

DID LANE & BODLEY BUILD TRACTION ENGINES?

By Robert T. Rhode

Introduction

Hesiod, a poet of ancient Greece, said the road toward being right is rocky while the path toward being wrong is smooth. I may be taking the smooth path here.

When Jack Norbeck was collecting information for his pioneering *Encyclopedia of American Steam Traction Engines*, he met with Raymond Laizure, who, in the 1970s, edited *The Stumptown Steamer* in Cadiz, Ohio. Organized in 1953, the Stumptown threshing reunion originally met at Laizure's farm four miles west of New Athens. As early as the March–April 1954 issue of *The Iron-Men Album Magazine*, Laizure was contributing articles to steam magazines. On page 105 in my book entitled *The Harvest Story: Recollections of Old-Time Threshermen*, I characterized Laizure's writing: "By all accounts, [Laizure] was a worthy practitioner of the storytelling art, especially when it came to finding a unique phrase. Laizure described an Advance engine as 'the Pride of Battle Creek barking away at a steep grade.' Instead of saying he had begun the milking, Laizure worded it, 'I ... had just gotten hold of the handles on my cow ...' When he understood that another person had made a good case, Laizure said, 'That laid the facts bare on the table.' When Laizure felt astonishment at witnessing a puzzling event, he said, 'It left me sitting straddle of a rail fence with a split basket full of mixed emotions.' Such word painting goes well beyond clichés. Laizure knew the rhythm of language, the picturesque detail, and how to convey the aura of sincerity."

Norbeck says it was Laizure who asserted that Lane & Bodley of Cincinnati, Ohio, built traction engines.

The Case for Lane & Bodley Traction Engines

When Norbeck visited Laizure's home, Norbeck secured a photograph of a cut of a traction engine that Laizure said was a Lane & Bodley, according to Norbeck, and Norbeck included the cut in his encyclopedia.

Laizure's Cut

The cut depicts a Paxton traction engine built by the foundry and machine works of the Harrisburg Car Manufacturing Company of Harrisburg, Pennsylvania. Design engineer Martin E. Hershey built his first Paxton-style road roller in 1880, as roller expert Raymond L. Drake has verified. Drake deduces that a full line of single-cylinder Hershey rollers became available in 1883. (Hershey held several patents for steamrollers.) At the very end of 1890, the Foundry & Machine Department at Harrisburg separated from the main manufacturing concern, which entered into receivership. The Commonwealth Guarantee Trust and Safe Deposit Company served as receiver from late 1890 through 1899.

The year 1890 witnessed an economic slump which became a full-blown panic in 1893. Responding to weak financial conditions, Lane & Bodley began producing only Corliss engines in 1890. If, for the time being, we assume that Lane & Bodley had previously served as a distributor of Paxton traction engines, we

must acknowledge that, in 1890, the Commonwealth Guarantee Trust and Safe Deposit Company decided there was no future in traction engines for the Harrisburg firm and, by 1891, had ceased production of Paxtons, thereby ending Lane & Bodley's distribution of such engines.

We might be safe in assuming that Lane & Bodley distributed Paxton traction engines because, in 1884, the Harrisburg Car Manufacturing Company was actively seeking distribution points farther west.

Page 1 of the *Harrisburg Telegraph* for September 24, 1884, featured this story: "Some time ago the Harrisburg foundry and machine works sent one of their prize 'Paxton' traction engines to Cambridge City, Indiana, to see how it would work in furnishing power for the Kimmel steam gang plow, a number of traction engines made by other parties having failed after repeated trials. How well the Paxton carried off the laurels is shown in the following article from the *Wayne Citizen*, published at Cambridge City, commendation totally unsolicited and unexpected by the Harrisburg foundry and machine works: 'From time to time the Citizen has had occasion to give its readers some details of first experiments and then the substantial success of the steam gang plow invented and manufactured by our townsmen, Messrs. Kimmel. ... The great success of Wm. Kimmel's invention is well known to our people, and nothing more would need be said, were it not for the question raised in regard to the possibility of finding a traction engine capable of doing the work. ... The wide-spread notoriety of the Kimmel steam gang plow, which sprang into full life from the first, without tedious and slow growth (when once

