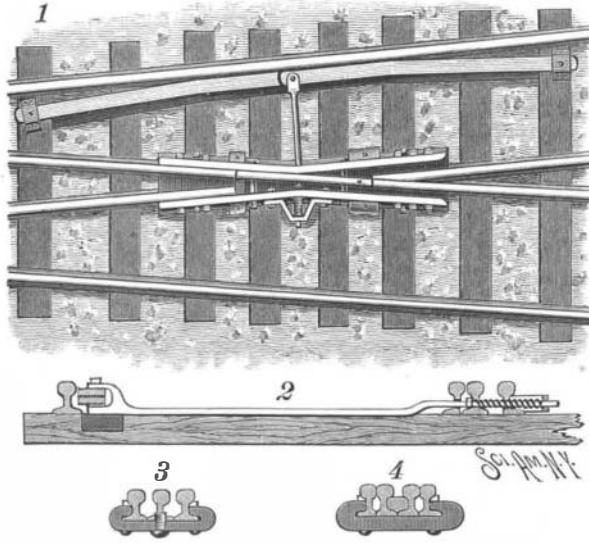


AN IMPROVED SWING RAIL RAILROAD FROG.

The frog shown in the illustration is designed to dispense with the use of a base plate, but permits of the passage of locomotive and cars in either direction of travel from a side track to an intersected main track, automatically returning the swing rail of the frog to alignment with near rails of the main track after the cars have passed from one intersecting track to the other. The improvement has been patented by Mr. David Horrie, of Kakauna, Wis. Fig. 1 shows the improvement at the intersection of a side track with the

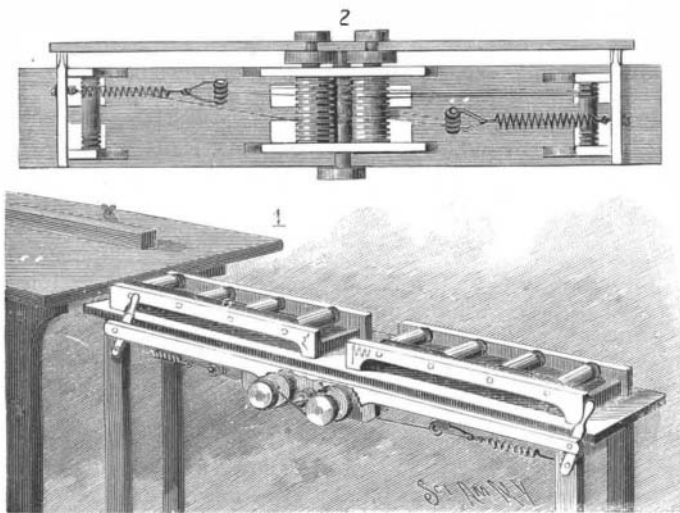


HORRIE'S RAILROAD FROG.

main track, the latter being continuous, Fig. 2 being a transverse sectional view on the line of the frog, and Figs. 3 and 4 being other cross sections. The frog consists of two inwardly bent carrier rails, with two plates clipped on their base flanges, and a swing rail pivoted near one end on one plate and slidable on the other plate. There are two transverse guide bolts fast in the carrier rails and loose in the swing rail, and a device to vibrate the latter, comprising tripping bars and a shifting rod, there being a bracket frame on one carrier rail and a spiral spring pressing the frame and spring rail. For further particulars relative to this improvement address the Northwestern Horrie Patent Frog Co., Antigo, Wis.

AN IMPROVED MECHANICAL CARRIER.

The mechanism shown in the illustration is designed to be of very simple and compact construction, and especially adapted for use in sawmills, or where boards or similar material may be thrown upon the rolls for transportation. The improvement has been patented by Mr. Charles P. Hogue, of Portland, Oregon. Fig. 1 shows the carrier in perspective, and Fig. 2 is a bottom plan view. On the bed, in suitable supporting frames, are transversely journaled rolls, whose upper surfaces project slightly above the tops of the frames, the rolls being grooved to receive a driving belt which connects with them all. On opposite sides are tension rolls or pulleys journaled in forks carried by springs, which serve to keep the belt taut. The rolls are all directly driven and turned in the same direction, and their direction may be instantly changed by moving a shift rail. The belt grooves are so arranged in the rolls that the rolls may be conveniently cased in and protected, and the driving drums connected with the rolls



HOGUE'S CARRIER.

may be used alternately as drivers and idlers, a single belt connecting the drums and every roll.

