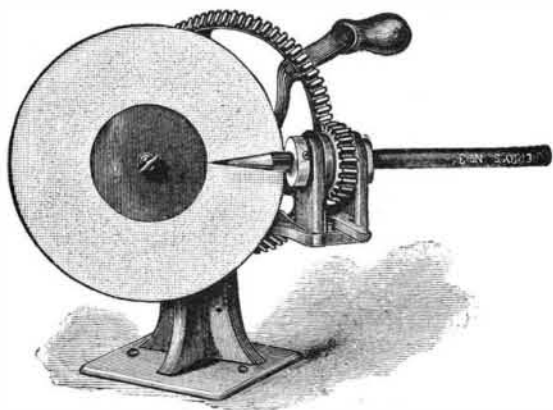


GEM PENCIL SHARPENER.

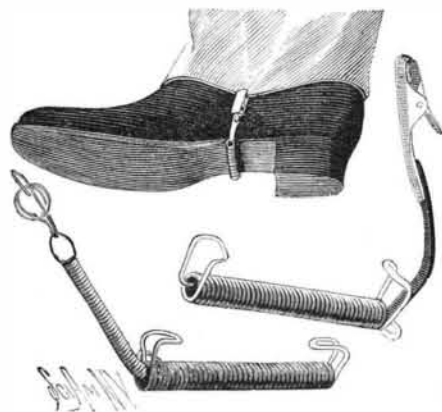
This sharpener must be made stationary with screws to the desk, table, or counter on which it is used. It will sharpen any pencil, large or small, and will

**GEM PENCIL SHARPENER.**

point a red or blue pencil perfectly, which all will appreciate who have tried to sharpen these pencils. To sharpen a pencil, push it through the chuck, press against the tail piece of the chuck holder, so as to bring the end of the pencil against the sand paper disk, and bring to a point by turning the crank. Any length of bevel on the end of a pencil desired can be obtained, and if a very fine point is desired, such as for artist's use, a piece of emery paper can be substituted for the sand paper, which answers for all ordinary purposes. This device is manufactured by Messrs. Gould & Cook, for Messrs. Goodnow & Wightman, of Boston, Mass.

AN IMPROVED TROUSERS STRAP.

The accompanying illustration represents a valuable device for the use of bicyclists and horseback riders,

**CARTER'S IMPROVED TROUSERS STRAP.**

to prevent the trousers from working up or from coming in contact with the wheel. It has been patented by Mr. George T. Carter, of Pittsburg, Pa. It is simple, durable, easily made and inexpensive, and both forms were thoroughly tested last summer by a large number of users, and pronounced a perfect success. The device clasps the sole just forward of the heel by two hooks connected by a spring, and is attached to the inside lower edge of the trousers leg by a light coil spring for bicycle riders, or by a band, elastic or not, as preferred for horseback riders. When in use the device is concealed from the view of passers-by, while it does not change the ordinary appearance of the trousers leg.

For further information relative to this invention address Mr. George T. Carter, Hamilton Building, Pittsburg, Pa., or Mr. Wendell M. Smith, Wilder Building, Rochester, N. Y.

Floating Industrial Exhibitions.

Floating exhibitions seem to be a success so far as Spain and Germany are concerned. A fine steamer loaded with the best specimens of all kinds of goods lately sailed from Spain for South America. The German Export Company has decided to apply the sum of \$1,000,000 (5,000,000 marks) on the building, equipment, and working of a very large steamer which is to serve as a floating exhibition. The vessel in question will be called Kaiser Wilhelm, and the principal dimensions are as follows: Length, 564 ft.; breadth, 66 ft.; depth, 46 ft.; so the question is not of a small craft. The steamer is to have four engines, entirely independent of each other, and four propellers. She is to be fitted in exceptionally good style. The expenses for a two years' tour are calculated at \$785,000, while the takings for hire of room and profits on sale are expected to reach \$1,815,000, leaving the very handsome profit of more than \$1,000,000. The steamer will, according to the present arrangements, be ready to start in the spring of next year. A previous undertaking of a similar nature, the steamer Gottorp, dispatched from Hamburg, is understood to have given a satisfactory result. Not only are Spanish and German goods being shown in many different parts of the world, but the staff accompanying steamer has ample opportunities

for studying in each place the various local and special requirements, and to see to what extent and in what manner the different wants are being supplied, either by home or other foreign makers.

