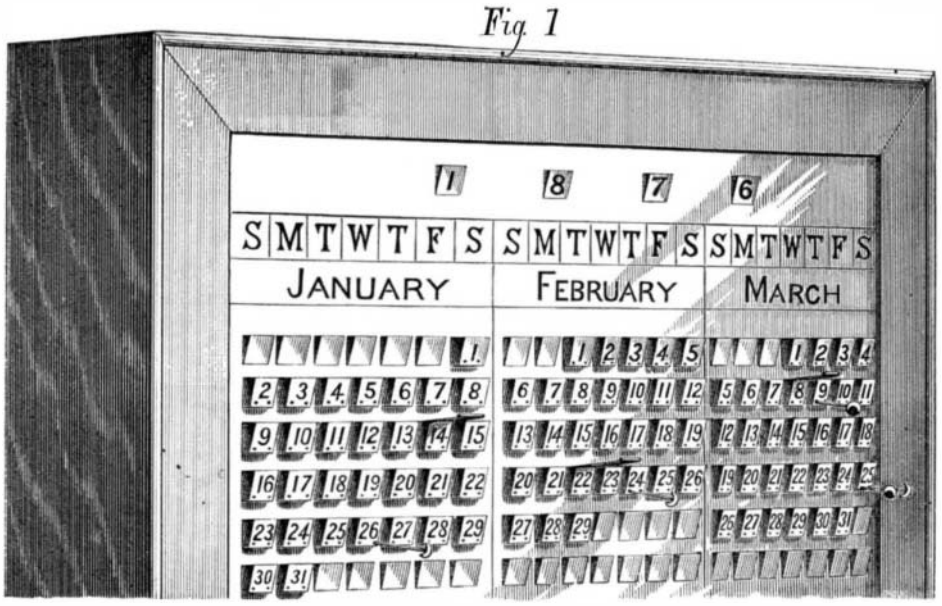
IMPROVED ADJUSTABLE ALMANAC.

We illustrate herewith a new almanac, which, by a simple rearrangement of marked pegs inserted in cavities in a block, may be adapted for any year. In the annexed engraving, Fig. 1, a portion of the device (three months) is shown. The pegs are placed in columns in the month divisions of the wooden block. Each of said divisions, for the sake of uniformity, contains 42 pegs, and on these pegs are figures to denote the days of the month, so that, of course, as many blank pegs appear as the total number exceeds that of the days in the month.

The pegs are alike in size, and therefore are interchangeable in the block orifices. On the under side of each, at the same end as the figure marked, is inscribed the day of the year. The opposite extremity of the peg is blank, so that, according as it is inserted in the block, it shows either the plain or numbered end. To use the calendar, all the pegs are inserted so as properly to indicate the days of the month, but are pushed into the block to their full length. As each day arrives, its corresponding peg is drawn out until the number denoting the year day, on the under side of said peg, appears. Thus, for every day expired, a drawn peg will be shown, while those days yet to come are indicated by the untouched pegs, so that the last drawn peg points out the current day.

Fig. 1

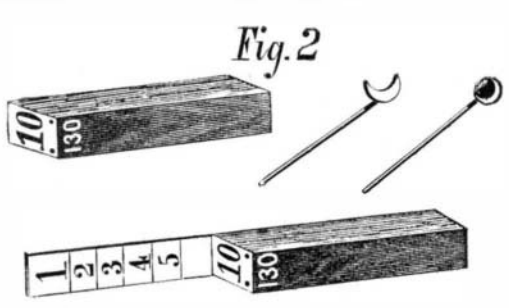


MILLER'S ADJUSTABLE ALMANAC.

The year in progress is shown at the top by similar movable pegs, which are also interchangeable with those already described. Those pegs not in use for indicating the year are inserted, rear end out, in the blank month spaces, and thus are conveniently stored until needed.

Each peg, as shown in Fig. 2, has a movable metal slide on its upper side. On this slide are figures, and, as the slide is moved out or in on the peg, said figures are shown in succession. This is called a "reminder," and the object is to denote that as many different matters are to be attended to, on the day shown by the peg, as are indicated by the last figure appearing on the slide. Another device may be used to symbolize events. In the engravings, pins are represented

Fig. 2



inserted in orifices in the pegs, to indicate the occurrence of full moons and eclipses—the former being denoted by a crescent-shaped head on the pin, and the latter by a head representing an eclipsed orb. Of course the peg shows the day on which these events are to take place.

Patented August 17, 1875. Canadian patent now pending. For further information relative to proposals for manufacturing on royalty, etc., address the inventor, Mr. David J. Miller, Santa Fé, New Mexico.

