(No Model.)

E. S. DRAKE.

CLAMP.

No. 426,665. Patented Apr. 29, 1890.

Fig. 1.

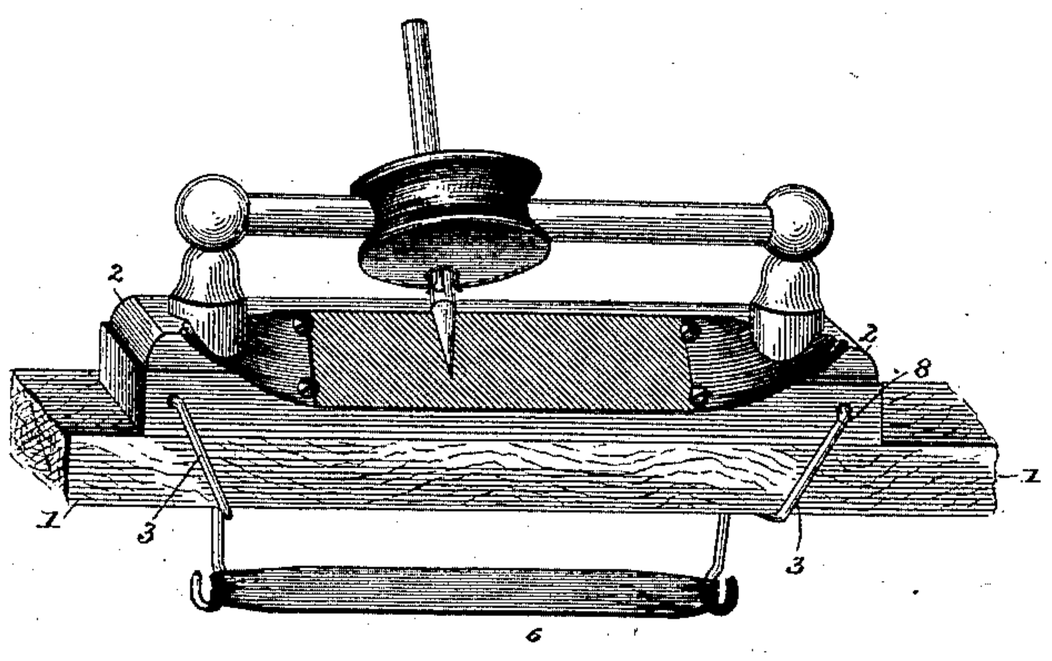


Fig. 2.

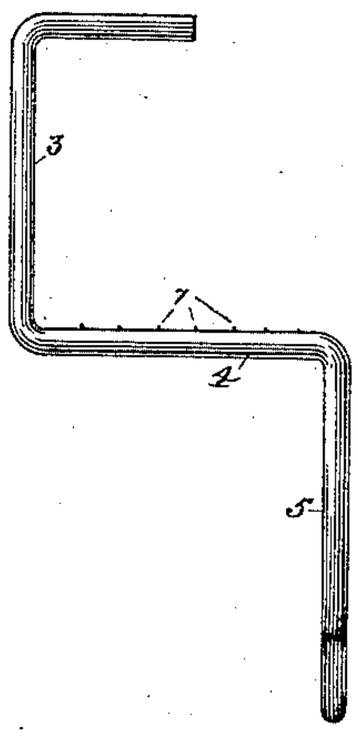


Fig. 3.

