

Improved Horoscope.

This apparatus is intended to show the hour of the day at any time when the sun shines. The engraving and description published herewith will serve to render the invention intelligible to all. The standard, A, carries an index arm, B, which works on a center at C. The vertical arm, D, is also fixed on a center at E, and carries the scale-board at the top; this is secured firmly to the arm, D. Close to the upper margin of the scale-board a scale of polar distances is drawn. The rest of the surface, except the ends, is occupied by the scale of hours formed of curved lines and marked from 4 A. M. to 8 P. M.; the hours are subdivided into spaces corresponding to two minutes; if desired still smaller divisions can be made on the scale. At the ends of the scale of hours are two other small divisions which indicate the different elevations of the pole.

Returning to the index arm again, we find that the lower arm has two small brass plates, G and H, fastened to it. The plate, G, is provided with two small holes to admit the rays of the sun, and the other plate, H, is marked with a black line on a white ground. At the upper end of the index arm there is another brass plate to which the plumb-line, I, is connected. The line is so fastened to the plate that it hangs between it and the scale-board. The hole, J, in the arm is merely to receive the plummet when the instrument is packed up, and the index arm is fixed in its place by a thumb-screw, so that it will not shift or move accidentally.

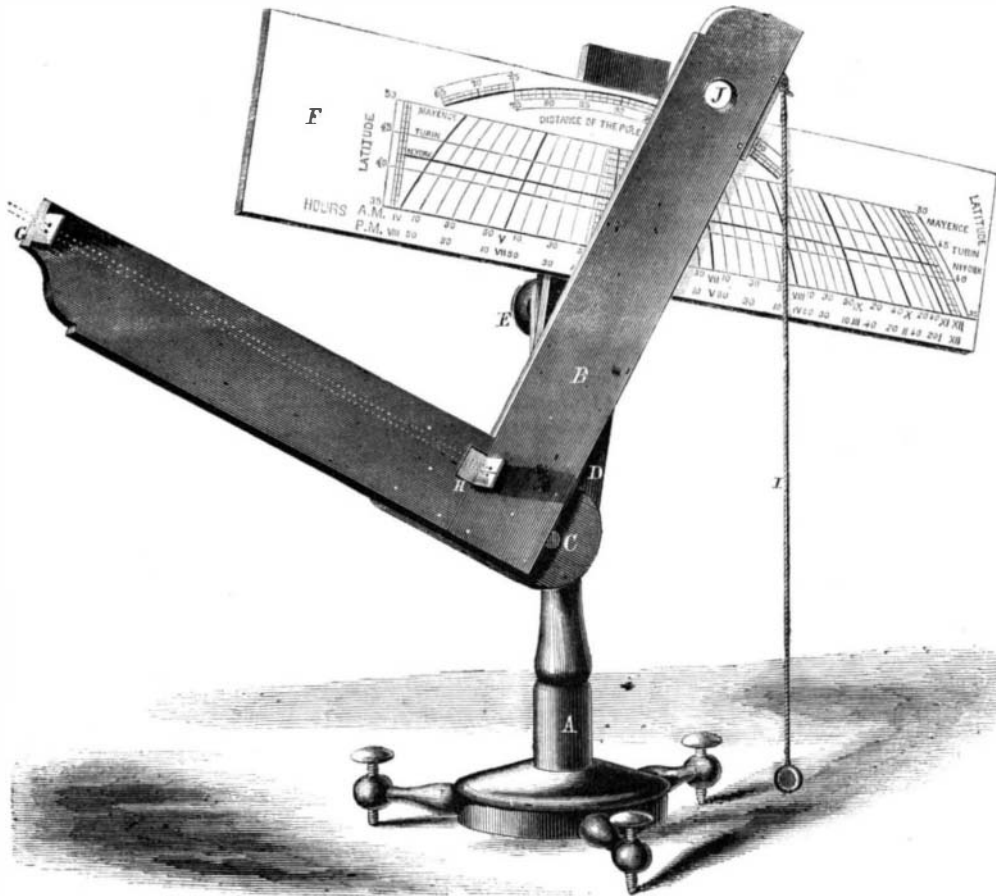
The time is ascertained by this instrument, when the sun shines, in the following manner:—A black line is drawn across the scale of hours to correspond to the latitude of the place where the instrument is to be used, and in taking an observation the instrument is placed upon a bench or other nearly horizontal surface, in such a position that the sun stands at the left, and that the shade of the scale-board appears in a straight line or nearly so. The polar distance of the sun, corresponding to the day on which the observation is made, is then ascertained from the tables sent with each instrument, and that point of the scale of polar distances marked near the upper margin of the scale-board, which corresponds to the polar distance taken from the tables, is brought vertically over the center of the pivot, E, which can be effected by turning the scale-board on its own pivot, and the plumb-line suspended from the arm, can be used to ascertain the desired position. In this position the scale-board is fastened by the jam nut, and the index, B, is turned on its own pivot, until the sun's rays, passing through two little holes in the plate, G, strike the brass plate, H. At the moment when the double image of the sun appearing in the form of two little disks, one standing over the other, is intersected by the black line, the plumb-line shows the hour and minute of true solar time at that point where the thread crosses the black line on the scale of hours.

