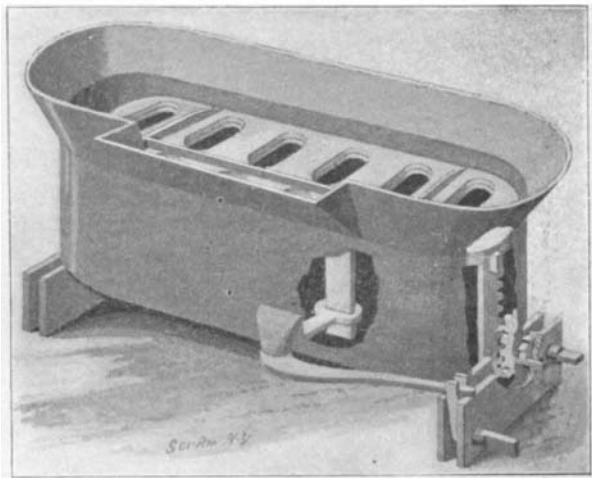


A REMOVABLE FIREBOX AND GRATE FOR COOKING STOVES.

A novel form of firebox for attachment to cooking stoves was recently patented by Andrew A. Witz, of Harvey, No. Dak., the construction of which is certainly ingenious.

The firebox is constructed of sheet metal in oval form and is formed with a top flange whereby it is adapted for insertion in a cooking stove. The end walls of the firebox are formed with grooves which are intended to act as guideways for vertically movable rack bars carrying a grate. A slidable portion rests flat upon the grate, both the grate and the slidable portion being provided with slots or openings which, when brought into registry, permit the entrance of air to spread combustion and to permit the discharge of ashes, cinders and the like. The racks of the grate are operated by segment gears keyed on a transverse shaft with which a handle lever can be engaged. By means of the handle, the shaft can be rotated so that the segment gears are caused to raise or lower the rack bars and consequently the grate. The shaft is locked and the grate held in any desired adjustment by means of a ratchet segment and a slidable dog.

The slidable part superposed on the grate is provided with a depending arm engaged and operated by an elbow lever, the outer end of which is loosely connected with the lever of a short rock-shaft having its bearings in parallel plates forming an attachment of the firebox. By oscillating the rock-shaft through the medium of the lever handle, the elbow lever will be caused to reciprocate the sliding portions superposed on the grate. In order to permit such a movement of the superposed part, the grate is necessarily provided with a slot in which the arm previously mentioned works. By reason of the adaptation of the depending arm to slide in a slot formed in the inner end of the elbow lever, provision is made for rock-



A REMOVABLE FIREBOX AND GRATE FOR COOKING STOVES.

ing the grate whatever may be the elevation or vertical adjustment. In other words, the sliding engagement of the bar and lever arm is the same whatever be the position of the grate. It is even practicable to shake the grate while it is being raised or lowered.

This improved firebox, with its grate adjustment, can be used in connection with the old forms of cooking stoves. The firebox is designed to contain any kind of fuel. It is apparent that the openings of the grate and its superposed portion amply provide for the admission of air, and that the draft may be perfectly regulated. By adjusting the superposed sliding part, it is possible to close the openings more or less. When there is a comparatively small quantity of fuel on the grate and the degree of heat corresponds, the grate can be raised to bring the fuel surface nearer to the bottom of the pots, kettles, or other cooking receptacle placed in the stove holes. If there be a comparatively large amount of fuel on the grate, and the combustion and heat are greater than required for cooking purposes, the grate can be lowered in order to lessen the effect of the heat upon the cooking receptacles.

Contents.

(Illustrated articles are marked with an asterisk.)

