



**A Bill for Establishing a Sliding Scale for Copies of Patents.**

A very obnoxious bill has been reported by the House Committee on Patents, and is now before both Houses of Congress. The matter in itself is a very small one, but should this bill become a law, it will prove to be a most vexatious measure and, instead of facilitating and expediting the work of the office, it will serve to embarrass and annoy inventors, and produce a condition of affairs which is as unnecessary as it would be intolerable. The bill as presented to the House is as follows:

"Sec. 493. The price to be paid for uncertified printed copies of specifications and drawings of patents shall be determined by the Commissioner of Patents: Provided, That the maximum cost of a copy shall be ten cents for each unit of five pages, or fraction thereof, contained in the specification and drawing of such printed copy."

We cannot but feel that this measure providing for a sliding scale of cost savors of a petty and useless economy, which should not for a moment be considered by Congress. Instead of interposing vexatious conditions, every facility should be afforded inventors and attorneys for procuring copies of patents with the greatest possible ease and dispatch.

Copies of patents are now furnished at the general rate of five cents each. The Commissioner claims, however, that a few patents are very diffuse, and show an immense number of sheets of specifications and drawings, ranging sometimes from 50 to 200 pages, and that the price of five cents does not cover the cost of publishing patents of this size. This may be perfectly true, but on the great majority of patents there should be a good margin of profit to the Patent Office. For example, we have taken at random one hundred copies of patents which have recently come to hand; estimating the value of the paper at five cents a pound, which is more than liberal, we find that the cost of the paper for the one hundred copies comes to 19 cents, or in short, that the cost of the paper, per copy, averages less than two mills. It would seem that the printing should not much exceed the cost of the paper; in fact, a local printer has estimated the cost of the mere printing and paper, not including the original cost of plates, at about one and a half cents a copy. It is apparent, therefore, from this, that the average profit on the ordinary run of patent copies should far more than make up the loss on the few patents of excessive size which are issued.

Even if this department were run at a loss, which has been questioned by the Patent Law Association of Washington, which has begun a campaign against the bill, certainly the outlay on the part of the Patent Office is well expended, owing to the facilities which are offered and which should be offered to the inventors throughout the country. Attorneys throughout the land are perfectly familiar with the difficulties and delays now arising from the narrow policy already pursued by the Patent Office with reference to patent copies. Only 75 copies of each patent are printed. Of this number 35 are sent abroad for distribution among foreign patent offices and libraries. This leaves a supply of only 40 copies for distribution throughout this great and glorious land. The inventor himself can only procure 10 copies of his own patent at one time. The supply of copies is constantly running out, and attorneys and inventors are being constantly subjected to annoyance and delay incident to waiting upon the pleasure of the Patent Office to print new copies, or else they are obliged to have made hand copies, which are quite expensive.

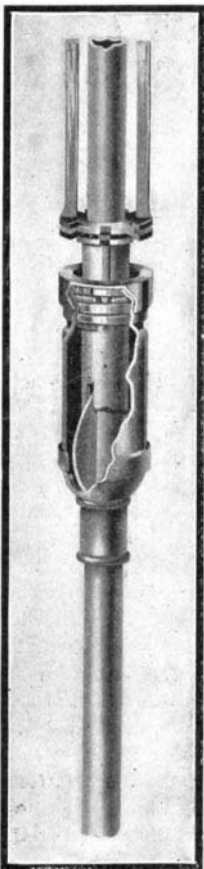
The proposed introduction of a sliding scale of cost is quite out of the question in a great institution like the United States Patent Office. This system has been tried in England and has been abandoned as impracticable. In case the inventor writes to an attorney ordering a number of copies distributed through different classes, it would be necessary, first, for the attorney to send a clerk to the Patent Office, have a search made through the records, count the pages in each patent ordered, form an estimate of the extra cost of such patents as may have more than five pages, write back to the inventor informing him of the amount of the charge, and after all this work has been accomplished, has there been any saving to the Patent Office? No. A large force of clerks would be required in the Patent Office, to ascertain the cost of copies ordered and answer the many inquiries of attorneys all over the country. Such an expense would greatly add to the cost of obtaining the copies, and it is not readily seen how the income of the Patent Office would be greatly, if at all, increased by such a vexatious system. Considering that the United States Patent

Office turned into the Treasury last year a surplus of \$193,556, the necessity for such niggardliness as is shown in the proposed bill seems utterly inexplicable.

