

RECENT INVENTIONS.

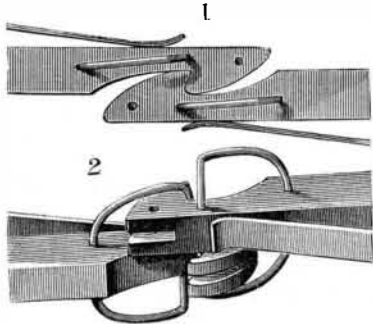
Novel Animal Tag.

This is a new tag for animals, consisting of a tube provided with a removable cover and an elongated staple for the strap by which the tube is held to the animal. A tube or lengthened box or casing, A, preferably made of metal, is closed at one end, and at the opposite end is provided with a hinged cover, which can be secured and locked on the tube by means of a spring tongue or any other suitable device. The tube, A, is provided with an elongated staple, through which a strap can be passed to secure the tube on the animal's neck. If desired, the tube, A, can be held within the staple of a bell, as shown in the engraving, the bell-strap passing through the staple of the tube, A, and through the staple of the bell. Papers or documents bearing the name of the owner of the cattle, or other information in relation to the animal, are placed in the tube or casing, A, which is then closed. The tube is to be made very small, so that it will not molest the animal. This invention has been patented by Mr. Elias G. Queen, of Big Valley, Tex.



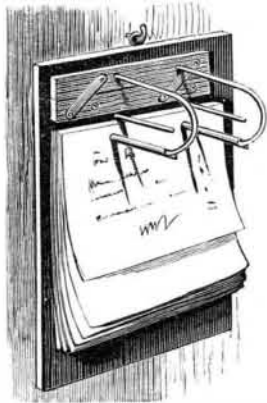
Improved Car Coupling.

This invention consists in the combination, with a draw-head having a hook formed at its end, of a spring which presses the draw-head in the direction toward the open side of the hook, and of loop frames formed on the top and bottom of the draw-head, whereby two such draw-heads can catch on each other or on the loop frames, accordingly as the draw-heads are at the same or different elevations above the track. The operation is as follows: When the draw-heads come together, the beveled ends strike against each other and are moved laterally from each other. When the ends of the short prongs of the hooks have passed each other, the draw-heads snap toward each other, and the hooks catch and engage as shown in Fig. 1. When the draw-heads are at different elevations above the tracks, the hooks catch on the frames projecting from the tops and bottoms of the draw-heads as shown in Fig. 2. This invention has been patented by Messrs. Geiger & Lynn, of Norristown, Pa.



Improved Letter File.

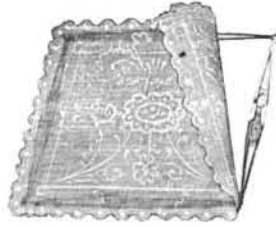
The letter file shown in the engraving is so constructed that the curved locking pins will be out of the way when letters and other papers are placed on the file. Two tubes, having their upper ends beveled to form points, project upward from a board, and between the tubes and the nearest transverse edge of the board two thin rods or wires project upward, the wires being about the same height as the tubes. Two curved wires or rods project upward from a strip which rests on the board, and is connected by means of two pivoted links with a similar strip fixed on the board parallel with the transverse edge. The strip carrying the curved wires can be moved upward from the fixed strip. The curved wires are so arranged and of such size that when the movable strip rests against the fixed strip the upper ends of the curved wires will pass into the upper ends of the tubes. By pushing against one end of the movable strip the curved wires will be moved from the ends of the tubes, and the sheets to be filed can be placed on the board, the tubes passing through the sheets. The straight wires form guides, against which the edges of the sheets are rested, so that all the sheets will be pierced by the tubes a like distance from the edge. When the file is closed, no paper or sheets can be removed from or placed on tubes. This invention has been patented by Mr. Morris Herzberg, of West Point, Ga.



Pillow-sham Holder.

