INFORMATION USEFUL TO PATENTEES.

From inquiries repeatedly made of us as to the rights of minors and women who secure patents, and as to who are the legitimate owners of inventions issued under various circumstances, we are inclined to believe that a few items of information under this head will interest our inventor readers at least :—

RIGHTS OF MINORS.

A minor can take a patent in his own name, but it is subject to the control of one of his parents or his legal guardian, the same as any other property that may come into his possession.

By the laws of the United States, as well as Great Britain, minors, until they are twenty-one years of age, are not considered competent to do business. Minors could not, therefore, legally transfer a patent; neither could the parent or legal guardian do this in case the term of the patent should extend beyond the time when the minor becomes of age. There are difficulties connected with the transfer of patents granted to minors which appear never to have been settled.

WOMEN'S RIGHTS.

Women can also apply for and obtain patents upon the same terms as the sterner sex. We frequently take out patents for ladies; but they do not exercise their ingenuity as much as they ought. If the woman-patentee is of age she can transfer a patent legally, and enjoy all the rights and privileges of anyone.

CURIOUS QUESTION ABOUT OWNERSHIP IN PATENTS.

Many employers think themselves entitled to all inventions made by persons in their service. This is not so unless there is a stipulation to that effect; and it is high time that employers should abandon such unjust pretensions. No inventor need fear of thus losing his right, unless it can be proved that he was employed expressly to bring out such invention for the benefit of his employer.

In regard to inventions made by slaves, it has been the practice of the Patent Office to reject such applications, as they are considered legally incompetent alike to receive the patent and to transfer their interest to others. In reference to free colored men, we believe them also to be incompetent to receive a patent, as under the United States Laws they are not regarded as citizens, and could not therefore defend a patent against infringers in the United States courts.

JOINT PATENTEES.—RECORDING ASSIGNMENTS.

There are three classes of assignments that must be recorded at the Patent Office within three months from their date, in order to insure their validity against subsequent purchasers without notice. These are, first, an assignment of the entire patent; second, an undivided portion of a patent; third, the sale of an exclusive right, under a patent, for a particular territory. Illustration: If A, having already sold a patent to B, turns knave and makes a second sale of the same property to C, who records it, (B having omitted to place his assignment on record within three months, and C having no knowledge of the sale to B), then the assignment to C will be held valid, and that to B becomes null; B's only remedy being a suit for fraud against A.

We are very frequently asked the following question: "A, B and C each own an undivided third-interest in a certain patent. Can A proceed to manufacture and sell the patented article whenever he chooses, without the consent or without accounting to B and C as to the proceeds?"

In answer we say that A can proceed, without consent, to manufacture and sell the patented article whenever he pleases. Whether B and C can procure an order from the Court compelling A to give bonds that he will account for profits and set apart a third share thereof to each, under the direction of the Court-is a question as yet undecided.

The opinion, however, prevails that one of the owners in a joint patent may use the invention, freely, for his own benefit, so long as he does not debar the others of the right to do the same.

If an assignment of the invention is made at the time of the application, and the case is rejected after examination, and the inventor or his attorney afterward succeeds in securing the issue of the patent, by appeal or otherwise, this issue does not, as some have supposed, render the transfer invalid. The same remark also applies to a case which may have been withdrawn, and resubmitted and patented under a new application.

RECENT AMERICAN INVENTIONS.

The following inventions are among the most important of those for which patents have recently been granted, and which will be found recorded in our list of Claims.

Planing Saw.—In circular saws intended to saw and plane at a single operation it has been found exceedingly difficult to preserve the planing knives in an effective working condition, owing to the severe lateral stress to which they are subjected. In the above invention guides or supports are secured to the cutters, projecting radially beyond them in the plane of the saw plate, and working in the kerf cut by the ripping teeth. By this means the cutters are effectually preserved from deflection and breakage. The merits of this invention are due to William S. Winsor, of Port Orford, Oregon.

Combined Tent, Overcoat and Cape.—The object of this invention is to combine a tent, overcoat and cape in such a manner that the parts may be compactly folded, carried in the knapsack, be extremely light and capable, with a slight manipulation, of being used in any of the capacities above specified, so that a soldier may be protected in storm while on duty during the day, and be provided with a suitable covering at night. This ingenious article was invented by Henry J. Phillips, of New York city.

