

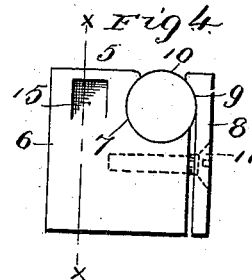
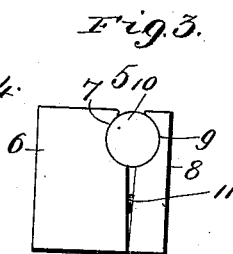
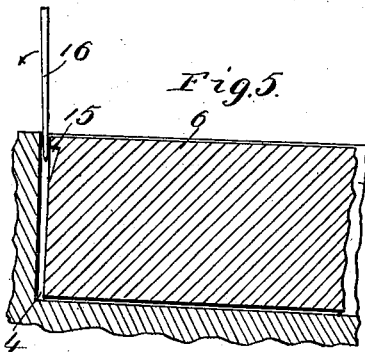
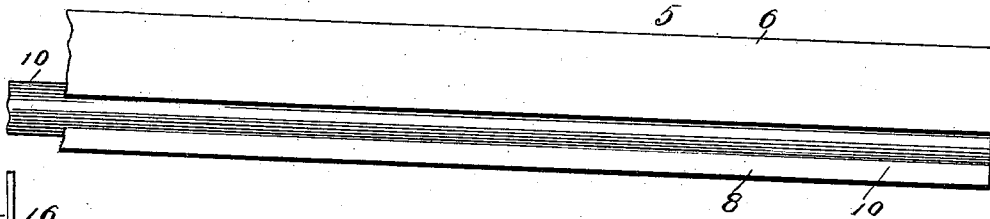
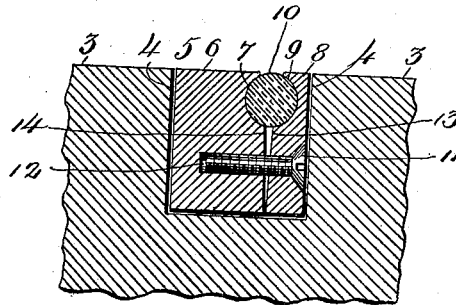
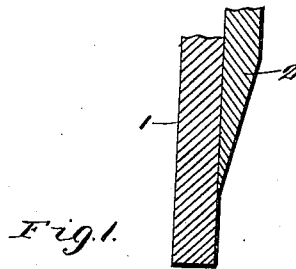
No. 649,156.

F. E. BURNS.
CUTTING MACHINE.

Patented May 8, 1900.

(No Model.)

(Application filed Aug. 23, 1899.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK E. BURNS, OF ST. LOUIS, MISSOURI.

CUTTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 649,156, dated May 8, 1900.

Application filed August 23, 1899. Serial No. 728,211. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. BURNS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Cutting-Machines; 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 relates to improvements in cutting-machines; and it consists in the novel combination and arrangement of parts, as will be hereinafter more particularly described and claimed.

In the drawings, Figure 1 is a vertical transverse section of a paper-cutting machine, with parts broken away, showing my invention applied thereto. Fig. 2 is a top plan view of the improved cutting-stick which embodies my invention. Fig. 3 is an end view of the same, and Fig. 4 is a similar view showing a modification of my invention.

The object of my invention is to construct a simple and practical clamp and cutting-stick to be used more particularly for paper-cutting machines and removably located in the bed of the machine, the cutting-knife of the machine, or, more properly, the lower edge thereof, being adapted to cooperate with the cutting-stick of the construction hereinafter described, whereby not only better results are obtained in cutting paper or other material, but the stick will last for a considerable length of time, for the reason that it can be turned and presents more cutting-surfaces than those heretofore employed where a removable clamp is used; and it consists of a removable clamp made of two pieces and having two semicircular grooves, a wooden stick which is circular in cross-section and adapted to be embraced along its entire length by the said clamp about its semicircular portions, screws or similar devices for connecting the two parts comprising the clamp together, whereby the stick is firmly held in a binding position, and in other details of the construction of the clamp, as will be apparent from the description to follow.

Referring to the drawings, 1 represents the clamping-plate, the lower edge of which is adapted to be brought in contact with the pa-

per to be cut, 2 the cutter-blade, which operates in conjunction with the said clamping-plate and follows immediately after the movement of the latter, and 3 the bed of the machine, all of which are of the usual construction and found in the modern paper-cutting machine.