The Patent Office can well afford to bear a loss of several thousand dollars a year, were such an amount necessary, rather than subject the inventor and the public to such an annoyance. If Congress feels that the Patent Office should not be allowed the use of its own income, let it increase the price of copies from five to ten cents each; but let us have one uniform rate for all copies ordered, and let an adequate supply be printed every week, so that the delays, annoyances, and medieval methods now in vogue may be done away with.

**COMBINATION LOCK FOR UMBRELLAS.**

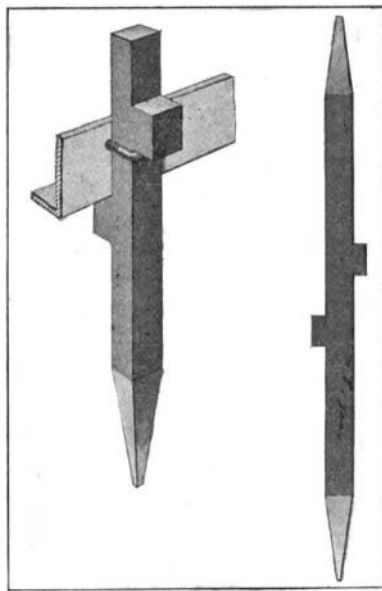
In order to prevent the misappropriation of umbrellas, whether intentional or otherwise, Dr. R. B. Waite, of Springville, N. Y., has provided a device which will increase the spring latch of an umbrella, to prevent the umbrella being opened by an unauthorized person. The device is provided with a simple combination lock, which will render it impossible for anyone not familiar with the proper combination to operate the latch. The lock is so arranged that the owner can open it in the dark, the proper combination being recognized by a number of clicking sounds produced when the lock is being operated. As shown in our illustration, the device consists of a casing which, at its lower end, fits snugly onto the runner sleeve of the umbrella, but is formed with an enlarged portion which covers the spring latch. A number of disks are held in the upper end of this casing, between an indented shoulder formed therein and a cap which is soldered to the top. A keyway is cut in each of these disks, and it is only by turning these disks until they are all brought into alignment with the key formed on the runner sleeve, that the casing can be pushed upward. The disks are brought into position by turning the casing a certain distance in one direction, and then a certain distance in the opposite direction, these distances being indicated in each case by a predetermined number of clicks, due to a spring pawl formed on the upper end of the casing slipping into notches formed on one of the disks. Our illustration shows the disks in the aligned position, and the casing partly moved upward. It is evident that further upward movement of the casing would result in pressing down the spring latch, thus releasing the runner sleeve from engagement therewith, and permitting the umbrella to be raised.



**COMBINATION LOCK FOR UMBRELLAS.**

**HARROW TOOTH AND SIMPLE FASTENING DEVICE.**

The harrow tooth which is illustrated herewith is adapted for convenient attachment upon a frame beam of a harrow, and its construction, which is extremely simple, is such as to prevent movement of the tooth in any direction while, at the same time, permitting it to be readily detached when desired. In the case of



