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## NEW YORK, SATURDAY, MARCH 1, 1884.

### Contents.

(Illustrated articles are marked with an asterisk.)

· · · <del>-</del> · · · · · ·

Air analysis, pocket appa. for	133	Inv
Basket willow, growing	134 :	Knu
Bacon, curing without smoking.	136	Leg
Bee cúlture	129	Lin
Brass, cementing on glass	131 ·	Loc
Business and personal	138 +	Lou
Butterine vs. butter	130	Mac
Cart, dumping, rapid*	134	Mar
Comet, Pons-Brooks*	134	New
Comets, five new	13L	Not
Copper on human economy	131	Pan
Ear, hygiene of, points on	133	Pat
Electricity, information on	133	Pat
Engine, gas, Otto, experiments.	137	Peti
Engine, steam fire, first	128	Pige
Exhibition, elect., Phila., 1884	133	Pla
Explosions, fire damp	129	Pol
Farm, wheat, to equip	137	Pot
Filters, Hvatt* 127	130	Pot
Filters, Hyatt*127. Fish, frozen, animated	135	Pul
Floods, western, unavoidable	137	Rob
Flour. why does it spoil		Sah
Fools, impulses of	133	Scie
Gas, carbonic acid, conden. of		Sun
Glass drilling and turning	131	Swit
Glass, Obscuring	198	" Ta
Glass, obscuring Guyot, Prof., death of Hammer, foot power, imp *	186	Tele
Hammer, foot power, imp *	13ĭ	Tele
Harrow, revolving, improved*	131	Teta
Indicator, station. for cars		The
Inventions, agricultural	138	Twi
Inventions, engineering,	138	Val
Inventions, index of	139	Vise
Inventions, index of Inventions, mechanical.	133	Whi
Inventions, miscellaneous	138	Wo

entors, rights of...... 128 131 133 130 136 138 139 135 129 132 132 liteness by telephone...... tash, chlorate, poisoning by... tato, new... lleys, loose, or idlers... bbery as property right... nara. length of time to dill... entific discoveries, recover 128 136 bery as property the to fill... entified discoveries, recent. nests, red, scientists on.... itch guard imp, safety\*..... aking aim," two eyes or one. lephone, calling a dog by... lephone tortunes..... anus-lock jaw ... aters, fireproof... light, red, cause ue of small thing of istle heard 13 miles rking and thinking

TABLE OF CONTENTS OF

THE SCIENTIFIC AMERICAN SUPPLEMENT

## No. 428,

## For the Week ending March 1, 1884.

Price 10 cents. For sale by all newsdealers

PAGE CHEMISTRY, ETC.-Jmproved Method of Recovering Silver from the Hypo Bath. Perret's Sponge Filter.-with engraving Improved Automatic Filter.-1 figure.

ENGINEERING AND MECHANICS. ETC. - Col. Bange's Artillery System. - By MAJOR DE SARREPONT. - Use of artillery. - Material to be employed. - Description of Mr. Bange's gun. - Mountainartil-lery. - Several engravings The Arlberg Tunnel. - Situation, gradients, manner of operating, etc. 6791

6793 et Sewerage System of Memphis. Sewerage System of Mempins. Sinking through Quicksand Honigman's Condensers—Experiments with boilers supplied with the same.—With table giving boiling points of mixtures of caustic soda and water, and the vapor tension.—Several figures ... The Righi Vandois and its Wire Hope Railway.—Motive Power. -Rails, Cars.—Cable.—Brakes, etc. ... Forest's Gas Motor.—Several engravings... Six Wheeled Freight Car Truck.—Several figures. Improved Hydraulig Cloth Press.—With engraving.... 6793 6794 6795 6796

It is commonly believed that the natural tendency of rattling. what is aimed at in bill No. 1,558, now before the Senate.

This is a strong assertion, yet the facts will bear it out; (admittedly) stolen property against the claims of the real owner.

The bill in question was introduced Feb. 16, by the Hon. ily. D. W. Voorhees, Senator from Indiana, as a substitute for the bill (S. 1,115) to amend Section 4,919 of the Revised Statutes relating to the recovery of damages for the infringement of patents, the text of which is nearly the same as House bill 3,925, printed in the SCIENTIFIC AMERICAN for lows:

to impair in any way the right of such purchaser as absolute flutings will be slashed at the same inclination as the pitch owner."

In brief, though the seller of a patented article have no not reclaim his property.

All the talk of "good faith," "the usual course of trade," of the two might be.

be as sacred and inviolable as any other species of property threads. rights; and public interest demands that they shall be as scrupulously respected and quite as carefully guarded, for they contribute their full share to the public well-being. Exact figures cannot be given; but anyone who will inquire posed legislation-will soon arrive at a sum that would go far to purchase the entire farm property of whole States.

