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## THE SCIENTIFIC AMERICAN SUPPLEMENT NO. 111,

## For the Week ending February 16, 1878.

Price 10 cents. To be had at this offce and of ail newsdealers. ENGINEERING AND MECHANICS.-Improved Electro-Magnetic. Rail.
Way Brake. illustrations, -Improved Hand Power Rock Drill. 5 ill
lustrations, showing the machine as adapted to Mining, Sinking, and Qusaryings, showing the machine as adapted to Mining, sinking, and
tionw. Double-action Vertical Steam Engines, with Boiler. 12 illustra-
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Fireless and Hot Water Locomotives. History of all the Inventions
upon this subjeet. $\begin{aligned} & \text { With description of acoh improvement and itt } \\ & \text { ing. Therk }\end{aligned}$
The demand for Engines of this kind. the uses to which they may


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economy of construction, etc.











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A PATENT OFFICE COURT.
The Commissioner of Patents recommends, in his report, that the present system of appeals be abolished, and that " a Patent Court be established in connection with the office, to be composed of three members, appointed as other judges of the United States Courts now are." The Commissioner says that this tribunal would relieve him of his judicial says that this tribunal would relieve
duties and establish uniform precedents.
duties and establish uniform precedents.
The idea of a court sitting to discover whether a party
shall have a standing in court-and this would be the character of the proposed establishment-certainly possesses the charm of novelty; but it assumes a more important and reassuring aspect when it is remembered that the grave and weighty questions which so of ten threaten the average examiner with premature baldness may by this plan be subjected to the learned judicial mind in banc. Perhaps, armed with microscopes, their Honors will be able to demonstrate to lower orders of intelligence the hidden principle which to lower orders of intelligence the hidden principle which
underlies the granting of patents on infinitesimal distincunderlies the granting of patents on infinitesimal distinc-
tions, as exemplified in the envelope-opener case illustrated herewith. In 1858 Mr. Charles Phelps obtained a patent for a letter-opener, consisting of a thread placed in a crease of the envelope, as shown in the upper figure of our engraving. In 1871 Mr. Henry Gregg obtained a patent for a let ter-opener, consisting of a thread placed in a crease of the envelope, as shown in the lower figure of our engravirg. In either case, to open the envelope you pull the thread so as to make it cut the paper. Unwary intelligence, ignorant of the profundity with which the Patent Office burrows into these subjects, would rashly assert that here was no differ ence; but the lynx-eyed genius of that institution pityingly points to a knot in the thread, to be found on our lower figure by the aid of a magnifying glass, and triumphantly issues a patent on that. Single minds cannot constantly be sub jected to such stress, and a court is the obvious remedy.


Nothing short of a bench of gown-clad judges learned in the law can consistently grapple with such claims as that of Mr. Joseph A. Griffin, of Syracuse, N.Y., who, on December 7, 1875, patented the "compound as a substitute for eggs." What. for instance, are such simple legal questions as are involved in contingent remainders, the "rule in Shelley's case," and cestui qui trusts, beside the consideration of "ten parts cream tartar, three parts tartaric acid, one part alum, nine parts bicarbonate of soda," besides additions of "curcuma, sulphur, sugar, gum arabic, and starch?" It must be clear that nothing but the longest practice in digesting law can fit any one for digesting " plain cake" composed of the above appalling ingredients mixed with butter, etc., and baked in quick oven. Better is the agony of three judges with dyspepsia than that one patent for delusive eggs should be iniThenerly issued.
Then there is the great army of inventors of woman-power baby rockers, combined hair crimpers and hog scratchers, and excelsior mouse traps. Every one of them is prepared to assert that his particular invention is the discovery of the age, and probably inwardly believes that nothing short of a tribunal of archangels is really competent to pronounce upon it. Shall these men be denied the poor substitute of a bench of human judges who will investigate the scratchers and baby rockers by the light of the back numbers of the Patent Office Gazette, the common law, and the Revised Statutes?
Certainly not. Let us have that court, and at the same time any other complications which will obstruct and muddle the business of the office and provide more expensive and useless officials for the inventors to pay for.
None more than ourselves applaud the well-meant efforts of Commissioner Spear in the direction of useful reform; but he can readily inform himself of the fact that the great majority of applications for patents are based on very simple devices, and that it is rarely that one is so obscure as to be beyond the intelligence of any well versed mechanic. This being the case, there certainly is, or ought to be, ample ability among the members of the examining corps to meet all questions which may come before them, and consequently a new Patent Court is as unnecessary as it is objectiona-
ble.

