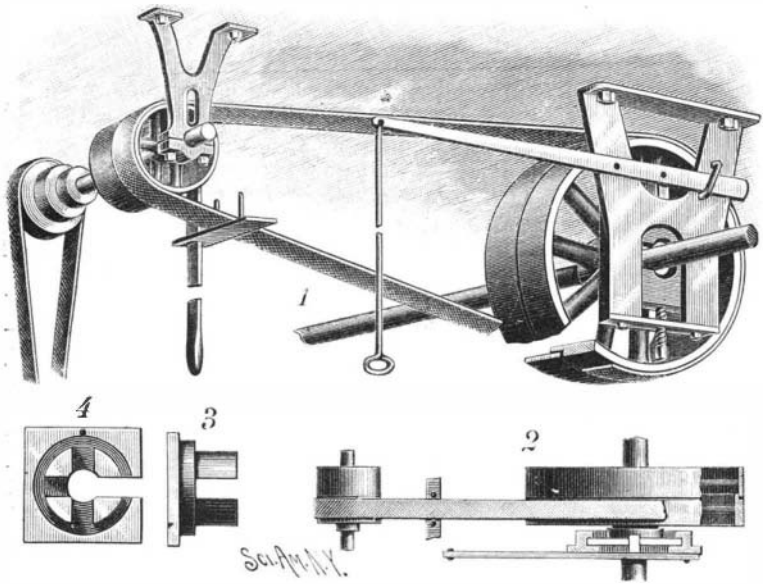


AN IMPROVED BELT REST.

A device designed for use in connection with a line shaft and fast pulley, to support the belt and prevent it from moving when the machine to be driven is not in use, is illustrated herewith, and has been patented by Messrs. Benjamin F. and James F. Comstock, of Canton, Ill. On the shaft with the driving pulley is a second pulley, with an inwardly extending reduced flange adapted to engage the inside rim of the driving pulley, the flanged pulley being mounted to rotate on sector pins projecting from a collar on the inside of a sliding block, of which side and face views are shown in Figs. 3 and 4, the block being mounted to slide in guideways formed in the hanger, as shown in Figs. 1 and 2, so as to permit an up and down movement of the sliding block without its touching the line shaft. In a crosspiece in the bottom of the hanger is a set screw to limit the downward sliding movement of the block, the latter being connected at its upper end by a link with a lever fulcrumed on the hanger, which lever has at its outer end a downwardly extending handle. By pulling down upon this handle the upward sliding motion of the block throws the flange of the second pulley into contact with the inside of the rim of the driving pulley, when the operator can conveniently and easily shift the belt by operating the belt shifter. When the belt has been shifted, the sliding block moves downward until it rests on the set screw in the crosspiece in the bottom



COMSTOCK'S BELT REST.

of the hanger, the pulleys then being out of frictional contact, and the flanged pulley ceases to rotate, resting on its sector pins until the operator again desires to shift the belt.

THE GREAT EASTERN MOVING TO HER LAST BERTH.

After thirty years' vain struggle against an adverse destiny, this leviathan steamship has been beached on the shores of the Mersey, to be broken up for old iron. The Great Eastern was planned by Mr. Brunel and built by Mr. Scott Russell, to accomplish the voyage to

the East, round the Cape, without having to stop by the way for coal, and was originally intended to take some 3,000 first, second, and third class passengers and a large cargo. Her length was 692 feet, her breadth 83 feet, and the depth of her hold was 24 feet, and her registered tonnage 18,914 tons. She was fitted with both paddle and screw engines, carried five funnels, each 100 feet high, and had a coal bunker space of 10,000 tons. She was built at Millwall, and great difficulty was experienced in the launch, which occupied three months, and cost 60,000*l*.