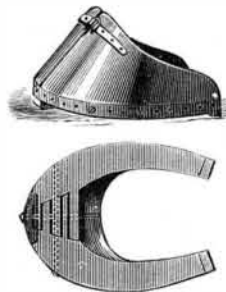
The annexed engraving shows an adjustable extension frame, by means of which pillow-shams may be made to re-

tain the smooth and neat appearance they present when coming from the hands of the laundress. The invention consists in the novel construction and arrangement of bars, made of wire or other suitable material, having looped and hooked ends or bowed ends lapping past each other and secured adjustably in clips, thus forming a rectangular frame easily adjustable as to length and width. By this construction the supporter may be adjusted for any size pillow-sham desired. This useful device has been patented by Mrs. Mary A. Steers. Further information may be obtained by addressing Mr. George Steers, 427 North West Street, Kalamazoo, Mich.



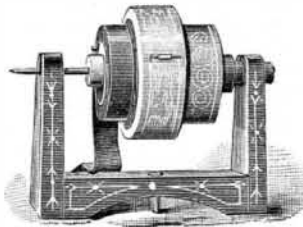
Novel Horseshoe.

This horseshoe has a base made in two parts, hinged together at their forward ends, and having a cap, also made in two parts, attached to the base, the parts of the cap being provided at their upper forward corners with eyes and a fastening staple, and the hinged parts of the base being locked in place by a screw-rod passing through the hinged end of the base, whereby the shoe can be readily applied and detached, and will be securely held in place while in use. With this construction the shoe can be easily and quickly applied to and detached from a horse's foot by removing the screw-rod and fastening, and when applied to the foot will be held firmly in place by the screw-rod and fastening. This shoe has the further advantage of protecting the hoof and preventing the hoof from spreading or cracking. Fig. 1 is a perspective view of the shoe, and Fig. 2 shows the bottom. This invention has been patented by Mr. George W. Fenley, Sr., of Tolosa, Tex.



New Ribbon Reel.

The engraving shows a new reel or frame for holding rolls of ribbons in such a manner that they can be exhibited to great advantage, and can easily be unwound when parts are to be cut off. The shaft or rod is supported in the standards having notches in their upper ends to receive it. The shaft has washers and a binding screw for holding the rolls of ribbon in place. Any desired number of ribbon rolls are passed on the shaft. By means of a screw, the base of the reel can be secured in a show window. When the ribbons on the reel or frame are in the window, they can be examined conveniently by buyers, and will be exhibited to great advantage without becoming mixed with other articles. One or more of the ribbons may be unwound and drawn into the store, when the desired length can be cut off conveniently. The remaining part may be wound on the roll, and secured by means of a pin. This invention has been patented by Mr. Allen T. Cook, of Morven, Ga.



The Swiss Watch Trade.

The Geneva correspondent of the London *Times* writes: According to the annual report of the Swiss *Handels und Industrie Verein*, the Swiss watch trade during the last thirty years has undergone some notable changes. The more general use of machinery, the establishment of factories, and the introduction of improved methods of manufacture have cheapened production and led to a great extension of business. In these factories, watches, with some trifling exceptions, are made from beginning to end, as they are made in the large American watch factories. It is nevertheless not the case, as is sometimes asserted, that Americans were the first to make watches by machinery. A firm at Geneva, Vacheron & Constantin, had a factory and turned out watches by machinery before a single watch was made in the United States, and the Americans procured their first watch-making machinery from Switzerland. But Geneva has lost its ancient supremacy in watch making. Fine watches (*montres soignées*) are put together and regulated here, but the greatest market in the country, probably in Europe, is Chaux-de-Fonds, in canton Neuchatel. The factory system is being largely adopted in the newer watch making districts, such as the Bernese, Jura, and the town of Bienne. The latter place is fast becoming a sort of horological Sheffield. Many Geneva houses have found it expedient to establish *comptoirs* there, and a trade of which

Geneva had once the monopoly—the making of watch cases—has gone altogether to Bienne.

The movements of complicated watches—chronographs, repeaters, and perpetual calendars—are still made exclusively in the valley of Lake Joux, and no place, in or out of Switzerland, shows any disposition to dispute the supremacy of the mountaineers of the Vaudois Jura in this, the highest branch of horologic art. The report from which I quote observes that one of the results of the extension of mechanical watchmaking has been to deprive Switzerland of the practical monopoly in the production of time keepers which she once enjoyed. She has now several foreign competitors. American competitors, albeit their pretensions are as lacking in modesty as their goods in quality, are regarded as the most formidable—in America. This competition has, however, its favorable side, for during the last two years American watchmakers have procured many of their movements and their most tastefully executed cases in Switzerland. English and German competition, especially German, are mentioned with something like contempt.

