

New Inventions.

Artificial Legs.

A patent has recently been secured in Great Britain for an improvement in this humane invention. It consists in the employment of elastic cords connecting the thigh with the foot, to imitate the action of the natural muscles, for the purpose of controlling the movements of the several parts of the limb. In cases of amputation above the knee, a sack is applied to the socket of the thigh, which sack is of proper form to fit the stump of the natural limb, and suspended at its mouth from the edge of the socket of the artificial one, for the purpose of assisting to support the patient, and relieving the stump from the unpleasant, and often painful and injurious, pressure that is produced upon it by the ordinary method of supporting it, by forcing it into a tapered socket. O. D. Wilcox, M.D., of Easton, Pa., is the inventor.

This improvement was secured by patent through the Scientific American Agency.

Watchmaking.

The Hon. N. P. Banks, in his address at the Crystal Palace, a few weeks ago, alluded to the manufacture of watches in this country, and stated that a watch could be made in three hours equal to any imported from London or Paris. This is an astonishing fact, but not quite so surprising as that we have excelled every country in making clocks, both as regards cheapness and regularity, and are as yet almost unable to make good and cheap watches.

We have now made a start, and a good one, and we have no doubt that we shall soon stand at the top of horological countries. In the year 1825 we imported watches to the amount of \$320,498, and in 1855, to the amount of \$3,651,187, which shows a tremendous annual increase of money sent away, that might have been used at home. There is no doubt that as regards cheapness we can beat the world; for our American clock can be bought in England for one dollar, while the cheapest Swiss or Dutch clock costs one dollar and a half. Yet in Holland and Switzerland labor is about half the price it is here. Now it is evident that if we apply the same principles of manufacture to watches that we have done to clocks, we must succeed equally as well. Yankees have demonstrated their capabilities in this branch of art in days long gone by. During the war of 1812, many were made in Worcester county, Mass., and some of them are still extant, and Messrs. Appleton, Tracy & Co. of Waltham, Mass., have just established a watch factory where the separate parts are all accurately stamped out by machinery and fitted by hands. The jewels are bored by hand, and the corresponding pivots fitted to them by females. All the watches are made alike, so that they can be easily repaired, and any part of one size will exactly fit any other watch of the same size, so that they can easily be repaired and refitted. The simplest kind of lever watch without the fusee is the form adopted, and they can turn out about ten thousand per annum. We hope they may have occasion to test their productive powers, and thus gain for themselves the honor of being the pioneers of American machine-made watches.

We are indebted to the *Waltham Sentinel* for the majority of facts stated in this article.

Improved Snow Plow.

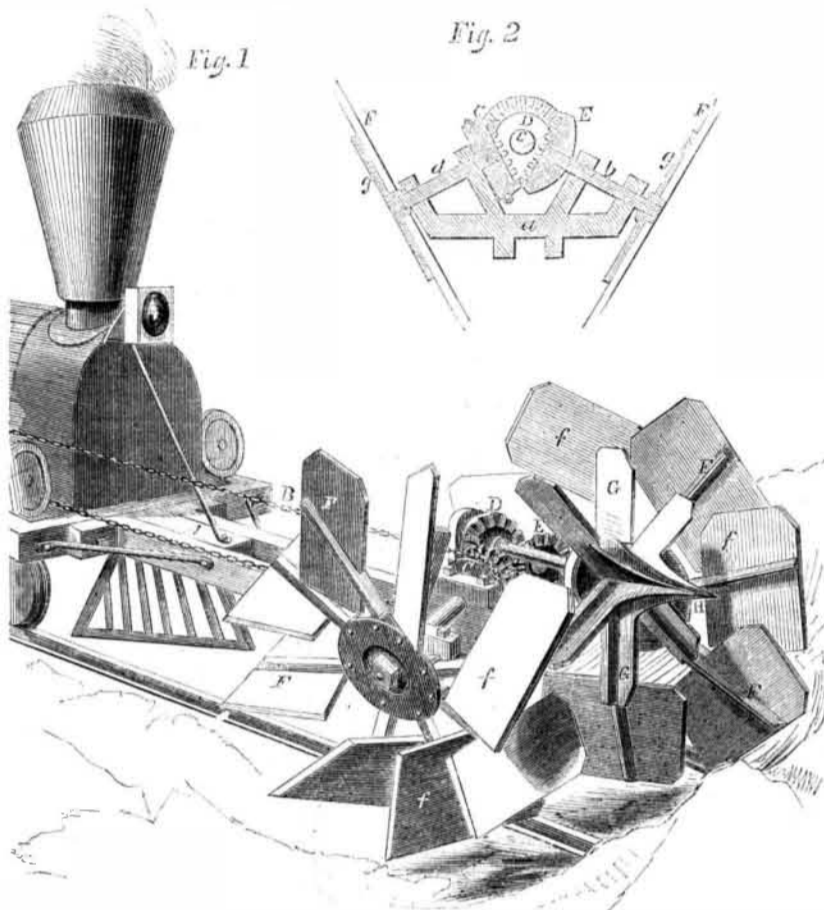
One of the most serious inconveniences of railway traveling incidental to our northern climate in the winter season, is the frequent interruption of business occasioned by heavy falls of snow. Sometimes, for the space of a whole week, the traffic on certain roads has been suspended from this cause. It is therefore not surprising that ingenuity should be directed in devising some apparatus for a speedy clearing of the track, so as to enable the traffic to go on uninterruptedly.

