## PHOTOGRAPHIC NOTES.

Mounting Large Photographs.—The following is recommended by Mr. Davanne as a method he observed in France for mounting large photographs, which we strated, but it has brought with it an element of danfind reported in the British Journal of Photography:

cult it is to paste a photographic proof upon a large cardboard (bristol), so that in the shrinking or contrac- destined, in the near future, to largely supplant all wires when it may become necessary without risk to tion of the proof no wrinkle or ridge should be apparent, but the whole lie perfectly flat.

the size of the cardboard, on the bottom of which the tain restrictions of law, both as to their manufacture cardboard is laid. A kind of frame on hinges, joined to and use. Gas companies are compelled to furnish a the box in the form of a lid, is now closed and fastened gas not below a certain degree of luminosity, and not down to the box by means of hooks. This frame or lid to contain more than a certain percentage of impurihas an opening in the center a quarter of an inch each ties. Coal oil is likewise restricted to a minimum deway larger than the proof or print to be pasted. The gree of fire test, below which its use is prohibited. The box is only about one inch high, and on the bottom same is true of naphtha and burning fluids, which are is placed a piece of wood about half an inch thick, not to be stored in quantities, except under certain rebeveled off toward the four sides, and of the exact size strictions. All of these safeguards are intended to lessen of the print to be pasted. In the center of the bottom the danger to the community from their use, and thus of the box is fastened a strong screw, so as to raise or decrease the danger from conflagrations that would crease. fall the piece of beveled wood. Its use can now easily otherwise arise. Nevertheless, in spite of all these prebe guessed. The bristol is placed in the box, the lid cautions, fires continue to occur, and in many cases of which is closed, the screw is turned, the center of from direct infractions of these laws. the bristol is pressed up the hole in the lid. The pasted | The principle of electric lighting may be said to be a proof is taken and placed on the bristol, the square comparatively new discovery. Intensity of light means hole serving at the same time as a guide. The quarter intensity of heat, and heat results in fire unless carefulof an inch given to the opening on each side allows ly guarded against. So far, while its danger to the unthe proof to be taken by the fingers and placed in its sophisticated is fully admitted, no laws, save in a few proper place with the greatest ease. It appears that local instances, have been enacted for its use. The systhis bulging out of the middle of the cardboard before tem is yet in its infancy, and while its powers and danpasting on the proof gives perfect flatness to the whole gers are freely acknowledged, there are but few that when dry.

One of the members, at the instigation of M. Davanne, had one of these boxes made, and he assured the members that he was very much pleased, and could recom- and while the latter have a vital interest in assuring to show that it exists. mend its use.

proofs flat, "or flat enough for every purpose," simply exact size of the print to be pasted, and, after having familiar with the nature of the force employed. Under In fact, the two methods have for object to raise the buildings now in course of erection, or in other buildcenter of the cardboard, so that when the print dries ings altered for this purpose. and contracts the cardboard becomes flat. Both these dodges are good, but the latter has in its favor its simplicity.

# Gas Engines for Large Powers.

being built, are now busy with large motors of this the short circuit made. class for driving mills and factories, instead of the usual steam engine. These gas engines are used in connection with a special gas-making plant, and it is stated substance, but so far there has been nothing of the that whereas the average consumption of an ordinary kind that is not open to some objection. The oversteam engine is 31/4 lb. of coal per horse power, the cor- | charging of the wire from too powerful a current will responding consumption of the gas engine is only  $2\frac{1}{4}$  generate a heat that will cause it to become red hot, lb., and this economy has induced several works to re- and in this condition the covering will burn off, leavplace their steam engines by large gas engines. Among ing the wire exposed to convey its heat to surroundthese works are the zinc rolling mill of W. Grillo, in ing objects. Even in the absence of this cause, the Oberhausen, where ten gas motors supply an aggreate wires may be left exposed in such a manner that the of 244 H. P; the Mechern Berg Werk Verein, where coverings may become rubbed off by the contact of seven motors supply an aggregate of 174 H. P.; the surrounding objects. So that in either case the in-Russian company for the manufacture of powder in sulation is destroyed and the current set free to make Schlusseburg, where seventeen motors supply an aggre- i mischief. gate of 194 H. P.; a sugar factory in Elsdorf, where six motors supply an aggregate of 191 H. P.; the water- it is not denied that they can be overcome or conworks of the town of Coblenz, with 120 H. P.; the trolled. The question is, to how great an extent do lighting); and the opera in Frankfort-on-the-Main, task of guarding against them? The losses by fire rewith two motors, having 100 H. P.