Friction Clutch.—The object of this invention is to so provide and apply friction surfaces within a pulley, or its equivalent, that the friction may be brought into action in a more effective manner than in the friction clutches heretofore used. With a view to this end the invention consists, firstly, in the use within a pulley or its equivalent, of segments of metal so combined with a sleeve fitted to slide on the same shaft on which the pulley is placed, that by a sliding movement of the said sleeve upon the shaft the said segments may be forced radially outward against the inner periphery of the pulley and so caused to produce friction by which rotary motion may be imparted from the pulley to the segments, or *vice versa;* and it consists, secondly, in so applying such segments in combination with the shaft and pulley, or its equivalent, that the centrifugal force developed in the segments by their rotary motion shall be allowed to force them outward against the inner periphery of the pulley, and so be productive of friction between the segments and pulley, and made instrumental in or accessory to the transmission of rotary motion. This invention is by Wendell Wright, of New York city.

Projectile.—This invention consists in the construction of a projectile for ordnance with its body composed of a single casting of iron, and a surrounding ring of lead or other soft metal or suitable material capable of lateral expansion, such casting being of such form that the force employed to ram it home in loading, or the force to which it is subject in its discharge, will cause it to be broken in two or more pieces, which will act in such manner as to cause the said ring to be so expanded as to fill the bore and enter the rifle grooves of the gun. It also consists in providing the hard metal portion of the body of a projectile, with projecting collars on each side of its expanding ring, for the purpose of confining the ring in a longitudinal direction, and preventing the formation on the said ring of uneven edges, which tend to deflect it from its true trajectory. It also consists in enveloping the packing ring of soft metal with a band or patch of copper or brass, corrugated longitudinally, to provide for its expansion in a circumferential direction. This invention was patented by I. P. Tice, of New York city.

Pump Attachment.—The pistons of atmospheric pumps frequently become dry, especially if used only at intervals, and as quite an imperfect vacuum can only be found when the piston is dry, considerable time is consumed in pumping before the water is raised and the pump rendered capable of operating perfectly. In many cases it is necessary to pour water into the pump in order that the packing of the piston may swell tight before water can be raised. The object of this invention, patented by John W. Lane, of Newton, N. J., is to obviate this difficulty, and to this end he attaches a water chamber or reservoir to the induction pipe of the pump near its junction with the pump cylinder, said chamber being sufficiently large and in such close proximity to the pump as to supply or fill the latter when the piston is operated, and ensure the perfect action of the piston almost immediately, even if its packing be quite dry.

Padlock.—The object of this invention is to obtain an unpickable padlock of simple construction, and consists in the employment or use of a dog so combined with a guard bar that the latter will keep the former firmly in proper position, and the key, in unlocking the lock, made to act directly on the guard bar or a pendant thereof, the two parts aforesaid forming a simple and efficient means for securing the shackle in the lock. The invention also consists in the employment or use of certain parts, so arranged as to retain a false key if inserted in the lock, so that said key cannot be withdrawn, and by being retained in the lock not only serve as a means to prevent further efforts to pick the lock, but also serve as a means to lead to the detection of the party who made the effort to pick or illegitimately open the same. The above described lock was patented by Thomas Slaight, of Newark, N. J.

Fire Escape.—This invention, patented by Aaron Shute, of Flushing, N. Y., consists in the employment or use of a flexible or chain ladder applied to a balcony of a building in such a way that the ladder may, in case of fire, be released in a moment of time by an inmate of the dwelling, and at various parts of it, and the ladder allowed to descend to the earth, affording a ready means of escape for the occupants. Patents have been applied for in England and France for this invention.

Thanks to our Cotemporaries.

