

is availed of by the public generally, that the right of such registration is not, to any considerable extent, understood, and that the privilege is not to a proper degree appreciated.

Prints and labels are alike as to requisites for registration: they must both have artistic merit, and a print or label which is merely descriptive in words of the article or the contents of the article to which it is applied or to which it relates, involving nothing beyond the skill of a typesetter, is not proper subject matter for registration. But, if the label or print has artistic merit, it may be registered, if properly applied for. This requisite of artistic merit is essential to the registrability of both prints and labels; but in the respect of use, prints and labels differ.

The Patent Office rule following the statute defines a label as "a device or representation borne by an article of manufacture or vendible commodity." Note, then, that the label is borne by the article; that is to say, applied to the article. Now, the same rule defines a print as "a device or representation not borne by an article of manufacture or vendible commodity; but in some fashion pertaining thereto, such, for instance, as a pictorial advertisement thereof." This is the important difference between a label and a print, the former being "borne by an article of manufacture" and the latter "not borne by an article of manufacture."

If a print "bears a device capable of sequestration as a trade mark," it can be registered as a print without respect to the registration of such device as a trade mark. (Ex parte United States Playing Card Company, 63 O. G., 206.) This is because a print, not being applied to an article of manufacture, is not in any sense a trade mark.

A label being in its application to the article of merchandise more like a trade mark, it was held, prior to ex parte Mahn, 82 O. G., p. 1210, that if such label bore a device capable of registration as a trade mark, "it could not be registered as a label until after the trade mark was registered." The said decision, in ex parte Mahn, has modified the practice of the Patent Office, the Commissioner of Patents saying: "There is no authority of law for the requirement for the registration of the trade mark matter contained in a label as a condition precedent to the registration of the label." This, of course, is based on the assumption that the label is a proper label for registration, that is, "of artistic merit, indicating pictorially or otherwise the article or the contents of the article to which it is to be applied," as, if the label is simply a trade mark, it cannot be registered as a label.

Inasmuch as both prints and labels are registered, if at all, under the copyright law, registration must be effected before the label or print is used or published.

It is evident, therefore, that a print or label to be registered need only, in the case of a label, involve artistic merit and indicate, pictorially or otherwise, the article or the contents of the article to which it is applied; and in the case of a print, involve artistic merit and in some fashion pertain to the article of manufacture or vendible commodity, and that registration be effected before publication or use.

Whether registration as a label will protect use as a print, or vice versa, is not settled; but there is no reason why the same device or representation should not be registered to the same applicant, both as a print and as a label, and the slight expense of registration recommends such course.

Prints and labels, when used, should be marked "copyrighted," with the date—not "registered."

The very slight expense of applying for copyright of labels and prints is worthy of consideration, especially as the government fee is refunded if registration is refused.

In these times, when there is so much activity in advertising wares, when prints are so commonly used on store counters and walls in such advertising, and when the printers' and lithographers' arts render the production of artistic prints and labels so economical, it seems advisable to call the attention of the mercantile public to the present practice as to registration, in order that they may secure the protection for their artistic productions afforded by the statute.

THE VISIT OF COLONEL KRAG.

Colonel Ole Herman Johannes Krag, chief of ordnance of the Norwegian army and inventor of the Krag-Jorgensen rifle, who recently came to this country on a leave of absence, has returned home. Colonel Krag was deeply impressed with the United States, and especially with the intelligence of its citizens. "For this reason," he said, "I believe that the United States can, out of such material, equip soldiers to serve behind rifles much more quickly than any other country." The Krag-Jorgensen rifle is fully described in our "Army and Coast Defence" number. The United States government secured the patent for the manufacture of this rifle in this country by paying Colonel Krag a royalty of one dollar per rifle. About 75,000 rifles are already in the hands of the military authorities in this country, and the government ar-

senal at Springfield is now turning out the rifles at the rate of 250 a day. In a short time the output will be at the rate of 500 a day, and Congress has been asked to appropriate \$800,000 for the expense of manufacturing additional guns. The Norwegian and Danish armies are equipped with this rifle, and France has shown an inclination to adopt it, but hesitates because it is not a French invention.