In 1859 the mammoth steamship started on her first trip to the United States, but had to put back through the explosion of a steam pipe, by which a number of persons were killed and injured. Next year she reached New York, and made several trips across the Atlantic, but the receipts were unequal to the enormous expenses. In 1861, she was utilized as a troop ship to take the Guards to Canada, but it was not until 1865 that her true vocation was considered to have been found—namely, to lay a telegraph cable between England and America. In this work she was occupied for some years—an attempt being made in 1867 to utilize her as a passenger ship between New York and Havre during the Paris Exhibition—but when there were no more cables to lay she was relegated to idleness and Sheerness, where cockney "trippers" were admitted to view her interior at a shilling a head. Two years ago the vessel was taken over by a syndicate, and stationed in the Mersey as a species of People's Palace of Amusement, being subsequently transferred to Dublin. After a brief visit to the Clyde, the Great Eastern was sent on her last voyage to the Mersey, where, recently, she was beached near New Ferry, on the Cheshire shore, to be eventually handed over to the dismantling hammer. Even to the last her ill-fortune appeared to attend her, as during her journey from the Clyde she encountered a gale, during which the tug was obliged to cast her loose, while her own engines, being stopped for a short time, the great vessel became unmanageable, and for hours rolled about at the mercy of the wind and waves. On the weather moderating, however, she was again taken in charge, and finally towed by the tug Stormcock to her last berth.—*London Graphic*.

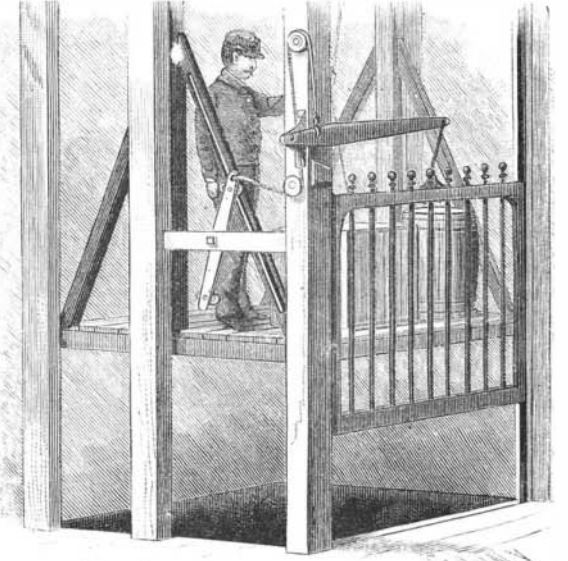
DISPARAGING THE HORSE.—A

writer in one of our contemporaries thinks the intelligence of the horse is greatly overrated, and submits the result of some of his observations as evidence: I have seen horses walk around a post until they had wound up the bridle and then stand there with their heads bound down to the post, because they didn't have sense enough to walk the other way and unwind the bridle. I have seen them get a foot over the bridle when tied to a ring in the pavement, and then go into fits because they didn't have sense enough to lift their feet over the bridle again. I have seen them prance

around in a burning barn, with their tails and manes on fire, and burn to death, because they did not have sense enough to run out. Anybody can steal a horse without any objection from the horse. A horse will stand and starve and freeze to death with nothing between him and a comfortable stall and plenty of oats except an old door that he could kick down with one foot, or that could be opened by removing the pin with the teeth. If this is a high degree of intelligence even in a brute, then I am lacking in that article myself. Compared with the dog, the elephant, or even the parrot, the horse seems to me to be a perfect fool.