Formed in the bed 3 of the machine along its entire length and immediately below the clamping-plate and cutter-blade is a rectangular-shaped groove or channel 4, which is adapted to snugly receive the clamp, together with the cutting-stick, the construction and operation of which will now be described.

The clamp 5 corresponds in length to the width of the machine, or, more properly, the bed thereof, and consists of a block 6, one edge of which is provided with a semicircular groove 7, which is located adjacent to the upper edge of said block, which forms one jaw of the said clamp, the opposite jaw of the latter consisting of a plate 8, the length of which corresponds to the length of said block or the opposite jaw of said clamp, and is also provided with a semicircular groove 9, which faces the groove 7, between which grooves a wooden cutting-stick 10, which is circular in cross-section, is adapted to be clamped, whereby a suitable amount of surface is exposed to view, with which the cutter-blade 2 is adapted to cooperate.

In order to hold the round or circular cutting-stick 10 in a binding position between the jaws of the clamp, screws 11 are loosely passed through the plate 8 and into screw-threaded openings 13, formed in the block 6, and, as will readily be seen from the drawings, the inner opposite faces 13 and 14 of the plate 8 and block 5, respectively, are inclined, whereby a suitable space is left between the jaws to firmly clamp the wooden cutting-stick 10, and thereby hold the same in its proper and adjusted position.

From the foregoing description it will readily be seen that by the employment of the clamp or construction thereof and the circular or round cutting-stick used in connection therewith the latter can be turned slightly by releasing the clamp when the said stick becomes sufficiently worn, whereby not only a better cutting-surface is obtained, but the stick will last for an indefinite length of time and not

become useless after being used a short length of time, as is a common annoyance with sticks of other constructions.

I am aware that prior to my invention a rectangular-shaped stick in cross-section has been employed and clamped, the clamp, together with the stick, having been inserted into a channel formed in the bed of the cutting-machine; but I have found in practice that a cutting-stick of this construction is very undesirable and lasts for only a short length of time, and in many instances the four sides cannot be utilized, for the reason that the stick splits or becomes separated by usage or what may be commonly called "quarters" itself by the knife or cutting blade. Further, I am also aware that sticks which are circular in cross-section have also been employed in this class of machinery; but the bed of the table has been necessarily formed to accommodate such a stick, which is very large in construction, and this form has been very undesirable in many respects, and therefore I wish to limit myself to the employment of a clamp adapted to be received by the bed of the machine, said clamp holding a cutting-stick which is round in cross-section, whereby the clamp, together with the stick, may be removed from the machine for adjustment of the stick as the same becomes worn through usage.

In Fig. 4 I have shown a modification of my invention in which the semicircular groove 7 of the block 6 extends a sufficient distance to form a perfect bearing for the cutting-stick 10, in which instance the plate 8 will have a very slight groove 9 formed thereon, which construction is found to be preferable for the reasons stated. The end of the block 6 is provided with a depression 15, which is located at one end of the same and is normally located below the upper surface of the bed of the table, whereby the said block, together with its parts, may be easily removed from

the machine by inserting the end of a screw-driver or other tool 16 between one of the end walls of the channel 4, formed in the bed of the machine and the end of the clamp 6, whereby when said tool is turned in the direction shown by the arrow, Fig. 5, the end of the same will pass into the depression 15 and the clamp be easily removed from the channel.

Having fully described my invention, what I claim is—

A cutting-machine, having a channel formed in the bed portion thereof, a clamp normally located within said channel and composed of a block and plate, the former having a circular longitudinal depression formed therein, providing a bearing, a cutting-stick circular in cross-section, located within said depression, a slight depression or groove formed on said plate, and adapted to come in contact with said cutting-stick for holding the same within the depression formed in the block, the inner opposite faces of said block and plate being inclined whereby a sufficient space is left between the block and plate adjacent to the upper portions thereof, and screws loosely passing through the plate and into screw-threaded openings formed in the block for binding the stick between the two, one end of said block being provided with a depression and normally located adjacent to one of the end walls of the channel, and below the surface of the bed, whereby a tool may be inserted between the end wall of the channel and one end of the clamp, the end of said tool being received by said depression for removing the clamp from the channel, substantially as described.

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

FRANK E. BURNS.

Witnesses:

C. F. KELLER,
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