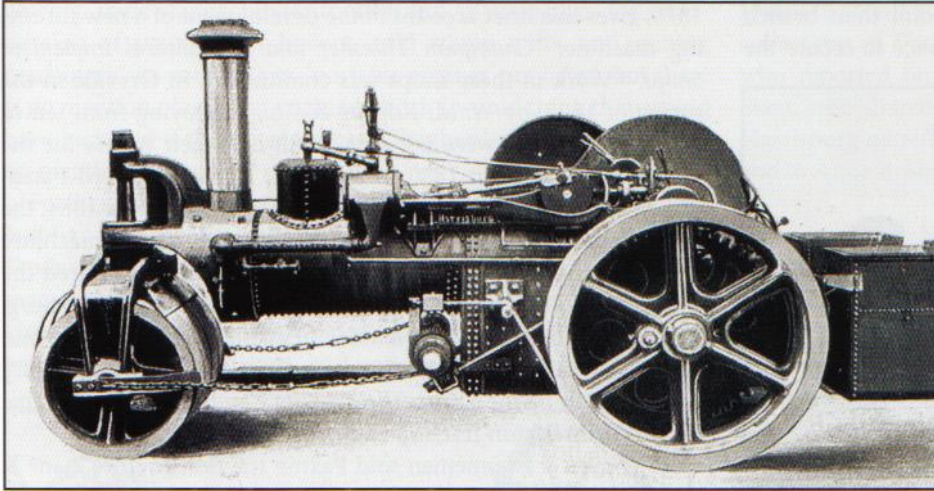


Page 12 of *The Iron-Men Album Magazine* for March and April of 1968 carried this portrait of Raymond Laizure. Photograph courtesy William Flowers.

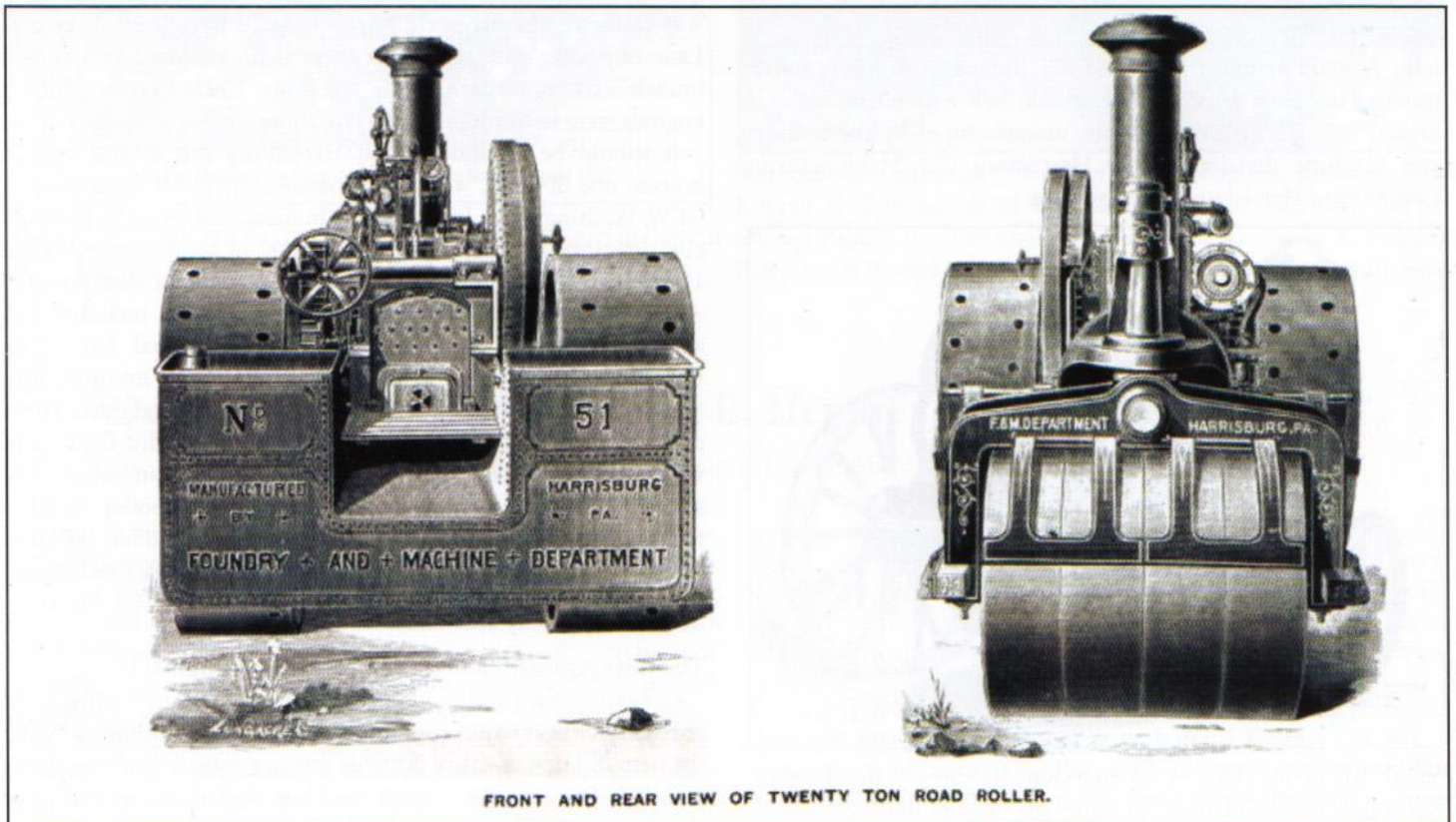
the inventor practicalized his years of thought and labor), brought the alert and enterprising engine makers promptly into the field. No less than five traction engines have undertaken the task of furnishing the requisite power, with the equally necessary economy and ease of management. The Gaar, Scott & Co., Birdsall, Geiser, Frick, and lastly the Paxton, have been tested. Each of the first named were in some mea-

