas of the Great Plains), "car gate" (Sandhills, Gypsum Hills, eastern Colorado), "car crossing" (Kansas), and "car pass" (western North Dakota). There are also descriptive or humorous names: "razorback gate" (Ozarks), "corduroy gate" (Flint Hills, because of the rippling vibrations that occur when a car is driven over the grid), "spook" (Wyoming, used especially for the cowhide often thrown on a grid), and "cow filter" (Cornwall, England, because it filters out cows while letting cars pass). Other humorous terms include "Model T trap" (Kansas), "lazy man's gate" (Idaho and Wyoming), "wife saver" (Kansas), and "gee whiz gate" (Kansas, from "Gee whiz, that sure beats opening a gate!").

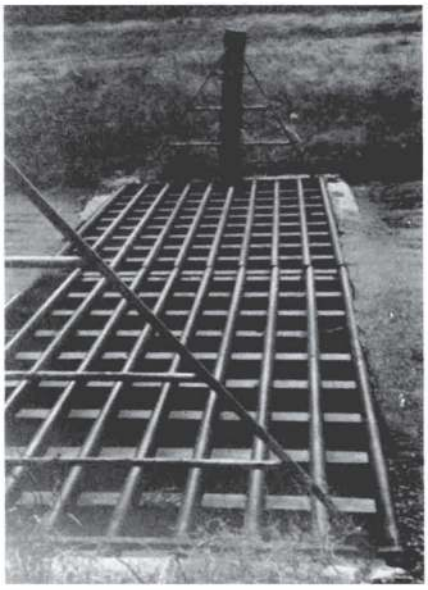
Some of the other names for the cattle guard, listed alphabetically and, when possible, where they are used, are: "auto chute" (Nebraska); "barrier

gate"; "buffalo gate" (Custer State Park, South Dakota, home of a sizable herd of bison); "cattle crossing guard" (California); "cattle gap" (Mississippi); "cattle gate" (Colorado, Kansas, Nebraska, New Jersey); "cattle grate" (Kansas); "cattle grill" (Kansas); "cattle guard gate" (Idaho); "cattle pass" (North Dakota); "cattle stop" (California, Kansas, Nebraska); "cattle stopper" (Montana); "cow catcher" (Kansas); "cow pit"; "cow trap" (Kansas); "crossover" (Nebraska); "drive-over gate" (Wisconsin); "fence stile" (Nebraska); "gap" (Tennessee); "Kalamazoo" (Wyoming, from the manufactured guard used on railroads); "livestock barrier" (Texas); "Mexican gate" (Wyoming-Nebraska border); "pit guard" (Santa Fe Railroad); "run-over" (Nebraska); "stock bridge" (Texas); "stock gap" (Tennessee, Texas); "stock guard" (Kansas, Wyoming); "stock pit"; and "Wyoming guard" (Nevada).

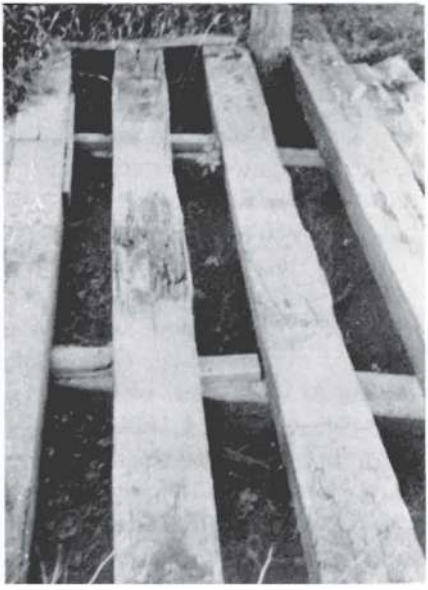
The term "fence gap," from eastern Colorado in the early 1900s, suggests a possible borrowing from the common fencing term "water gap." In Montana in the early 1920s the device was called an "automobile runway cattle guard." The first half of this term refers to wheel troughs for the automobile, while the latter half describes the pit with poles, similar to those used on the railroad. From this composite usage one can surmise that such terms as "run-over," "crossover," and "auto gate" originally referred to the trough or arched-crossover guard and that the term "cattle guard" came to be applied to the pit-and-pole guard. One old-time cowboy, who obviously preferred riding horses to driving pickups, gave me this answer when I asked him if he knew the cattle guard by any other names: "I call it a rough son of a bitch."

At least one cattle guard has, like a teen-ager's hot rod, been given a proper name. Fred B. Curry of New Braunfels, Texas, told me about a particularly noisy cattle guard, one designed with loose bars that would rattle when driven over, that was known locally as "Thunder Bridge."

Another type of variation in cattle guards concerns the use of folk substitutes for the grid, the pit, or both. For instance, a substitute found in many areas of the West might be called the rubber-band cattle guard. People have learned that by stretching (and usually twisting) strips of inner tube (usually from tractor or truck tires) between two wooden end pieces at about four or five inches above the ground, they can effect a light, inexpensive, and adequate replacement for the regular kind of cattle guard. The rubber strips can be driven over without causing bumps, and the driver does not even have to slow down. Because there is no pit, cattle could escape by stepping between the strips, but they do not seem inclined to do so, at least not on the Tom Wyse Ranch near Lindsay, Montana. According to Mrs. Wyse, no animal has ever gotten out of their pasture where this kind of guard was being used. Their guard is made of only six strips, but the vibrating and shimmering that occurs in the slightest breeze helps to frighten the cattle away. Mrs. Wyse also commented on the ease with which a broken strip can be replaced. Other



A cattle guard in north-central Wyoming. Note the extra-wide spacing of the bars and the extra-heavy base supports.



A railroad-tie cattle guard made by Dale Remsberg, Cassoday, Kansas

rubber-strip guards have been built in Wyoming, California, Texas, and New Mexico, among other places. One near Magdalena, New Mexico, was built in a potentially high-water area where a regular pit guard could have had its dirt approach ramps washed out. This guard was built specifically for use by heavy cattle-hauling trucks.

A related cattle guard, but one that is much less convenient for driving over, can be made by bolting worn-out tires together. One such guard was built by Julius Trescony of San Lucas, California, who fastened together five rows of tires, five tires each in the middle and outside rows, four tires each in the other two rows. These rows fitted snugly into each other, and then four tires were bolted vertically in a row on each end in order to form the wings. Art Dorsett of Olpe, Kansas, saw similar guards on a ranch where he had worked in South Dakota. "You couldn't cross it going very fast," he said, "and we used them only in pastures where we mostly drove pickups. They kept the sight-seers out and the cattle in."

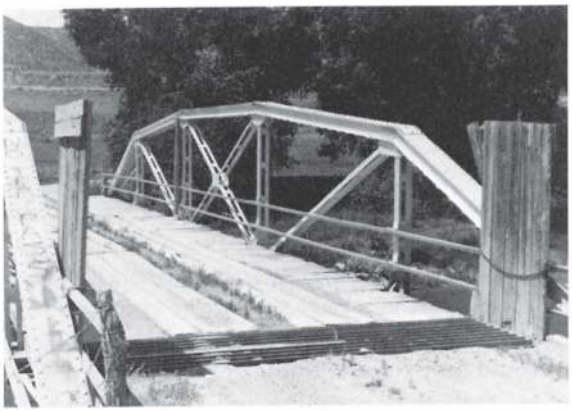
Cattle guards used in the late 1970s in southern Texas were made by placing cinder blocks with the hole side up. A quarter of a century earlier in Exmoor National Park in England, a guard was made by vertically embed-

ding round drainage tiles into a concrete base. I have also seen other concrete-block cattle guards in southern England. These guards turn cattle reasonably well, but their practicality is limited because of the ease with which dirt and debris will fill up the holes. A road running through Crazy Woman Canyon in the Bighorn Mountains of Wyoming has a cattle guard that was made by forming rows containing three concrete parking abutments, then making eight such rows into a grid. This guard had no pit, and it was extremely rough to cross.