THE HEAVENS IN AUGUST.

BY GARRETT P. SERVISS.

The long, warm evenings of August, when the atmosphere rests quiet and steady after the fierce heats of midsummer, are a joy to all lovers of the stars. Sitting on lawn or veranda, one can watch, without chill or discomfort, the merging of twilight into darkness, the gradual withdrawal of the rose and azure and gold tinted curtain that conceals the universe and the slow forthcoming of the stars—at first singly and here and there; then in pairs and sets, which forewarn the experienced star-gazer of the emergence of the constellations; and, finally, in groups and swarms and starry clouds, that have been the wonder of all the ages, and are as refreshing to the imagination to-day as they were when the shepherds watched them in Chaldea, or the old Greeks saw them overhead as they tramped across the hills of Arcadia to attend the Olympic games.

Early in the evening, at the beginning of August, the brilliant constellation Scorpio is conspicuous just above the horizon in the south. Its chief star Antares, usually described as red, is one of the most interesting in the heavens. In our latitudes a first-rate 4-inch telescope, under favorable atmospheric conditions, should easily show the minute green companion of Antares. The distance is only about three seconds of arc, and a good magnifying power, say 150 or 200 diameters, should be used. At present the planet Saturn appears as a member of the constellation Scorpio, shining a few degrees north of Antares.

East of Scorpio, where the Milky Way appears very brilliant, is Sagittarius, with the inverted figure of a short-handled dipper visible among its stars. Higher are Ophiuchus and Serpens, with Hercules near the zenith. Hercules is flanked on the west by the Northern Crown and on the east by Lyra, whose great blue-white gem Vega is one of the chief glories of the summer nights. West of the Northern Crown is Bootes with Arcturus, and east of Lyra is Cygnus, with the striking figure of the Northern Cross. South of Lyra and Cygnus the constellation Aquila attracts the eye by its singular combination of a bright star, Altair, accompanied on two sides, at a distance of a few degrees, by a fainter star.

THE PLANETS.

Mercury is an evening star and remains during August in the constellation Leo. On the 9th it is at its greatest eastern elongation and crosses the meridian about an hour and three-quarters after the sun.

Venus is the cynosure of the sunset sky, far more brilliant than Jupiter, although less than half as bright as it will be in October. The fact has recently been pointed out that, for observations of Venus, telescopes of comparatively small aperture are very effective. Daylight observations are best, and amateurs can make them without great inconvenience. It is only necessary to know nearly the place of Venus in the sky at the time of observation in order to find the planet in full daylight. During August, Venus will cross the meridian not far from a quarter before three o'clock, or, in other words, two hours and three-quarters after the sun. But it is considerably south of the sun—a fact that must be properly taken into account in searching for the planet on the meridian. On August 10 Venus will be only five minutes of arc north of the celestial equator when crossing the meridian of Washington. It will be easy to find her then, anywhere in the eastern United States, by pointing the telescope, a little before a quarter to three o'clock, toward true south, at an elevation corresponding to the difference between the latitude of the place of observation and 90°. Suppose, for instance, that the latitude is 40°, then the elevation of the telescope should be 50°. If the planet is not found directly in the field of view, a little careful sweeping will be certain to pick it up. A cap with a circular hole about half the aperture of the telescope should be placed over the object glass, unless the telescope is less than three inches in diameter. Any markings seen with certainty on the disk of Venus should be carefully recorded.

Mars is gradually coming more clearly in evidence as a morning star, although still distant and inconspicuous. It is in Taurus at the opening of the month, about 5° north of Aldebaran, and at the close it will be found just over the border in Gemini.

Jupiter, in Virgo, moves slowly eastward, passing south of the celebrated double star Gamma, in the course of the month. On the 14th Jupiter crosses the meridian at 3 o'clock in the afternoon. Jupiter and Venus approach one another, until, on the evening of the 18th, they will be only about 2° apart.

Saturn remains in Ophiuchus, just above Antares in Scorpio, crossing the meridian early in the evening.