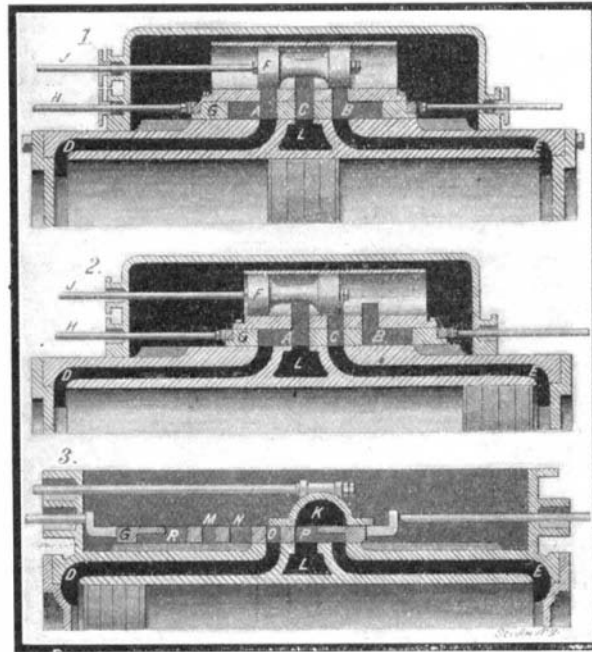
**HARROW TOOTH.**

a double-pointed tooth the construction also permits the tooth to be readily reversed in position, thus substituting a sharp end of the tooth for one that is worn out. The shank or body of the tooth is formed with two lugs, that project from opposite faces of the tooth. The lower lug is adapted to fit under the angle-iron frame of the harrow, and the upper lug

rests on the fastening device. This fastening device or clamp consists of a U-shaped member, whose ends pass through perforations in the vertical flange of the angle iron. When the clamp is adjusted, it is permanently secured in place by means of nuts threaded on to these ends, and bearing against the rear face of the vertical flange. At the right in the illustration, we show a tooth pointed at both ends, and it will be evident at a glance that this tooth may be applied as readily with either point in the downward or operative position. This same construction may be advantageously applied to secure cultivator teeth to the frame beam of a cultivator. A patent for this invention has recently been granted to Mr. John Y. Cooper, Rural Route No. 5, Nashville, Tenn.

**VALVE MECHANISM FOR LOCOMOTIVES.**

We illustrate herewith a new valve mechanism for locomotives, which when the locomotive is starting and climbing grades may be operated by the engineer, to admit steam in the usual manner at both ends of the cylinders, but when running or traveling down-grade can be operated to admit steam only at the forward or at the rear ends of the cylinders. Mr. Martin Schilde, 432 Philip Street, New Orleans, La., is the inventor of this valve mechanism. The accompanying engraving shows in section two forms of Mr. Schilde's invention. The cylinder is provided with the usual steam admission ports *D* and *E*, and the exhaust port *L*, and in Figs. 1 and 2 these communicate through ports in a plate *G* with the valve cylinder of the valve *F*, which is connected by the valve stem *J* with the link movement in the usual manner. The plate *G* is secured to the bottom of the valve cylinder, and by means of the rod *H*, which leads to the engineer's cab, may be moved to any desired position over



**VALVE MECHANISM FOR LOCOMOTIVES.**

the ports of the main or piston cylinder. With the plate in its central position, as shown in Fig. 1, steam will be admitted to the cylinder at either end. When the valve *F* moves to the right, steam enters the cylinder at the left end through ports *A* and *D*, at the same time the left end of the piston cylinder is opened through ports *E* and *B* to the valve cylinder, and thence through ports *C* to the outlet port *L*. When the valve *F* is moved to the left, the conditions are reversed. Steam enters the cylinder through ports *B* and *E*, and the exhaust passes out through ports *D*, *A* and *C* to *L*. When it is desired to admit steam only to the forward end of the piston cylinder, the plate *G* is moved to the position shown in Fig. 2, when the port *D* is always in communication with the exhaust port *L* through port *A*. Now, when the piston is moved to the left, the port *C* is uncovered, permitting steam to flow through *E* into the cylinder; and when it is moved to the right, the steam is permitted to escape through ports *E*, *C* and *A* to the exhaust port *L*. It will be readily understood that when the plate *G* is moved so as to bring the port *C* into register with port *D*, the action will be reversed, steam being admitted at the left end of the cylinder only. In Fig. 3 we show a modification of the construction, as adapted for use with a slide valve. With the parts in the position illustrated, port *E* is always in communication with the exhaust *L*, through port *P*, and port *D* connects first with the steam chest through port *O*, and then with the exhaust port *L* by way of the cavity in the valve *K* and the port *P*. Steam would be admitted to either end of the cylinder alternately if ports *O*, *N* and *M* were brought into register respectively with ports *E*, *L* and *D*. In order to admit steam to port *E* only, the plate would have to be moved to the right until port *M* registered with port *E*, when port *D* would be connected with the exhaust through port *R*.