In Colorado in the early 1920s, some ranchers merely laid cedar posts (usually split so that they would not roll) directly onto the ground and drove over them. Lack of a pit and the roughness of crossing were two major disadvantages of this guard. Other Coloradans have put old bedsprings on the ground to drive over, while an Arizona rancher put his bedsprings into a shallow pit. Around 1954 a Utah rancher made a guard by hanging some bedsprings about four inches off the ground. In Wyoming and Montana, old harrow sections, minus teeth, have been placed on the ground or in a shallow pit and used as cattle guards. One rancher in Texas put an old World War II landing mat over a pit and used it as a grid for a cattle guard. In the northern plains a winter cattle guard was sometimes made by digging a shallow pit in the gateway and then filling it with water. The water would remain frozen all winter long, and the slick ice would effectively turn cattle.

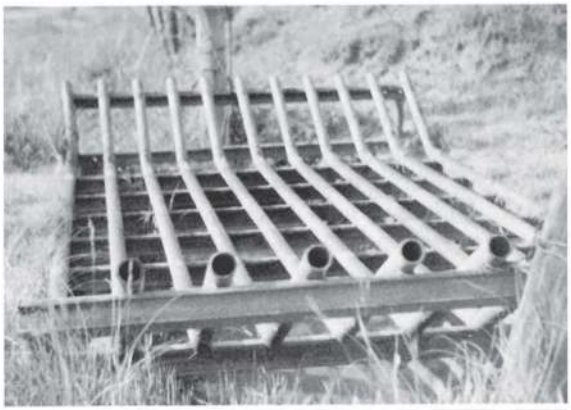
In the summer of 1978, while driving north of Watford City, North Dakota, to the ranch where the late Andrew Johnston invented his cattle guard in 1914 (see chapter 3), on one road I crossed a sheet of flat steel, the kind of metal siding used for the walls of grain bins or heavy storage tanks. This flat metal covered the road from fence line to fence line and was some eight to ten feet wide. It was not only completely smooth to drive over but apparently was also effective in turning stock. In Wyoming a similar sheet-metal cattle guard, painted bright orange to increase its effectiveness, is reportedly being used near the Big Horn National Forest. Colorado farmers have claimed that a series of corrugated roofing tin, laid two strips wide on a road, will stop livestock. The crackling noise, along with the slippery footing, serves as a deterrent.

In Alberta, cowmen have substituted a cowskin for tin, stretching it across a gateway to keep cattle from crossing. In some areas of northern Mexico no gates are used. Rather, each of the two posts that frame the gateway is draped with a cowhide. Cattle will not voluntarily pass through them, and sometimes the hides must be removed before the cattle can even be driven through the openings. Because animals inevitably shy away from the dead of their own species, cowhides are often used in conjunction with regular cattle guards in order to improve efficacy, an instance, perhaps, of what Sir James Frazer might have termed a sort of sympathetic magic in reverse.



A cattle guard incorporated into a bridge over the White River near Meeker, Colorado. The board panels can be lowered if cattle are to be driven over the bridge.

A wingless cattle guard, Ellis County, Kansas



Unusual cattle-guard wings made by bending grid bars, near Lovewell Reservoir, Kansas

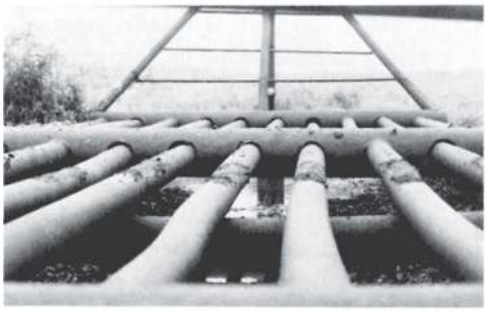
Of all the makeshift cattle guards I have encountered, none was as intriguing or as sensational as the dog cattle guard. This was the only instance of a living cattle guard (not counting cowboys) that I have heard of; the story was related by Lon J. Godley of Hardesty, Oklahoma. As a boy, Godley lived with his family on the J. K. Hitch Ranch in the northern panhandle of Texas. A neighboring ranch had a county road passing through its pastures, so the owner was not allowed to erect a gate to keep his stock in. Although cattle guards were widely used by the period 1918 to 1925 (the dates Godley remembers seeing the dog guard in operation), for some reason this rancher chose to chain a shepherd watch dog to the post on either side of the gateway. Each dog was provided with a house and was fed and watered daily. Their chains were short enough that they could only come within eight or ten feet of each other. Thus, they could not get their chains tangled, nor could they get run over if a car passed between them. Their barking and snarling, however, was enough to keep cattle from trying to escape from the pasture. Being kept on chains made the dogs irritable, and their barking not only kept cattle away, it also caused most mule- or horse-drawn wagons to take a detour through a wire gate some distance to the side. Teams might have been afraid to pass between the dogs (I wonder if they were named Charybdis and Scylla?), but horseback riders, like Godley and the ranch cowboy who worked with his father, could ride through; nevertheless, the experience was exciting and daring, just the sort of exploit to fix itself in a young boy's memory: "I was just a boy eight or ten years old at that time, but the dogs made me remember them because they were so mean."

Although cattle guards work reasonably well, they are not foolproof, and folk opinion about their efficacy and its improvement forms a major part of cattle-guard lore. People agree, for instance, that wild cattle are more likely to jump a guard, if pushed, and that tame cattle, particularly milk cows and roping steers, are more likely to learn to walk across guards. Shallow pits and wide spacing of bars allow animals to cross by stepping between bars; wide, flat support stringers can be walked over; even a two-inch ledge on the sides of the grid where it joins the wings can be negotiated by a determined cow. Some people say that a cattle guard that is to be used in a pasture with brahma cattle should be half again as wide as a regular guard. In short, popular opinion holds that cattle guards will not be totally effective against a determined bovine; but that same opinion also holds that such an animal will usually get through almost any other kind of barrier as well. One Colorado rancher, for instance, told me that while his cattle and horses would jump an eight-foot cattle guard to get out of the pasture, he always had to open a gate in order to get them back in.

That a horse's hoof can sometimes span the bars of a cattle guard perhaps accounts for the folk belief that a cloven-hoofed animal is more likely to

A cattle-guard wing with rings to hold barbed wire, Greenwood County, Kansas

A noise-making cattle guard constructed with loose bars, Greenwood County, Kansas



be turned away by a cattle guard than is a horse. This belief is reasonably accurate with regard to cows and sheep (although sheep have been known to jump cattle guards six feet across and wider), but very few cattle guards are able to turn the cloven-hoofed goat. Some cattle guards have been specifically designed for goats. These have straight sides (goats often cross at the junction of the wing and the grid) or angle irons, pointed side up, along the stringers and pit edges; nevertheless, according to one Texan, "the goats cross in flocks."