American Search Lights in the East.

An officer of the Japanese navy has written a letter to a friend in this country, in which he speaks highly of the efficiency of several American electric search lights used in the fleet to which he is attached. These lights stood the test of actual service better than the English and German apparatus, which will be doubtless condemned by a board of survey. He also states that the best maps of the Yellow Sea and Corea

are from the United States Hydrographic Office in Washington. These maps and charts are compiled with the latest data, and the principal roads in Corea are clearly indicated.

Voting by Machinery.

The new amended Constitution of New York State makes it possible, says the New York Sun, to dispense with the ballot system of voting altogether and to substitute in its stead mechanical devices for recording the vote, if the Legislature shall so direct.

The amendment permitting the use of voting machines was inserted by the Constitutional Convention, which had in mind the successful trial of such a voting machine at several town and village elections in the western part of the State.

Mr. Jacob H. Myers is the inventor of this new device for registering votes, and has been trying for many years to get it used at elections. As the Constitution stood in the way, requiring as it did that elections be by ballot, it was found necessary to amend the fundamental law of the State before the machine could be used at all elections. This has now been done, and a description of Mr. Myers' mechanical device, which will become a part of the voting system of the State if the Legislature shall so direct, may be of interest to the voting citizens who may be called upon to use it.

To all outward appearance the machine is nothing more than a sheet iron box five feet square and seven feet high. It has two doors in the front, one for the entrance of the voter and the other for his exit after he has registered a freeman's will. On entering the box the voter finds himself fully inclosed from prying eyes, for there is a roof over the booth, which is lighted from within. At the back of the booth the voter sees several rows of knobs in parallel perpendicular rows occupying almost the entire back wall. Each of these rows is reserved to the candidates of a particular party who are to be voted for. The party designation will be found at the top of each row of knobs, and opposite each knob will be found the name of the candidate to be voted for. If the voter cannot read, he can recognize his party candidates by the distinctive color of the paper on which the names are printed. Provision is made for the strict party man who wants to vote the straight ticket, which is the easiest thing to do in the Myers voting machine, as it is by any mode of voting yet devised. By pulling a lever at the top of a column of knobs one vote is cast for every candidate of the party. At the same time all the other levers and the knobs are locked, and if the voter should remain in the box all day he couldn't cast another vote.

The machine would be the delight of the Mugwump. He could pick out individual candidates nominated by all parties and split his ticket to his heart's content. In voting for individual candidates the pressing in of the knob opposite the name of the candidate (for mayor, for instance) would lock the knobs of every other candidate for mayor, so that there would be no danger of anybody's voting twice for mayor.

When the voter leaves the booth by the "exit" door all of the levers and knobs are released by the action of the door, and the booth is ready for another voter. There has been some talk to the effect that the voter might be confused by a multiplicity of candidates, but the provision of the Constitution separating State and national elections from those for municipal officers has disposed of that adverse argument.

Outside the booth the voter will find a chart representing the position of the knobs and their relation to the candidates, which will assist him very materially in recording his desires when he gets inside. Similar charts can be used by the political poll workers in instructing their friends. Only a blind man would be incapable of voting with the machine, but he might have assistance, the law so providing.

In an actual village election, where it is true there were only a few candidates in the field, more than one thousand votes have been registered by a single machine, and the inventor claims for it a capacity which would permit of greatly reducing the number of election districts in this city, were it used here, thus greatly lessening the expense of elections.

So much for the voter's part. The machine does the rest. Back of those long rows of levers and knobs is a shallow box fitted into the back of the booth, which contains the counting machinery, which is worked when the levers are pulled or the knobs pushed by the voters. This automatic counting arrangement is similar to that of the automatic cash registers; or a better comparison, perhaps, would be the counting machines which register the number of newspapers run off by a printing press, or the fare registers on a street car.