sure successful. We have had the pleasure of seeing all of them at work, and have not hesitated to say that the Kimmel plow, with any of them (excepting the Birdsall, and Gaar, Scott & Co., which were too light, or not constructed for purpose), developed abundant power to pull the gang. It was reserved, however, for the Paxton, manufactured by the Foundry and Machine department of the Harrisburg,

Pa., Car Manufacturing Company, to do the most perfect plowing we have seen. For several weeks Messrs. Kimmel have been working the Paxton purchased by them some time ago. Great fields of ground have been broken with this engine, and every inch of ground showed better work than with the old method. Yesterday we were given an opportunity of witnessing this most complete of all the successes, through the kindness of Thos. Reese, Jr., general foreman of the Harrisburg works. On arrival at the farm we found the Paxton industriously and faithfully at work, steadily drawing the gang through hard and dry ground. ... The engine started in with forty-five pounds of steam and at no time used more than eighty pounds. The gang of six plows each cutting twelve inches was lifted and lowered with ease and went into and came out of the ground promptly at the will of the plowman. ... The engine easily backs the plows into fence corners and turns the earth within three feet of the corner. ... The coal burned, estimated from measured boxes, was 1,500 lbs. in ten hours. ... This engine was built expressly for the Kimmels, first for plowing and secondarily for road and general farm use. Its cylinder is 8x10 inches, and the developed power was fully that of fifteen horses. The traction wheels



This image belonging to steamroller expert Raymond L. Drake appeared in "Facts and Questions About Harrisburg Steamrollers," an article that he and I published in 2008 in *Engineers and Engines Magazine*. It depicts designer Martin E. Hershey's 1880 roller design, which has much in common with Hershey's Paxton traction engine for agricultural purposes.



FRONT AND REAR VIEW OF TWENTY TON ROAD ROLLER.