Like almost every other aspect of the cattle guard, its operating principle has received little study. Very few persons, even among ranchers and oil pumpers, were able to give a clear and quick response when asked what made a cattle guard work. Those who did respond quickly usually answered, only half facetiously, to ask a cow. There is more than a little truth in this answer, yet some observation and deduction can suggest plausible theories concerning the effectiveness of cattle guards. In fact, when given time to ponder, most persons I talked with agreed that livestock probably have an instinctive fear of injury, particularly to their legs. Thus a surface offering obviously poor footing, coupled with an open pit underneath, would be a formidable obstacle to the average head of livestock—goats excepted.

This idea is well expressed by two correspondents from Texas. C. W. Wimberley of San Angelo observed that cattle, when crossing rocky and rough terrain, will often lower their heads and become very careful and selective of their footing. If given a choice, they will avoid rocky areas scarred by wide cracks and crevices, thus indicating that they will instinctively avoid any opening in the earth where the bottom is not clearly visible—which is the

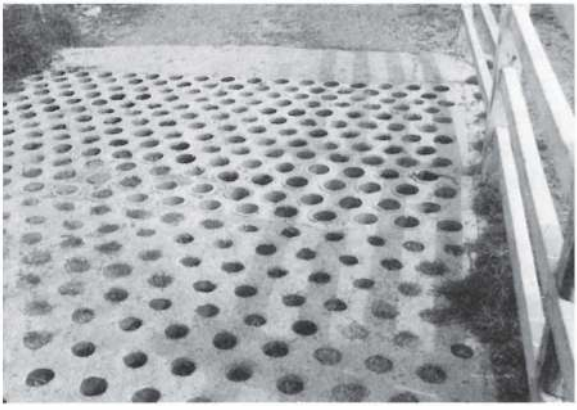
basic principle behind cattle guards. Tracy King of Roby suggested that cows and horses have an innate danger signal. For example, in heavy fog or on a dark night, cattle will not allow themselves to be driven over a bluff. Moreover, a horse that is familiar with the terrain will, if given his head, pick his way home despite any darkness or fog. If he comes to a gate or fence, he will stop rather than walk into it. Thus, says King, when a cow or horse comes to a cattle guard, its innate sense of danger tells it to stay off.

Other persons agree that this fear is general, that livestock will shy away from shadows, holes, and insecure footing, much as a green colt will balk at being ridden through a mudhole. A telling example of this intuitive desire for firm footing is found in *cavalletti,* obstacle courses used at some horse shows as a test of a horse's training. These structures, which are made by laying a series of poles on the ground or just above ground level, bear a general resemblance to a cattle guard. Persons who know about such things have told me that an untrained horse tends to be spooked by these obstacles; sometimes great efforts are necessary in order to train a horse to go through *cavalletti* smoothly and confidently.

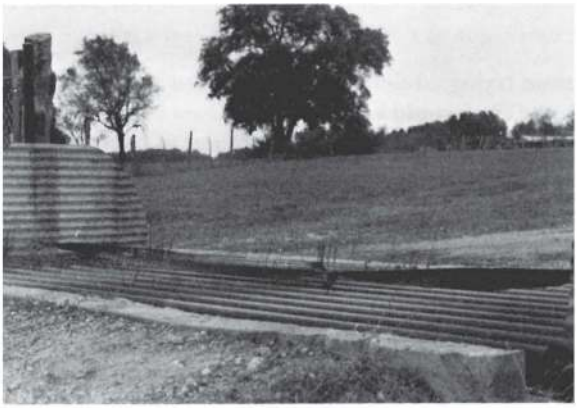
Fear of cattle guards may be innate in most animals, but many of my informants agreed that livestock will occasionally try to cross a cattle guard, especially if the animals are heavily concentrated in a small area. Once a cow or horse has been caught in a guard, however, and escapes without having to be destroyed, that animal will be especially wary of getting caught again. In other respects people disagree about what makes a good cattle guard, particularly concerning the pit and the spacing of the bars. Some have told me that the pit should be boxed in, because a dark hole is more frightening to an animal than is a lighted hole. Others have insisted that the most effective pit should be open at one or both ends so that daylight can show through. Most agree that the pit should be relatively deep, free from grass and weeds, and cleaned of dirt and gravel. Yet I have seen cattle guards that were placed directly on the ground with no pit whatever, guards that must have worked reasonably well because they opened onto a well-traveled highway. In fact, some highway departments in western states have substituted stripes of paint for regular cattle guards and apparently have no major problems with livestock crossing the highways.

Concerning bars and spacing, some persons think not only that pipes offer more slippery footing than do wooden slats but also that the sound and feel of hoof on metal is what turns the animal. Others say that wooden bars are just as effective and are much smoother to drive across. Some ranchers want to have the bars close enough together so that if an animal happens to get pushed onto a guard, it will not slip through and break a leg. Others want the bars eight inches or more apart so that there will not be any footing at all on the grid itself. Wide spacing only works well (although it is rougher to

Julius Trescony and a cattle guard he made by bolting tires together. (Courtesy of Reuben Albaugh)



A cattle grid made of drainage tiles in Exmoor National Park, Devonshire, England. (Photo taken in 1941, courtesy of Richard Jemmett)

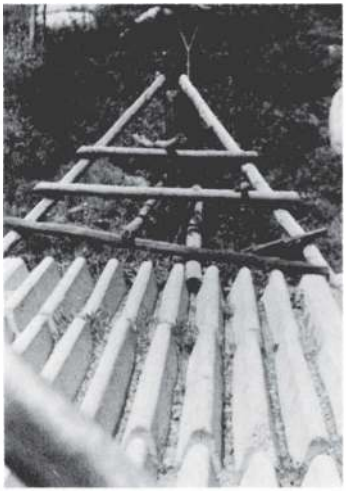


A cattle guard supplemented with an innertube strip, Blanco County, Texas

drive across) if a deep pit is maintained. When a pit begins to fill up, animals can simply step between the bars and walk right across. Therefore, many grids are built so that they can be easily removed in order to clean the pit. Some persons consider railroad rail to be the best material for bars because of its great resistance to bending. Others dislike it for the same reason; the slightly rounded top of the rail tends to make an animal slip off, and once its leg is caught, the bars cannot be pried apart to release it. Rail is also more difficult to cut than is pipe. Some persons prefer the trapezoidal-shaped formed-steel bars found in many commercially produced cattle guards because of their strength and the smoothness of the ride when one crosses in a car. But others have found that the shape of the bars, with the base of the trapezoid on the bottom, forms a trap that holds an animal's hoof more effectively than does any other type of bar. Horsemen have told me that the space between the bars should either be close enough together to be spanned by a horse's hoof or far enough apart so that a horse could step between the bars and pull his hoof out easily. Because a horse's hoof is solid, it neither spreads out when he places weight on it nor contracts when he draws it up. By contrast, cows have more flexible hooves and are therefore much less likely to be caught or seriously injured in cattle guards than are horses. The ideal space between bars is wide enough to let an animal's foot go through and to let the foot be pulled back out of the pit without serious injury but narrow enough to hinder forward motion.

