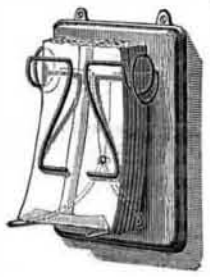
RECENT INVENTIONS.

New Paper Bag Holder.

The engraving represents a device for holding paper bags in a compact and convenient shape, so that they can be readily removed when one or more is desired for use. The holder consists of a wire spring of peculiar form, arranged to press upon the bags and follow them down after the removal of one or more, so as to keep those remaining securely in place. To a base-board are attached the holding springs by one or more screws. The springs are formed of a continuous piece of wire, the ends of which are firmly attached at the screw near one end of the board. From that point the two portions extend upon the face of the board to near its end, where they are bent outward at right angles and then bent to form the rings that project upward from the face of the board. They are then bent inward from the outer edges of the rings toward the middle of the board, and form a loop that extends to the screw. The rings form springs which tend to press the outer end of the loop down upon the board or the bags placed thereon, and at the same time the two arms extending from the screw allow the lateral separation of the rings, so that they may receive bags of different widths between them. Below the screw are fixed arms or supports, upon which the bags rest. In use, the holder is to be hung up or placed upon a counter or shelf, and the loop being raised and the rings pushed apart the bags can be readily inserted and will be held by the pressure of the loop and side pressure of the rings. To remove a bag it is only necessary to take hold of its lower end at the supports and draw it out, and both the face and the side springs will retain the remainder securely in place. This device is simple, inexpensive, and exceedingly useful. The invention has been patented by Mr. Orrin P. Kenyon, of Wakefield, R. I.



Improved Pipe Vise.

This pipe vise has a double inclined shifting jaw, whereby the power put on the pipe held in the vise will tend to cause the pipe to be held with still greater firmness than by the screw alone, thus obviating all danger of the pipe turning between the jaws and becoming marred and injured. The upper jaw is made with double inclines on its lower surface and has the lower end of the screw swiveled in it. This jaw is formed with a single side arm, which is guided between the vertical uprights. The lower jaw has notched double inclines and thin flat end pieces, and rests flat upon the bed-piece of the frame, with the end pieces reaching under cross-pins, which serve to hold the jaw in place, but do not interfere in any manner with the free movement of the jaw endwise through a limited space. The lower jaw having double inclines and being held loosely in the frame of the vise, it will be seen that when the turning power is applied to a pipe grasped between the jaws any tendency of the pipe to turn will slide the lower jaw, causing the inclines to grasp the pipe with increasing firmness, according to the power applied to the pipe, so that there will be no danger of the pipe slipping or turning between the jaws, and being thereby cut or injured. This invention has been patented by Mr. Alfred Beard, of Danville, Ill., who may be addressed for further information.

What Does Our Clothing Weigh?

The medical profession, unable to cure all the ills that flesh is heir to, looks eagerly about for some one on whom to lay the blame. Climate, soil, geographical position, and all our habits of life have in turn been accused of causing disease. From time to time our worthy contemporary, the London *Lancet*, sounds the tocsin, declaring that it has discovered a new cause of alarm. Some article of food, drink, or clothing is selected for attack as being the key to all our misery.

The last freak of the alarmist is accusing women of wearing *too much* clothing. Hitherto, the cry has usually been that women's dress did not sufficiently protect them from the weather, and it was no doubt true, as applied to costumes worn at the Queen's "drawing rooms." But since the introduction of cork soled boots, felt hats, ulsters, and overcoats, and their general adoption by the fair sex, this cry has been silenced, and the *Lancet* now accuses them of going to the opposite extreme. Sealskin sacks, fur lined dolmans, and quilted silk circulars were the objects of its last attack. This, too, in spite of the fact known to every scientific mind that fur and cotton wadding afford far greater protection against the cold than the same weight of any other material, feathers alone excepted. A man's ulster, or even a quilted overcoat that would afford the same amount of warmth, or more properly speaking, keep out the same amount of cold, would weigh far more. In Northern Europe, especially Russia, and to a less extent here, fur lined garments are worn by both sexes, nor does any one think of calling them *heavy* until a warm spring sun renders them unnecessary.