Its chief satellite, Titan, is at western elongation at midnight on the 2d and at eastern elongation in the evening of the 10th, returning to western elongation an hour before midnight on the 18th.

Uranus is in Libra, on the border of Scorpio, a few degrees west of the double star Beta Scorpionis. Neptune remains near Zeta Tauri.

THE MOON.

There are two full moons in August, on the 1st and the 31st. The new moon occurs on the 17th, the first quarter on the 24th, and the last quarter on the 9th.

The moon is nearest the earth on the 28th and farthest from it on the 12th.

The lunar conjunctions with the planets occur as follows: Mars, 11th; Neptune, 12th; Mercury, 19th; Jupiter, 20th; Venus, 21st; Uranus, 24th; Saturn, 25th.

METEORS.

The celebrated August meteors appear on the night of the 10th, radiating from the constellation Perseus, which rises in the northeast.

A NEW CENTER OF THE PLAGUE.

Prof. Koch has announced the results of his investigations on the plague. He declared that the view entertained some ten years ago that the plague no longer threatened mankind must be abandoned, for there are now no less than four plague centers, the last of which Prof. Koch discovered in the Hinterland of German West Africa. Former outbreaks have been traced to Mesopotamia, where it has never entirely disappeared; but in China the plague is endemic, the plague center being in the Province of Hunan. There is a second plague center in Thibet; the latest outbreaks in China and India have had their origin there. The third center is in the neighborhood of Mecca, on the west coast of Arabia, and this center is of the greatest possible importance in view of the great number of pilgrims which annually visit the sacred city of Mohammed. Nothing was known of any other plague center until Prof. Koch discovered the fourth was in equatorial Africa. It was found that a devastating disease prevailed at Kissiba. Prof. Koch suspected it was the plague and proceeded from India to West Africa, and was able to diagnose the disease as the bubonic plague. Nine out of ten of those infected died. The disease was communicated to rats and monkeys, and it was found that an outbreak of the plague among rats frequently precedes an epidemic among human beings, and the rat plague may always be regarded as a salutary warning. The old explanation that it was found wherever dirt and social misery prevailed is inadequate. No satisfactory answer has yet been given as to the real origin of the disease.

DESTRUCTION OF A WAR BALLOON.

The war balloon used in reconnoitering the position at Santiago was destroyed. The balloon was held by eighteen men by a rope which was 1,000 feet long. The men moved about in various parts of the field, carrying the captive balloon with them. A telegraph wire connected the basket of the balloon with the ground, and observations were transmitted to the officers below. The balloon was received by a scathing fire. Three shells from a shrapnel battery tore great holes in it, and the showers of bullets made it resemble a great sieve. The three men who were in the basket at the time the balloon was destroyed escaped with but one slight injury. The balloon was finally landed in the middle of a stream waist deep, just as two regiments of dismounted cavalry were charging a Spanish ambush. The balloon has been an effective adjunct in reconnoitering in the Santiago campaign. It will be remembered that in the siege of Paris the invested Frenchmen sent up many balloons to carry deputies, dispatches, and mail, and Herr Krupp made special cannon to fire upon them. It consisted of a long barrel mounted on a standard so that it could be readily turned in any direction. The standard was secured to a four-wheeled platform wagon.

EFFECT OF X RAYS ON COLORS.

Sir William Crookes has shown that various gems and minerals glow with a beautiful tinted phosphorescence in the cathode rays of his vacuum tubes, and M. Leconteur and Mr. A. C. Cossor applied this fact to the examination of precious stones and minerals of uncertain constitution. A large number of gems of various kinds, shown under the rays, were quite altered in color by the phosphorescence. Four large Burmese rubies, for example, weighing twenty-two and a half carats, glowed a fiery red. Siamese rubies were easily told from Siamese by the phosphorescence. Diamonds became a light blue or green; moonstone gleamed like moonlight just after the rays were withdrawn from it; American dolomite was red; tungstate of calcium, a turquoise blue; sea shells, a rich golden yellow and light blue, and so on. Questionable stones can thus be tested without injury to the gem. Moreover, the method is applicable to toxicology in the case of alkaloids, and will be useful in medical jurisprudence.