Air, compressed, applications...	344	Notes and queries.....	353
Automobile racing.....	347	Patent department.....	348
Bail supporter*.....	348	Phonographs, horns for.....	349
Battleships, latest*.....	345	Railroads, underground*.....	345
Burglars' tools, electric.....	348	Rubber, substitute for.....	349
Dippers*.....	348	Science notes.....	341
Electrical devices*.....	349	Shell, high-explosive test of*.....	338, 340
Firebox and grate*.....	350	Shell test, high-explosive.....	340
Gas, natural.....	340	Speed records, automobile.....	347
Headlights, locomotive.....	347	Spiders, useful*.....	343
Heater electric*.....	348	Steel-making process.....	342
Heavens in December.....	341	Supplement, current.....	347
Hydraulic plant.....	343	Telegraph, Cape to Cairo.....	343
Ink well*.....	348	Tesla's patent.....	348
Inventions, index of.....	351	Thermo-electric couple.....	340
Inventions, sorely needed.....	349	Trap*.....	348
Legal notes.....	350	Wheel, ballbearing*.....	349
Nernst lamp, improvements in.....	349		

Legal Notes.

**The Harvey Patents.**—Following the action of the government in refusing to recognize the validity of the Harvey patents for face-hardening armor plates, comes the filing of a suit in the Court of Claims by the Carnegie Steel Company to recover from the United States all the royalties paid. The question at issue involves the point whether the Carnegie Company was actually required to pay the royalties exacted by the patentees, and whether the contractor was bound by this requirement, thereby rendering the government liable to reimbursement, despite the subsequent declaration that the patent was void. It had been agreed that if the Carnegie Company was to pay royalties for the right to use the Harvey process, the United States would reimburse the company for the royalties, provided the sum thus paid did not exceed one-half of one cent per pound of armor delivered. On April 1, 1899, royalty was paid to the amount of \$8,024.45 for 1,604,890 pounds of armor plate. The Carnegie Company demands reimbursement for that amount in accordance with the contract made with the United States government. The United States has failed to live up to its agreement. After the government refused to reimburse the Carnegie Company, the contractor declined to pay any further royalties to the patentees, who have thus far been unable to recover from the Carnegie Company. Consequently the government takes the standpoint that if the Carnegie Company has not yet been obliged to pay any other royalties under these patents, it was not required to pay those which it did pay and for which it now brings suit to recover.

**Simultaneous Expiration of Trademark and Patent.**—It is a well-known principle of law that a trademark right in a patented article expires with the patent, provided that it was not vested in the owner before the application for the patent. Up to the present time the cases to which this principle has been applied have involved merely trademarks and patents in the same country. The question arises: If the patent on the article is granted in one country, and the trademark right exists in another country, does the trademark become public property when the patent expires? The question was recently decided by the Supreme Court of the United States in the matter of the Holzapfel's Compositions Company, Ltd., vs. the Rahtjen's American Composition Company. The evidence showed that some time between 1860 and 1865 a German inventor, John Rahtjen, invented a paint which proved particularly serviceable as a covering for ships' bottoms. Rahtjen sent his paint to England and to the United States, marking it "Rahtjen's Patent Composition Paint." Not until 1873 was a patent secured on the paint. That patent was obtained in England and expired at the end of seven years, because the inventor had not fulfilled certain official requirements. Rahtjen subsequently assigned the right to make his paint to an English firm (the appellant in the present case) and to an American firm (the respondent). The respondent began this suit in equity to restrain the appellant from using the trademark which the respondent averred it had acquired in the name "Rahtjen's Composition." A United States trademark was registered in 1885, subsequently to the expiration of the English patent, and subsequently to the time when the appellant company had commenced to manufacture the paint as "Rahtjen's Composition, Holzapfel's Manufacture," and had sent it to the United States under that name.

Prior to November, 1873, the article was not patented anywhere. Therefore the Court held that a description of it as a patented article had no basis in fact and was a false statement tending to deceive. A symbol or label claimed as a trademark so worded as to contain a distinct assertion which is false will not be recognized, nor can any right to its exclusive use be maintained. After 1873 the words "Rahtjen's Patent Composition" must have referred to the English patent, since there was no other. As the right to use the word depended upon the British patent, the Court believed that the right so to designate the composition fell with the expiration of that patent, and became public property, as a description of the article. The Court found that the name given to the article was essentially descriptive, although the name of the inventor was an element. The inventor had called his product by a certain name. When the right to make it became public, how else could it be sold than by the name used to describe it? And when a person having the right to make it describes the composition by its name, and so distinctly said it was manufactured by him that no doubt could arise, how can it be held, the Court asked, that there was any infringement of the