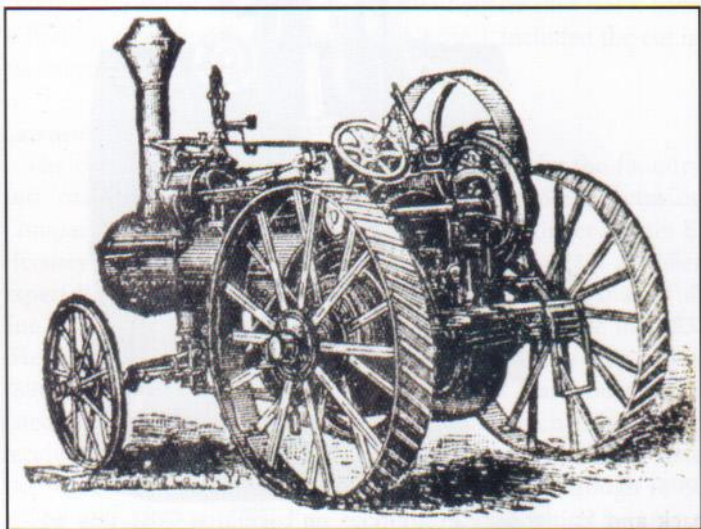
These cuts of Hershey's early design of Harrisburg road roller appeared on page 110 of *The American Engineer* for March 18th, 1886.

are large, with twenty inches face, and the front wheels eight inch face. ... In the trial for speed to-day the engine plowed two rounds on the extreme outside of a forty acre field in twenty minutes, turning over six feet at each round."

The *Cambridge City Tribune* for October 2, 1884 reported, "The Kimmel bros. have purchased a mammoth traction engine built by Paxton & Co., Harrisburg, P., with which to operate their steam gang plow on their farm. ... The manufacturers of the Paxton traction engine at Harrisburg, Pa., are in correspondence with Kimmel Bros. in relation to securing a suitable storage room for their engines at this place, and also to make this point their branch headquarters for Indiana. Steps were taken at once to secure the



John F. Spalding and I published this tintype from John's collection in *The Steam Tractor Encyclopedia, New Expanded Edition*; it depicts a Paxton traction engine, manufactured by the foundry and machine division of the Harrisburg Car Manufacturing Company of Harrisburg, Pennsylvania.



Jack Norbeck included in his encyclopedia this cut that he says Raymond Laizure believed to represent Lane & Bodley traction engines sold in Cincinnati, Ohio. There is no evidence that Lane & Bodley manufactured traction engines.

old Catholic Church building for them and the company advised of it." William Kimmel, the inventor of the steam plow in Cambridge City, exhibited his plow and the Paxton engine at a fair in St. Louis.

While I have found no evidence that Harrisburg carried out plans to distribute the Paxton traction engines from Cambridge City, Indiana, we do have proof that Koppes & Brennenman of Orrville, Ohio, distributed such engines: Norbeck depicts a Koppes & Brennenman traction engine that is clearly a Paxton. Page 692 in Ben Douglass' *History of Wayne County, Ohio*, published in 1878, gives this brief account of the development of a new threshing machine: "*Champion Thresher and Agricultural Implement Shops*.—Work in these shops was commenced in Orrville in the spring of 1875, by W. M. Koppes & Co., employing from ten to fifteen hands, and were not able to fill half their orders for the thresher last year." In 1880, William M. Koppes received Patent 235,256 for his "thrashing machine and clover huller." In 1884, the Harrisburg factory was building Champion threshing machines and clover hullers; it would appear that Harrisburg acquired the rights from Koppes to produce his threshers in Harrisburg. Koppes then became a distributor of Paxton traction engines and Harrisburg-built Champion threshers. Simultaneously, Harrisburg was approaching the Kimmel brothers in Cambridge City, Indiana, to marry the Paxton traction engine to their plow.

As Koppes & Brennenman sold Paxton traction engines, Lane & Bodley could have sold them, too. The Directory of Steam Engine Manufacturers in Volume 17 of *Engineering Mechanics*, published in Philadelphia in 1898, lists a branch of the "Harrisburg F'dry & Mch. Wks. [Foundry & Machine Works]" in Cincinnati. By that year, only Corliss engines would have been sold. City directories do not mention the Harrisburg branch; for that reason, there is no way to learn whether such a branch could have been located at Lane & Bodley's address. Also, there is no evidence that such a branch existed earlier, during the time when Paxton traction engines were in production in Harrisburg.

