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## The Cattle Guard

Etienne S. Benson  
*University of Pennsylvania*

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## The Cattle Guard

### Abstract

Parallel lines of steel stretch toward the horizon, interrupted by overgrowth and dappled shade. Half-hidden below the center of the photographic frame, a pair of triangular wings rises at a 45-degree angle from the railroad tracks into the encroaching brush. Between them is a horizontal grid of wooden and metal bars. This arrangement of bars constitutes what is variously called, depending on one's location in the English-speaking world, a cattle guard, cattle grid, or stock grid. The bars are spaced such that the hoof of any would-be bovine or ovine trespasser can easily slip into the shallow pit between them. The aim is to prevent livestock from even attempting to cross.

### Disciplines

Animal Sciences | Animal Studies | Anthropology | Demography, Population, and Ecology | Place and Environment

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Rachel Carson Center for Environment and Society  
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Etienne S. Benson

## The Cattle Guard



**Figure 1:**  
D. K. Gleason, "16. Mile Post No. LB 40.0, Cattle Guard viewed from the north. West Feliciana Railroad Right-of-Way, Woodville, Wilkinson County, MS," 1979. Photograph from the Historic American Engineering Record (HAER).

Parallel lines of steel stretch toward the horizon, interrupted by overgrowth and dappled shade. Half-hidden below the center of the photographic frame, a pair of triangular wings rises at a 45-degree angle from the railroad tracks into the encroaching brush. Between them is a horizontal grid of wooden and metal bars. This arrangement of bars constitutes what is variously called, depending on one's location in the English-speaking world, a cattle guard, cattle grid, or stock grid. The bars are spaced such that the hoof of any would-be bovine or ovine trespasser can easily slip into the shallow pit between them. The aim is to prevent livestock from even attempting to cross. Similar to the granite coffin stiles used for centuries in Cornwall, cattle guards are Maxwell's demons for living things, keeping cattle and sheep on one side of a fence or wall while

allowing free passage to humans traveling by foot or on wheels.<sup>1</sup> They are material-semiotic devices that establish an ontological divide between certain humans who can move at will across the landscape and certain kinds of animals who cannot.<sup>2</sup> Although cattle guards are designed to make passage physically difficult for cattle and sheep, their intended impact is mainly psychological. If a cow or sheep steps onto a cattle guard—where his or her hoof will possibly become irremovably trapped—the device has, in a sense, already failed. Indeed, the perception of danger is more important than the real hazard. Under certain conditions, painted stripes of alternating black and white can have the same deterrent effect as physical bars and gaps.

In the United States cattle guards have been used to govern the movements of humans and animals at the intersections of fences and railways since the very beginning of the railroad age in the 1830s.<sup>3</sup> Poised between abandonment and reclamation, the particular railroad tracks and cattle guard depicted above are located along the West Feliciana right-of-way in the town of Woodville, Mississippi, not far from the Louisiana border. Documented by the Baton Rouge-based photographer David King Gleason in 1979, they represent part of the nation's industrial and engineering legacy as preserved in the Historic American Engineering Record (HAER).<sup>4</sup> The HAER survey was launched by a coalition of national heritage and engineering organizations in 1969, just as the country was beginning to shudder and creak from the postwar boom into the postindustrial era. It aimed to evoke “the intellect, ingenuity, hard work, and sacrifice of engineers and inventors, workers and businessmen and women, their families and communities.”<sup>5</sup> At the same time, it offers a more mundane record of the enduring give-and-take between human and nonhuman agents. Although no animals can be seen in it, Gleason's photograph serves as a reminder of how the needs and desires of other forms of life leave imprints on our infrastructures, and how our infrastructures, in turn, help determine what it means to belong to a particular species and to have a body of a particular kind.

1 On the Cornish coffin stile, see Robin Menneer, “Geology and Cornish Hedges,” accessed 5 March 2016, <http://www.cornishhedges.co.uk/PDF/aonb.pdf>.