This invention was patented through the Scientific American Patent Agency, by Michael Eblé, of the kingdom of Wirtemberg, on the 8th of Sept., 1863. For further information address Alphons Armbruster, Springfield, Ill.

A Costly Sword.

One of the most exciting features connected with the recent Sanitary Fair, in this city, was the spirited competition carried on in the Trophy Room, in connection with a beautiful sword presented to the Fair

by Messrs. Tiffany & Co., of this city. Books were opened and subscriptions were received from one dollar upwards for favorite generals of the army, each subscriber registering his name for whomsoever he or she might prefer. The contest was carried on between the respective friends of Lieut-General Grant and Major-General McClellan. 44,963 votes were cast, representing so many dollars. Of the whole

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number General Grant received 30,291, and General McClellan received 14,509—giving to the former a majority of 15,782, and 163 votes were cast for various other officers. One check for \$10,000 was sent in from "The Loyal Men of New York." One "Loyal New Englander" sent in a check for \$3,000. Thus ended the sword controversy.

RICHARDS' TRY-SQUARE.

The instrument represented herewith is one that will be highly appreciated by all mechanics who have



occasion to use a square. In most cases where one of these tools are employed, the workman has either to stoop and look under the blade or else bring his

work up to the level of his eyes. This square renders such movements unnecessary, as may be seen by a glance at the engraving. The back, A, of the square has a pointer, B, forged with it, so that it is solid and immovable; in connection with this there is an arm, C, jointed by a rivet and washers to the back; this arm forms the blade of the square. The pointer, D, is attached to this blade, and the whole is so arranged that when the square is true, the two pointers, B and D, exactly coincide, thus showing at a glance whether the work is true or not. There is a small spring, E, set in the inside of the back which is connected to the working arm, or blade, C, in such a manner that it throws the pointers open so that when the square is applied to the work and taken from it again, the pointers will spring apart in order to register the next application of the tool to the work. This is a very useful square, as it saves a great deal of stooping and bending, and materially expedites the work. It was patented Jan. 26, 1864, through the Scientific American Patent Agency, by John Richards; for further information address the inventor, at the Ohio Tool Company's Works, Columbus, Ohio.

A UNIVERSAL TIME-PIECE.—We recently had the pleasure of examining a time-piece which was exhibited to us by the inventor, A. W. Hall, of this

city. This time-piece is intended to show the correct hour on any locality of the globe, and it is of particular convenience for travelers, and at railroad stations, on vessels, &c. It is provided with two dials containing the names of the most important places on the globe, arranged in such relative position toward each other that, by the motion of said disks on the dial of the clock or watch, the correct local time of all the places marked thereon can be ascertained at any moment without calculation. The specimen time-piece exhibited to us by Mr. Hall is a watch, very neatly finished, and notwithstanding the limited space in which the disks had to be confined, the names of all the places marked thereon were easily distinguished.

Report of the Commissioner of Patents.

The introductory report of the Commissioner of Patents (Hon. D. P. Holloway), for 1863, is just issued; but it did not reach us in time to enable us to publish anything more than the statistics showing the operations of the Patent Office, which are as follows:—

Number of applications made during the year 1863.	6,014
Number of patents granted, including re-issues and designs.	4,170
Number of caveats filed during the year.	787
Number of applications for extension of patents.	40
Number of patents extended.	48
Number of patents expired Dec. 31st, 1863.	968

Of the patents granted there were to—

Citizens of the United States.	4,048
Subjects of Great Britain.	58
Subjects of French Empire.	37
Subjects of other foreign governments.	27
	4,170

The following is a statement of the Patent Fund:—

Amount to the credit of the Patent Fund January 1, 1863.	\$ 38,361 15
Amount paid in during the year.	195,593 29
Total.	\$233,954 44
Deduct amount of expenditures during the year.	189,414 14

Leaving to the credit of the Patent Fund January 1, 1864, the sum of \$44,540 30

In our next number we shall present some interesting extracts from the Report.