# Meteor Showers.

meteor streams with which the earth comes in contact proper precautions are taken on the side of safety. are derived from the earth itself; that is, thrown off At the same time, inasmuch as the insurance compaby volcanic action at a time when the internal forces nies are inaugurating a more thorough system in re- House of Lords that by long exposure to heat not of our planet were sufficiently active to give the initial gard to the inspection of risks, it would cost them much exceeding that of boiling water, timber is velocity, some twelve miles a second, requisite to carry but a trifle additional to secure competent men for them beyond the earth's attraction. Comets, which this branch of the subject.

## The Electric Light and Fire Losses.\*

The importance of the electric light as a factor in the advancement of human progress has been fully demonger by destruction of property that must be examined suggestion has been made that firemen be provided All amateurs, as well as the trade, know how diffi- into, and, if possible, eliminated.

other methods of illumination at present in vogue. All other forces now employed, such as illuminating unless the precaution was observed of keeping the The photographer in question had a large flat box of gas, coal oils, and fluids of like nature, are under cer-

have the technical knowledge sufficient to understand what is or is not safe in regard to its employment. Everything has to be left to the companies themselves; the public that this great force can be made a tractable faster than they can be furnished. For this reason by cutting out a thick piece of blotting paper of the much of the work must be deputed to men only partly dampened it, he laid it upon the back of the cardboard these conditions it will naturally follow that many misfor about fifteen minutes before pasting it on the print. takes will be made in running wires for this purpose in

The law of electric currents is that they will complete their circuit by the shortest possible route that lies open to them. The danger lies in their possible dicarelessness. In doing this, there is a consequent dan- John H. Shaw. The works at Deutz, where Otto's gas engines are ger of fire, if anything of a combustible nature lies in

> The only safeguard at present employed is the insulation of the wires by some good non-conducting

While admitting the dangers as at present existing, affect the public in general who are uninsured. It or the injunction will be refused. would seem, then, that the cities in which this light Prof. Richard A. Proctor maintains that most of the is used should appoint suitable men to see that all

impunity; but the electric wire, heavily charged, as it must be, means a physical danger, and perhaps death, to the man who attempts to carelessly handle it. Cases of this kind are numerous, so much so that the with a pair of cutting nippers having glass or other There is no denying the fact that the electric light is insulated handles for the purpose of cutting these the individual. Even this would not always be safe handles perfectly dry when using, as water is an excellent conductor.

> While the benefit of this new force is acknowledged. public property should not be carelessly exposed to danger pending the time when a safer method of governing this force shall become known, and when experimental theories shall give place to practical success. In the mean time it behooves the fire underwriters to be on their guard against a force which threatens to materially add to the losses, and which losses show a tendency to increase rather than to de-

# **●**-{-**●** ≻-4 DECISIONS RELATING TO PATENTS. U. S. Circuit Court.-District of Connecticut.

ENTERPRISE MANUFACTURING COMPANY, PENNSYL-

VANIA, v. SARGENT et al. PATENT MINCE MEAT MACHINE.

## Shipman, J.

A new combination of old parts for attaining an object may sometimes, and perhaps often, be so obvious as to merit no title to invention.

While in ordinary cases of new combinations of old parts for attaining an object novelty and utility are evidence of invention, there should be other evidence

Evidence of invention, in addition to novelty and Another member informed us that he had always slave to man's use, it is obvious that the demands of utility, may often be found in the machineitself, which succeeded without any apparatus whatever to get his the public call for skilled workmen in this direction shows that it came from a creative mind, or the necessary evidence may sometimes be found in the history of the invention.