It should be mentioned that Harrisburg ran several branch houses; one of them, which was managed by Jacob E. Sheibley at 94 W. Washington in Indianapolis, Indiana, was listed in the 1885 city directory as "mnfrs [manufacturers] of farm engines." Page 107 of the *Thirty-Fifth Annual Report of the Indiana State Board of Agriculture*, Volume 27, 1885 (printed in 1886), included this announcement in its descriptions of the annual fair: "The Harrisburg Manufacturing Co., Harrisburg, Pa., F. Johnson, Agt. [agent], Indianapolis, Ind., exhibited three traction engines. These engines made quite a handsome appearance and did their work with great promptness and ease. The engine is mounted on very solid bed plate on the boiler. By extension of the boiler shell the traction gear is entirely independent of the boiler. Wheels, wrought iron; axles, solid wrought iron; drive wheels, five feet and four inches in diameter."

The Case Against Lane & Bodley Traction Engines

Off and on for two decades, I have searched for proof that Lane & Bodley built traction engines, and I have found nothing. While the firm did manufacture portable engines, which bear no resemblance to Laizure's cut of what has been labeled a Lane & Bodley traction engine, there is no shred of evidence suggesting that the company also built traction engines.

Anne B. Shepherd, reference librarian at the Cincinnati History Library and Archives, says, "The entry in *Leading Manufacturers of Cincinnati 1886* is very specific as to what [Lane & Bodley] manufactured: 'automatic cut-off Corliss engines, single slide-valve automatic engines, centre-crank engines, slide-valve engines with medium strokes, portable engines, heavy stationary circular-saw mills, fractional head blocks, gang edgers, lumber trimmers, lath saws, and special appliances for handling slabs, saw dust, etc., portable circular-saw mills for farm and neighborhood business, turned and polished iron shafting, hangers, pulleys, couplings, mill gearing, mule stands, binder frames, and all appliances for transmission of power, steel boilers, gold stamp mills, and mining machinery.' As you can see, 'portable engines' are listed, but there is no mention of traction engines, which I would think they would have included if they made them." Shepherd concludes, "I found no mention of 'traction' engines."

Further, Lane & Bodley is not listed among traction engine builders in *Seeger & Guernsey's Cyclopedia of the Manufactures and Products of the United States* in 1890. Page 36 in *Steam*, a monthly magazine, for August 15, 1908, presents a detailed biography of Henry Marcus Lane, who is described as a builder of portable engines "on wheels or skids" and stationary engines, but there is no

mention of traction engines. The biography afforded a perfect opportunity to mention traction engines, had Lane & Bodley built them.

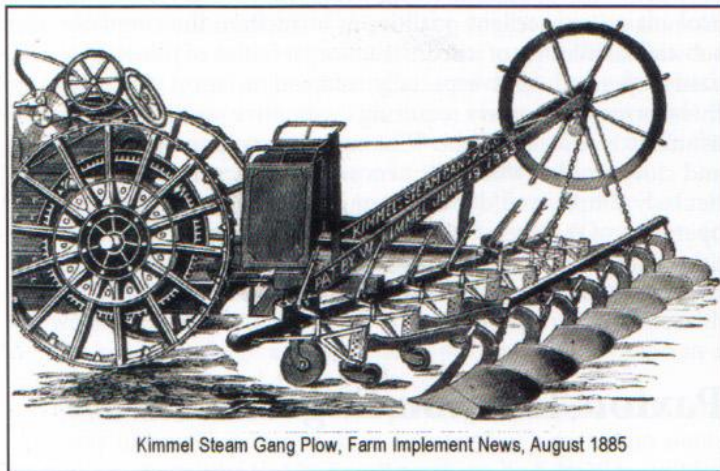
My Conclusion

I am persuaded that Lane & Bodley did not build traction engines. Further, I doubt that Lane & Bodley distributed Paxton traction engines manufactured in Harrisburg, Pennsylvania.