Many welders believe that the bars should be far enough apart to scare cattle and close enough together to allow a smooth crossing for vehicles. Ralph L. Ricketts, professor emeritus of agricultural engineering at the University of Missouri-Columbia, is the only person I know of who has attempted to study the problem from anything approaching a scientific point of view. He has spent many years in the field as an extension specialist. In his attempts to design an economical but effective cattle guard, he determined that the pit, along with proper bar size and spacing, was crucial. One incident proved to him that a totally effective cattle guard required both bars and a pit:

> I spent a lot of time trying to design a cattle guard that could be easily built and yet one that would keep livestock from crossing it. Some co-workers and I built an experimental guard out of concrete. It was just a slab poured on the ground with six-inch-high ribs sticking up—no pit. We poured one on a farm as an experiment in the Ozark area. It sure was pretty. This farmer and his neighbor were driving cattle up the lane and approaching the cattle guard. The neighbor had been bragging about this guard and said he surely would build one of his own. The gate was open at the side of the guard and the cattle were supposed to approach the guard, smell it, and then go through the open gate. They approached it, smelled it,



A cattle guard made of concrete parking abutments, Bighorn Mountains, Wyoming

A sheet-metal cattle guard north of Watford City, North Dakota

and then every one of the cattle in the herd walked or stumbled over the guard. Apparently they thought this was no more rough than some of the stony land adjacent to the cattle guard.

This answers the question as to why cattle guards work. It is not because they are rough; it is because cattle fear the space under the rails. They can't keep their feet on top of the rails and they know this. With the guard that failed, their feet simply slipped off the top of the concrete rails into the shallow space between the rails with no damage. With a grid and a pit, their feet slip off the rails and go down in the space below the guards. The cattle know this will happen and don't try to cross a good guard. If they do happen to get into a guard, they always lose hide and hair from the leg or legs and they respect the guard much more in the future than before they got mixed up in it.

In a good plan the rails will be narrow, two inches maximum, and preferably rounded at the top. They will be spaced six inches apart (farther would be good, only a little rougher to cross with a car), and there should be 18 inches of space under the rails.

Another crucial element for the effectiveness of a cattle guard is the manner in which the guard is connected with the fence; it is also important to make sure that cattle cannot cross along the lip between the grid and the wings.

For whatever reasons, most cattle guards, properly installed, do work. Many ranchers find that cattle, in trying to escape, are more likely to rub down a gate or crawl through the fence rather than to escape through or over a cattle guard. Cattle guards have even been used to keep recently captured mustangs in a pasture. On the other hand, there seem to be more gates and

fewer cattle guards on ranches that handle registered stock, because breeders cannot take the chance of getting livestock from one pasture mixed with those of another.

The controversy over the effectiveness of cattle guards remains active, and one stockraiser's experiences with cattle guards will differ from those of another. One of the most convincing (and entertaining) testimonies to the effectiveness of cattle guards was related by Larry Whitmer, who operates a ranch near Zenda, Kansas. A few years back, near his house, Whitmer had a pasture full of heifers that adjoined a lot where he was keeping some bulls. Besides a good barbed-wire fence, the two enclosures shared a cattle guard and a pond. The line fence had been stretched across the pond, the bottom wire just a few inches above the water. Whitmer did not particularly want the bulls in with the heifers, but bovine nature being what it is, he was not surprised one day to find that a couple of bulls had gotten into the heifers' pasture. The gate was still up, and no wire had been torn loose from the fence, so he assumed that they had somehow crossed the cattle guard. He ran the bulls back into their pasture and then went back to the barn to get some material for a wire gate to string across the cattle guard. He got back to the pasture just in time to see one of the bulls swim across the pond, duck its head under the barbed wire, and come out into the heifers' pasture. The mating urge was strong, but apparently, in this instance at least, the instinct to avoid cattle guards was even stronger.

Cattle guards have proven to be effective against bison at, among other places, the Maxwell Game Preserve in Kansas, Custer State Park in South Dakota, and the Wichita Mountains Wildlife Refuge in Oklahoma (which also uses cattle guards to control elk, deer, and longhorn cattle). Many national forests and parks, such as Yellowstone, use cattle guards to control bison. Yet some correspondents have reported that bison will run over cattle guards at will: "Buffalo are crazy, anyway," one experienced handler said. The assertion is probably correct at times, especially when bison are riled. Yet gentled, undisturbed bison will stay behind not only cattle guards but also fences that tame cows will crawl through.

Cattle guards have even been known to be effective with dogs and coyotes. Several persons have told me that they have had to carry their dogs across a guard, and others have said that a good woven wire fence with a cattle guard could keep sheep safe from coyotes—if anything could. Still others, however, have found that both dogs and coyotes were quite willing to jump or run across cattle guards.

A folk observation, made especially in desert states and in the Nebraska Sandhills, is that rattlesnakes often live in the pit area of cattle guards. In the northern states they will sun themselves near their homes; in hotter climes they will stay in the shade of the pit walls and grid. In either case, an unwary

A cattle guard near Virgil, Kansas, built by Mick Sage. Tires were added to help deter livestock.

A cattle guard with pipe-bar gate to keep out unwanted automobile traffic, Greenwood County, Kansas

rider, coming up to open the gate beside a cattle guard, may find himself either on a horse that has been bitten by a snake or on one that has been spooked by stepping on or near a snake.

Many persons have told me stories about livestock that had been trapped in cattle guards, and most agree that the consequences are usually more serious for a horse than for a cow. One story, however, about a young goat that got stuck in a Texas cattle guard has all the trappings of an incipient folk anecdote. C. W. Wimberley tells this story:

> During the 1930s my wife mothered two angora pet kids and one evening while we were away from home, the antics of these kids on the nearby cattle guard turned traffic on that country road into a comedy of errors. One of the kids managed to fall through the center opening into the pit of the cattle guard. While it spent its day imprisoned, its partner wandered about the immediate vicinity, frequently returning to check on his buddy.
>
> On hearing a car approach, the prisoner would stick its head up through the railings to see what was going on and, in the last split-second, would jerk its head back as the car passed overhead. From that point the behavior patterns of each kid varied from car to car.

Afterwards, the way Wimberley heard the story while sitting around the general store, it ran something like this:

> "Yeah, when I sees this goat's head sticking up between the bars, I jams the brakes—too late. And when I do stop and look back there that goat's head is looking at me—nary a scratch. I go back

and get in the cattle guard to get it out, but after the scramble I figure a goat that's that hard to catch can take care of itself without any help from me."

"I done nearly the same thing. Only when I looked back that danged kid was standing in the middle of the road. Of course I was glad it wasn't hurt, but I'll never figure out how it got out of that cattle guard so quick."

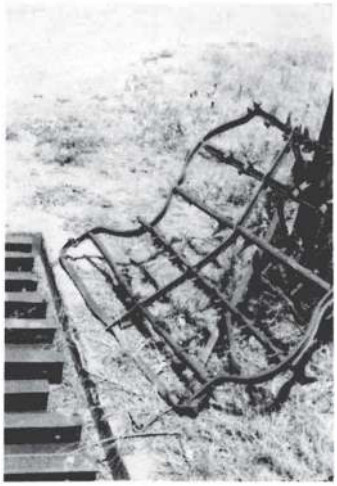
"That's nothing. When I hit my brakes, old John was right behind me and his truck rams mine right on top of the cattle guard and he comes out mad as blazes. I tried to get him to look under my truck to see if there was a goat down there in that cattle guard, but he points his finger at a goat standing beside the fence and says, 'There's your blamed old goat.'"

Wimberley concluded his story by saying: "And that's the way it went on all day. Those two goats had everybody all stirred up with their cattle guard game."