Swiss watches, owing to improved methods of manufacture, are now higher in quality and lower than ever, and, say the authors of the report, the best and cheapest in the world. Many foreign watchmakers resort to Switzerland for their supplies, and hundreds of watches sold abroad as "home-made" are made in this country. The calamitous crisis which followed the over-production of 1874 and previous years is now at an end, and, thanks chiefly to the American demand, the Swiss watch trade is fairly active. England and France (notwithstanding the rivalry of Besancon) are good customers; the demand from Germany, Austria, and Russia (which take mostly watches of inferior quality) is not so good as could be wished, but the trade with Spain, Portugal, Italy, and the East shows decided signs of improvement. Prices have not, however, increased in proportion to the increased demand, and there is reason to fear that production is again outrunning consumption. Wages, too, are showing a tendency to rise; in several departments an advance has been already conceded, and altogether the position and prospects of manufacturers are much less satisfactory than might be desired.

Another Great Lake in Africa.

The existence of another equatorial lake in Central Africa, far to the west of Albert Nyanza, rumors of which have reached Europe from time to time since Sir Samuel Baker's first journey, is again reported, this time in a much more definite form. Mr. F. Lupton, Governor of the Egyptian province of Bahr el Ghazal, writes to the London *Times* from his station, Dehm Siber, on the 27th of July, to the effect that Rafai Aga, an employe under his command, on his return from an expedition toward the Uelle, told him that he and some of the members of the expedition had seen a great lake in the country of the Barboa, a powerful copper-colored tribe clothed with a peculiar grass cloth (of which Mr. Lupton sends a specimen in his letter). Mr. Lupton gathered that the position of the lake was in about 3 degrees 40 minutes north latitude and 23 degrees east longitude, and that it was quite as large as Victoria Nyanza. When the weather permits, the Barboas cross the lake in large open boats made out of a single tree, the voyage taking three days, and they obtain from the people living on the western side (their own country being east of the lake) articles of European manufacture, such as blue beads and brass wire. Mr. Lupton adds Rafai Aga's own account of his route to the lake: Started from Dehm Bekeer, marched six days southwest to Zeriba el Douleb, then four days south-southwest to Bengier; four days southwest to Zeriba Warendema; six days southwest by west to the Bahr el Makwar, which he crossed after visiting several very large islands inhabited by a people who call themselves Basango. The Makwar is called by the Arabs Bahr el Warshal, and joins the Uelle, but is a much larger stream; both flow in a west-southwest direction. After crossing the Makwar, Rafai marched ten days south-southwest and reached the residence of the Sultan of Barboa, by whom he was well received; the lake is situated four days' march to the southwest of the Sultan's residence. Mr. Lupton concludes by saying: "I feel I should not be doing right in keeping dark this information, which, when looked into by competent persons, may throw some light on the famous Congo and Uelle rivers. I believe that the Uelle flows into the lake discovered by Rafai Aga, and that the stream which is said to flow out of the lake probably joins the Congo." Mr. Lupton further informs the *Times* that he is engaged in preparing a map of this province, and that he was about to start in a few days on a journey to a country called Umbungu, some fifteen days' march to the west of Dehm Siber.

The Voltaic Arc.

At a recent meeting of the London Physical Society, Prof. S. P. Thompson read some "Historical Notes on Physics," in which he showed that the voltaic arc between carbon points was produced by a Mr. Etienne Gaspar Robertson (whose name indicates a Scotch origin), at Paris, in 1802. This reference is found in the *Journal de Paris* for that year. Laboratory notebooks at the Royal Institution, however, are said to show that Davy experimented with the arc quite as early. The experiment usually attributed to Franklin, of exhausting air from a vessel of water "off the boil," and causing it to boil afresh, is found in Boyle's "new experiments touching the spring of the air."