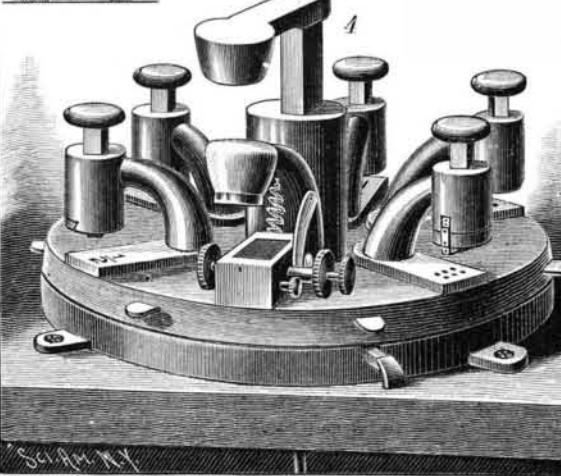
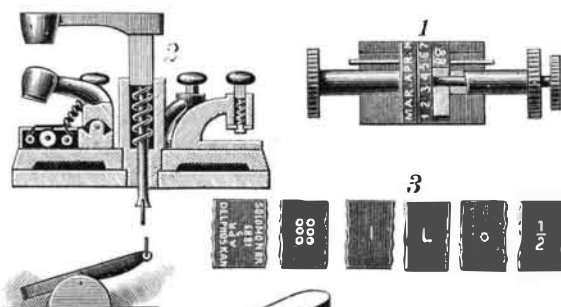
How many years longer must the American people wait and see the foreign trade carried off by other nations by simple devices such as the above and government subsidies? If laws were passed giving liberal payments to vessels of the highest speed for carrying the mails, we should soon have a greatly increased commerce.

Half a Century of Inventions.

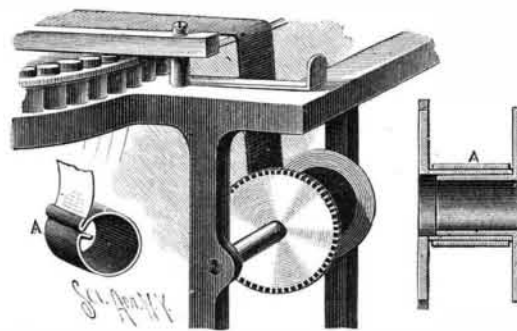
Those of us not yet fifty years of age have probably lived in the most important and intellectually progressive period of human history. Within this half century the following inventions and discoveries have been among the number: Ocean steamships, street railways, telegraph lines, ocean cables, telephones, phonograph, photography and a score of new methods of picture making, aniline colors, kerosene oil, electric lights, steam fire engines, chemical fire extinguishers, anæsthetics and painless surgery; gun cotton, nitro-glycerine, dynamite, giant powder; aluminum, magnesium, and other new metals; electro-plating, spectrum analysis and spectroscopy; audiphone, pneumatic tubes, electric motor, electric railway, electric bells, typewriter, cheap postal system, steam heating, steam and hydraulic elevators, vestibule cars, cantilever bridges. These are only a part. All positive knowledge of the physical constitution of planetary and stellar worlds has been attained within this period.—*Homiletic Review.*

A COUPON TICKET STAMP AND PUNCH.

The accompanying illustration represents a stamp and punch designed mainly for the use of railroad ticket agents, for indicating on or in the ticket its date, the destination for which issued, and other particulars, the whole being mounted upon an adjustable revolving table controlled by a catch for bringing the stamp and punches under a hammer or striker common to them all, and operated by a foot treadle, leaving the hands free. It is a patented invention of Mr. Wilson M. Dunaway, of Hoxie, Sheridan County, Kansas. Fig. 1 represents a vertical transverse section through the ticket stamp, Fig. 2 a vertical section, Fig. 3 a face view of the tickets in part, and Fig. 4 a perspective view of the whole device. A revoluble table is mounted upon a stationary base, a ticket stamp and a series of punches, each having an independent bed piece, being detachably secured to the upper side of the revoluble table, the punches and stamp being arranged to allow of their being brought under a vertically reciprocating hammer or striker, this striker having an operating rod extending down through a central tubular bearing. A treadle is connected with the lower end of the rod to operate the striker, and a spring throws the rod upward after each stamp or punch has been made. An automatically operated inking ribbon is arranged in connection with the stamping arm, while the several punches, making different marks, are in ordinary but separate use for similar purposes. Thus, after the ticket is stamped, the first punch may be used to indicate the destination, the second the class of conveyance, the third whether the ticket is a limited one, the fourth the date, the fifth whether it is half or full fare, etc. Of course only such of the punches need be used as occasion requires, by simply turning the revoluble table to bring a particular punch under the hammer or striker.