To the newspaper press in the Northern and Western States we are indebted for very many excellent notices of this paper. Probably no other weekly publication was ever favored so extensively in this respect, and we take this occasion to thank our cotemporaries for the editorial courtesies they have extended to us during the sixteen years we have published the SCIENTIFIC AMERICAN. The two following are but specimens of hundreds equally complimentary, which we have clipped from our exchanges. The *Herald*, published at Winsted, Conn., says :—

Among our numerous exchanges we have no greater favorite than the SCIENTIFIC AMERICAN. Keeping closely to its proper sphere in mechanics; always instructive but never pedantic; always practical and nowise visionary; and, better than all, holding stiffly to the interests of its readers and the public, impartial, never selling its opinions or surrendering them to the interests of outside parties, it is altogether a model journal. Fretted, tired and sick of the continuous roll and rub-a-dub of politics in the common herd of newspapers, it is refreshing now and then to take up a sheet which subserves the interests of the people and the race, instead of those of a mere candidate or party. Then, again, the SCIENTIFIC AMERICAN is unquestionably foremost and first in its class. The mechanic who cannot afford to subscribe for it is unfortunate indeed.

The *Press*, published at Lasalle, Ill., appreciates the SCIENTIFIC AMERICAN, and says :—

Among all the different newspapers of this country, we think we are justified in the assertion, that the SCIENTIFIC AMERICAN, published by Munn & Co., New York, is justly entitled to be ranked among the very best. Certain it is that no one weekly paper contains more useful information for all classes of readers than this ably-conducted journal. Particularly at this time is it of great value. The able, decided position it has taken in defence of the national government in this trying hour, its faithful record of the progress of the war, its scientific articles upon the different weapons introduced in modern warfare, its numerous engravings, its correct list of all patents issued—makes the SCIENTIFIC AMERICAN of almost incalculable value to the American reader. As regards typographical execution, neatness of print, quality of paper, &c., it has no superior. Every farmer, manufacturer, mechanic, artizan, inventor and tradesman should have it.

TO OUR EDITORIAL BRETHREN.

We send a copy of this week's issue of the SCIENTIFIC AMERICAN to every newspaper published in the United States accessible to us through the mail facilities of Uncle Sam, and we take this occasion to thank our brethren of the press for their uniform courtesy toward us ever since we commenced the publication of this journal. Your friendly aid, thus cordially extended, has aided us materially. We acknowledge it with gratitude, and still further appeal to you to speak a good word to your readers in our behalf. To all such journals as publish our prospectus we shall send the SCIENTIFIC AMERICAN one year without an exchange, and would be glad to have such papers as do so sent marked to our office.

THE London *Times* declares that while steam navigation has been a scientific success it has been a pecuniary failure, inasmuch as all the lines of ocean steamers require enormous appropriations from the government to keep them afloat.

PATENTS FOR SEVENTEEN YEARS.

The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from **$30** down to **$15**. Other changes in the fees are also made as follows:—

On filing each Caveat	$10
On filing each application for a Patent, except for a design	$15
On issuing each original Patent	$20
On appeal to Commissioner of Patents	$20
On application for Re-issue	$30
On application for Extension of Patent	$50
On granting the Extension	$50
On filing Disclaimer	$10
On filing application for Design, three and a half years	$10
On filing application for Design, seven years	$15
On filing application for Design, fourteen years	$30

The law abolishes discrimination in fees required of foreigners, except in reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (exceptin cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submitit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of $5, accompanied with a model or drawing and descr ption, we have a specialsearch made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the Inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name markedon them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & Co., No. 37 Park-row, New York.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is $10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does no limit the issue of Patents to Inventors. Anyone can take out a Patent there.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered.

Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING NOVEMBER 12, 1861.

Reported Officially for the Scientific American.

THE PRINTING OF PATENTS ABANDONED.

The plan adopted by Commissioner Holloway of printing the specification which forms part of the Letters Patent, he has been obliged to abandon owing to the reduced receipts of the Patent Office. Hereafter, for a time, the specifications will be engrossed on parchment as formerly. This change will obviate the great delay which has attended the issuing of patents after sealing, but the papers do not go out looking so neatly. We hope the receipts of the Office will soon justify the extra expense which attended the printing.

*** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

2,684.—D. B. Abbey, of Horse Head, N. Y., for an Improvement in Corn Planters:

I claim the swinging seed tubes, L, with the collars, g, fitted on them and provided with the furrow shares, O, in connection with stocks or bars, P, attached to the lower ends of the tubes, L, and provided with the covering shares, Q, all being arranged to operate as and for the purpose specified.

[This invention relates to an improvement in that class of corn planters which are designed for planting corn in check rows. The object of he invention is to obtain a machine of the class specified, which can be operated by a single person—the driver—no attendant being required to operate the seed slide.]

