A LARGE PLANETARIUM.

A very large planetarium has recently been constructed by Mr. N. B. Jewett, of Haverhill, Mass., and we have been informed by a correspondent that several scientific men have examined it, and pronounced it a very complete apparatus of the kind. It occupies a space sixteen feet in diameter, and the sun, sixteen planets, and nineteen satellites are represented upon it. The center stand, which supports the whole, is six feet in diameter, and made of rosewood and mahogany. This stand is supported by four legs, and there is a circle representing the orbit of the earth, and upon which is a railroad track bearing a small car carrying two spheres or globes representing the earth and the moon. Mechanical devices are applied and arranged to give them their proper motions, the earth making 365¼ revolutions while moving round in its orbit, with an arrangement showing the leap year. The pole of the earth points in one direction at an inclination of 23½ degrees to the perpendicular, and the moon makes her periodic revolution round the earth, and shows all its different phases.

The motions of the other planets are produced as follows: In the center of the earth's orbit, there is a perpendicular shaft, at the foot of which is attached a gear wheel, and there is also a series of hollow tubes on this shaft with a gear wheel at the foot of each, to give the correct motion to each planet. At the one side of the independent wheels on the tube shafts, there is a counter shaft, on which is a corresponding number of stationary wheels having the requisite number of teeth to give the wheels on the several tube shafts their proper motions. A horizontal arm extends from each tube, on which is a planet having its orbit situated at the proper distance from the other planets and sun, the latter being represented by a large sphere on the center shaft. The whole machinery is put in motion by a small crank handle placed at the end of the horizontal shaft connected with the main wheel, and the arm that moves the car which supports the earth and moon. It is a beautiful piece of mechanism, and, so far as we know, is the largest planetarium in our country, excepting perhaps the famous one of Rittenhouse, at Princeton College, N. J.

THE CONDITION OF APPLICATIONS AT THE PATENT OFFICE.

In our Washington letter (published on page 321 of our last issue) reference is made to the general good condition of the Patent Office. There is at present no very great accumulation of cases in any one department, with the exception of Class IV., which includes the following subjects, arranged in the order of the number of applications now made; the first being the most numerous:—

1. *India-rubber and Gutta-percha;* modes of treating, and fabrics, manufactures and compositions thereof.
2. *Gas;* apparatus, modes and materials for making.
3. *Surgical Instruments;* and methods, modes of preparing drugs and medicines, &c.
4. *Manufacture of Sugar and Salt;* apparatus and method therefor, including evaporation, &c.
5. *Coal Oil;* apparatus and method for making and purifying.
6. *Miscellaneous Chemical;* relating to almost every department of the arts.
7. *Vapor Lamps and Burners.*
8. *Hides and Leather;* treatment and preparation of, including tanning, &c.
9. *Oils, Fats, Soaps, Candles;* purification, treatment and manufacture of.
10. *Alcohol and Alcoholic Liquors, Beer, &c.;* including fermentation and distillation.
11. *Food;* preservation and preparation of.
12. *Paper Stock and other Fibrous Materials;* modes of preparation and treatment of.
13. *Dyeing, Bleaching, Calico-printing, &c.*

There are many cases in this class not yet acted upon. This arises solely from the fact that the acting Chief Examiner has been kept from his post by severe sickness; and thus, for a number of weeks, the care of this interesting department has devolved upon his assistant, who, though he has performed his duty nobly, has not been able to dispose of all the cases which have been presented for examination. The Chief Examiner is now gradually resuming his duties, and we may soon expect to see the usual efficiency in his department.

HOME PATENT AGENTS.

J. S. Colvin, of Pittsburgh, Pa., under date of Oct. 29th, says:—"I have just received the Letters Patent on my Gasket, and thank you for your prompt attention." He sends a model of another invention from another party, to which he alludes in the same letter, and says:—"I have obtained this case for you as a reward for your promptness in my other business, as the other party in interest was in favor of a *home* agency, on the ground that he could explain the nature of the invention better personally," &c.

We give the above extracts as a basis on which to make a few remarks concerning *home patent agents.* In most kinds of business it is desirable to patronize home industry, and it is commendable to employ artizans, physicians, lawyers or patent solicitors, residing in the same city or village as the person needing his patronage, provided that such fellow-townsmen are known to be fully competent in their respective occupations; and in such case the principle of home patronage is an evidence of good citizenship. In the profession of patent solicitors, however, it is necessary that the applicant for a patent or his attorney shall be conversant with what has been done previously in the line of invention in which he is about to apply for a patent; as without this knowledge the applicant is likely to suffer the mortification of a rejection; or his specification will be so worded as to render his patent useless. We advise inventors to be cautious in placing their inventions in the hands of inexperienced patent solicitors, as our observation has taught us that, among all half-fledged professional men, a bungling patent attorney is the most pernicious, for he is almost certain to injure the inventor.

PATENT CASE.—WOOD-SPLITTING MACHINE.

On the 5th inst., an important case was tried before Judge Ingersoll, in the U. S. District Court, this city, in which the validity of two patents was at issue. J. A. Conover sued J. H. Rapp for damages for infringing his patent for a wood-splitting machine, granted May 10, 1855. The defendant pleaded the general issue, and especially that his machine was different from that of the plaintiff, and that it was also secured by a patent issued to Philip Ruger, Jan. 25, 1859. The validity of the plaintiff's patent having been questioned, it was sustained by the decision, but only six cents damages were awarded. Quite a number of patents have been issued for such machines. The business of splitting pine and other woods, for kindling fires, is now carried on extensively in our large cities; hence the importance of controlling, by patents, the machines which are employed for such purposes.