In the days of heavy woolen or quilted petticoats physicians complained of the weights thus suspended on the hips, and asserted that they must be hung from the shoulders. Fur lined garments for both sexes fulfill this condition, while the loose fitting style of those worn by women confine a considerable quantity of air, that best of non-conductors, between them and the body.

Impressed with the importance of the *Lancet's* remarks, and perhaps hoping to check the extravagant custom of wearing these cloaks, the reporter or a New York daily visited several stores and weighed these articles, with the following results:

WOMEN.		MEN.	
Sealskin dolmans,	6 pounds.	Dr. Sayre's ulster,	20 pounds.
Fur lined "	5 "	Average ulster,	15 "
Fur lined circular,	4 "	Winterovercoat,	8 "
Sealskin sack,	4 "	Lighter "	6 "
Silk dress,	3½ "	Suits, average,	6 "
Plush "	5¼ "	" cheviot,	4 "
Velvet and cloth sack,	6 "		

Skirts were found that weighed from 9 to 12 pounds, and a ball dress of satin and plush was *estimated* at 12 pounds.

He also visited several prominent physicians, both male and female, from many of whom the *Lancet's* theory received but little support. Even the old and partially accepted theory that the hips must not be allowed to bear any load was also exploded. In many persons the hips are better able to bear the weight of the nether garments than the shoulders, pressure on which tends to cause stooping, thus contracting the breathing space and inducing lung complaints, since it is the upper and not the lower end of the lung that is most liable to disease.

One point, however, was insisted on by all physicians of city experience, namely, the advantages of well made and properly fitting corsets. If well boned, they prevent the tightest skirt bands from pressing in upon the vital parts, but when old they become injurious, as the ends of the broken bones not only press inward, but sometimes penetrate the flesh. Dr. Weir spoke of a hospital case that had come under his notice in which a woman's liver was almost cut in two by wearing skirts tightly around her waist with *worn out* corsets. A lady physician also writes, that "badly fitting corsets and broken steels produce great suffering among poor girls." Several other physicians said that weight hanging from the hips could do little or no harm, and the muscles of the abdomen are strong and well arranged for withstanding strain. Weight supported at the waist comes on the hip bones, and is borne chiefly by the legs, and can be carried more safely from the waist than from the shoulders.

There are many men who wear no suspenders; they need none because their hips are prominent and easily support the pants, which hang on them as on hooks; others would need to buckle their pants so tightly to prevent dragging down as to be injurious, for this reason; that they do not wear any corsets, hence the belt presses in upon the liver and other vital organs. A pair of winter pants, the pockets partially filled with knives and keys, to say nothing of silver dollars, more than equals in weight the skirts *usually* worn by the other sex.

Men's theories of woman's dress is always faulty, not being drawn from experience. With the advent of competent, educated, and experienced female physicians, ladies of taste and refinement who dress as fashionable ladies do (and we claim that they ought to do this, if only for the experience they would gain from it), we shall expect to see our medical exchanges filled with correct criticisms of such articles of dress as are actually harmful, and not with senseless tirades against such useful and healthful garments as are usually the subject of attack. When the medical criticism of woman's dress has been turned over to female physicians, the male members of the profession will have time to criticise their own clothing, and may be induced to cast this beam from their own eye, and relieve us from some of the tyrannies of dress.

Railroad Inventions.

The *Age of Steel* echoes what inventors of railroad improvements often complain of, and that is that railway officials do not seem to want anything new. No matter how good an invention may be no railway man wants to see the invention or the inventor, nor does he even care to talk about it. The inventor may propose to haul a train of cars from New York to Washington, not only without expense, but to make money by selling water from the water tanks to people along the line, so as to make running the trains a double source of economy, yet the railway man consigns the inventor to the firebox of eternity, and proposes to see him well on his way in that direction. The poor inventor feels that he does not deserve any such treatment, complains, and wonders why it is such hard work to deal with railway men. If he does succeed in making a really valuable invention, why is it that he must put it on to trains himself, watch it at every step of the way, and do this all at his own expense? That it is so, every inventor and every railroad man knows perfectly well.

It would seem as if enough wheat might be found among the chaff to warrant railroad officials spending a little time examining inventions brought before them. They would thus encourage the inventor to further research and experiment in the railroad line, from which something good to the community and railroad companies might eventually come, if some of the inventions submitted were found lacking in practicability

Bogus Inventions.