2,685.—Albert Anderson, of Bridgeport, Conn., for an Improvement in Roller Skates:

I claim the construction of wheeled skates with a large front wheel, D, substantially as shown and described, when the axis of said wheel is arranged above that portion of the stock which receives the ball of the skater's foot so that obstructions may be easily mounted, and so that the skater will be prevented from falling forward as described.

I also claim the construction and arrangement of the stock, A, so that its rear portion will be higher than the part which receives the ball of the foot, so that the weight of the skater will be partially thrown forward upon the large front wheel, and so that the skater will be prevented from falling backward; all as set forth.

[This apparently is a great improvement in roller skates, and will insure their general adoption. The character of the invention will be fully understood by the claim.]

2,686.—Silas Barker and A. H. Smith, of Hartford, Conn., for an Improvement in Water Meters:

We claim, first, The arrangement of the cylinder, A, and the hollow piston, B, said piston having an outlet, H, from one end.

Second, The combination of the piston, D, and valves, K K, said valves being on the end of the piston, D, and moved by the valve rod, F.

Third, The combination of the glass covering, L, on the piston, B, and the leather packing, M, in the center part of cylinder, A, said packing being kept fitted to the piston, B, by the springs, N, and held between the three parts of the cylinder, A A A, all as set forth and described.

2,687.—O. Billings, of La Grange, Ohio, for an Improvement in Grain and Grass Harvesters:

I claim, first, The attaching of the front end of the shoe, K, of the finger bar to the adjustable bar, N, which is connected by a pendent, P, to the lever, Q, as shown and described, for the purpose of regulating the hight of the front ends of the finger, e, as set forth.

Second, The arrangement of the spring lever, R, relatively with the lever, S, and finger bar, L, as shown and described, whereby the weight of the outer part of the finger bar and sickle is counterpoised, or nearly so, and whereby said finger and sickle may be raised bodily when required in order to pass over obstructions.

Third, The arrangement of the crank axle, E, of the track wheel, C, segment, G, and spring, H, substantially as and for the purpose set forth.

[The object of this invention is to obtain a grain and grass harvester which may be operated with but little side draught, the cutter or sickle allowed to conform perfectly to the irregularities of the surface of the ground, and at the same time admitting of being readily raised to pass over any obstacle which may lie in its path, while all the working parts are placed under the complete control of the operator.]

2,688.—Uriah Billings, of New Bedford, Mass., for an Improvement in Machines for Making Horseshoes:

I claim the combination of the goose neck, B, fixed die, C, and discharge aperture, f, with the forming mechanism, D E F G H, all constructed, arranged and operating as and for the purposes set forth.

The employment of the griper levers, J J, in combination with the traveling rollers, L L', and the extension arms, E' E', substantially as shown and described.

The combination of the vertical griping levers, J J, with the forming rollers, F F, and die, C, substantially as and for the purpose shown and described.

[This is an exceedingly simple and efficient machine for making horseshoes—one that may be operated with a moderate power and still capable of working rapidly and in a perfect manner.]

2,689.—Ransom Cook, of Saratoga Springs, N. Y., for an Improved Exhaust Fan:

I claim the construction of an exhaust fan in the manner substantially as described.

2,690.—Ransom Cook, of Saratoga Springs, N. Y., for an Improved Fan Blower:

I claim a fan blower, constructed substantially as described.

2,691.—J. M. Currier, of Newburyport, Mass., for a Substitute for Pins in Bowling Alleys:

I claim, first, The suspended pedals, A A A.

Second, The arrangement consisting of the devices, 1 2 4 and 5, for elevating the balls and depositing them on the inclined plane, 3.

Third, The devices for raising, adjusting and operating the number plates, N N N.

Fourth, The devices for raising the number plates, elevating and depositing the balls and recording the number of games played, all by a single operation as described.

Fifth, The dial, O, for recording the games as arranged and described in combination with a bowling alley.

Sixth, A bowling alley comprising the above devices constructed and arranged as fully shown and described in the specification and the drawings accompanying the same.

2,692.—Loyd Day and Milton Day, of Carrol County, Md., and Andrew Mercer, of Richmond, Howard County, Md., for an Improvement in Railroad Rails:

We claim a new and improved form of continuous railroad rail and a new method of combining the triangular bar with the chair or base bar for its reception with braces, supports or fastenings, substantially as described.