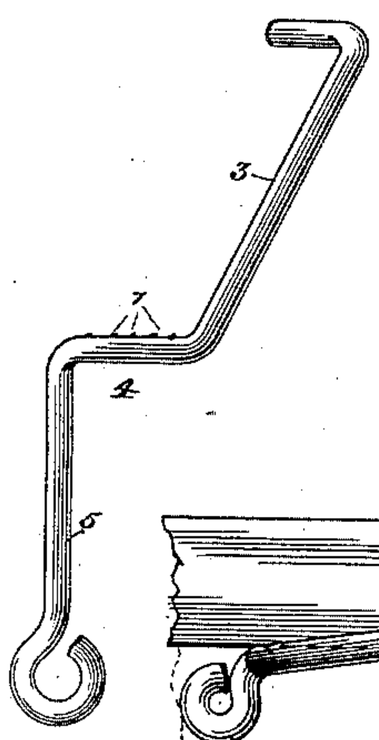
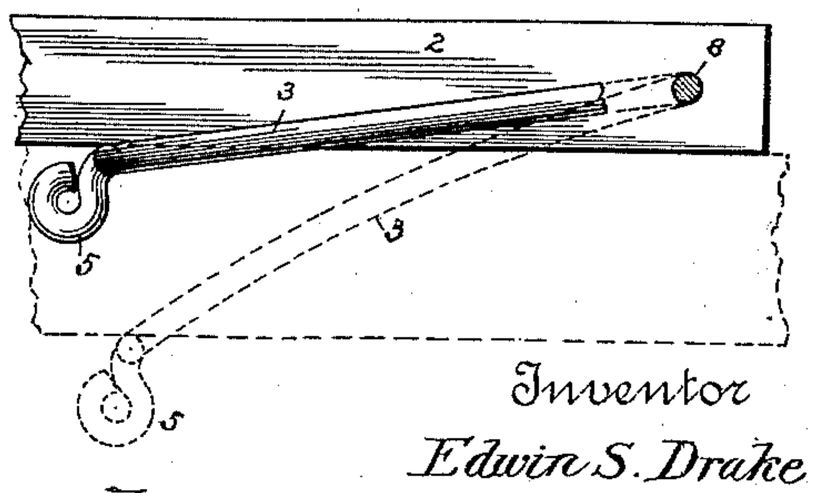


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN S. DRAKE, OF PORTLAND, MAINE.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 426,665, dated April 29, 1890.

Application filed November 11, 1889. Serial No. 329,925. (No model.)

To all whom it may concern:

Be it known that I, EDWIN S. DRAKE, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Clamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a simple, durable, and efficient means for securing to tables, desks, stands, or shelves such articles as pencil-sharpeners, match-safes, work-holders, &c.; in fact, any articles which it may be necessary or desirable to provide with means which, while affording a secure attachment and provision against displacement, will at the same time permit of their ready removal and attachment to other supports.

To this end the invention consists in the improved clamp hereinafter shown and described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a pencil-sharpener (one invented by me and described and claimed in an application filed March 2, 1889, Serial No. 301,810) secured to the edge of a table or desk by my improved clamp. Figs. 2 and 3 are respectively a side elevation and perspective view of the clamp. Fig. 4 is a fragmentary view showing a different form of the clamp.

As the pencil-sharpener shown forms no part of my present invention, I do not deem it necessary to give any description of its construction or operation. It is shown here merely to illustrate the manner of applying and using the clamp.

In the drawings, 1 denotes the edge of the table or other support to which the article is to be attached. 2 indicates the base of the article, and 3 the clamp. This clamp is formed of a piece of brass or steel wire of suitable length and thickness, bent into substantially the form shown in Fig. 2, though it is not necessary that it should be of this precise form, as its exact shape, size, and proportions may vary as taste or the requirements of the use to which it is to be put may dictate. Its active part may be likened in shape to the letter U, one of its parallel arms being shown in Fig. 2 as shorter than the other, though both may be of one length, or either longer than the other. From that arm which takes hold of the support to which the article is secured (numbered 4 in the drawings) preferably projects laterally a stem 5, which in one form of the device (that shown in Fig. 4) acts merely as a knob or thumb-piece by which its hold on the support may be released, and in the other (that shown in Figs. 1, 2, and 3) as a convenient means of applying a spring 6 to bring the clamps toward each other and hold them in contact with the support. From this same arm of the clamp, on that side which comes in contact with the table or whatever support the article is secured to, project short spines or spikes 7, to bite into the material of the support and give the clamp a better grip. The other arm of the clamp is perfectly plain and forms the means of connection to the article, as I will now describe.