**DUNAWAY'S COUPON TICKET STAMP AND PUNCH.****IMPROVED INKING DEVICE FOR TYPE WRITERS.**

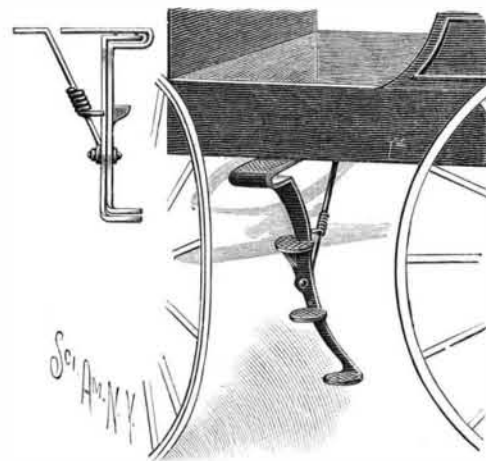
The illustration herewith represents an inking ribbon spool for type writing machines, by means of which the ribbons can be quickly and easily adjusted, and ribbons of various colors can be readily interchanged with but a single set of ribbon spools fitted to the machine. This invention has been patented by Mr. Harvey Ray, of Mobile, Ala. One side of the spool has peripheral teeth to engage mechanism of the type writer as the machine is operated, and on this toothed side is fixed a hub, slotted to receive an inwardly bent tongue of the inking ribbon bobbin, as shown at A in the small figure and in the sectional view. This bobbin consists of a plate of metal bent around from

**RAY'S INKING RIBBON SPOOL FOR TYPE WRITERS.**

its tongue to fit loosely upon the fixed hub, and at the other end is bent upon itself to form a clamp into which the end of the inking ribbon is fastened. The other side part of the spool has a hub which fits snugly inside of the other fixed hub, and against the end of the bobbin, the side plates thus forming walls between which the inking ribbon is held truly edgewise. By removing the movable side portion, the bobbin with the ribbon wound on it may be readily slipped from the fixed hub, and replaced by another bobbin carrying a fresh ribbon, or one of a different color, without soiling the fingers.

AN IMPROVED FOLDING STEP FOR VEHICLES.

The accompanying illustration represents a folding carriage step having an upper section and lower section pivoted thereto, each section being provided with tread plates. This invention has been patented by Mrs. Mattie M. Marsh, of Moscow, Idaho Ter. The sections when folded one upon the other are parallel,

**MARSH'S VEHICLE STEP.**

and are pivotally connected by a bolt or pin, as shown in the small view. The sections may be either straight or curved, as desired. The upper end of the main section is bent to form a tread plate, and so that it can be secured to the vehicle body, while at its lower end is another tread plate. The extremities of the pivotal or drop section are bent outward to provide upper and lower tread plates, this section being so made that it will fold with the upper one. The step is braced by a rod secured to the inner end of the pivot pin and the under surface of the vehicle body, a spring coiled around this rod serving to hold the lower section in folded position when it is not necessary to use it, but the tension of the spring being so light that the section can be readily disengaged and brought to the drop position.

THE Timberman does not seem alarmed at the prospect of an early destruction of our timber supply. It asserts that Puget Sound has 1,800 miles of shore line, and all along this line, miles and miles farther than the eye can reach, is one vast and almost unbroken forest of enormous trees. The forests are so vast that, although the sawmills have been ripping 500,000,000 feet of lumber out of them every year for the past ten years, the spaces made by these inroads seem no more than garden patches. An official estimate places the amount of standing timber in that area at 500,000,000,000 feet, or a thousand years' supply, even at the enormous rate the timber is now being felled and sawed. The editor adds that the timber belt of Washington Territory covers an area equal to that of the States of Vermont, Massachusetts, Connecticut, and New Hampshire.