

establishment of relations between the employer and employed.

And, in conclusion, we earnestly call upon our mechanics individually to exercise their own good sense in the present emergency, and to avoid evil counsels.

When trades' unions, as in the case of the iron molders, go so far as to attempt to regulate the number of apprentices a shop shall contain, to prevent whom they please from earning his daily bread, to fine men for trying to get work save through their agents, and to deliberately resolve that owners of works shall not "presume" to control their own business, we think it high time for employers to join in combination and refuse all society men admittance to their shops. Such associations are productive of no benefit to the working man, and if he individually cannot resist their power, it is the duty of the employer to afford him every protection against them.

POSTAL REFORM.

As a means of disseminating useful information through the medium of cheap literature to the masses, as an aid in promoting social intercourse, as a facilitation of business enterprise, as a help to self education through increased letter writing, and as affording fuller and freer interchange of ideas, our postal system is of the utmost national importance; and the acquisition of such reforms as will insure its greatest efficiency at the lowest possible cost is a subject interesting to every individual able to read and write. The success attending the use of postal cards in England affords evidence of the favor with which any step in the direction of cheap postage is popularly regarded; and the large increase of matter passing through the mails of that country since the introduction of the system proves that the people gladly welcome any project tending to decrease the expense of intercommunication.

There is no question but that at the present time a necessity exists for still further modification of our postal laws, in accordance with the growth of the nation in territory, population and commercial prosperity. The day when every letter was accompanied on its journey by a regular bill of lading which had to be checked at each post office through which it travelled is past: but the labor of transportation, assortment, and delivery, although materially simplified, is not reduced to the lowest possible expenditure, nor has the service in general that completeness and uniformity of organization adequate to the proper fulfilment of the work it is called upon to perform.

Transportation, cost of stamps, salaries of employees and rent of buildings are the elements which make up the sum total of our postal expenses. So far as the transportation of letters themselves is concerned, their actual weight is of but little moment. It is rarely that an ordinary communication weighs half an ounce, the legal rate, so that double or even quadruple the number of letters might be carried without producing any material difference in the expense arising from the mere heaviness of the mails. But there is other and far bulkier material than prepaid letters to be forwarded. The free exchange of periodicals and the abuse of the franking privilege necessitates the transmission of a vast quantity of matter which, from its nature, constitutes the bulk of the mails, and on which no tax is levied. As a result, letter postage is placed at a figure sufficiently great to meet the deficit thus incurred, so that, virtually, the people at large have to pay for the tons of Congressional documents and transient publications which are yearly sent on private business between private parties. Taking all this dead-head matter into consideration, in connection with the cost of its transportation over the great distances separating points on our territory, it is plainly evident that, so long as the present state of affairs exists, postage as cheap as that of Great Britain will be an impossibility; nor can any reduction of the sum at present paid for letter postage be effected until a uniform rate be established, taxable on every particle of matter forwarded and based upon weight, or on weight and distance sent, combined.

In the city of New York, it costs as much to send a letter across the river to Brooklyn as to San Francisco, and yet it can hardly be urged that the expense is as great to transmit that letter to one city as to the other.

For other matter than letters, an equalization of charges is even a greater necessity. We see no reason why the publisher of a weekly journal should, in case he desires to forward fifty-two copies of his journal at one time to a non-subscriber, be compelled to pay one dollar and four cents postage; while if, to a subscriber, one number of the paper be sent weekly for fifty-two weeks, the charge for the entire year is but twenty cents. In both instances the number of copies sent is precisely the same; why then should wholesale rates be paid in one case and not in the other? What is needed is a fixed uniform rate of newspaper postage, sufficiently low to make it no great burden if imposed on exchanges or on publishers who forward large quantities of matter, and which, if collected on every periodical or package passing through the mails, would yield an income sufficient to counterbalance the reduction of letter postage to one cent per half ounce. The franking privilege is simply a crying evil, and we trust that the day of its total abolition is not far distant.

The new postal rates, which have lately come into effect, are more valuable on account of their opening the way toward future and greater reductions than for the saving of postage in which they may at present result. Postal cards, for correspondence or for printed circulars, similar to those already in use in England and other European countries, have been authorized. The card will bear a one cent stamp and will be imprinted with lines for the address. The back will be ruled for the letter. The price for both card and stamp will be one cent. As the plates for printing are not yet prepared, it will probably be three or four weeks before

the cards will be ready for issue. The charges on circulars are reduced from two cents to one cent for every two ounces or fraction thereof. Transient newspapers, pamphlets, magazines, etc., are also to pay one cent for every two ounces or fraction, instead of two cents for every four ounces or less as under the old law. On books, the postage is two cents for every two ounces or fraction, the weight being limited to four pounds; and on samples of merchandise, etc., the rates are the same as for books, with the limitation of weight to twelve ounces.

