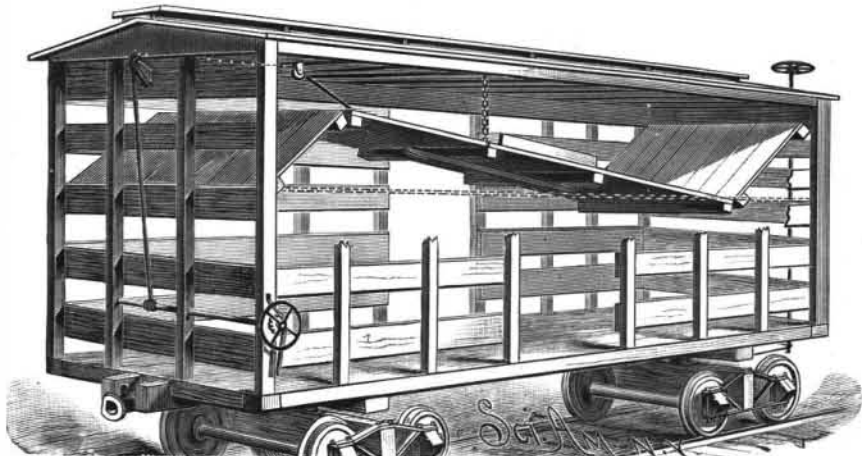


DOUBLE-DECK STOCK CAR.

This car is so designed that it may be quickly and easily changed from a single to a double floored car; the object being to provide a car that may be used either for the transportation of cattle or of sheep, hogs, or other small animals. The car, which may be of the ordinary form, is provided with a movable auxiliary, or upper, floor. To the top of one end of the car is hinged a heavily made flap, or leaf, to which, in turn, there is hinged a platform, to the opposite end of which is hinged a second flap, which is hinged to the end of the car at a point just in line with the sur-

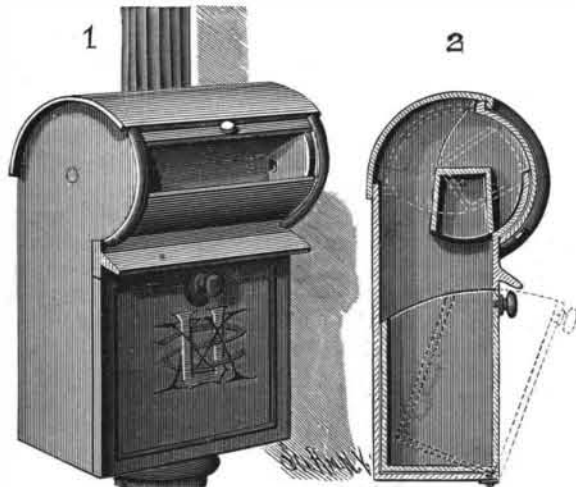
**WHITE'S DOUBLE-DECK STOCK CAR.**

face of the platform when the latter is in its lowered position. The platform normally rests in its lowered position, being then supported by suitably arranged cleats; but when the car is to be cleared for the purpose of transporting cattle, the platform is drawn up until it occupies a position just beneath and parallel with the roof of the car. This movement is brought about through the medium of a chain or rope, one end of which is secured to the end of the platform, as shown at the left in the engraving, while the other end is guided over sheaves, located as shown in the drawing, and secured to a shaft preferably mounted at one end of the car. The shaft is provided with a hand wheel and pawl-and-ratchet attachment. To draw the platform up (it is represented in the engraving about midway between its upper and lower positions), the hand wheel is turned to wind the rope upon the shaft, thus drawing up the platform and its leaves. When the platform is to be lowered, a handle on the pawl is moved so as to release the pawl from the ratchet, when the weight of the platform causes it to drop to its lower position. When the platform is lowered, side flaps hinged to it drop into the spaces between the doors and edges of the platform. The center of the platform is steadied and supported by a chain, as shown.

This invention has been patented by Mr. Louis H. White, of St. Augustine, Florida.

IMPROVED LETTER BOX.

This letter box is provided with a shifting receiving frame, arranged to deposit the mail in the main receptacle, and constructed so as to close the same when moved to position for receiving the mail. The top of the casing forms a semi-cylindrical dome, having an opening through which the mail matter is placed in the receptacle of the shifting frame, which is pivoted in the dome, and is so overweighted in front of the

**BUSH'S IMPROVED LETTER BOX.**

pivots that it will swing of its own accord to a closed, inverted position for dropping any mail it may contain into the main receptacle, as shown in the sectional view, Fig. 2. Secured to the front edges of the end plates of the shifting frame is a curved plate, provided with a knob, by means of which the frame may be turned so that its mouth will coincide with the opening in the dome, when mail matter may be deposited. When the frame is in this position, its lower back piece, together with a stationary curved plate held at its ends to the main frame, closes the main lower part

of the box, so that no mail already in the box can be extracted. Properly arranged flanges on the movable curved plate and across the upper edge of the dome opening, the side edges of which are covered by curved and grooved heads, prevent the entrance of rain and snow. In the lower part of the main frame is a box so hinged that it may be swung outward and downward, to facilitate the emptying of the mail matter directly into the mail collector's bag.

This letter box, the invention of Mr. A. V. B. Bush, of No. 2 Fulton St., New York city, is adapted to receive either large or small mail matter; and when

opened for the deposit of mail, the main part of the box is securely closed, and, as the shifting frame automatically closes itself, there is no danger of the box ever being left open.

IMPROVED WAGON STAKE.