> In this case the patentee accomplished a new and beneficial result by means which others had been near to and apparently wanted to find, but did not see. *Held* that he was entitled to be styled an inventor.

The first and second claims of letters patent No. 271,398, of January 30, 1883, to John G. Baker, for a machine for mincing meat, considered, and *held* not infringed by the defendant's machine, patented in reversion from their proper intent through accident or issued letters patent No. 10,717, of April 17, 1886, to

#### U. S. Circuit Court.-Southern District of New York.

COLGATE V. THE WESTERN ELECTRIC MANUFACTURING COMPANY.

#### Wallace. J.

Pardee, J.

Infringement consisted in the sale of the patented article. Proof of an established license fee for the use of the invention *held* insufficient to authorize a recovery

Royalty paid for a license to sell and transfer to purchasers the right to use is not the criterion of the value of an ordinary selling right.

## U. S. Circuit Court.-Eastern District of Louisiana,

GAIL et al. v. WACKERBARTH et al.

# TRADE MARK.

Parties will be restrained by injunction from putting up goods in packages in imitation of others in the municipality of Prague, with 150 H. P. (for electric these dangers exist, and on whom should fall the trade calculated to deceive the buying public and to defraud the original users of such packages, but such sulting from the careless employment of this force will imitation must be sufficiently close to have that effect

## Spontaneous Combustion of Wood.

Mr. Braidwood, superintendent of the London fire engine establishment, stated before a committee of the brought into such a condition that something like spontaneous combustion takes place, and that it may

probably pass beyond the limits of its attraction.

.... Varnish for Metals.

A so-called vulcanized varnish is recommended by the Zeitschrift fur Maschinenbau und Schlosserei. This is ordinary linseed oil varnish, containing 5 to 10 per common, and no doubt some method will be devised cent of sulphur. A solution of flowers of sulphur in by which it may be handled more safely. hot turpentine oil is prepared, to which a corresponding quantity of linseed oil varnish is added, and the causing fires, there is another nearly as great, from solution of asphalt, excellent weather proof paint is obtained for application in any color to metallic surfaces.

he regards as the parents of the meteor streams, he Undoubtedly, as time progresses, the public at large take eight years for the heat from pipes charged with thinks may have originated outside our solar system. will become better acquainted with the nature of this or used to convey steam, hot water, or heated air, Most of the comets whose orbits belong to our system, force, and be able to use ordinary discrimination in laid among the joists of a floor, or in the heart of a he thinks originated in the larger planets. The sun is its employment ; but that time is still a long way off, partition, or elsewhere in a building, incased in timnow, perhaps, giving birth frequently to comets which and in the interim other precautions are necessary. ber, to induce the condition necessary to the actual It will be remembered that the introduction of coal oil ignition of the timber.

or kerosene was followed by numerous explosions and fires, though at the present day its use is regarded as comparatively safe. The same result will follow in the case of the electric light when it becomes more

Apart from the danger existing as a direct means of

\* Insurance World.

## Fluorescence of Bismuth.

Sulphate of bismuth, according to M. De Boisbaudran, does not fluoresce in a vacuum when submitted to the action of the electric discharge; but when mixed with sulphate of calcium, it gives out a fine reddish orange fluorescence. Sulphate of bismuth with sulphate of strontium gives a bright orange fluorescence; whole well stirred. This mixture preserves metals the present plan of stretching the wires on poles in and with carbonate of strontium a blue light. With against oxidation by transforming their surfaces into the public streets. There are many cases where the sulphate of magnesia, sulphate of bismuth gives an sulphuric combinations. By mixing vulcanized var- wires thus exposed are a menace and obstacle to the orange fluorescence. M. De Boisbaudran has applied nish with non-metallic coloring substances, or with a firemen in the performance of their duties. The or- this method to the discovery of traces of bismuth in a dinary telegraph wire can be cut or handled with number of chemical products and reagents of the laboi ratory, several of which were reported to be pure.