The cost of labor in our post office system can only be lessened by a thorough remodeling of the various departments, and by doing away with much unnecessary and useless work which tends but to make their interior machinery complicated and unwieldy. There is very little value in the stamp of date and locality usually imprinted on the exterior of the envelope. It is almost invariably illegible and might easily be dispensed with on ordinary letters; though if its use were required by the sender, means should be provided and a charge made for affixing it carefully and properly. A contemporary suggests that stamped envelopes should be more generally employed for drop letters; and by this mode, the time and labor of obliterating the postage stamp would be saved, as the mere writing of the address on the exterior would be a sufficient cancellation.

A thousand million letters yearly pass through our mails, and yet the statistics of the Post Office Department show that the country suffers a deficiency, and that, instead of being a means of revenue, our postal arrangements are a source of expense. This, by proper organization, judicious retrenchment, and a uniform low rate of postage honestly enforced, can be eventually remedied; and although the various innovations and improvements will doubtless in the beginning prove expensive, still in the end we believe they will become self supporting by the postal increase they will produce.

THE TARIFF AND TAX REDUCTIONS.

The bill providing for a reduction of fifty-three million dollars yearly of government revenue from taxes and tariffs has at length passed both houses of Congress. The substance of the act is as follows: The present duties on cotton goods, wools, metals, glassware, paper (except sized printing paper, which is made twenty five per cent *ad valorem*), leather and books are reduced ten per cent. The addition of ten per cent *ad valorem* on indirect shipments of East India products is revived. Hides are placed on the free list, and important reductions are made in the duties on salt and coal. Inventors will be interested in Section 6, which provides that, for a term of two years from and after the passage of the act and no longer, machinery and apparatus designed for or adapted to steam towage on canals and not now manufactured in the United States may be imported by any State or by any person authorized by the Legislature of any State, free of duty, subject to such regulations as may be prescribed by the Secretary of the Treasury. The free importation of steam plows is also permitted for the same period of time and under the same restrictions. Shipbuilding material for use in vessels engaged in foreign trade is exempt from duty, but vessels receiving the benefit of this provision cannot engage in the coastwise trade for more than two months in a year without the payment of the usual tariff. Salt to be used for curing fish is also made free. Extensive alterations are made in the mode of collecting revenue from distilleries, and voluminous instructions are given for the conduct of their business. The tax on distilled liquors is consolidated, but no actual reduction is made. On tobacco, the tax is equalized at twenty cents per pound, instead of sixteen and thirty two cents a formerly. The standard of vinegar, according to which import duties are to be collected, is fixed at a strength which requires thirty-five grains of bicarbonate of potash to neutralize one ounce troy of vinegar. The tax on gas made from coal, wholly or in part, or from any other material, is repealed.

The stamps on legal papers, stock sales, foreign bills of exchange, merchant notes, etc., are abolished after October 1st. The stamp duty on friction matches is retained, and also the two cent stamp on checks, drafts and orders for money. Informers' moieties are rescinded, and an appropriation of one hundred thousand dollars made to cover the expenses of bringing to punishment persons violating the revenue laws. The internal taxes against shipbuilders for sales of vessels are remitted.

Before the 1st of January, 1873, the President is directed to reduce the revenue districts to eighty in number. One collector and one assessor in each district are all the officials hereafter to be appointed by the President, and their appointees are to be reduced to the lowest possible number. This provision necessitates the removal of about two hundred and eighty office holders, and is the most important, in an economical point of view, in the entire act.

With the exception of tea and coffee, which were made free from July 1st, under a previous act, and the revised whiskey and tobacco taxes, which take effect from the same date, the alterations and reductions provided for by the bill go into operation on the 1st of August next.

RAPID TRANSIT IN NEW YORK.