IMPROVED JUMP SEAT FOR CARRIAGES.

The accompanying engravings represent a novel construction for jump seats of carriages, which admits of both front and rear seats being brought together so as to occupy the space required for but one, and also of the front seat being altogether removed when desired. This arrangement tends considerably to economize room in the vehicle, and at the same time affords an easily adjustable and strong method of attaching the seat.

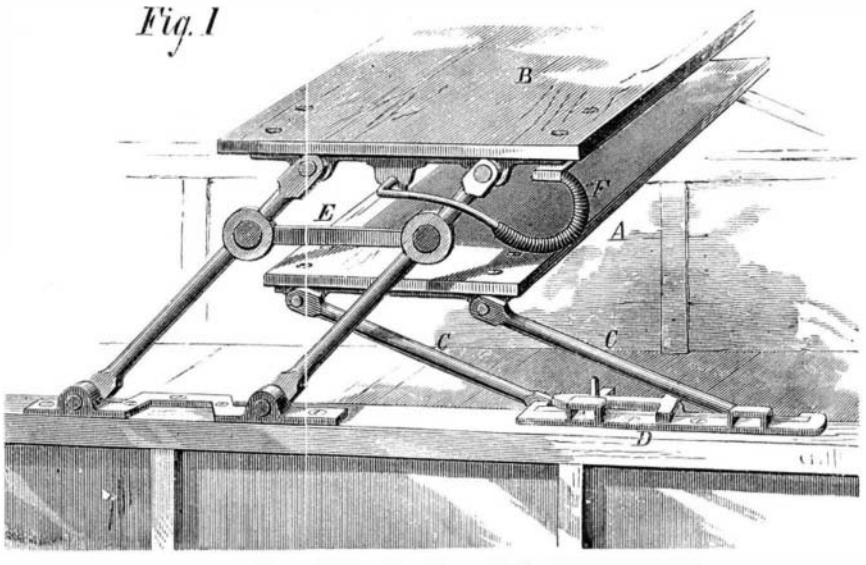
In Fig. 1, A is the front and B the rear seat. The uprights, C, of the front seat are pivoted to the seat support and also to an inside plate not shown, which enters a recess in the plate, D, which is secured to the side piece of the wagon. The inside plate may easily be lifted out of the recess, so that the mode of attaching or detaching the front seat from the wagon is obviously simple. On plate, D, is a pivoted double latch, having two opposite horizontal projections and a vertical thumbpiece. This serves to fasten the two plates together, when the inner one is inserted, while one of its projections always enters one of the loops shown on plate, D, thus causing the latch to furnish a support to the uprights of the front seat frame in whatever position the latter may be placed.

The arrangement of the rear seat is shown in Fig. 2 and also in Fig. 1. The uprights are pivoted directly to the wagon plate, and are provided with a connecting piece, which equalizes the strain on them. Here is also a handle, F, for convenience in adjusting the seat.

As shown in the illustration, the seats are brought together, but it will be readily understood how they can be swung apart. When it is desired to dispense with one seat, the front one is altogether removed and the rear thrown forward on its pivots. The construction is simple and strong, the supports being made of one half inch round iron, and there being no lateral play in the journals.

Patented through the Scientific American Patent Agency, May 5, 1874. For further particulars relative to sale of patent, with patterns, &c., or relative to sale of rights, address Messrs. Hanna & Brother, carriage makers, Bel Air, Harford county, Md.

Fig. 1



HANNA'S JUMP SEAT FOR CARRIAGES.

The Chinese Railroad.

We mentioned recently the undertaking of the first railroad in China, the material for which is already *en route* to the last mentioned country from England. We learn that the line, which is to extend between Shanghai and Woosung a distance of 9½ miles, will be completed by July next. There is in China an excessively strong prejudice against railroads, which it is hoped this new enterprise will aid greatly in overcoming. It was only recently that several newspapers, published in some of the principal Chinese cities, and edited by natives in other respects intelligent and well informed, published bitter articles against the introduction of the locomotive, and even went so far as to assert that even in America and Europe the number of casualties, due to swift trains rushing about the country, was so excessive that people never used the cars as means of conveyance except when forced to do so by lack of time or similar necessity.