Because cattle guards are not always totally effective, folk methods have arisen to improve them. The simplest way to ensure that a cattle guard will stop stock is to supplement it with a gate. I have seen scores of cattle guards that have had a barbed-wire gate, an aluminum gate, or a single pipe stretching from wing to wing. Sometimes these extra gates have been placed there specifically to keep unwanted motorists from purposelessly (or purposefully, for that matter) driving into a pasture; more often, however, these added deterrents have been placed on little-used cattle guards. Thus the wire gate, for instance, can be left open for a day or a week of heavy use, but kept closed at other times.

Using a gate with a cattle guard, however, is self-defeating, because cattle guards were designed so as to eliminate the necessity of opening and closing gates. Thus, when a cattle guard fails to work adequately, other methods are often put into play in order to make it more effective. Sometimes common-sense additions are made to the original guard. In Wyoming, for example, I have seen a too-wide concrete lip between wing and grid that was made effective by fastening a piece of angle iron, pointed side up, in the middle of the lip. Near Ellis, Kansas, a piece of seven-inch pipe, cut in half lengthwise, was laid between wing and grid in order to deny footing to errant livestock.

Other means have been used in attempting to frighten away animals that might want to walk across cattle guards. Ray Purinton of WaKeeney, Kansas, found that a piece of loose roofing tin laid on the grid stopped a troublesome horse from getting out. The bars were close enough together so that the horse's hoof could span the space between two of them, but the sound and feel of the loose tin on the grid stopped him from walking out. People have also tied rags to the wings and grid, placed newspapers and white paper in the pit,



An old harrow section used as a cattle-guard wing near Lake City, Kansas

Truck and tractor tires used as wings on the Pioneer Ranch, Nebraska Sandhills. (Courtesy of Mary Ann Koch)

and even put chunks of broken mirror into the pit in order to make their cattle guards more effective.

Besides the main part of the guard, the wing is another part that has yielded to the folk impulse to improve its effectiveness. In addition to, or sometimes instead of, the usual wooden or metal wings, people have placed wheels from old wagons or implements and old tires from trucks or tractors between the grid and the fence in order to discourage animals from trying to crawl through. Sometimes mere sticks, boards, or broken fence posts have been slanted down from the fence to the grid. Sections from old harrows and the headboards from old-fashioned metal beds have been used as wings. In desert regions, ranchers will often buttress the wings with chunks of cactus or branches of tree cactus.

A spectacular use of tree cactus was reported from New Mexico, where a rancher had constructed a pitless variation of a trough cattle guard. He had leveled off and hollowed out two logs for the troughs. The logs were about fourteen inches above the ground, and dirt had been mounded up to each for an approach ramp. The rancher had kept the tracks clear; but in between, on both sides, and all around for several yards, he had filled every available space with pieces of tree cactus. Instead of using wings, he had tied big chunks of tree cactus to the fence posts in order to steer cattle away from the crossing. According to George W. McKinney, who saw this cattle guard in the 1930s, it was an awesome sight: "I bet it would have made an old Model T stand on its toes as it crossed."

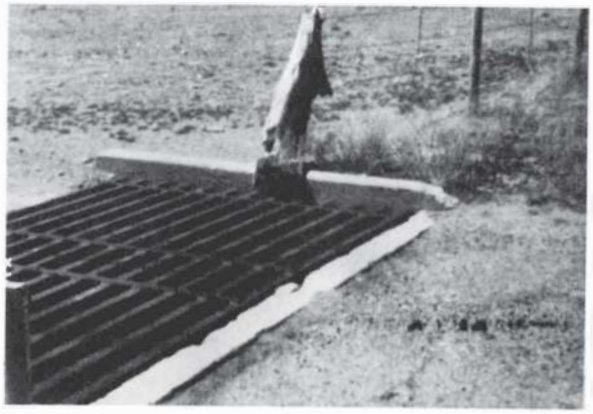
The attempt to keep animals away from the grid, particularly those that might be inclined to try to jump or walk over it, is a commonly practiced folk method of improving the effectiveness of cattle guards. E. A. Stephenson of

Bucklin, Kansas, had a problem with cattle walking along the fence near the guard. He devised a method for heading them back into the middle of the pasture. He built a wire wishbone by setting a post behind each end of the wing at the point where it joined the outside edge of the grid; he then angled the wire back ten feet or so to a post in the fence line. Another method of trying to frighten the animals away is by setting a tall post on each side of the guard, stringing a wire on the poles, then hanging gunny sacks down from the wire. The wire can be strung high enough to give clearance to trucks, and the gunny sacks will not damage them. In Montana a more ingenious—but more complicated—system has been devised by Tom McCrea of Plains. He placed a hot wire, charged by an electric fencer, about four or five inches above the ground and directly in front of the first bar of the grid. He first tried using inner tubes for insulators (which also act as springs, allowing vehicles to pass over the wire by pressing it down), but later he found that the rubber straps used in tying down truck cargo work best. He says, however, that this device works well only if livestock will stop to sniff it. Then, once shocked, a cow will not try to cross. In order to draw the animal's attention to the wire, McCrea has placed such things as old tires or a cowhide under it.

Although opinion is divided on whether cows are less likely to cross metal bars than wooden ones, many persons from both sides believe that the deterring powers of either type of bar material will be enhanced by paint. The majority of cattle guards are plain, but many have been painted. Paint also protects metal bars against rust. Colors commonly used are silver, black, and white; but some guards are painted with bright colors such as yellow, orange, red, blue, and green. The most effective method, according to conventional range-country wisdom, is to paint every other bar black, and the others white. Thus, since the spaces between the bars will appear farther apart to a cow, she will not attempt to cross the guard. I have seen many guards painted this way—or in some other variation, such as painting two bars white, then two black, and so forth. One new cattle guard on the eastern edge of the Flint Hills was not keeping cattle in. Painting the bars did not solve the problem either until two additional pipe bars were installed and painted.

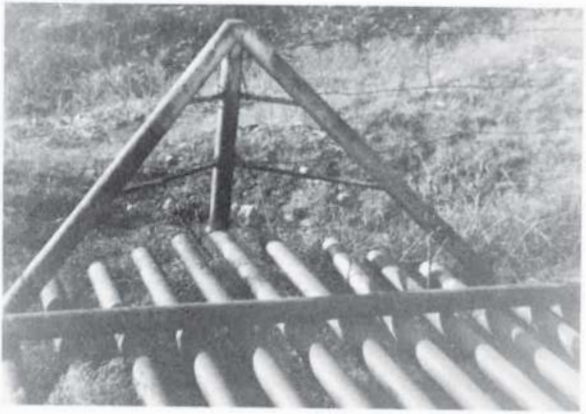
Next to painting the grid, probably the most widely used means of improving the effectiveness of a cattle guard is with a cowhide. I have already mentioned the use of a cowhide by itself as a deterrent, but more often it is used in conjunction with a cattle guard. Sometimes a dried cowhide is thrown onto a grid where it will rattle; sometimes a fresher hide is fastened to the grid; sometimes a hide is tied onto each wing of the cattle guard or to the fence just beyond the wing.