At the recent session of the New York State Legislature several projects for securing rapid transit in this city were passed, but only two of them have been approved by the Governor. Of these, the most prominent is the charter granted to the millionaire Vanderbilt, giving him authority to construct an underground steam railway, in connection with the existing Harlem railway, commencing on Fourth avenue at 59th street, and extending southwardly, through Fourth avenue, the Bowery, Bayard, Park, and Center streets

into the City Hall Park, at a point near Broadway between the City Hall and the Post Office. The expenses of construction will be very heavy, but it is stated that it will be soon commenced and rapidly built. We hope that this statement will prove to be correct, for the citizens of New York are subjected to great inconvenience for lack of the means of rapid transit, while the owners of property are compelled to lose the benefits of the increased valuations which would be theirs were the city limits rendered more accessible and more fully inhabited. The privileges granted to Vanderbilt are in some respects remarkable. It would naturally be supposed that both the Legislature and the Governor would take care, as far as possible, in the wording of the grant, to protect the inhabitants of the city from all unnecessary nuisances, either in the construction or the operation of the road. As the latter is to be laid underground, beneath some of our best streets, and is to be operated by steam locomotives, it might have been expected that the company would be compelled to provide for the necessary ventilation, by side shafts and chimneys built on their own property so as not to incumber or impair the public streets. But no such provision was exacted. On the contrary, the bill gives the company permission to make openings for ventilation in the middle of the streets, the holes to be six feet in diameter, twenty feet apart, each surrounded by an iron railing. The two splendid and important thoroughfares under which the road runs are therefore to be occupied and disfigured by the railway corporation, while the air of both avenues is to be contaminated by the foul gases from the locomotives.

The project for the Broadway Underground Railway, known as the Beach Pneumatic Transit plan, which is admitted to have the best route and to be the most carefully prepared and most popular of any of the railway schemes ever presented to our citizens, passed both branches of the Legislature by large majorities, but failed to receive the Governor's approval. One of his principal adverse reasons was that a city engineer had officially reported to him as his opinion that the sewerage of Broadway would be interfered with, and that the work was impracticable; but many of our eminent engineers and architects had testified to him that the work was entirely practicable. The action of the Governor shows how deficient in practical information some of our prominent public men are, and how little they appreciate the public wants. Broadway is the backbone of Manhattan island. From it, the land slopes gently off to the rivers on each side. It is the grand thoroughfare of the city, the special objective or central line of business and travel, and the construction of a first class fast railway under its surface is urgently demanded for the public convenience. It is generally conceded that the existence of such a railway under Broadway would greatly increase the traffic of the street and augment property values. The Beach Transit bill provided for the construction of ventilated tunnels, built on the most approved plans. The bill lacked one vote of a passage over the Governor's veto in the Senate, and will probably become a law at the next session. The company has spent a large amount of money in the perfecting of their plans and in the demonstration of their practicability. They have put a short section of their underground railway in operation under Broadway, between Warren and Murray streets, heretofore fully described by us. The route is from the extreme southern end of the city at the Battery, up Broadway to and under the Harlem river, with sundry branches.

In this connection, it may be stated that the expenses of constructing an underground railway through the heart of a city are necessarily very heavy, and in order to secure the success of such an enterprise the route adopted should be the one best calculated to accommodate the public and yield the largest local traffic. In New York, the Broadway route stands pre-eminent in these respects. Mr. John Fowler, Engineer-in-Chief of the London underground railways, testifying recently on the general subject of underground city roads before a Parliamentary committee, said that "the stations must be on the thoroughfare, and visible to the public." In other words, a city road must be located with special reference to the convenience of the people, or it will not be properly patronized.

The other rapid transit bill approved by the Governor is known as the Swain three-tier road. It provides for the construction of an underground railway, a surface railway, and an elevated railway, all on the same line. The route authorized is upon the west side of the city, commencing at or near the Bowling Green and running northwardly to and over Harlem river. The company is compelled for the most part of its route to buy its way through private property, and this cost, added to the expense of building the works, will, it is believed by many, be so great as to hinder the construction. But we hope not. In so large and prosperous a city as New York, there is room and need for several lines of rapid transit railways, and all of them would doubtless be well supported.

A MACHINE THAT TALKS.

There has lately been on exhibition, in one of the theatres in this city, an ingenious machine which counterfeits, with remarkable fidelity, the sounds of the human voice. It was invented some thirty years ago by Professor Faber, of Vienna, and was, as we learn, exhibited shortly afterwards in this country. Recently, however, the apparatus has been so much altered and improved by a son of the inventor that at present it bears but little resemblance to the original, and may, for all practical purposes, be considered an entirely different machine.

Although the mechanism is constructed to imitate as closely as possible the simple working of the human vocal apparatus, yet it is so intricate in detail that an attempt to describe accurately the functions of its many tubes, levers,