

this country, and consequently augment the demand for the needed steel and iron, there can be no manner of doubt.

#### SCOTCH STEEL AND AMERICAN BRIDGE CONTRACTORS.

Scotch mild steel makers have a lot of work to overtake before they come to a standstill. For example, Messrs. Colville & Sons, Motherwell, have an order for some 4000 tons of plates, angles, bars, &c., for the railway bridge work which Messrs. Arrol & Co., of Glasgow, have to execute for Australia, on account of the American contractors, and it is stated that the Steel Company of Scotland have also a quantity of steel to be made for the same bridge. One or two of the steel firms are, however, working from hand to mouth, the orders being so few. The price for steel ship plates is £6 5s per ton, but it is scarcely possible to get it. Best boiler plates are about £6 15s per ton.

#### A RAILWAY CAR MADE OF STEEL AND PAPER.

THE *Chatham Planet* describes at length a new railway car, the invention of a Canadian master car builder, Mr. T. L. Wilson. A truck has been designed and patent applied for. The car truck frame will be constructed entirely of rolled channel steel, jointed as in the car frame. Every part is uniform in size, and interchangeable, and no wood used in its construction whatsoever. All bolts used in the truck frame are of one length and diameter. It will be seen at once that only bolts of one size will be required to be kept at any stations for repairs, and in case of a breakage or collision the parts damaged can be supplied by the simple use of a wrench without removing the truck to a repair shop. The advantages to be derived over the old pattern are that there is a lighter, stronger, more durable and less expensive truck. We may state here that the car and truck in question have been adopted for use on the contemplated underground railway in New York. The same inventor, Mr. T. L. Wilson, not long ago invented and patented a SAFETY TRUCK LOCK, designed to prevent trains from leaving the track while in motion, through broken rails, open switches, or other causes. This invention is very simple in contrivance, and is attached to the main bolster of the truck and extending up and past the main bolster of the car, and can be placed on any car at a very small expense. It has been tested on every railroad in Canada, the trials being successful in every case and witnessed and certified to by all the chief officials. Trains, with the inventor and train-men on board, were run at the rate of 20 to 30 miles an hour into open switches and along tracks with rails displaced, without leaving the track or receiving injury, which would have been suicidal under other circumstances. A company with a subscribed capital of between \$200,000 and \$300,000, has been formed in New York to operate it in the United States. With fire-proof cars and the safety appliance the recent disaster on the C. P. R., by which the first through train from the west was burned by bush fires, would have been avoided. That was caused by the rails spreading from the intense heat. Equipped in the way we mention the train would have been kept on the track until the danger was passed and the cars would not have caught fire. In all probability, in fact we have reason to believe, that large works will be established in some town or city of Canada, and the United States, for the construction of cars on this principle. As there is but little doubt that they will intine be generally adopted, a large and thriving industry will result, second not even to that established by Pullman, of Pullman car fame.

#### BESSEMER STEEL IN THE UNITED STATES.

(Chicago Railway Review.)

THE American Iron and Steel Association, which is the most excellent authority, officially announces that "this country will make more Bessemer steel, more Bessemer steel rails and more open hearth steel in 1886 than in any previous year," and further, "that this country will make more pig iron in 1886 than in any previous year in our history." These statements are

based upon the statistics for the first half year, and upon the orders placed for the future, together with requirements known to be in the market. It appears that never before have we made so large a quantity of Bessemer steel in six months as during the first half of this year, and the half year's production of Bessemer steel rails has only once been exceeded—in 1882. It is true, moreover, that never before has our country produced so much pig iron, in the same time, as during the first six months of 1886, and that, prior to 1879, no whole year's total of pig iron production reaches the aggregate of the first half of this year.

These facts are most significant. The iron and steel trade has long been closely watched, as a barometer of general commercial conditions. With this enormous interest active, we are taught by past experience, that the whole commercial fabric of our nation must be also active. No better sign of the times has been wanted than that which tells us that iron and steel interests are busy. We can let this sign tell its story now, with the supporting facts that the clearing house returns are continuing to indicate increased volumes of business as compared with last year; that railroad earnings continue to grow larger, and that from nearly all sources come reports of a most decidedly better feeling in trade circles. We are evidently entering upon a period of *bona fide* renewal of "good times." If we can conservatively enjoy these bettered trade conditions and avoid the danger of the hazardous, but seductive, "booming" spirit we will all be enabled to roll up comfortable balances by the close of 1887.

#### THE BESSEMER COMBINATION.

(American Manufacturer.)

A YEAR ago the 12th of last month the Bessemer steel rail manufacturers of the United States entered into a combination, having as its object the regulation of the output of rails, to the end that there might be a stop put to overproduction and the consequent ruinous competition and prices. This combination was entered upon with a great deal of doubt as to its ultimate outcome. While there was a nominal agreement, it was well understood by those present that the assent of certain mills was a conditional one, and if the state of the market and of demand justified them, they would not feel themselves bound.

The result of the combination, however, has been far more beneficial to the rail manufacturers than even the most sanguine dared hope. A maximum of production for 1885-6 was fixed, but so great has been the demand that this, by authority of the Executive Committee, was extended again and again, until it reached nearly double the original figure. Prices of rails, notwithstanding this increase in the limit of production, have steadily advanced. A year ago they were quoting at \$26.50 to \$27; to-day at \$34 to \$35 at the works. The result of the combination has been so beneficial to the steel rail manufacturers that at their meeting held at Long Branch recently, at which every rail-making company in the country was represented, it was agreed to continue the association for another year, the allotment for the next year being, it is understood, a million tons to start with, but with power in the Executive Committee to increase this if deemed wise.

The outcome of this combination of American steel rail manufacturers is in marked contrast to that of the European combination. That has gone to pieces, and rails have reached a price lower than ever known before. Whereas, under the conservative action of the American combination, prices have been advanced, and not only has the rail business been profitable, but all kinds of iron and steel products have been toned up by the success of the steel rail men in maintaining prices. It is, of course, understood that the organization that met at Long Branch does not attempt directly to fix prices. Each company makes its own price, but the agreement to restrict production, and a faithful adherence to the same enables manufacturers to get fair prices, and justifies each in the belief that his prices will not be cut by his fellows.