We hardly share in the sanguine anticipations, of the promoters of the Chinese railroad, that, if the inhabitants of the Flowery Kingdom once get used to seeing traffic conducted on a short line, they will speedily abandon their present obstinate opposition. The Chinaman, say those who are familiar with the peculiar notions of his race, does not object to the railroad because of the dangers thereof, as above intimated, but purely on religious scruples. Every one knows how extremely solicitous the Chinese are as to the ultimate disposition of their dead. In San Francisco there are special companies who insure their compatriots burial in the ground of their native land, and who make it their business to convey back to China the remains of emigrants who die in this country. So also, when coolies are hired to go abroad, there is always a stipulation in the contract that the bodies of such as die shall be shipped back to the Chinese territory. China in fact has been described as one huge burial ground, and it is asserted that her soil is fairly packed with the dust of the countless number of generations which have formed her dense population during the long period of her national existence. This of course is more figurative than literal, but the circumstance nevertheless remains that it is particularly impossible for railroads to run, through the thickly settled districts, without in some measure approaching, and thus (in Chinese belief) profaning, the very hallowed resting places of the dead. Such, it seems, is the objection to railroads; and as long as it exists we imagine that the missionaries will have better success in counteracting it than the party of engineers and workmen who, it is expected, are to demonstrate, before the oblique ocular organs and to the equally oblique intellect of John Chinaman, the immense practical value of the iron horse.

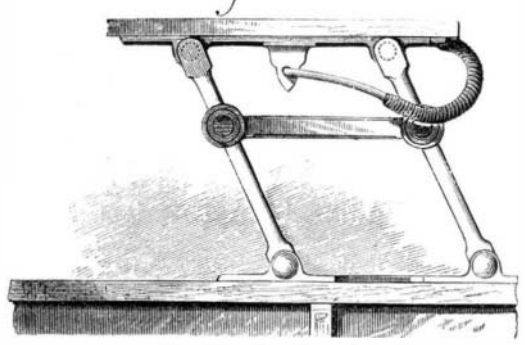
New Blasting Powder.

The new blasting agent *lignose* invented by Baron von Trutzschler Falkenstein, and apparently made of woody fiber prepared with nitroglycerin, has been recently tested (we learn from *Deutsche Industrie Zeitung*) in various mines in Upper Silesia. The results were on the whole not unfavorable, but the action was not always regular. The substance has not (as was at first claimed for it by the inventor) five times the force of an equal weight of ordinary black blasting powder, and even four times was doubtful; but a threefold force may be readily conceded. The price fixed by von Trutzschler is $33.75 per cwt., or three and a half times cheaper than the price of 3 cwt. of powder. The advantages of the new agent are less danger, as it does not explode on contact with open fire, and is but difficultly exploded by friction or concussion: and the fact that, to effect its explosion in a blast hole, the strand match may be used. The powder is very light, and in the loose state burns very slowly. A manufactory for the new agent has been established at Kieltsch.

Utilizing Tin Plate Scrap.

The invention of Mr. F. G. Morton, of Lynton street, London, England, has for its object a simple, economical, and efficient means of separating the tin from the iron of tin plate scraps, and generally for separating, from iron or other metal, tin, solder, zinc, or mixtures thereof which may be attached thereto in the form of a coating. The tin plate

Fig. 2.



HANNA'S JUMP SEAT FOR CARRIAGES.

scraps or other combination of metals to be operated upon are submitted to the action of a blast or current of highly heated air in an encased or jacketed vessel or chamber, provided with a perforated false bottom or grating, in such a manner as to melt the coating of tin, solder, zinc, or mixture of these, causing it to leave the iron or other metal and pass off through the false bottom or grating. The blast of air is caused to pass through or over a suitable furnace, and conducted into the jacket of the melting chamber, the internal shell of which is perforated to admit the heated air into the melting chamber, where it is diffused and caused to act upon the tin plate scraps or other substances to be operated upon as aforesaid, which substances are simultaneously agitated.

New Method of Preparing Vaccine Virus.

The following method has been recommended and used by one of our correspondents:

On the eighth day, or thereabouts, after vaccination, the calf being placed in a convenient position, the lymph from the vesicles is caused to flow into shallow dishes, and evaporated to dryness; then it is pulverized and put into tubes and hermetically sealed; and it is then ready for use.

The advantages of this mode of obtaining lymph are, first, you obtain a pure lymph free from all the contaminating matter which bovine virus is liable to, such as hair, cuticle, *pus*, *fæces* of the animal, dust, etc. Second, the lymph preserves its integrity very much longer than under the modes of preparation and preservation in ordinary use. Third, it is much easier for physicians to manipulate when vaccinating than the quills, ivory points, or liquid lymph in tubes.

A good brown oak stain is produced by preparing the wood with a solution of 1 oz. catechu, boiled in 1½ pints of water. When dry, brush over a solution of bichromate of potash 1 oz. to 1½ pints of water.