Acknowledgments

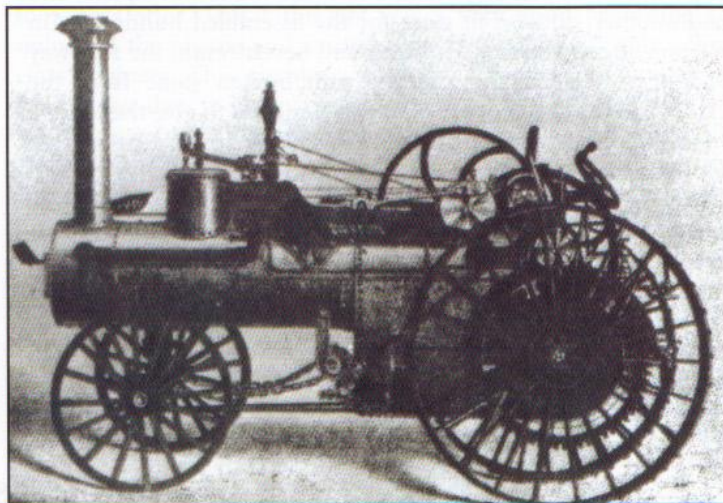
I want to thank Tom Downing and John Leck, who searched their collections of *The Stumptown Steamer* for evidence; Jack Norbeck, who reported on his visit with Raymond Laizure; and Brenda Stant, who shared her in-depth knowledge of the constellation of Harrisburg manufacturers. I am most grateful to Dr. Mark Ohlde and to Anne B. Shepherd, both of whom dug deeply into their files.

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Kimmel Steam Gang Plow, *Farm Implement News*, August 1885

The driver wheels of a Paxton traction engine can be seen in this cut of the Kimmel brothers' gang plow in Cambridge City, Indiana.



Norbeck also included this cut of Paxton engines, distributed by Koppes & Brenneeman of Orrville, Ohio. The fact that Koppes offered Paxton traction engines for sale argues for the hypothesis that Lane & Bodley sold Paxtons: a theory I am prepared to dispute.

Description of One of Martin E. Hershey's Early Road Rollers

This account is from page 1 of the *Harrisburg Telegraph*, published in Harrisburg, Pennsylvania, on May 17th, 1884:

At last there is something tangible in the way of providing for the long-neglected streets of Harrisburg. This morning a public exhibition was given of the new road roller built at the Harrisburg foundry and machine works on Allison's Hill. ... a special car left the Reading depot, having on board the Mayor, members of Councils, representatives of the press, and prominent citizens of all professions, all in the care of Dispatcher Levan. At the switch below the round house the car was run upon the track leading to Allison's Hill, and in a short time the foundry and machine works were reached, the train halting in the yard, where the big road roller was awaiting the visitors with steam up and ready for exhibition. Superintendent M. E. Hershey met the visitors and extended every

courtesy to them that they might get all the information possible relating to the new machine. There were already present several hundred people, who had assembled to watch the new roller work. The roller has been described at length, but to again give an idea of it, it may be said that, proper, it consists of three ponderous wheels, one in front and two behind, having a combined tread of 8 feet, driven by a powerful engine, and capable of being propelled back and forward, or in a circle, with equal facility. The whole weight is about twenty-two tons, and the workmanship is of the most reliable kind, that which has made a most excellent reputation for these works. The hind wheels are so perforated that iron teeth can be placed in them and the streets torn up with perfect

ease. The first trial of the machine was given in the yard. The man in charge mounted the box, gave a wheel a twist and the ponderous machine, responding to the touch, moved off without a hitch. Backward and forward it went, the reversing process being accomplished without the loss of a moment's time, and then to vary the monotony the huge iron Juggernaut was run around in a circle, crushing down a wide, smooth road in the dirt. A lot of broken stone, several cart loads, was dumped in the yard, and the roller sailed over it gracefully, mashing it as flat as a penny without any jar or any apparent strain to cross it. Then the teeth were put in the hind wheels and the machine "tore things up" in the yard, leaving deep holes wherever one of the iron spikes sunk into the ground. On a macadamized street it will work wonders in revealing things that have been lost in the deep layers of mud. Everybody was delighted with the exhibition, and some of the more enthusiastic were in favor of letting the machine run over a few Councilmen who voted against fixing up the streets, not because of malice aforethought, but as an evidence of good faith in the roller that it would do the work well and crush a little common sense into the Councilmen. It was the general opinion that the roller was a perfect success, but Superintendent Hershey wanted to make the test complete, and had another surprise in store for the assembled hundreds. On Vernon street, between Fifteenth and Seventeenth, the roadway had been scraped and covered with broken stone from the crusher to the depth of a foot. It was designed to give the roller a more practical test by running it over this street. The whistle tooted and the big machine sailed out of the shop yards and down the road at a comfortable rate of speed to ... where the Mayor and Councilmen had taken up a position. Over the broken stone the roller went "Just as easy," and when it reached the limit, and everybody was wondering how it was going to turn to come back on the narrow street, the lever was reversed and it backed down, doing just as much execution as when it went ahead. A dozen times this was done, in a short time, the stone