On the score of sound policy, not less than that of comto play fast and loose with interests so gigantic and vitally the only one popularly recognized. important. The public injury might be more readily apparent, but it could scarcely be greater, if cattle, or horses, or tion, by enabling any thief or trespasser to give a valid title to any one he might induce to buy of him in "good faith."

If the spirit of the proposed bill were not so plainly in harmony with that of other bills, on this and other subjects, proposed or enacted by the present Congress, one would be bills that seek, though less frankly, the same end.

It would be too hazardous, however, to treat the measure tain members in both houses of Congress, and the apparent but they are very few in their sum total. inacquaintance of others with respect to the importance of our manufacturing interests or their intimate dependence on the integrity of the patent laws.

changing pull of the belt, making a wear that will insure a

legislation in all civilized countries is toward a reversal of Another device is practiced by a first class mechanic, which the "good old plan, that he shall take who has the power, is to substitute the turned hub of the fixed pulley for the and he shall keep who can." And so it is; but unfortu-shaft as an axle for the loose pulley. The result of this nately the tendency is not universal. Under the specious method is to give a large bearing for the loose pulley hub. plea of correcting alleged wrongs, it is still possible for To accomplish this result the fast pulley is cast with the rim legislators, presumably civilized, to propose (if not to secure) entirely on one side of the arms and the hub extending bethe enactment of laws which do not help to make it youd the other side of the arms sufficient to receive the hub easier for men to retain and enjoy what is rightfully theirs. of the loose pulley its entire length, while the rim and hub of Nevertheless, one cannot but feel a degree of surprise at the loose pulley project from the same side of the arms of the sight of legislators calmly considering acts which would the loose pulley. This arrangement gives a very large bearput a premium upon robbery, by making it impossible for ing for the loose pulley hub-the outside of the finished fast the owner of any species of property to reclaim it after it had pulley hub-and also saves the width of one pulley in the been taken from him by force or fraud; and that is precisely projecting end of the shaft, as it need come no further through the box than to receive the hub of the tight pulley.

In all cases it is a good plan to have the loose pulley for the bill frankly discriminates in favor of the receiver of slightly smaller in diameter than the fast pulley, to relieve the tension of the belt; and when the fast pulley is slightly larger, it will receive the belt and start the work more read-

## ..... HOW KNURLS ARE MADE.

Knurls may be purchased ready made and of varying sizes and patterns at the tool stores, but it not unfrequently happens that these stores are not at hand or that their stocks are February 2, 1884. The proposed substitute reads as fol too limited for choice. But knurls of the ordinary cross X fintings, for use for knurling thumb nuts and screw heads, The SCIENTIFIC AMERICAN Export Edition is a large and splendid perl 2 "Be it enacted, etc. — That it shall be a valid defense to any may be readily produced on the lathe with the help of the odical, issued once a month. Each number contains about one hundred action for an infringement of any patent, or any suit or ordinary screw chasing hob. To do this turn up the blank proceeding to enjoin any person from the use of a patented knurl, of soft iron or annealed steel, drill it. and mount it article, that the defendant therein, or his assignor, purchased as usual in its handle, so that it turns freely on its pivot; the patented article for use or consumption, and not place the hob on the lathe centers, dogged to the face plate, for sale or exchange, in good faith and in the usual as usual. Place a lathe tool or bar of steel in the tool post course of trade, without notice that the same was for a guide or rest, and present the knurl on its side so that covered by a patent, or without notice that the its pivot is vertical. Bear against the hob as for forming a seller had no right to sell such article: and in all such cases chaser, and the threads of the bob will rotate the knurl as the notice received after such purchase shall not have the effect cutting proceeds. If the knurl lies square on its side, the

> or no slash at all, the result may be produced by inclining right to sell, the sale shall be valid and the real owner can the face of the knurl, and this inclination can be assured by filing its handle where it rests on the guide. If the knurl has a rounding face, the inclinations at which it is presented "for personal use," and all that, goes for nothing, except to to the hob must be changed as the work proceeds, to correcover the naked injustice of the closing provision. In not spond. If the knurl is to have a concave face, the concavity one case in a million could the patentee prove an absence of ; of the knurl's face and the diameter of the hob must corregood faith or the existence of collusion between the fraudu- spond. Good soft iron, as Swede or Norway iron properly lent seller and the "innocent" buyer, whatever the relations case hardened, will make as good knurls for brass or softer metals as steel. The grades of fluting of knurls produced in The courts have held the property rights of patentees to this way may be varied by using hobs of different pitches of

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## TETANUS-LOCK JAW.