## THE ANNUAL REPORT OF THE COMMISSIONER OF

 PATENTS.From the above document, which has just been sent to Congress, we find that the amount of moneys received during the year from all sources was $\$ 732,342.85$. The expenditures were $\$ 610,475.12$, which is less than any year since 1871 , not withstanding the expenses incurred during the fire. The re ceipts exceeded the expenditures by $\$ 121,867.73$, which, added to the present surplus to the credit of the Patent Office in the U. S. Treasury, leaves a total balance of $\$ 1,114,222.40$.
The following shows the business of the office for 1877

| Applications for patents and designs | 20,308 |
| :---: | :---: |
| Patents and designs issued | 13,619 |
| Applications for reissues | 639 |
| Patents reissued | 568 |
| Patents extended | 2 |
| Caveats filed | 2,809 |
| Patents allowed, but not issued for want of final fee | 807 |
| Application for trademark registration | 1,416 |
| Trademarks registered | 1,216 |
| Applications for registering labels. | 632 |
| Labels registered. | 392 |

The Commissioner states that the photo-lithographing of the back issues of the old patents is still going on, and it is the back issues of the old patents is still going on, and it is
hoped that by the end of next March the tracing of the hoped that by the end of next March the tracing of the
entire number of old drawings will be completed, ready for entire number of old drawings will be completed, ready for
the photo-lithographers. In connection with this he suggests that the specifications of the back numbers of patents should also be printed, and asks for $\$ 20,000$ for a commencement of this important work, which is very much needed.
There is a falling off in the business done by the office as compared with some previous years, but this the Commis sioner attributes to the fact that the increased facilities which the office by its publications has afforded the public for examination into the state of the various arts have affected and will continue to affect to a great extent the number and will continue to affect to a great extent the number. and
character of applications as well as of patents. A less character of applications as well as of patents. A less
number of applications covering old fields of invention will be filed, and a corresponding improvement will be found in the character of patents granted.
This is undoubtedly true, and is excellent evidence of the double advantage of publishing complete illustrated descriptions of all patents obtained as widely and at as cheap a price as possible. They spread valuable information among the public, and enable inventors to keep posted, both as to the most recent advances in invention and also as to the tendency of inventive genius, for, as we have pointed out before, invention runs in grooves, and there appear to be times when the world is ripe for certain original ideas, and these often simultaneously appear from different sources. The recent simultaneous discovery of the possibility of liquefying the so-called permanent gases by two investigators is another re markable example in point of the workings of this possible law of invention.
The following table shows the number of patents issued to each State and Territory during the year:


In the matter of ratio of inventors to population Connecticut leads, the proportion being 1 in 885 ; this in any other State or Territory does not exceed 1 in 1,000 . The Commissioner proposes another change in which we are cordially in agreement with him, namely, the dispensing with models in applications except in special cases-" where the capability of the machine to operate is called in question, or where the examiner is in doubt as to the sufficiency of the drawing, or where models may be necessary for ready illustration on appeals or in interference cases." This change, if carried out, will, as the Commissioner states, relieve the inventor of a large part of the expense attending applications for patents. The Commissioner has only in this case to issue an order that hereafter models will not be required except in such special instances where they may seem necessary, as indı cated above. No new legislation is necessary. The Commissioner has nothing but precedent, which is not obligatory, to set aside, as under the law applicants are to furnish models when "required by the Commissioner."

## Indestructible Writing Ink.

An ink that carinot be erased even with acids is obtained by the following receipt: To good gall ink add a strong solution of fine soluble Prussian blue in distilled water This addition makes the ink, which was previously proof against alkalies, equally proof against acids, and forms a writing fluid which cannot be erased without destruction of the paper. The ink writes greenish blue, but afterward turns black.-Pharmacist.