This counting machinery is protected by a door which cannot be opened except by the inspectors of

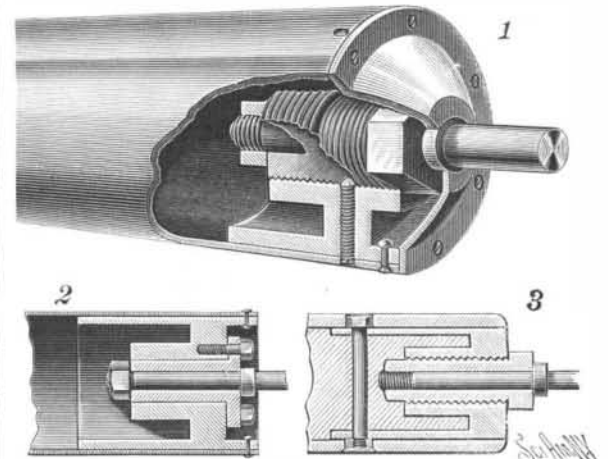
election after the voting is done, and then the canvass of the vote is practically completed. The exact vote cast for every candidate will be indicated by the machines. Should the tally of voters who entered the booth kept by the election inspectors and poll clerks not agree with the machine, the conclusion would be that fallible man was mistaken, and that the machine's record was accurate.

Inventor Myers says that two votes a minute can be cast by the use of his machine. Provision is made for independent candidates for single offices, who have been properly nominated, and each will have his separate knob. Not to deprive the discontented voter of his right to vote for whom he pleases, whether nominated or not, provision will be made for the reception of such ballots and their deposit in a box outside of the booth.

As to the cost of the machines, they are estimated to be worth \$250 apiece. This city would certainly need 1,000, if not more. On the other hand, the saving through their use would be more than \$100,000 a year, as indicated by the estimate of the Bureau of Elections of the cost of elections under the present system. In the first place, ballot and poll clerks might be done away with. They are to be paid \$57,600 this year. A doorkeeper for each machine might be required in their place, however. The printing of the ballots this year cost \$40,000, and there was \$5,000 expended in fitting up polling places, which would not be needed with the machines. Added to this would be the saving consequent on a very considerable diminution in the number of polling places, which it is believed would be rendered possible by the introduction of the voting machine.

AN IMPROVED JOURNAL HEAD FOR ROLLS.

This is an improvement in rolls, cylinders, etc., primarily designed to facilitate paper making, providing therefor a journal head of simple and durable construction, easily applied, and permitting of convenient



MCCORKINDALE'S JOURNAL HEAD FOR ROLLS.

ly removing and replacing the spindle in case of wear or breakage, without removing the roll from the machine. The improvement has been patented by Mr. Duncan L. McCorkindale, of Childs, Md. Fig. 1 shows the application of the improvement, with the cylinder partly broken away to show its interior supports, Figs. 2 and 3 being modified forms of journal head bearings. As shown in Fig. 1, a head riveted inside the cylinder end has a hub with an interior screw thread in which screws a bushing with polygonal head, the journal spindle being carried by the bushing. The rear end of the journal spindle is screw-threaded, and receives a nut to fasten the spindle in place in the bushing. The spindle is fastened in place in the hub of the head by a set screw. It will be seen that with either form of the improvement the journal head may be readily applied or removed without removing the roll from the machine.

Extensive Trolley System.

A franchise for the construction of an electric railroad in the town of Milton and the village of Ballston Spa, N. Y., has been awarded to the Boston Electrical Construction Company. Work will be begun at once, so that the road will be in running order August 1, 1895. If the ideas of the company are finally carried out, there will be a belt line running from Ballston Spa to Rock City Falls, thence to Jamesville, easterly to Greenfield Center and Saratoga Springs, and thence south to Ballston Spa.

The road will be of the standard gauge and will run ordinary freight cars direct from the large paper mills at Rock City Falls to New York City without breaking bulk. It will also have passenger equipments. The new road, its projectors claim, will be the beginning of a system of electric roads connecting Troy, Albany, Schenectady, Amsterdam, Broadalbin, Johnstown, Gloversville, Rock City Falls, Saratoga, Ballston, Mechanicsville, and possibly other cities or villages.