The object of the invention here illustrated is to provide a wagon stake formed entirely of metal, and which will be stronger, cheaper, more durable, and easier replaced in case of breaking than any other style of stake. The tapering body of the stake consists of a flat web of iron surrounded by a flange thickened at two or more points along

the outer edge, and provided with holes for receiving the bolt or rivet by which an annular clevis is pivoted to the stake. At the bottom, the flange is widened and extended to form a foot, which rests upon the bolster of the wagon. Projecting from the bottom of the foot is a steady pin, and also a bolt provided with a nut for binding the stake to the bolster. A bolt or screw is also inserted in the bolster through a hole in the extended part of the foot. The stake may be made of cast or malleable iron, and the pin and bolt may be formed integrally with the stake, or may be secured by casting the metal around them, or by screwing them into threaded holes in the stake.

This invention has been patented by Messrs. J. H. Conover and D. S. Brink. Further particulars can be had by addressing the former at Springborough, Pa.

Adhere to One Business.

Concentration, says the *Manufacturers' Gazette*, is an important factor in the success of the manufacturer or merchant. The individual who attempts to do everything seldom succeeds in doing anything well. Life is not long enough to exhaust even one branch of science, art, or industry. When one needs anything out of his line of business, it is far better to make the purchase of an experienced and trustworthy neighbor than to undertake to learn another branch of business, with all its cost of experience. The concern which undertakes to make all the money, to get along without making any purchases of others, and to monopolize all the avenues for profit, generally gets left in the race for wealth. The most successful individuals and firms are those which have developed a promising specialty, leaving collateral matters to the attention of their neighbors in trade and industry. The possibilities of any one branch of manufacture grow upon investigation, and develop rapidly under fostering care. The man who gathers all the profits that are in one branch of legitimate industry can well afford to give his brother in trade a chance as well.

THE *Republican* wishes to say a word of disinterested praise for one of the best papers published in this country. We allude to the *SCIENTIFIC AMERICAN*, published by Munn & Co., New York city. For three dollars a year it furnishes a greater amount of solid reading than is to be found in any other journal on the globe. Its departments of science, mechanics, natural history, and pure literature are unrivaled. Its illustrations present models of excellence in the art of picture making. Every family in the land should take the *SCIENTIFIC AMERICAN*.—*Hendricks County Republican, Danville, Ind.*

THE fastest ocean passenger steamer afloat is believed to be the Cunard liner *Etruria*, plying between New York and Liverpool. On her westward voyage, October, 1885, she steamed 481 nautical, or 557 statute, miles in 24 hours, being at the rate of over 23 miles per hour.

IMPROVED TRANSOM LIFTER.

The transom is hinged to the door casing by the upper end of its frame, and carries, on one side, a bracket, in the outer forked end of which is held a grooved pulley, over which passes a curved arm formed on the upper end of a lifting rod sliding vertically in bearings and provided at its lower end with a handle.

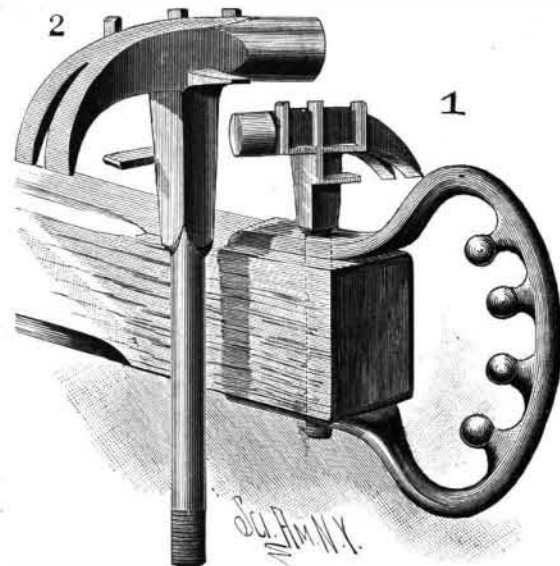
**WALKER'S IMPROVED TRANSOM LIFTER.**

When closed, the transom can be opened by moving the rod upward, when the curved arm will act on the pulley and its bracket and swing the transom open. The transom can be held in this position by screwing a set screw in the lower bearing against the rod. The set screw also serves to lock the transom in a closed position. The roller prevents jarring, and imparts an easy motion to the transom. The forked end, being attached by the bolt of the roller to the arm, can be swung downward, so as to engage the curved arm from the inner side, thus permitting the hinging of the transom at its lower instead of its upper edge.

This invention has been patented by Mr. Leander T. Walker, of South Pueblo, Colorado.

COMBINATION TOOL.

This simple and inexpensive device is adapted for use as a clevis fastening or for holding double trees or neck yokes to the tongues of vehicles. It may also be used as a hammer, wrench, and screw driver, thus facilitating the keeping of agricultural implements in running order. The tool is preferably made of cast steel or iron. Upon one side of the hammer head are wrench sockets (Fig. 1), adapted to receive nuts of different sizes, while from the other side projects a screw driver bit, as shown in Fig. 2. The shank or handle portion is made round, to allow it to be passed through the top and bottom end parts of a draught clevis, which is thereby held to the end of a plow stock, as represented in Fig. 1. The extremity of the shank is threaded to fit a threaded hole in the lower part of the clevis. As the sides of the wrench sockets project beyond the outer face of the head and

**OGLETREE'S COMBINATION TOOL.**

at the side of the shank, a good hold is obtained upon the nuts, and there is ample room left for the fingers to pass around the handle at the side next to the sockets.

It is evident that this tool, which is the invention of Mr. John W. Ogletree, of Powder Springs, Ga., while capable of good service in holding the clevis to the plow or other implement, is always conveniently at hand for instant use when required. When used for holding double trees or neck yokes to vehicle tongues, the screw threads on the shank may be dispensed with.