2 This claim bears some similarity to Giorgio Agamben's idea of the “anthropological machine,” except that rather than dividing humans from animals, the cattle guard and similar devices divide particular kinds of humans from particular kinds of animals. I am grateful to Jean Langford for helping refine my argument here. Cf. Giorgio Agamben, *The Open: Man and Animal* (Stanford: Stanford University Press, 2004).

3 For a comprehensive history, see James Hoy, *The Cattle Guard: Its History and Lore* (Lawrence: University of Kansas Press, 1982).

4 More information on the Historic American Engineering Record (HAER) is available online from the US National Park Service, accessed 5 March 2016, <http://www.nps.gov/hdp/haer/>.

5 National Park Service, “HAER: Historic American Engineering Record,” Brochure, p. 1, accessed 5 March, 2016, [http://www.nps.gov/hdp/haer/NPS\\_HAER\\_Brochure.pdf](http://www.nps.gov/hdp/haer/NPS_HAER_Brochure.pdf).

Construction on the 35-mile-long West Feliciana line began in the late 1830s and was completed in 1842. Progressively incorporated into ever-larger rail networks, it remained in operation until the 1970s. Over the course of those 130-odd years, its tracks were built and rebuilt upon a complex sediment of histories, some of them deeply troubled. When the first trains reached Woodville in 1842, they were borne on rails made not of steel as in this photograph, but of cypress, cedar, and longleaf pine protected by a thin sheath of iron.<sup>6</sup> These wooden rails, long since replaced, were hewn and laid by enslaved men owned by Woodville's most prominent resident, Edward McGehee, who also financed the building of the line.<sup>7</sup> When a census of the county where Woodville is located was conducted two decades later, more than three-fifths of the population of about 16,000 were identified as slaves.<sup>8</sup> One way or another, most of them were involved in producing the bales of cotton that were transported on the West Feliciana line to the Mississippi River and thence to the textile mills of New England and Lancashire.<sup>9</sup> McGehee was one of Mississippi's wealthiest planters, and he worked in ways both overt and indirect, both ideological and material, to build a world in which the lines between enslaved blacks and free whites were unmistakable. In addition to financing the railroad, he was a sponsor of the Mississippi State Colonization Society, which sought to resettle freed and free-born black men and women in far-off Liberia and thereby prevent them from troubling the logic of what its members considered to be an unbridgeable racial gap.<sup>10</sup> Infrastructural development enhanced the mobility of the few while tightening the chains of the many.

In a roundabout way, the fact that the West Feliciana railroad was built by slave labor in the heart of the antebellum Cotton Belt helps explain why it was the site of the United States'—and possibly the world's—first railway cattle guards.<sup>11</sup> Well into the nineteenth century, most areas of Mississippi, like other parts of the South, adhered to open-range

6 Anne Butler and Norman Ferachi, *St. Francisville and West Feliciana Parish* (Mt. Pleasant: Arcadia, 2014), 10.

7 Carolyn E. DeLatte, *Antebellum Louisiana, 1830–1860: Life and Labor* (Lafayette: Center for Louisiana Studies, University of Louisiana, 2004), 443.

8 For historical census data, see the Office of Coast Survey's distribution map of slave populations, <http://historicalcharts.noaa.gov/historicals/preview/image/CWSLAVE> and the US Census Bureau's records from 1790 to 1990, accessed 5 March 2016. <https://www.census.gov/population/www/censusdata/pop1790-1990.html>.

9 Sven Beckert, *Empire of Cotton: A Global History* (New York: Knopf, 2014), 102.

10 McGehee is identified as a "manager" of the Mississippi State Colonization Society in the *First Annual Report of the Mississippi State Colonization Society* (Natchez, 1832), 10. Available at <http://louisdl.louislibraries.org/cdm/fullbrowser/collection/p16313coll51/id/1070/rv/compoundobject/cpd/1077>.