Letters patent protect two class of individuals occupying the extremes in the inventing world. First, those who study a subject with the intention of honestly improving it; second, those who study the movements of the first class and steal everything they can. All honor is due to the honest man who, by patient experimenting, close application, deep study, and much expenditure, produces a device destined to make more subservient the forces of nature. This man makes himself familiar with what has been accomplished in the particular branch to which he is devoting his attention, and then seeks to push it another step toward perfection. We cannot throw our glance to any point in the civilized world without meeting overwhelming evidences of his unremitting labor.

The second division steals the work of the honest inventor. The smallness and apparent insignificance of these things never affect the zeal of the pirate. His attentions are given to the big and the little; sometimes the latter is preferred.

From these simple facts has arisen the holy horror in which every honorable member of the profession holds these people, and the dread he has of showing the result of his work before he has filed his claims, for fear his idea of a bolt of peculiar construction may be stolen. The thief knows that a machine which would do that particular work successfully would be valuable; he also knows that peculiar bolt is vital; consequently, if he can control the use of the bolt, he has, practically, the controlling use of the whole thing. The only redress is now in the courts, and as the choice between the thief and his royalty and the lawyer and his fee is about even, a compromise is effected, and the peculiar bolt has made the fortune, not of its creator, but of its owner.—*Engineering News.*

The Patent Office Surplus Fund.

Referring to the fact that there is in the United States Treasury more than two millions of dollars to the credit of the Patent Office, one of our contemporaries aptly suggests that it is absurd that more than $400,000 should be added to the fund in a single year, when every employe in the office is overcrowded with work to such a degree as to cause unnecessary delays and hurried examinations. A reasonable portion of the annual surplus in the payment of salaries to an additional force will do much toward reforming existing evils. The Patent Office should be provided with a sufficient examining force to enable every application for a patent to be acted upon within a fortnight at most after the filing of the papers. Inventors are naturally impatient to get a decision in their cases as soon as possible, and from their generous support of the Patent Office they are entitled to more consideration than it is possible for the present force of the office to grant them. If our legislators would take the trouble to investigate into the wants of the Patent Office, and then vote a sufficient sum from the Patent Office fund to enable the Commissioner to employ all the help he needs to keep the work of the office well up, they would be instrumental in doing some good.

Use of the Microscope in Brewing.

Not only is an impoverished yeast unable to develop an active and healthy fermentation, but being itself so weak it is less able to battle against the different disease ferments, which always become more active as the yeast itself loses its vitality. The persistent use of the microscope is, says the *Brewers' Guardian*, the only means by which the necessity for a change of yeast can be recognized, and therefore the yeast from each brewing ought to be examined from day to day; as soon as the cells are observed to lose their rotundity, to elongate, and to acquire something of the shape of the figure 8, it is a sure sign that some deterioration is taking place, and when the cells become filled with granular matter it is certainly time to make a change, for the yeast must then be seriously weakened. Simultaneous with these alterations in the appearance of the yeast cells the careful observer will be sure to find that numerous other organisms, such as bacteria, lactic and other diseased ferments, begin to make their appearance, and if the use of such a yeast is persisted in, the resulting beers cannot long remain sound and with a proper and normal flavor. Frequent and unnecessary changes of yeast are to be deprecated, but it is far more serious to continue to use a yeast when once degeneration and deterioration have set in.

Popular Science.

The following, says the *Chemical News*, is from a recent number of the *Ashton Reporter:* "Water carried as Gas.—M. Pasteur, a nephew of the celebrated chemist of that name, has recently adapted an old discovery to great practical use. It is a well known fact that the crossing of the great African desert is accomplished by means of caravans composed of camels, horses, etc., the water for which has to be transported on the back of the consumer. This lessens to a great degree their freighting capacity. M. Pasteur has established suitable works at the numerous termini of the routes for separating the water into oxygen and hydrogen. As the latter is sixteen times lighter than the former, and is the gas used in balloons, it carries the oxygen and a considerable part of the camel, besides furnishing light on dark nights. He unites the gases by the simple means of explosion when desired for use. The French Government has created M. Pasteur a commander of the Legion of Honor for his great adaptation."