Scientific American.

Science and Art.

The Form and Uses of Paper.

It is light, soft, and fleecy as snow, it protects the finest cutlery; pressed into the form of a roller, it becomes as hard as metal; and turned in a lathe, is used as an instrument for manufacturing paper itself. It is a package for the common wares, and a thin slip of it pays for an estate or a cargo of the richest merchandise. It now constitutes the chief money of the world. The bulk of all commerce is carried on by its means. All the wealth of the opulent classes consists of bits of paper. Preserving the impressions of priceless skill, jealously guarded in portfolios, or surrounded with rich frames, it is among the most valued possessions of the man of genius; at the same time it is proverbially the cheapest of all materials. Playing cards, trays of all kinds, drinking vessels, boxes, moldings and cornices for rooms, panels for apartments, and bulkheads for ships, are all made of paper. It covers our walls, and boards for binding books, frames for pictures, toys for children, ornaments for boudoirs, are amongst the few of the countless uses to which ingenuity has applied old rags. Perhaps the most singular part of the whole is, that paper is made from articles which have no value except as materials for its manufacture. The vilest refuse-our cast-off garments, the beggar's rags, the waste of cotton, worn out ropes, all of which we should be troubled to dispose of-is converted by the paper maker into an article indispensable to civilized man.

Patent Alarm Bed.

The annexed engravings represent, in a forcible manner the alarm bed of J. Carroll House, of Lowville, Lewis County, N. Y., for which a patent was granted on the 17th of last July.

Figure 1 is a perspective view showing how the bed has operated upon its occupant, who recklessly dared to sleep beyond his allotted period of rest. Fig. 2 is an outline perspective. Fig. 3 is a section of a plan view. Fig. 4 is a section of the back rails and tilting frame, showing the manner in which the hook and catch lock into each other; and fig. 5 is a section of the end rails of the tilting frame, and a view of the clock, head board, and rail. Like letters refer to similar parts.

The bedstead is made in any of the known styles, with the exception that one of the side rails is left out, but the remaining parts retain their relative positions. The posts, head board, and rail, and the like parts of the foot of the bedstead are permanently fitted together. One side rail, J, is then put in and fastened with screws. The corner braces, P, are then fastened firmly to the back, and end rails, N and L, by screws. This completes the bedst ead proper.

A round shaft, S, of iron has one of its bearings at one end in a metal plate in a post, and the other end passing through a hole in the opposite post. Collars are secured on the shaft between which is fastened a stirrup hasp to the side rail, J, by screws. This hasp admits of a rolling motion in shaft S, but not an end motion. At a a are fastened the hooks, fig. 4; these are fitted in place by keys. Upon the outer end of shaft S, is a square shoulder, upon which is placed the weighted lever, E, held by nut h. F is a lever pawl, having its fulcrum on a screw, j. It is so arranged that whenever the support at the opposite end is withdrawn, it will turn upon this screw, and drop, as shown in fig. 1.

m is a bevelled strip, grooved upon its inner surface, and fastened to the back of the head board. To this is fastened the shelf, y, which has an aperture in it over the groove in strip m. O, figs. 2 and 5, represents a small iron rod passing through this aperture, and the groove, and it has its point of rotation in the metal shoe, f. It is kept in place by a thin plate on the top of shelf y, beneath which is a washer, on the rod, O. There is a small arm soldered to this rod near its lower end, and it is curved horizontally. At the upper end of rod O, is a small straight arm, l, fig. 5. It stands in such a relative position to the lower

er arm will project a short distance beyond the | under side of its end rails, K I, are iron bear- | ed to the patentee, at the Dey Street House, edge of the rail, N. M, in fig. 1, is an alarm ings (one, c, shown.) These are placed at tion. It is fastened to shelf y, by screws. The front to back-and they work in metal boxes, door of the clock is removed, also the minute | d, in the end rails of the bedstead. Upon the hand, as the latter would, in its revolution, back strip of the frame are catches, b, fastened come in contact with arm *l*, the hight of which is determined by the clock, it being necessary position to the hooks, a a, on shaft S. that it should stand over fig. 6 on the dial.

HGIK is a frame of hard wood, with side ted, and fitted to receive any kind of mattrass and end rails. It is of the same width as the and bed; p is a clothes fastener, two or three bedstead, and in length such that it freely may be used to retain the clothes in place

clock of any of the usual styles of construc- about two-thirds the width of the frame-from ville, N.Y.

to screw bolts, W; these catches correspond in This light but stout frame is corded or slat-

plays between the end rails, L N. Upon the when the bed assumes an inclined position.

HOUSE'S PATENT ALARM BED.