One Flint Hills rancher, Raymond Prewitt of Cassoday, Kansas, told me about a problem he had with some roping steers that had gone sour and ornery over the course of the summer roping season. Among other bad habits,



Cowhide on a cattle guard in central New Mexico. (Courtesy of Jay Taylor)

A cattle guard and arched entryway near San Angelo, Texas



A symmetrical grid cattle guard in the Teterville Oil Field, Greenwood County, Kansas

these steers had learned to walk the narrow concrete ledge of the cattle-guard pit just west of his house. He tried painting every other bar with aluminum paint, but this did not work. He tried painting each bar in alternate twelve-inch sections of black and aluminum, again with no effect. He tried pouring the paint in concentric semicircles on the gravel road in front of the guard, but traffic soon erased these efforts. Finally, he draped a fresh cowhide over the bars of the grid. The steers, completely oblivious to the hide, continued to cross; but his daughter's horse, a family pet that was used to jumping the guard at will, would not come within fifty feet of the cattle guard until the hide had been removed. Conversely, Montana rancher James Murphy of Livingston found that a cowhide over a cattle guard kept his cattle in but had no effect whatever on his horses, which continued to jump the guard. Ranchers from the Ruby Mountains of Nevada and from the Sandhills of Nebraska, however, have told me that hides work with any kind of animal.

Earlier in the history of the development of the cattle guard, when the ladder guard with an open pit in the middle was used, a hide was often placed in the pit to help scare cattle away. In the sheep country of Nevada a sheepskin is sometimes substituted for a cowhide. In Kansas I have seen dead snakes laid across a grid, ostensibly to frighten livestock.

The cowhide technique is employed all over North American range country, and possibly elsewhere. It seems to work because animals tend to jump and snort and bellow and shy away from signs of death and blood, as anyone can attest who has ever driven cattle past an animal that has recently been struck by lightning. In general, the operating principle seems to be similar to that used in a Navajo scarecrow, which consists of a dead crow hung from a string on a post in the cornfield.

The innate desire to beautify one's surroundings often finds expression in functional, workaday objects. Folklorists have often noted the results of this aesthetic urge in such things as rural mailboxes, quilts, and embroidered blue jeans. Like these items, cattle guards are primarily utilitarian; but unlike these items, cattle guards are not normally the objects of beautification. Occasionally, however, someone has attempted to make a guard aesthetically pleasing, above and beyond the clean, hard geometric lines inherent in cattle guards. Often the aesthetic effect of a cattle guard is enhanced, not by the guard itself, but by a fancy entryway of which the guard is only a part. High poles, for instance, with the name of the ranch in wrought metal suspended between them, are commonly used to frame cattle guards in the Kansas Flint Hills and elsewhere. There is an especially fancy entryway of this sort in east-central Wyoming, where old wagon wheels have been welded into the structure of the cattle guard's wings on both sides of the gateway. In north-central Texas, prosperous-looking ranches often have elaborate gateposts of native stone or brick. Sometimes these masonry entryways arch completely over the

driveway, with the cattle guard directly underneath. In some instances these arched frames are intentionally constructed so that only cars and pickups will have the necessary clearance to drive under them; large trucks (which might damage the grid) must go through the gate at the side.

The guard itself can be beautified (as well as having its effectiveness improved) by painting the grid, although if the paint is not maintained, the resulting chipped and scraped cattle guard soon turns into an eyesore. Usually, if the guard itself is decorated, one also finds the artistic impulse displayed in the wings. For instance, wings lend themselves to such things as having the owner's name or brand spelled out in metal rod and worked into the design of the wing. The most unusual wing design I have seen was on an oil lease near Lovell, Wyoming. There the wings of the cattle guards that led into the lease were made of rod that had been formed into the shape of an oil derrick. I have also seen the tops of the center posts of wings adorned with metal rings, drilling bits, and other such decorative items.

One of the nicest—and most subtle—aesthetic touches I have seen in cattle guards is found in several guards east of the Teterville oil field in Greenwood County, Kansas. Here the pipe bars are arranged symmetrically so as to form a point at each end where the grid and the wing join. The middle bar of an eleven-bar grid, in other words, might be fourteen feet long, while the two bars on either side would each be six inches shorter (three inches on each end), and so forth, so that the two outside bars would each be eleven and one-half feet in length. The ends of the wings are then attached to the ends of these outside bars, and the wings slope back and up towards the center bar of the grid. Thus, all lines, both of the grid and of the wings, come to an arrow-like point. Because this design does not afford any pit edge or any space between the grid and the wings on which cattle may cross (usually the weak link in a cattle guard), it provides a prime example of that happy instance in folk expression where function and aesthetics meet in perfect form.

Because cattle guards are so much a part of range country and are taken for granted by most of the people who live among them, there has developed around cattle guards a set of customs, actions, and beliefs. Some of this lore is related to custom, some is utilitarian, and some concerns values. Cattle guards became necessary because of cars; therefore, it is not surprising that much of this lore concerns automobiles. In open-range country, for instance, where crossroads are few and signposts even fewer, cattle guards are used in giving directions, much as one uses traffic lights in a city: "Take the fork to the right after you cross the fifth cattle guard."

Some travelers in range country use the cattle guard as a game, much as passengers would pass time by "collecting" license tags from as many different states as possible when going through more heavily traveled regions. Patricia Diness of Middletown, New York, for example, was raised in Dartmoor Na-

tional Park in Devonshire, England, an open-range area containing many cattle guards. She remembers, as a child, playing a game of guessing the number of cattle guards to be crossed before reaching home. Once she had grown old enough to remember where each cattle guard was, the game lost its challenge, but she reports that her young daughter has enjoyed the same game on visits to her grandparents in Devon. Similarly, Kaye Y. Turner of Pocatello, Idaho, remembers that as a girl she used to ride at sixty-five miles per hour along the Medicine Bow cutoff in Wyoming, a stretch of road that had many cattle guards. "With nothing else to do (other than count antelope), we would take turns hollering 'cattle guard—lazy man's gate' for each one. Drove my mother crazy!"

Many persons have told me about this stretch of Wyoming highway, which is rather renowned as far as cattle guards are concerned. One of the most intriguing customs concerning the Medicine Bow cutoff was reported by some instructors at Casper College. Apparently, some students, when they leave for holidays, take along a supply of beer in the car. The object is to finish a beer before the car crosses each of the cattle guards. The mounds of empty cans tossed out at each guard are treasure troves for gatherers of aluminum cans.

Changing social attitudes are revealed in a story about cattle guards told by Margaret Hailey of Phoenix. In 1922 her husband, Rob L. Hailey of Willcox, Arizona, attended a high-school dance with some fellow students in Bowie. On the way home to Willcox, they found that the sheriff had strung a chain across a cattle guard as a roadblock. He was checking for illegal booze, and the cattle guard made a perfect spot to stop traffic. Because the sheriff knew the students and knew that they were not bootleggers, he let them pass, then he refastened the chain for the next car. Mrs. Hailey went on to say: "We like this story because it is a contrast to what goes on now. Needless to say, the amount of traffic through that area is very heavy in 1980 and stopping cars would be a big operation. Also, our son, who is a policeman (just one generation later) wouldn't think of trying to operate in this manner."

Because it is more expensive to construct a cattle guard than a barbed-wire gate, cattle guards on private roads tend to be associated with rich ranchers. Roy Alleman, in a 1957 article in *American Cattle Producer,* indicated that this was the case in the Sandhills of Nebraska: "If one passes through a range which [has] a lot of fancy auto gates, he lifts his eyebrows and remarks to himself, 'Hm-m, wonder which vice-president of what corporation owns this place?'" Other persons have told me that in the early days, a cattle guard on a public road was considered a sign that the rancher whose ranch was crossed by that road was on especially friendly terms with his county commissioner.