A recent correspondent inquires "How many days after an injury to toes or fingers is lock jaw likely to set in, and into the value of property vested in, or contingent upon, after how many days may the danger be considered past?" patent rights on New York Island alone-property whose A disease involving such extreme peril as tetanus is very value would be unsettled or destroyed outright by the pro-naturally viewed with proportional horror and apprehension, and instead of answering our correspondent in "Notes and Queries," we devote a little space to the subject here; and we shall confine ourselves, as he does, to that form of disease mon justice to inventors and patentees, Congress ought not known in surgical practice as traumatic tetanus, as that is

It is well to correct at once an impression which is very common and which causes much needless alarm. It is the houses, or lands were similarly deprived of legal protection general belief that a severe, and especially a lacerated, wound is extremely apt to cause lock jaw; a hurt, for instance, from a "rusty nail." Now, this not at all true. It will, by most people, be deemed very strange, but it still is strictly true, that tetanus has very little to do with the severity of the injury; a single smooth cut (for example, a slight surgical almost forced to think that its purpose must be not to secure operation) may cause it, as may also a blow even of no great a change in the cited section of the Revised Statutes, but violence. On the other hand, the most terrible mangling rather to expose the inherent viciousness of other patent and tearing may go free. And so extremely small is the number of cases, in comparison with the multitudes of injuries daily received, that every effort ought to be made to other than seriously, in view of the manifest temper of cer-jouiet the popular apprehension. Cases of tetanus do occur.

> There can be no question that the physical condition of the person injured has much more to do with the development of the disease than has the severity of the injury. Ex-

# 128

	Improved Hydraul Cloth Press With engraving	0(9(	
3	III. ARCHITECTURE, DECORATIVE ART, ETC.—Ornament.— What is it, what it means, and what makes it good or bad.—From an address by H. H. STATHAM. Poitrineau's Movable Buildings.—Several engravings Lizadrindod Rectory, Wales.—1 engraving	6798 6798	
1	<ul> <li>IV. ELECTRICITY, MAGNETISM, PHYSICS, ETC.—The "Cruto" Lamp The Comparative Visibility of Illuminated Surfaces.—Experi- ments of M. Aug. Charpentier. Upon Some FiguresObtained by Mr. Cardani through Electroly- sis.—Numerous figures</li> <li>Dr. Wreden's Microphone Transmitter.—Several figures. New Models of Accumulators.—2 engravings. Translation of the Morse Telegraph Signs into Letters.—With diagram Magnetic Polarity in Iron. An Illustration of Inertia.—With engraving.</li> </ul>	6796 6799 6800 6801 6801 6802 6802	
	<ul> <li>ASTRONOMY.—The Universe of Suns.—Lambert's stellar system compared with Kant's.—By R. A. PROCTOR.</li> <li>The Sun and Sun Spots</li></ul>	6805 6805	1
7	VII. HORTICULTURE.—The Greater Moth Orchid (Phalœopsis grandifiora)—With engraving	6806	1
7	VIII. DOMESTIC ECONOMY.—The Scientific Basis of Cookery.—By W. MATTEU WILLIAMS.—Technological education necessary for women.—Laws of heat.—Convection and radiation available in application of heat to cookery.—Origin of the prejudice against baked meat.—Cooking/of steaks and chops.—Bolling.—Stewing		1
J	IX. THE GROWTH OF LONDON. – Population and Traffic. – Govern- ment. – Drainage. – Water supply. – Lighting. – Bridges, etc. – Mar- kets. – Comparison with Paris. Prehistoric Pits in Oregon.	6804	   
2	X. BIOGRAPHYDR. WEDLProfessor of histologyWith por-	6909	٩,

## LOOSE PULLEYS, OR IDLERS.

The common practice of running a loose pulley on the shaft, as a wagon wheel runs on its axle, is one full of annoyances and is anything but a permanency in use. A loose pulparticularly when this strain is intensified by that of a long, then play their own destructive part.

heavy belt. The better practice, wherever it is feasible, is pulley.

cept in special localities, it is almost impossible to induce tetanus in a person who is in good, vigorous health. Depressing causes of every sort tend to its origination, and

hence the well known fact that injuries and surgical operations during the exhaustion of a severe military campaign develop tetanus at a very alarming rate. The disease is ley, or an idler pulley, should have its separate shaft with purelynervous in its origin and its nature, and because of its separate journals. The shaft upon which the fast pulley | this whatever lowers the nerve force, that is, the life force, is fixed is of too small a diameter to act as the axle for a favors its inception. But though nervous only at first, orpulley which revolves rapidly, and the hub of the pulley is ganic changes in blood vessels (and probably also in the too short to withstand the leverage strain of the broad rim, blood) as well as other tissues speedily follow, and these

Tetanus may follow an injury almost instantly, certainly to mount the idler pulley on a short independent shaft with within an hour, though this is not common, and it may be its own independent journals. One of these journals may delayed several weeks. Instances are on record where it has turn in a projecting portion of the hub of the fast pulley, so waited a full month, but this is also not common. From that the rims of the two pulleys may come together, or the the third day to the tenth is the range in general. After idler shaft may be supported by two boxes outside the loose the tenth day few cases occur, and even if they do, the danger is not so great, for they are milder in proportion to the

With this arrangement there is no pulley turning on a shaft lateness of their origin, and many such recover. Of those and "wabbling" from side to side by the unequal and beginning early the prognosis is frightfully unfavorable.