being flattened to an even road surface, resembling a macadamized road that had been traveled over for a month. This, however, was not regarded as a satisfactory test to those more experienced in road making nor to the builders, who said that the true test of the roller, and one in which its operations will far exceed those of this morning, is to make and roll the first layer of large stone, and then make each successive layer of smaller stone until the level of the road bed is reached, when the road will be smooth and as level as a floor. This will be done hereafter on all the streets. ... About 11:30, the practical utility of the roller having been sufficiently demonstrated and its advantages made apparent to all who witnessed the test, the party returned to their homes. As said before, at last there is something tangible in the way of putting our long-neglected streets in good condition. While at the foundry and machine works the Telegraph representative took a look through that busy industrial establishment, and learned considerable of its workings. Here is manufactured the celebrated Paxton combined farm and traction engine, which was decided at the Southern exposition, Louisville, Ky., last November, to be the best, and was awarded a gold medal over a score of competitors; since then a great many have been ordered for the Southern market, one order from Louisville calling for seventeen of the engines. The best evidence of the merits of this traction engine is the fact that since the building of the first sample engine the works have been constantly crowded with orders, it being accepted with favor at once on account of its excellent qualities as a traction, the simplicity and substantial manner of its construction; it is also of pleasing design, easily operated, and especially adapted to meet the wants of threshermen and others requiring locomotive power. At this establishment is also made the "Champion" combined grain thresher and clover huller, which farmers say is perfect, and which is particularly simple, and does not require a life-long education in the operation of threshers to be able to run it. Everybody in the establishment is busy, and under its present management its capacity is taxed to the utmost limit to fill orders.

Description of Hershey's Paxton Traction Engine

This account is from page 102 in the *Thirty-fifth Annual Report of the Indiana State Board of Agriculture*, Volume 27, 1885 (printed in 1886):

The Car Manufacturing Co., of Harrisburg, Pa., exhibited a ten horse power traction engine—the "Paxton." The simplicity and substantial character of its construction are prominent features of the "Paxton." It is of average weight and of very pleasing design; the weight is so distributed as to render the engine very effective on the road as a reliable locomotive. The drivers are of large diameters, affording better facilities for surmounting obstructions; are made of wrought iron complete, except hubs. The axle is made of hammered car axles of large diameter. The small pinions are all of steel castings. This engine has a powerful brake operated with a treadle; the engineer can stop the engine on any grade instantaneously by use of one foot. The platform and drawbar are attached to the main axle, and by means of this device the load does not pull on any part of the engine or boiler, but directly on the axle, thus entirely releasing the boiler and other parts of the machinery from any strain in pulling the load. The platform and drawbar are made to swing on the axle, and can easily be swung under the boiler, entirely out of the way of the engineer and fireman. To this platform are attached springs and a combination of levers which give a movement of six

inches or more to the drawbar, giving the engine a number of revolutions before the total load is taken up. By this contrivance a load can be started as readily on a hill-side as on a level, the engine being allowed to accumulate speed before the main load is reached. This engine uses a reverse gear, patented by the Car Company. It is simple and compact, consisting of very few parts. The spark arrester is made and arranged on top, and can be easily thrown open to increase draft for starting fires. The engine is disconnected from propelling gear by a few turns of a small wheel on the end of the crank shaft and will secure the gear in that position; this is done without use of pins or springs. The compensating gear is of large proportions and very sensitive. On icy or slippery ground the two wheels can be locked together by a simple device which can be operated while the engine is in motion. The driving axle of this engine is not attached to the side of fire-box, but is continuous, passing through housings in the rear of boiler, and a cast iron thimble, the whole being so adjusted as to make the shaft in a large degree independent of the boiler.