11 On the West Feliciana Railway's "firsts," see Federal Writers' Project of the Works Progress Administration (Miss.), *Mississippi: A Guide to the Magnolia State* (New York: Viking, 1938), 344.

laws that required crops rather than livestock to be fenced in.<sup>12</sup> When a farmer failed to enclose his crops within adequate fences, livestock owners were legally absolved from responsibility for the damage caused by their free-roaming pigs, sheep, or cattle. Two factors contributed to the elimination of this open-range system in the Mississippi and Louisiana counties traversed by the West Feliciana line. The first was the dominance of cotton production and the planter class that grew wealthy on it during the period between Mississippi's admission to statehood in 1817 and the Civil War in the 1860s. McGehee's Bowling Green Plantation was worked by nearly a thousand enslaved men and women and covered several thousand acres.<sup>13</sup> Planters with such vast holdings had little interest in maintaining an open-range system whose primary beneficiaries were people with many cattle but little or no land.<sup>14</sup> The second factor was the railroad itself. Even at the slow pace of trains in the 1840s, livestock on the tracks posed a threat to the safe operation of the line. Even when trains were undamaged, railroad companies could be, and were, held responsible for the livestock who were killed or injured on the tracks.<sup>15</sup> Thus the predominance of slave-holding planters lent itself to a techno-legal system that kept livestock in place but lubricated the passage of cotton-laden trains.

That said, the effectiveness of the cattle guards in regulating the movement of animals, machines, and humans across the landscape should not be overstated. The legal record richly documents the many cases in which they proved ineffective, particularly after 1892. In that year, the state of Mississippi passed a law requiring railroads to install cattle guards when their tracks passed through enclosed private land. The law authorized penalties of \$250 to be paid to any party injured as a result of a failure to comply.<sup>16</sup> More than once, disputes over escaped livestock who damaged crops or who were killed after traversing railway cattle guards made their way to the Mississippi Supreme Court. In 1905, for example, the court ruled that the railroad company now running the West

12 On livestock policy in the American colonies, see Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (New York: Oxford University Press, 2004).

13 Samuel C. Hyde, Jr., "Continuity Recast: Judge Edward McGehee, Wilkinson County, and the Saga of Bowling Green Plantation," in *The Enigmatic South: Toward Civil War and Its Legacies*, ed. Samuel C. Hyde, Jr. (Baton Rouge: Louisiana State University Press, 2014).

14 On open-range vs. stock laws and the correlation of the latter with the proportion of African-Americans living in a particular county, see J. Crawford King, Jr., "The Closing of the Southern Range: An Exploratory Study," *Journal of Southern History* 48, no. 1 (February 1982): 53–70.

15 As early as 1852, the state of Alabama passed a law making railroad companies responsible for livestock killed or injured on their lines; Brooks Blevins, *Cattle in the Cotton Fields: A History of Cattle Raising in Alabama* (Tuscaloosa: University of Alabama, 1998), 54.

16 For interpretations of the 1892 law in a case argued before the Mississippi Supreme Court in 1894, see "Kansas City, Memphis & Birmingham Railroad Co. v. J. J. Spencer et al.," in *Cases Argued and Decided in the Supreme Court of Mississippi*, vol. 72 (Nashville: Marshall & Bruce Co., 1896), 491–506.

Feliciana line was not responsible for damage to crops caused by livestock that had crossed one of its cattle guards. The issue at hand was the effectiveness of a particular kind of cattle guard, the so-called Ross guard, which eliminated the pit underlying the crossbars seen in older designs in favor of spike-laden sheets of folded metal laid over the rail bed. One of dozens of novel “surface” cattle guard designs patented in the late nineteenth century, the Ross guard allegedly reduced the risk of train derailment in comparison to the older pit design.<sup>17</sup> The court ruled in favor of the railroad, arguing that a “proper cattle guard” must be “reasonably effective against stock” but also “reasonably preservative of the safety of the traveling public.”<sup>18</sup> In other words, perfection was an unattainable ideal and the railroad had the right to balance the effectiveness of its cattle guards against the risks they posed to trains and passengers.