Flies on Picture Frames.—There is no better preventive of flies soiling gilt frames than by covering them with gauze. It must be admitted, however, that many persons prefer leaving the frames exposed rather than hide them under the usual gauze covering; I would therefore suggest to manufacturers the advantage of improving the material. As at present made, the fabric is woven much closer than is necessary. The finest and most open work gossamer that could be wove would prove effectual in preventing flies settling near any object that was covered with it. A fly's instinct prevents it going near a cobweb. I would say, then, weave your gauze as fine and as much to resemble a spider's web as possible. This would prevent all the evil the housewife dreads, and at the same time would not hide any of the gilt and carved frames.—*S. Piesse.*

Water-wheel Experiments.—The testing operations of model wheels at the Fairmount Water-works, noticed in former numbers of the Scientific American, are still going on, but thus far, we understand, that only five or six turbines have been experimented with. A correspondent informs us that "Stevenson's Jonval has given out the best percentage of power." There are several other wheels now ready for testing, and inventors appear to be well satisfied with the manner in which the operations have been conducted.

Dredging Machine.—Carmichael & Osgood obtained Letters Patent for an improvement in dredging-machines, May 26, 1846. An application has already been filed in the Patent Office for its extension. The case is to be heard on the 9th day of May next, at the Patent Office. Persons opposed to the extension must file their objections twenty days before the day of hearing.

A COLUMN OF INTERESTING VARIETIES.

The Paris correspondent of the London *Morning Herald* says that experiments at Toulon have shown that the French metallic plates for coating the sides of vessels of war have been found to be perfectly shot-proof, though the four-inch iron plates used in England were broken to pieces by the elongated shot now in use. The French plates are made of iron, steel, and some other metal, but what other the correspondent could not ascertain. .....At the time of opening the Cooper Institute, in this city, 1,200 persons had applied for tickets to the several free classes.....The oldest church in America was built in the town of Hingham, Mass., in the year 1781, and is still used as a place of worship. The bell rope hangs down in the middle of the house, where it was placed in order that the bell might be rung instantly to give alarm of any sudden incursion. There are many of the old fashioned square pews in the house, enclosed by what resembles more a high unpainted fence than anything to be seen in a modern church. The frame is of oak, and the beams are huge and numerous. The old house is good for two hundred years more. This old church has an old pastor, the Rev. Joseph Richardson, who has preached in it for 53 years.....A correspondent of the Manchester *Mirror* says that a few days since a needle was taken from the outer and lower side of the foot, near the little toe joint, of Mrs. Ira Atwood, of North Sandwich, N. H., which she swallowed six years since. The needle was a shoe needle, a little over an inch long, and it was whole and quite rusty. The lady was alarmed at the time she swallowed the needle, but she had felt no inconvenience from it, and had forgotten the circumstance until she felt a pricking in her foot, when the needle was discovered.....Three hundred and seventy-three railway trains leave the city of London, England, every Sunday, to carry excursionists various distances into the country.....The Agricultural Bureau of the United States Patent Office have received intelligence of the shipment from Havre, France, of a large swarm of Lombardy bees. These bees will be sent, upon their arrival here, direct to the Agricultural Bureau. They are of larger size than the ordinary bee, and, having a longer bill, are able to suck flowers inaccessible to the American bee. The product of an old hive of these bees is sometimes 150 pounds of honey in one season. These bees will not be disturbed until 1861, by which time it is expected to rear from the swarm now *in transitu* stock enough for six hundred hives.....Numerous facts indicate that the State of New Jersey is settling down beneath the sea at the rate of about a foot in 100 years.....It is ascertained that the fixed stars, as they have been called, are all in motion, but their distances from us are so great that very delicate observations are required to discover these motions.....A man named Daniel Stafford stole a pair of oxen near Detroit last week, and in fourteen hours from the commission of the deed, he had been arrested, tried, convicted, and on his way to the State Prison under a sentence of three years.....There are four Shaker societies in Ohio, numbering 1,059; one in Connecticut, numbering 200; two in Maine, numbering 150; two in New Hampshire, numbering 500; four in Massachusetts, numbering 700; two in Kentucky, numbering 900; three in New York, numbering 1,050; making in all 18 societies.....The world could not get along without North Carolina. Her tar, pitch, and turpentine are used in every corner of the globe. The amount shipped to England during the year 1858 is valued at $2,176,870..... 162 pounds of starch consist of 72 pounds of carbon, 10 pounds of hydrogen, and 80 pounds of oxygen.....A discovery of great importance has just been made by the State geologist, in Texas. It is no less than the discovery of vast bodies of iron ore, as well as tertiary coal, or lignite, beds of limestone, pipe clay, fire rock and hydraulic limestone, in the region of country immediately south of Harrison county.....The Milan correspondent of the *Morning Post* says that a dog of African breed, which belonged to Gen. Espinasse, who fell at Magenta, still lurks about the spot where he shed his blood, and although often taken away, even to some distance, constantly returns.....Before the close of the present year the Grand Trunk Railway will have been completed to Detroit, a distance of 862 miles in a direct line, with branches in addition, making 1,099 miles of complete railway, including the Victoria Bridge—costing upwards of $60,000,000.