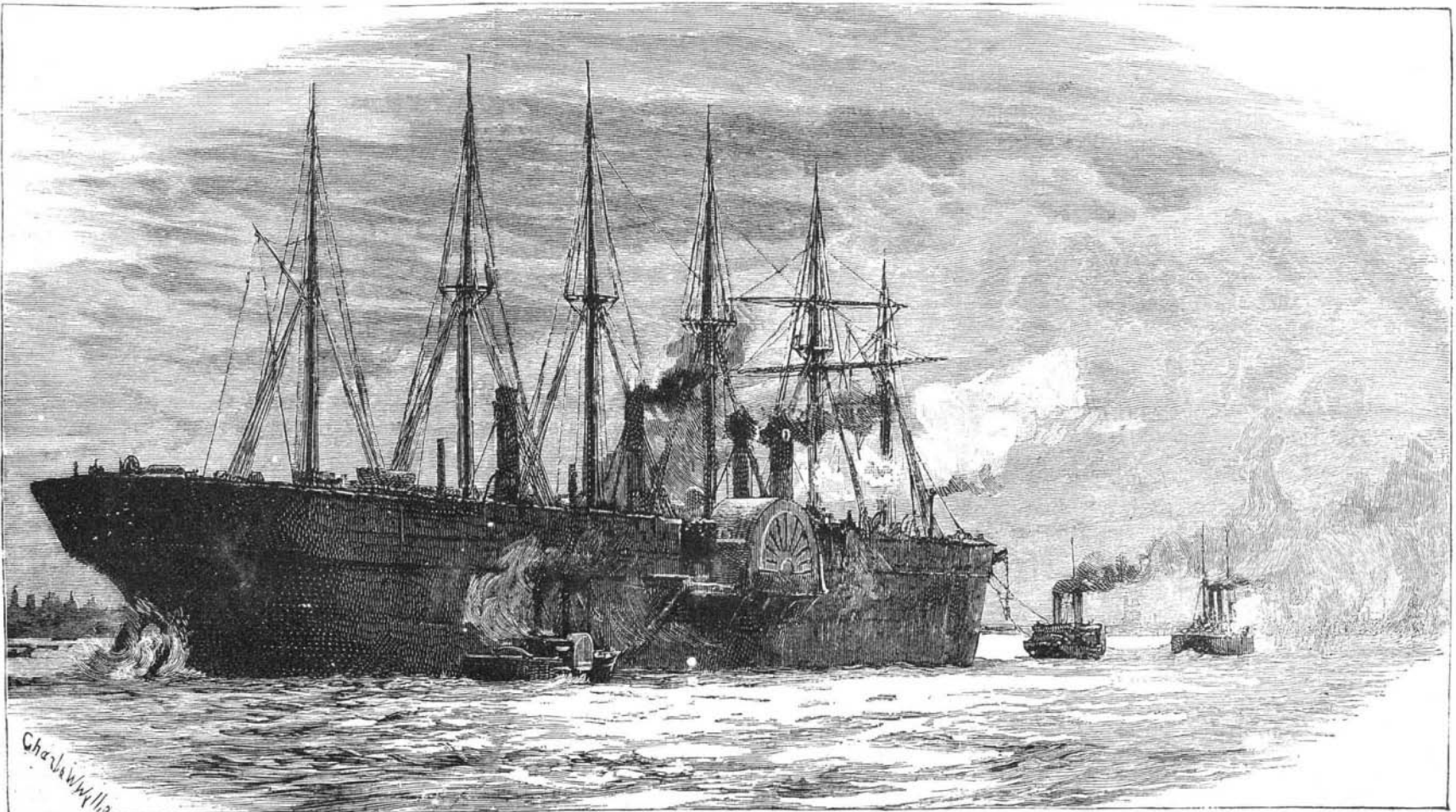
AN AUTOMATIC GATE FOR ELEVATORS.

A safety gate for the doorways of elevator shafts, designed to be automatically opened and closed by the



CALDWELL'S AUTOMATIC GATE FOR ELEVATORS.

elevator moving up and down, is illustrated herewith, and has been patented by Mr. John M. Caldwell, of No. 128 South Canal Street, Allegheny City, Pa. The sliding gate or door to the hatchway opening is suspended by a rope from the end of a lever pivoted to the framework, this lever being connected by a cord passing over pulleys on the framework to the upper end of a bar pivoted to a crosspiece of the framework. The bar has friction rollers at its ends, which engage the projecting edge of an inclined guide strip on the elevator as the latter moves up or down in front of the gate opening. When the gate is closed, the bar is inclined toward the door opening, its upper end being held down adjacent thereto by the weight of the gate. Upon the elevator approaching the gate opening, from above or below, the projecting edge of the upper or lower end of the guide strip on the elevator enters between a pair of rollers on the bar pivoted to the framework, moving its upper end away from the gate opening, and thus drawing on the cord to raise the gate. Upon the elevator moving away from the opening, either up or down, the guide strip passes between the rollers, permitting the gate to close.



THE GREAT EASTERN MOVING TO HER LAST BERTH.