trademark by employing the only term possible to describe the article, the right to manufacture which was open to all? Necessarily the right to manufacture and the right to use the only word descriptive of the article both became public property simultaneously. The exclusive right to use the only name which describes the composition could not be retained after the expiration of the patent; and no such right could be claimed by virtue of a valid trademark antedating the patent, for there was none. To strengthen its position the Court cites the case of the Singer Manufacturing Company vs. June Manufacturing Company, in which, however, both the patent and the trademark were domestic.

**Dental Bridge Verdict.**—Following hard upon the recent Brickell Feed-Water Heater decision, comes a United States Circuit Court verdict which may possibly render many American dentists liable to the International Tooth Crown Company for royalties due on "bridge-work." It seems that Dr. James Low in 1881 obtained a patent for the bridge-work system now followed by all dentists. He sold his invention to Dr. Sheffield for certain annual royalties and for an interest in the International Tooth Crown Company. Dr. Sheffield established a school for the purpose of instructing dentists how bridge and crown-work should be done. By licensing his graduates, he brought down upon his head a hornet's nest of opposition. Dr. Sheffield began a series of suits which, after his death, were continued by his widow. For fourteen years litigation has continued. The sum involved is \$10,000,000, which is claimed from the 17,000 dentists practicing in the United States. The International Tooth Crown Company has been opposed in Court by the Dentists' Protective Association, which has taken up the cause for American dentists. The verdict rendered in the United States Circuit Court involves merely \$500, claimed from the Hanks Dental Association of this city for infringement of the Low patent. But if the decision stands, it is possible that every dentist in the United States who has done bridge-work after the Low method will become liable. It remains to be seen whether the Circuit Court of Appeals will uphold the verdict, if the Dentists' Protective Association, who defrayed the expenses of the Hanks Dental Association, sees fit to appeal.

**Copyright Infringement.**—It is decreed in the English Fine Arts Copyright Act of 1862 that "if any person, not being the proprietor for the time being of copyright in any painting . . . shall, without the consent of such proprietor, repeat, copy, colorably imitate, or otherwise multiply for sale, or knowing that such repetition, copy or other imitation has been unlawfully made, shall sell . . . any copy . . . of the work . . . such person for every such offense shall forfeit £10." In the recent case of Hildeheimer vs. W. F. Faulkner, Ltd., which was an action brought to restrain infringement of the copyright by the defendants and to recover damages for the circulation of 1,012,600 copies of the plaintiff's pictures, it was decided by the trial court that the plaintiff was entitled to a penalty for each copy circulated, and that since this penalty must be some recognized actually existing sum in coin, the court felt itself constrained to fix the penalty at a farthing for each copy. The defendants appealed. It was stated that the cost of producing a million copies of the picture was only about £100. The questions to be decided on appeal were: (1) Whether the order for the printing of a million copies constituted a million offenses or only one offense. (2) Whether, if each copy constituted a separate offense, the penalty should be fixed at one farthing for each copy put in circulation, which would amount in the whole to £1,054 15s. 10d., or whether it should be fixed at some smaller fraction of a penny for each copy. Lord Justice Rigby held that the Court was not bound to fix a sum made up of separate sums which would have been recovered if there had been a separate action for each offense. Lord Justice Collins, although holding that the defendants were technically within the law and that they had become liable in respect of a million copies, construed the statute to mean that a maximum and not a minimum penalty was inflicted. His lordship could see no reason why in such a case the penalty should be limited in reference to a coin. In the present case the execution could only be for the aggregate sum. Lord Justice Romer, holding with his colleagues, found that if the statute were to be construed too literally the Court might be bound to award a sum which would obviously be far in excess of that which ought to be given, and the judgment would be doing that which the Act had carefully avoided doing, namely, fixing a minimum penalty. His lordship could see no reason why, when the action was brought for a number of offenses, a sum should not be given which, when divided by the number of offenses, would give for each a fraction of the lowest coin of the realm.