Scholars and laymen alike recognize the effect that barbed wire has had

on the development of the West. The automobile made range country even more accessible. The cattle guard has also played its part in helping to urbanize rural America. The long search for a practical automatic gate (see chapter 2) proves how strong was the pressure for a time- and labor-saving device such as the cattle guard. With improved roads, faster cars, and cattle guards, ranch country that was scores of miles from a city could become a rural suburbia for erstwhile city dwellers who did not mind commuting to their jobs. C. W. Wimberley has mused upon this subject: "The cattle guard was the bane of the old time country people and did more than any other contraption to urbanize the rural areas of Texas with city dudes too lazy to open a gate. It destroyed the family unit productive farm by making them playgrounds of country living." While the cattle guard does not deserve the entire blame for the demise of the family farm (which resulted from many forces), it undoubtedly did have some influence.

The line between folklore and popular culture is sometimes vague. Probably, however, the few depictions of cattle guards in the visual arts or in literature belong to the realm of popular culture. I have seen very few western paintings of cattle guards. In 1948 Ross Stefan did a pastel entitled *A New Experience*. This painting, set in the desert Southwest, shows a skinny, leggy weanling Hereford calf encountering its first cattle guard—eight wooden bars set between a nearly vertical set of wooden wings. One of the tall end fence posts carries a sign: "No Trezpasing." I have also seen a few cattle guards in paintings by regional artists and a few photographs using a cattle guard to frame the main subject of the picture, such as an old windmill or a snow-topped mountain.

A cattle guard can occasionally be seen fleetingly in the background of a movie or television show, usually one set in the contemporary American West. A few years ago, however, a cattle guard appeared in the opening frames of a Robert Mitchum movie that was set in England, a film version of Raymond Chandler's detective story *The Big Sleep*. The few appearances of cattle guards on film seem to have been totally accidental, but this was not so in an animated "Peanuts" television program, "Run for Your Life, Charlie Brown." In an early scene, Snoopy is shown on his way to camp riding on a low-slung motorcycle. En route he bounces and vibrates across a cattle guard, thus providing a small laugh to those who are familiar with cattle guards and also giving his persona a needed shaking up.

Cattle guards in fiction are rare. Mary O'Hara is representative of those authors who include a few cattle guards in their work in order to add realistic detail (although the fifteen-foot-wide cattle guard in *My Friend Flicka* lacks verisimilitude; it is nearly twice the width of a typical cattle guard and three feet wider than any cattle guard I have surveyed). In my reading of novels set in the twentieth-century West, cattle guards have figured importantly in only

three. One of these was Edward Abbey's *The Monkey Wrench Gang,* in which two of the protagonists, Smith and Hayduke, are in a jeep, trying to elude a posse of pickups and Chevy Blazers. Abbey has the two men cross an old wooden cattle guard, which they then set fire to in an attempt to slow the pursuit:

> The fence appeared, stretching right-angled across the line of their advance, from cliff to canyon. An opening for the road was formed by a rack or grill of two-by-fours set on edge, resting on a pair of railway ties. Cattle guard. Wheels could cross; hoofed animals like sheep, cows, and horses could not. There was a closed gate beside the cattle guard, through which livestock might be driven, but this, like most of the fenceline, was banked thick and solid with years' accumulation of windblown tumbleweeds. From a distance the fence resembled a hedgerow, brown and tangled. [Pp. 119-20]

I am not sure why Abbey included this cattle guard in his story, for, although Smith and Hayduke successfully set it ablaze, their pursuers are able to jump their vehicles across it anyway. I also found it interesting that Abbey, who normally has a good eye for detail, had the cattle guard made of two-by-fours; very few wooden guards, especially on public roads, are made with such small lumber.

In John Nichols' novel *The Milagro Beanfield War,* Bernabe Montoya, the sheriff, braces himself and shudders in a conditioned response every time he drives over a painted-stripe cattle guard just outside the town. This painted-stripe guard is used as a major image in the novel, a metaphor for the way in which the natural things in life are being cheated by artificial substitutes.

> [Bernabe] flinched and, shaking his head, muttered to himself: "It sure beats me how a handful of white stripes can fool cows like that." [P. 30]
>
> . . . . . .
>
> Bernabe likened the painted cattleguard to the sort of stickers—"Protected by Acme Burglar Alarm System"—store owners who could not afford burglar alarm systems put on prominent display in their business windows.
>
> Or to those signs—"Beware of the Dog"—that surburban folks too cheap to invest in a ferocious mutt, but nevertheless terrified of burglars, displayed on their lawns.
>
> Or then again, Bernabe figured a painted cattleguard might be said to share a common soul with a shapely woman who wore falsies.
>
> And Bernabe wondered: Did the painted cattleguard concept have some relationship to artificial insemination, also? . . .
>
> Bernabe never truly understood the deep down discomfort caused in himself by that painted cattleguard. [P. 164]

In *Horseman, Pass By,* Larry McMurtry's novel that was made into the movie *Hud,* the cattle guard on the prosperous Bannon Ranch is solidly built of pipe. The poverty of a young neighbor who helps Bannon work cattle, on the other hand, is subtly symbolized by a rickety, cheap cattle guard made of two-by-four lumber.

The brevity of the foregoing comments shows that the cattle guard has not had the same sort of symbolic or general appeal as the windmill, the locomotive, or barbed wire in the popular mind and in the popular arts. Still, a few artists have recognized, and utilized, its symbolism.

Jokes about cattle guards will never replace situation comedy or knock-knock jokes as a major form of American humor, but there have been some successful cattle-guard jokes and humor, in addition to the humorous names cited earlier—"corduroy gate," "cow filter," "wife saver."

Some of the cattle-guard humor I have encountered has been of a personal nature. A cowboy friend from my home town, for example, sent me a note that closed with the admonition, "Keep your cattle guard up." Then, in response to one of my newspaper queries, I received this letter: "Enclosed is a photograph of the cattle guards we are using during the 1980s in Chanute, Kansas. The older one was made in 1927, the other two in 1963 and 1967. The two newer ones are efficient, but it seems the older they get the more it costs to maintain them." I had not yet looked at the accompanying photograph, but when I saw the signature on the letter, Britton Thompson (my wife's cousin), I realized that my leg had been pulled. Britton is not considered to be the most serious-minded member of the family, a reputation that was not altered by the enclosed photograph—a picture of himself (the 1927 model) and his two sons, Dan and Ted, guarding their Holstein milking herd by brandishing clubs and shotguns.

Less personal but equally amusing is the humor found in the memoirs of a Wyoming schoolteacher, Paul Swaffar. This passage on the cattle guard is from his book *Look What I Stepped In,* published in 1972:

> I have no notion why they should be called cattle-guards instead of horse-guards, sheep-guards, pig-guards or billy-goat guards. I can only say—and I am widely quoted in this statement—"Cattle-guards are sure nice." You make them by leaving a hole in the fence, much as if you were going to put a gate there. The length of the hole will depend some on whether your wife drives the car—in case she does you make it real long. Then you dig a square hole right there in the gap. I don't know how deep this hole ought to be, but be sure to make it deep enough. You make the hole, say six feet across, depending some on whether you have mules or goats—if you do, I'd suggest around twenty feet. Then you take some heavy logs and lay them crosswise of the hole. Leave them stick over the edges quite

aways so's you don't fall in with a load of hay. Then lengthwise and on top of the logs you put 2 x 6s on edge, or poles, or old railroad irons, or pipe about say six or eight inches apart. You nail, bolt, or haywire these down good and you have the slickest gate you ever saw—without having a gate. Some people get real fancy and box the hole with concrete which is all right, but it costs quite a bit more—and this is pretty important in this day of high taxes.