Our engraving represents a machine for the

purpose of removing snow from railroad tracks and roads, and it is also applicable to other purposes, such as removing earth ditching, &c. A snow plow constructed on this plan has been tried on various railways, and found to operate successfully. It may be used with horses on turnpike and other roads, and will answer for ditching in sandy soils.

Fig 1 is a perspective view of the machine, placed in front of the locomotive, supported by the bars, A. B is a chain, by which motion is given to the flyers from the engine by passing over the obliquely placed wheel, C, which in its turn rotates the wheels, D and E. On the axles of these three wheels are placed the radial arms, F; those attached to C and

URMY'S SNOW PLOW.

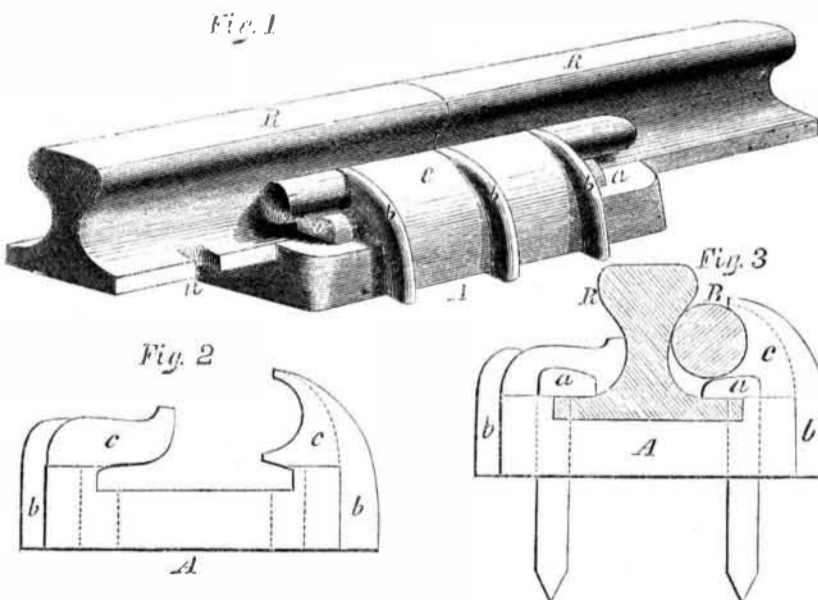


E have fans, *f*, on their ends placed obliquely to them, so as to throw away the snow up the bank during the motion of the machine. The flyers, *G*, on *D*, are at right angles with the arms, and have a point in the center, *H*, which bores the way through the snow while the flyers, *G*, throw it into *f*. The arrangement of *C* and *D* will be better understood by reference to Fig. 2, which is a section through

them. *a* is the frame supporting the wheels, *C*, *D* and *E*, which have shafts, *b* *c* and *d*, attached to them; on these shafts are fitted the frames, *g*, and they hold the arms, *F*, carrying the fans, *f*.

This machine is the invention of Jesse Urmey, of Wilmington, Del., from whom further particulars may be obtained. It was patented Nov. 10, 1857.

IMPROVED RAILROAD CHAIR.



This improvement is on that kind of chair called a key chair, in which a wooden pin is driven in by the side of the rails to tighten them in their places, and deaden the sound. It has been tried on the New York Central Railroad, and has given every satisfaction. The improvement consists in placing the spike holes nearly or directly under the key when it is in its place, so that when the spikes and keys are in their places the heads of the spikes will be in contact with the key, which prevents them from jarring out, and they, in their turn, prevent the key from shaking out also.

Fig. 1 is a perspective view of the chair and

rails, Fig. 2 is an end view of the chair by itself, and Fig. 3 an end view of the chair and rail. Similar letters refer to the same parts in each.