2,693.—K. H. Elliott and James Brown, of Morrisville, Vt., for an Improved Revolving Clothes Dryer:

We claim the frame, E, in connection with the lifting rope, H, clamp, J, swivel-eye, L, and block, D, the latter being connected to the horizontal arm, A, by the swivel connection formed of the pin, C, and hook, B, all arranged substantially as and for the purpose set forth.

We further claim the arrangement of the thimble, I, collar, g, and hub, F, with the knots, f h, on the rope, H, substantially as and for the purpose specified.

[The object of this invention is to obtain a revolving clothes drier which will admit of being suspended from a horizontal arm and attached to the side of a building or any proper support and be capable of being readily raised and lowered and secured at any desired hight, whereby it is believed the clothes may be more readily placed on and removed from the frame than hitherto, and the general manipulation of the device rendered extremely easy and attended with but little labor.]

2,694.—Lewis Face, of Covington, Ohio, for an Improved Washing and Wringing Machine:

I claim, first, The combination of the suds box, A, with the box or frame, B, the latter being secured to the former by hinges or joints, and said box or frame having the lever or hand frame, C, attached, which frame, C, is connected to the wash boards, C' D, by the rods, h h h' h', all being arranged as shown to admit of the elevation of the box or frame, C, when not required for use.

Second, The uprights, D D', attached to the sides of the suds box, A, the upright, D', being provided with the thimble, m', and crank, E, arranged substantially as shown and described, so as to grasp and hold the ends of the clothes and ensure the proper twisting or wringing of the same, as set forth.

Third, The adjustable box or frame, B, and washboards, C' D, arranged as shown in relation with the suds box, A, in combination with the wringing device formed of the uprights, D D', thimble, m', and crank, E, all arranged for joint operation, substantially as and for the purpose set forth.

[The object of this invention is to obtain a clothes washer and wringer so arranged and combined that little operations may be thoroughly performed, and with but a simple manipulation of the parts.]

2,695.—H. P. Gengembre, of Tarentum, Pa., for Improvement in Apparatus for Distilling Coal Oils:

I claim, the feeding and heating apparatus, consisting of the reservoir, B, pipe, D, heater, E, cock, b, and float, d, the whole applied in combination with each other, and with the retort substantially as and for the purpose specified.

And I also claim the tray, G, applied within the retort and in combination with a feeding apparatus, substantially as and for the purpose specified.

[This invention is intended more especially to be applied to apparatus for the distillation of petroleum, but is also applicable to the redistillation of coal oils. It consists in certain means of feeding the still, by which the oil is delivered there into at a high temperature as fast as the distillation proceeds so that the quantity in the still is always nearly the same, and by which the boiling over of the still is prevented.]

2,696.—H. B. Goodyear, of New Haven, Conn., for Improvement in Suspending Telegraph Wires:

I claim the method described of suspending telegraph wire of insufficient strength to support itself on poles set at usual distances apart, the same consisting in the use of an auxiliary iron wire or suspension cable and hanging the said telegraph wire upon it in the manner and or the purpose set forth.

2,697.—S. S. Hamill, of East Cambridge, Mass,, for Improvement in Railroad Switch:

I alaim the arrangement of the pendulous frame, I, constructed as shown, with the axle, B, bed, A, rod, K, lever, L, spring, M, and rod, N, all as shown and described.

[This invention relates to an improvement in that class of switches which are employed for city or horse railroads, and which are actuated by the drivers of the cars, a small wheel being thrown in contact with an elevated central curved rail-quill when it is required to have the cars pass on a turn-out or branch track.]

2,698.—W. H. Gray, of Philadelphia, Pa., for Improvement in Epaulets:

I claim securing the detachable inner shell, B, having the fringe attached to the outer shell, A, by means of the strap, a, in the manner substantially as described, whereby the necessity of other fastenings for that purpose is dispensed with.

[This invention consists in a novel mode of attaching the fringe to the outer shell of the epaulet for facilitating the removal of the fringe when the shell requires cleaning, and when it is to be worn without fringe.]

2,699.—J. W. Hardie, of New York City, for Improved Construction of Knife and Fork:

I claim forming the knife handle and blade, and the fork handle and