

RULES AND PROCEEDINGS OF THE GERMAN PATENT OFFICE.

NOTICE.—Pursuant to section 20 of the Patent Law of the 25th of May of this year, we issue the following provisions concerning the notification of inventions:

SECTION 1. The application and every accompanying drawing or specification must be signed by the applicant or his attorney. Explanations of the subject of the invention may not be given in the application itself, but only in the documents annexed to it.

SEC. 2. Each annex to the application must be furnished with a consecutive number. Each annex is, as far as it does not deal with models or samples, to be handed in in a duplicate.

SEC. 3. The application must contain the statements as hereafter required, as far as possible, in the given order of succession:

a. A short but accurate specification of what forms the subject of the invention. From the specification there must distinctly appear the claim for a patent — *i. e.*, that which the applicant considers new and patentable.

b. The petition that a patent be granted for the subject of the invention so described. If only an additional patent is to be granted (section 7 of the Law of Patents), the applicant must expressly state this and the original patent, as also its number and the year when granted be stated. If the patent is only to take the place of an existing patent (section 42 of the Law of Patents), the applicant must likewise expressly state this, and, at the same time, add thereto the documents about such patents in place of which the patent is to stand. The petition is in this case to be confined to a transformation from a territorial patent to one for the whole empire. If at the same time a patent is claimed for an improvement, a special petition must be made for the same.

c. The declaration that the governmental charges of twenty marks (section 20 of the Law of Patents), is already paid into the treasury of the Patent Office, so that it will be paid in along with the application.

d. The statement of name, rank, and residence of the applicant, as far as the application is effected by an attorney. The latter must hand in a power of attorney, signed by the applicant. If an attorney is appointed for an applicant living within this realm, and if the attorney is to be entered as such in the patent roll (section 19 of the statute), then it must be expressly stated in the power of attorney.

In appointing an attorney on the part of an applicant for a patent not residing in this realm, it is taken for granted that such agency extends to the rights and powers specified in section 12 of the statute.

e. The enumeration of the different annexes to the application, giving their number and contents.

SEC. 4. For all written documents of applications, paper of the size of thirty-three centimeters height by twenty-one centimeters must be used. For the writing, deep black ink (not strictly) must be used. Of each of the drawings there must be handed in duplicates. For the first and principal copy, white, stout, and smooth drawing-paper (so-called Bristol or carton paper) of the size of thirty-three centimeters height by twenty-centimeters breadth; or thirty-three centimeters height by forty-two centimeters breadth, or thirty-three centimeters height by sixty-three centimeters breadth, must be used.

The drawing, as also all writing on the principal copy, must be done with China ink, in deep black lines — not be colored or tinged. The drawing must be enclosed by a plain marginal line, which is to be drawn two centimeters back from the edge of the paper. All writing must fall within the space enclosed by the marginal lines.

The signature of the applicant is to be affixed in the lower right-hand corner. On the upper side of the sheet a space within the border-line, of at least three centimeters height, must be left free for number, date, and a specification of patent.

As a second copy, a tracing of the first and principal copy on drawing-cloth is to be handed in. In this copy the use of mixed colors is permitted and desired. The drawings may not be folded or rolled. They must be packed so as to arrive at the Patent Office in a smooth condition.

SEC. 4. All weights and measures must be given according to the metrical system, statements of temperature according to Celsius, those of density as specific weights.

SEC. 6. The specifications must confine themselves to what is pertinent towards forming a judgment of the application for a patent. Explanations of a general character should be avoided. Moreover, the specifications must be so arranged as to adapt

themselves for publication on granting of patent. In the summary in conclusion the claims for a patent should be specified more closely than done in the application.

SEC. 7. The subjoining of models and samples is desired so far as it may aid in giving a clear idea of the invention. It should be done when without this the judgment of the application for a patent cannot take place with any certainty.

COSTS AND CHARGES.

The costs and charges, which, according to the provisions of the Patent Law of 25th of May of this year, must be paid into our Treasury, are, for the sake of convenience, not to be sent in with the applications, but, by post-office order, addressed to the Treasury of the Imperial Patent Office. The post-office order must, however, if it is a case of a grant of a patent, show the name of the applicant, and the subject of the application — in case of complaint the name of complainant, and the cause of complaint; in other cases, that of the patentee, the subject of the patent, and the number which the same has in the patent roll. The Treasury furnishes receipts only if expressly wished for; and the cost of postage in such case to be borne by the receiver of such receipt.

VULCANIZING WOOD.

A New York firm claims to have discovered a process for vulcanizing wood, requiring, when the wood is green from the mill or tree, only from four to six hours in the preparation. By this process it is said that all kinds of wood and lumber are made hard. The fir, the cotton wood, the spruce, and even cedar, when treated by it, are rendered hard enough to be used as ties, and as such will last for an indefinite time, without being worn by the rail, or destroyed by decay.

But the effect of the treatment upon the southern yellow or pitch pine is really marvellous. The pitch is converted into oil, which is diffused through, and becomes homogeneous with, the fibre; it is then solidified and converted into resin. This imperishable substance fills all the pores, and so cements the fibres of the wood as to make it harder and stronger than oak, while it prevents it from absorbing air or moisture, from shrinking, cracking, warping or expanding.

But there are many other uses for which wood and lumber preserved by this process will prove invaluable. The railroads are maintaining 125,000 miles of fencing, the annual expense of repairing which is \$10,000,000. This is another very large item which might be saved to the stockholders. Bridges can be made of wood treated by this process, which will be as strong, as safe and lasting as those of iron, and at a much smaller cost. The annual expense for repairing the woodwork of railroad cars is very great, especially freight cars, which are always exposed to the weather, and are constantly rotting. The lumber prepared by this process has the appearance of the precious woods, when manufactured and used for mechanical purposes. The vulcanizing develops in it, and throughout every portion of it, a susceptibility of the highest polish, more beautiful and more lasting than the most expensive varnish. A polish, which is not tarnished by any exposure to the weather, nor affected even by the strongest acids. The construction of cars of lumber so inexpensive, which will not rot, which will not swell, nor shrink, which requires no oil, paint or varnish, must result in another great saving to the railway companies.—*National Car Builder*, viii, 133.

PRESERVATION OF BELTING.—In order that belting of cotton or linen should have both strength and flexibility, together with increased adhesive power, they should be thoroughly soaked in linseed oil varnish. If the belting be new, the varnish may be applied with a brush until no more will be taken up, whereupon it may immediately be used without any preparatory drying. After having been in use for some weeks, a second application of the varnish should be made. Cotton or linen belting thus prepared will neither contract nor stretch, and will always be pliable and unaffected by change of temperature. The adhesion of the belt to the pulley is likewise increased by the varnish, while steam and acid fumes have no effect upon the belting at all.—*Maschinen-Constructeur*.

A REMARKABLE RAILWAY BRIDGE.—The new iron railway bridge over the river Douro, near Porto, Portugal, crosses it with an arch of a single span which measures 160 meters (520 feet) and has a rise of 42 meters (138 feet 6 inches). It is crescent-shaped in form; that is, the extrados and the intrados, which are connected by struts in the form of St. Andrew's cross, are farthest apart at the crown.