A is the chair, placed at the junction of the two rails, *R*. *B* is the key, and *a a* the spikes. The sides or lips of the chair, *c c*, are made of proper shape to grasp the rail by its flanges at the bottom, and one or both of them is made with a recess on the inside to receive *B*. The lips, *c c*, are made of requisite thickness to give strength, and have ribs or beads, *b b b*, on them, to increase their stiffness and strength. The ends of the rails, *a* as is usual,

have notches cut in their lower flanges at a proper distance from the end, for the spikes to catch into. One of them is represented at *n*, Fig. 1. These holes are so placed that the spikes pass through them, and the heads of the spikes are hooked as represented, and stand under the key, and in contact with it; the key, therefore, prevents the spikes working up and down.

This complete railroad chair is the invention of John S. Robinson, Levi Herendeen and George Sheldon, of Canandaigua, N. Y., and was patented by them October 27th, 1857.

Further information may be obtained by addressing Robinson & Herendeen, as above.

A Few Words about Ourselves.

"When some one comes, with accents smooth and oily,
And tells you that a friend you valued highly
Has fallen into grievous paths of error,
Or done a deed which makes you quail with terror—
Unless you know there's truth in what he's saying,
'Twere best to think that some one has been playing
On his credulity; it may relieve him
To tell the tale to you—but don't believe him."

We have no desire to encumber our columns with matters strictly personal to ourselves, but we feel justified in presenting the accompanying extracts from correspondence addressed to us, especially as it is well known that inefficient Patent Agents are never slow to start rumors prejudicial to our reputation. This fact is fully developed by Mr. Turner, of Aztalan, Wis., whose letter is appended, and has all the ear-marks of a system which has been steadily pursued for some years—not, however, to our injury, among those who know us best; and if we considered it necessary to do so, we could publish a list of such references—beginning from the highest official authority in the United States down—such as would shame those who seek, in a covert manner, to injure us.

Messrs. Munn & Co.—I am in receipt of my Letters Patent from the Patent Office, executed to my entire satisfaction. I was not expecting them so soon, especially on account of the disarrangement in the Patent Office occasioned by the resignation of Mr. Mason, the former Commissioner, and the appointment of his successor. I can account for the speedy termination of the business at Washington only from the prompt and energetic manner in which, I am convinced, you are wont to act for your clients as Patent Attorneys—the makes of some notwithstanding—as I was repeatedly cautioned, before I went to New York, to keep clear of your firm; but after my arrival in your city, I thought it would do no harm to have a look at some of you, as, by so doing, I might be able to judge for myself in regard to your intentions towards your clients, whether honest or dishonest. The result is, I was satisfied with the integrity of your intentions; and by leaving my business wholly in your hands, I am satisfied I have attained what I sought (through your influence) sooner than by any other channel that had been suggested to me; and should I again have business of like nature to transact, I would be sure to call at No. 128 Fulton st., New York City. Respectfully yours, D. E. TURNER.

Aztalan, Wis., October, 1857.

Messrs. Munn & Co.—From your kind notice of my nail machine, it has impressed me with a desire to express to you my sincere thanks for so doing, and for the despatch and business-like manner in which you secured the patent for it, and another one of a similar kind. Hoping in some future day I may have another opportunity of intrusting to you the charge of making other applications for patents, I remain Very respectfully yours, JOHN WOOTTON.

Boonton, N. J., November, 1857.

*** We have received the gratifying intelligence that our patent has been obtained. Accept our thanks for conducting the case with so much ability and promptness—characteristics which, we are pleased to testify, you have always shown in all our business transactions with you. Very truly yours, RACE & MATHEWS.

Seneca Falls, N. Y., November 30, 1857.

The annexed letter is from the late Commissioner of Patents:—

Messrs. Munn & Co.—I take pleasure in stating that while I held the office of Commissioner of Patents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE came through your hands. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the Office, a marked degree of promptness, skill, and fidelity to the interests of your employers. Yours, very truly, CHAS. MASON.

We could fill our columns with extracts similar in spirit to the above, but we do not deem it necessary. The fact that the Scientific American Patent Agency is continually gaining the public confidence is, of itself, sufficient to stir up professional enmity among a class of irresponsible men, who have everything to gain and nothing to lose.

Sixteen patents have been issued to our clients, whose claims are published in this weeks' list, making fifty-nine within the past four weeks!

Valuable Discovery.

About three miles from Clear Lake, Napa county, California, and near the borax lakes, is a sulphur bank, from twenty to thirty acres in extent, and supposed to be thirty feet thick sufficiently pure for the use of the mint at San Francisco. The sulphur seems to be constantly forming from a dam, steam rising over the whole surface continually.