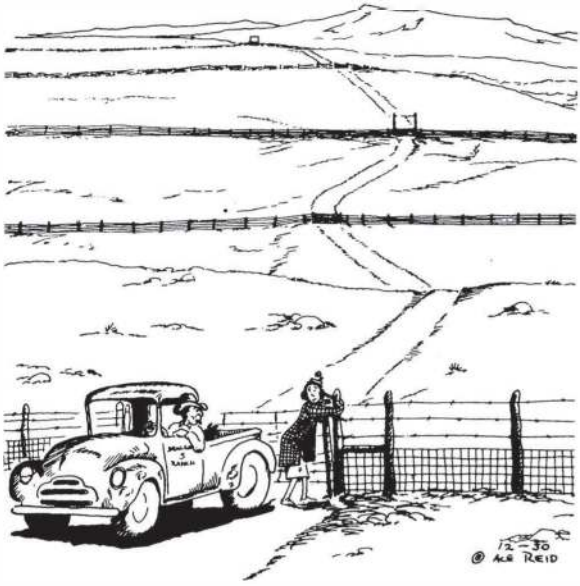
Advantages of a cattle-guard are:
(1) Kids love them—so do older people.
Disadvantages of the cattle-guard:
(1) They are useless on a chicken farm. [Pp. 48-49]

Swaffar's view of the cattle guard, while humorous, is also accurate. Like much humor, it contains more than a grain of truth.

One joke about cattle guards made use of the practice of placing a cowhide over the grid. An "Out Our Way" cartoon by the late J. R. Williams shows a vacationing city family of four who have just driven over a cattle guard covered by a hide, with hoofs, head, and tail still attached. Quite apparently this was the father's first encounter with a cattle guard. While the kids were bickering in the back seat, he was probably trying simultaneously to drive and to read a road map. He has hit something that felt like it was shaking his car apart, and when he looked into the rearview mirror, all he could see was a cow flattened out on the road. His trepidation will not be eased by either his son's keen interest in the disaster (a typical reaction of small boys) or by the devious comments the two cowboys are planning at his expense. "I put old dry hides in all the cattle guards to spook our cattle from jumpin' 'em—those people think they run over a cow," says one. To which his companion replies with typical cowboy deadpan humor: "We'll tell him this dry air and hot sun dries 'em up awful fast out here."

"Ace" Reid, creator of the cartoon "Cowpokes," includes cattle guards in his work, sometimes as realistic background detail and sometimes as part of the joke. One that illustrates perfectly the reason for the invention of cattle guards shows a cowboy driving a battered pickup through the last (or at least the latest) in a long series of barbed-wire gates as his wife struggles to close the gate. This long-suffering woman has evidently made a suggestion that completely fails to penetrate his consciousness: "What do we need cattle guards for?" he asks.

Mary Weberg wrote a humorous article "Honey, You Get the Gate" for *Farm Journal* (September 1959), in which she noted that ranch dwellers will often feign indifference about who will drive, but actually getting to drive is a very competitive game in which the loser "gets the gates." She had a neighbor who lived seven fences away—fourteen gates for the wife to open and shut when she came visiting. The suggestion was made to this long-suffering



Build cattle guards! What we need with them?

woman that she ask her husband for a cattle guard for their wedding anniversary each year for seven years, but we are not told the result. Perhaps her husband served as the model for Ace Reid's cartoon.

By far the most prevalent motif in cattle-guard humor concerns the mistaking of metal or wooden cattle guards for humans who guard cattle (one of the term's original dictionary meanings, by the way). The version I have heard and read most often is similar to this one printed in the September 1979 issue of *California Mining Journal:*

> Nick Franklin, New Mexico's secretary for energy and minerals, received an inquiry from Washington. The bureaucracy wanted to know how many cattle guards there were in New Mexico.
>
> The state official scratched his head and made a guesstimate. He advised Washington that there were approximately 50,000 cattle guards in his state.
>
> A reply from Washington informed him that there were too many cattle guards on the state payroll and there would be no more federal money for state highway programs until New Mexico fired at least half of them.
>
> It's reassuring to know there are people in Washington with that kind of mentality looking after you and me.

This story gained wide currency when Paul Harvey used it on his broadcast (as fact, not as joke, needless to say) on 8 September 1978. Later, Tracy King of Roby, Texas, sent me a letter containing a summary of Harvey's item. Doug McDonough, farm editor of the *Plainview* (Texas) *Herald* sent me a copy of his column, which told the story at three removes—the *American Agriculture News* account of Harvey's broadcast. A number of persons from several states have told me the story, often citing Harvey as the source. I had first heard the story, however, a good two months before Harvey's broadcast. A roughneck on an oil lease near Virgil, Kansas, stopped to check me out as I was measuring a cattle guard, and after he had learned that I was doing research on cattle guards, he told me the story as a joke, minus Franklin's name and a specific setting. I have tried several times, unsuccessfully, to communicate with both Harvey and Franklin in order to trace the story to its origins.

Recently, the joke seems to be spreading independently of the media coverage it received in 1978. I heard two versions in October 1981, both told as humorous but supposedly true stories. Donald Thompson of Arlington, Texas, for example, heard the story from a New Mexico hunting guide, who had state rather than federal officials as the objects of humor. As early as June 1981, the Reagan administration had attained the major role in the story, apparently a result of its much-publicized intent to reduce the presence of the federal bureaucracy in local affairs. According to Yvonne J. Milspaw, her father, who is from Utah, heard that a newly appointed official of the Interior Department had asked workers in the Salt Lake City office of the Bureau of Land Management for an inventory. When the resulting list showed, among other items, four hundred cattle guards, the naïve political appointee ordered that one hundred of them be fired.

Variations of this joke include one from Nebraska: "A cattle guard is someone who guards cattle from a thief and is hired by the government. More expense to the city dude to pay for in taxes." There is also this one from Montana: "We're kind of hoping, here in Montana, that not too much attention gets centered on cattle guards or else the bureaucrats will want to reorganize them and put them in uniforms." A Texas variation has a city slicker say, "I thought that a cattle guard was a deodorant for cows."

Many folk tales are based on facts, and jokes about cattle guards are probably originally related to experiences similar to the one that happened to Merle Walker, a former professor at Fort Hays State University in Kansas. When he was a young man, Walker had worked as a park ranger. One day a woman stopped to ask him how she and her party could view the major sights of the park in the least amount of time. Walker gave them directions, beginning with the phrase, "Go down to the first cattle guard and take a left turn." The woman repeated his instructions down to "the first cattle guard," at which point she asked, "Will he be wearing the same kind of uniform as you are?"

Tracing this story to the single incident that gave rise to the subsequent jokes is probably impossible, but certainly the experience that Alice Bullock

had during World War II is a likely candidate for the point of origin. She was working for the New Mexico Department of Education in Santa Fe at the time this incident occurred. There were many shortages during wartime, and when her office applied for money for six cattle guards for school bus routes, Washington gave an unexpected answer: it could have two guards, but not six; manpower was just too limited.

The cattle guard, despite its previously unrecognized role, is obviously a significant factor in the folk life and the popular culture of range country.

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