Maintenance was also a major challenge. If too much snow, debris or plant growth accumulated in the spaces between the bars of a cattle guard, whether of the surface or pit type, its deterrent effect could be lost. Even though the law recognized that cattle guards were imperfect devices, railroad companies could still be held responsible for failing to maintain them in reasonably good working order. What counted as “reasonable” varied both over time and from place to place. In 1877, the Indiana Supreme Court ruled that the Pittsburgh, Cincinnati, and St. Louis Railway Company was obligated to pay a man for a horse killed by one of its trains because a “cattle-guard, or pit, was suffered to remain an unreasonable length of time in a condition rendering it useless.”<sup>19</sup> The

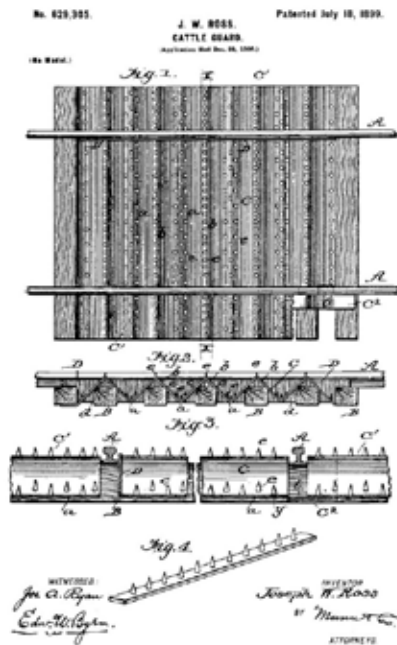


Figure 2: Drawing from J. W. Ross, “Cattle Guard.” See note 17.

17 J. W. Ross, “Cattle Guard,” US Patent No. 629,305, filed 29 December 1899 and issued 18 July 1899.  
 18 “Yazoo and M.V.R. Co. v. Harrington,” in *Southern Reporter*, vol. 37: 30 July, 1904–25 March, 1905 (St. Paul: West Publishing Co., 1905), 1016–18, quote on page 1017.  
 19 “Pittsburgh, Cincinnati, and St. Louis R. Co. v. Eby,” in *The American Railway Reports*, vol. 16, ed. W. W. Ladd, Jr. (New York: Cockcroft & Co., 1878), 244–50, quote on page 250.



challenge of maintaining the old pit-type cattle guards, which readily filled with difficult-to-remove debris, was one of the factors behind the proliferation of designs for surface cattle guards around the turn of the twentieth century. In a patent application filed in 1906, for example, Nathan Smith of Garrison, Montana, claimed that his design for a cattle guard would “not clog with snow under ordinary circumstances; but in case of any foreign matter, such as snow, getting under the plates or the longitudinal section they are easily raised and the foreign matter removed.”<sup>20</sup> Even with the benefit of such innovations, cattle guards often fell into disrepair. The consequences of cattle or sheep crossing such compromised barriers were rarely good for livestock owners, railroads, or the animals themselves. In landscapes designed to tightly regulate the movement of certain animal bodies, transgressions could be deadly.

More than just evidence of technical failure, such accidents attest to the impossibility of completely mastering nonhuman agencies—whether biological, meteorological, or mechanical. In the real world there are no Maxwell’s demons capable of differentiating unerringly between bodies of different kinds, or of perfectly and instantaneously deciding who may or may not pass. Instead, there are many zones of negotiated and costly passage. In this light, the cattle guard appears less as a dividing line than as a constructed space of encounter where the bodies of machines, animals, and humans weave complex paths around each other and sometimes violently and painfully collide. Those collisions reveal the gaps in our understandings of bodily differences as they emerge in encounters with the built landscape, as well as the indeterminacy inherent to the encounters of variable bodies under varying conditions. Certain animals understood the cattle guard as an impassable barrier for the kinds of bodies they had; others stepped, leaped, stumbled, or fled across them and in the process demonstrated what their bodies were capable of.

Instead of seeing the design and installation of a cattle guard as an example of technical mastery over the movement of certain nonhuman animals, we might instead see it as way of setting the stage for an ongoing negotiation over what it means to have a particular kind of body in a particular time and place. Looking beyond the cattle guard, I would argue that it is often precisely through practical interventions of this sort—that is, through infrastructural adjustments that are so minor and mundane that one must

20 N. Smith, “Cattle Guard for Railways,” US Patent No. 821,439, filed 14 February 1906 and issued 22 May 1906.

look hard and long at photographs such as this one before they become visible—that speculative ontological divides between different kinds of bodies, human and otherwise, become matters of uncontested common sense.