OPERATION-The light frame, G H I K, is | on. The alarm of the clock is now wound up, placed in a horizontal position, and the buttons, so as to have it ring when the hour hand, r, g g, slid under its front. The bed is then made, and the clothes and sheets tucked and drawn beneath the clothes spring, p. The weighted lever, E, is now raised to a horizontal position, and by so doing a slight rotation of shaft S, is produced, which causes the hooks, a a, to take into the catches, b b, and bring up the pawl, F, under the lip of the lever, E, turning the upright rod, O, so that its curved arm at the foot shall slide beneath the pawl, F. This turning of rod O, will bring the upper small arm, l, at right angles to the face of the clock. its foot from under pawl, F, which then drops, The clock is set so that at the hour a person and by so doing the weighted lever, E, is rewishes to rise, the hour hand, r, fig. 5, will have | lieved of its support, it drops, and rotates the arrived at 6; thus, if a person wishes to shaft, S, unlocking the hooks, a a, from the

comes in contact with the small projecting arm, 1. The hooks, g g, are then withdrawn, and the incumbent of the bed disposes himself to sleep under the clothes. Time with the hour hand, r, now moves on; at the appointed hour the alarm sounds, and if heard, by sliding in buttons, g g, the awakened person may arise with a grateful heart. But if he snores on, when the hour hand, r, comes in contact with the arm, l, it causes rod, O, to rotate a short distance, thus withdrawing the small arm on get up at 4, the clock must be set at 12, and so catches, b b, and the bed frame is then tilted



hours to sleep from 1 to 12. In many cases, by Mr. House. such beds are no doubt of great use, so as to arouse a person at a particular hour for an important transaction.

bed well deserved a patent. It is a conservator of one of the most excellent qualities of a tion at the Fair of the American Institute, in curved small arm at the foot of O, that when business man, viz.: "punctuality ;" and fig. 1 the Crystal Palace; and further information it is at right angles to the head board, the low- is a powerful illustration of the way it argues 'may be obtained in person or by letter address-

over, as depicted in fig. 1. It will thus be | and enforces the necessity of cultivating this seen that this is a tilting bed, operated by an virtue. Any sinner sleeping beyond a certain alarm clock, which can be set for any hour, to hour deserves to be tumbled out of the blankgive the person reposing on it, any 'number of ets in the manner so successfully accomplished

This bedstead has been in use for nearly a year, and has proven to be a valuable and useful invention. It can be attached to any of Every person will perceive that this alarm the bedsteads in use, and can be put up by any cabinet maker or carpenter. It is on exhibi-

this city, until October 20th; after that at Low-

Substitute for the Potato.

The "Chinese Yam" has been introduced into France, and cultivated with considerable success. It is stated that it offers to be a good substitute for the potato, and that its yield is very great.

Literary Notices.

THE UNITED STATES MAGASING.—This periodical has become one of the most beautiful, interesting; and instruc-tive inour country. The number for this month com-mences the publication of the 'Lay of the Last Min-strel,' illustrated with numerous wood cuts. It also con-tains a very excellent article on public libraries, with engravings of the most distinguished of them, both in Europe and in America. A clever article on the manu-facture of musical instruments is Illustrated with engrav-ings of the extensive and beautiful factory of Carhart, Needham, and Co., Twenty-third street, this city, for manufacturing melodeos. Fublished by J. M. Emerson, Spruce street, this city. A Voice ro OMERICA.—This volume consists of a series

Animateuring includeous. Fublished by 5. A. Emerson, Spruce street, this city. A Vorce TO AMERICA-This volume consists of a series of well written essays upon the national affairs of the United States. These contributions, it is understood, are the joint productions of difforent writers of ability, each having selected and discussed the subject upon which he considered himself best informed. They all tend to a common object, viz. -the preservation of our republican liberties and free institutions. The various rocks and guicksands upon which, in time spast, other nations have been wrecked, are vividly pointed out, while, at the same time, much salutary counsel relative to the individual rightsand duties of American citizens is introduced. Some persons may object to this book as being unnecessarily se-vere in its strictures upon Popery and foreign influence; but, as a whole, its circulation can hardly be otherwise than beneficial. New York; published by Edward Walk-er, 114 Fulton street.

The full of the state of the st ing interest. New ers, 10 Park Place

In minerest, where to be to first adminer to construct the set of ign reviews

eign reviews. THE NAUTICAL MAGAZINE—For this month, contains some capital articles. The leader is on "Stability in Ves-sels," and the next is a very full illustrated description of the new steamer Arago. Published by Griffiths & Bates, No. 115 Nassau street, New York.



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