In the base of the sharpener, or whatever article the clamp is to be applied to, is formed a small hole of diameter and shape in cross-section corresponding to the size and shape in cross-section of the attaching arm of the clamp. This I have found in practice to afford the only means of connection actually necessary; but in case it is desired to provide against detachment and loss of the clamp the hole may be run clear through the base of the article and the arm of the clamp made long enough to project therethrough and receive a nut or other means on its outer end to hold it permanently in place. In practice two of these clamps are used, as represented in Fig. 1, and they co-operate to form a rigid fastening not easily displaced by jars or strains on the article, yet readily detached when their holding-arms are freed from contact with the support.

In the form represented in Figs. 1, 2, and 3 the arm of the clamp by which it is connected to the article is round in cross-section, and permits the clamp to turn freely in the hole in the base. In this form it is necessary that the two clamps should be drawn toward each other and held in contact with the sup-

port by some extraneous spring. I have found the cheapest and most convenient spring for this purpose to be the ordinary rubber bands now in such common use; but a coiled spring, or even a string, tape, wire, or other device without any resilience in itself may be used, there being sufficient spring in the extensions 5 to answer the purpose. In the form represented in Fig. 4, however, the necessity for any separate spring is entirely obviated. This is done by making the clamp self-fastening, as it were. To do this, that arm of the clamp which attaches it to the base of the article is driven firmly or otherwise secured in a hole in the base, instead of being free to turn therein, as in the other form. In this way the clamp may be fitted to the base so that the rubber band or other spring necessary in the other form may be dispensed with, the resilience of the part 3 being sufficient to hold the opposite arm against the support with the requisite spring force.

From the above it will be seen that I have devised a clamp having wide application, strong and efficient in use, easily made at an extremely small cost, and readily applied and detached. These clamps co-operate in a peculiar manner to hold the article against strains or jars tending to displace them, and are especially adapted to such articles as pencil-sharpeners, work-holders, &c., whose use requires resistance to force tending to slide them along the surface of the support to which they are secured. An examination of Fig. 1 will show that within the limits of the strength of the clamp any such strain exerted upon the article will cause the clamp to take a firmer hold on the support, and the greater the strain the firmer will be the grip.

Referring again to Fig. 1, it will appear that any force exerted to push the sharpener toward the left will be resisted principally by the left-hand clamp, and, vice versa, any force tending to push it to the right will be resisted by the right-hand one, the two co-operating, however, to hold the article against all strains.

It will of course be understood that the form of clamp shown in Fig. 4 is a fixture to the base of the sharpener or whatever other article it is intended to uphold. In affixing to the base it must be arranged so that the arm 3 will be held normally up toward the under side of the base, with, however, a yielding force depending upon the resilience of the arm itself. The form of clamp shown in the other figures may or may not be a fixture. In any case the clamp is made at an extremely small cost and forms a salable adjunct to put on the market with the articles without adding to the cost of the latter to the purchaser.

Having thus described my invention, what I claim, and desire to secure, is—

1. A clamp consisting of two pieces of metal rod or wire bent into substantially the form of the letter U, one leg of which is adapted to be secured to the article to be fastened and the other of which is held against the base of the support by a spring, substantially as described.

2. A clamp for detachably securing a pencil-sharpener or other article of the character described to a table or support, consisting of two pieces of metal rod or wire bent into approximately a U shape, one arm thereof adapted to take hold of the base of the article and the other to overlap the edge of the support and take hold of its under side, and a spring to hold the wires against the support, substantially as described.

3. As a new article of manufacture, a clamp for detachably securing pencil-sharpeners or other articles of the character described to a table or support, consisting of two wires bent approximately into the form of the letter U and having one arm adapted to engage the article to be secured and the other to overlap the edge and be held against the opposite side of the support, and a spring for drawing the lower ends of the wires toward each other, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN S. DRAKE.

Witnesses:
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