S. KAUFMAN.

CUTTING STICK FOR PRINTING PRESSES.

APPLICATION FILED JUNE 19, 1909.

954,679.

Patented Apr. 12, 1910.

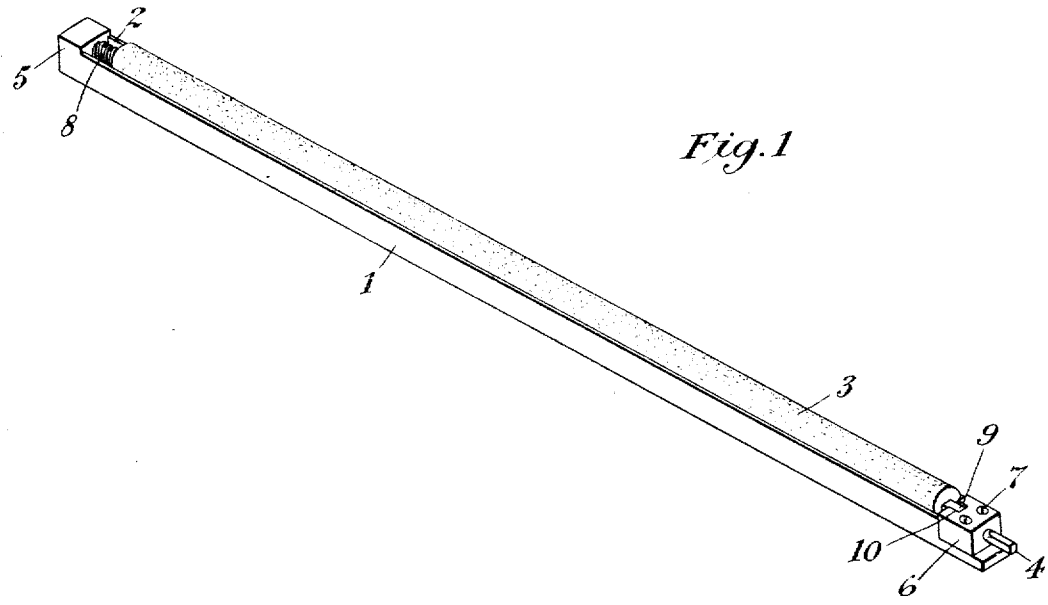


Fig. 1

Fig. 2

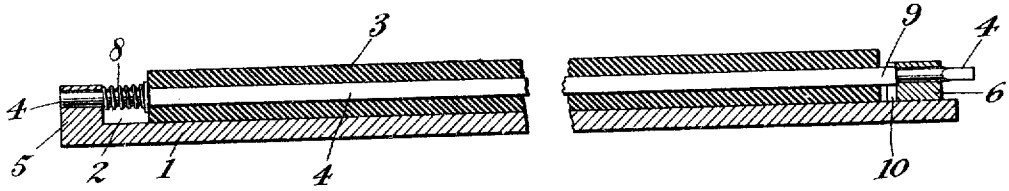


Fig. 3

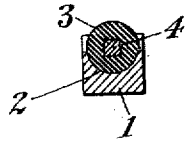
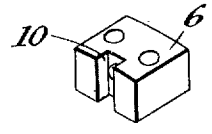


Fig. 4



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UNITED STATES PATENT OFFICE.

SAMUEL KAUFMAN, OF NEW YORK, N. Y.

CUTTING-STICK FOR PRINTING-PRESSES.

954,679. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed June 19, 1909. Serial No. 503,060.

To all whom it may concern:

Be it known that I, SAMUEL KAUFMAN, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Cutting-Sticks for Printing-Presses, of which the following is a full, clear, and exact specification.

My invention relates particularly to cutting sticks having a revoluble cutting block or surface, and is adapted for use in web printing presses such as are ordinarily used in printing newspapers, although it may be used in other types of machine. The cutting mechanism of such presses consists of a male cylinder carrying a knife and a female cylinder carrying a cutting stick arranged to co-act so as to sever the web into sheets of any required size as the paper is delivered from the press.

The cutting sticks at present in general use are made with a bed of wood upon which is nailed a flat strip of rubber to form the cutting surface. When the rubber becomes worn out from the action of the knife, the press must be stopped, the cutting stick removed from the cylinder and a new one replaced. These operations cause a considerable loss of time, which is particularly disadvantageous in newspaper work, for in such work time is often of the essence.

My invention has for its principal object to provide a cutting stick of novel and simple construction, having a revoluble cutting surface which may be readily turned while the cutting stick is in its place on the cylinder so that when any part of its surface becomes worn out a fresh cutting surface may be presented to the knife, thereby permitting the use of one cutting block for a plurality of cuts. I attain this object, as well as others not herein enumerated, by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of my cutting stick; Fig. 2 is a section in elevation through the center line of the stick; Fig. 3 is a cross section in elevation; and Fig. 4 is a detailed view of the detachable support.

The cutting stick comprises a bed or frame (1) provided with a longitudinal groove (2) which is made semi-circular in cross section to form a suitable housing for a cylindrical cutting block (3). The cutting block is revolubly carried on a shaft (4) which is suitably journaled near its ends in a stationary bearing or support (5) and a detachable bearing or support (6) so as to permit of a longitudinal movement of the shaft. This cutting block is constructed of rubber or other suitable resilient material to provide a yielding surface upon which the cutting knife may act.

It is necessary to fasten the cutting block on to the shaft in such a manner that the block will not slip around the shaft. I prefer to do this by making the portion of the shaft on which the cutting block is mounted polygonal in cross section, as shown in Fig. 3, although this may be accomplished in any other suitable manner.

The bearing or support (6) is detachably fastened to the frame (1) in any suitable manner known to the art, as by means of the screws (7). By simply detaching this support from the frame the cutting block may be readily removed and a new one replaced, as when the surface of the cutting block is entirely worn out.

To provide means for holding the cutting block securely in place so as to prevent further rotation thereof when the block has been turned into proper position, I provide a spring (8) which acts against the stationary support (5) and the adjacent end of the cutting block (3) to force the shoulder (9) of the shaft into the recess (10) formed on the inner surface of the detachable support. The engagement of the shoulder with the recess acts to lock the cutting block in position when it has been turned.

The manner in which my invention operates is as follows: When any part of the surface of the cutting block becomes worn, the shaft upon which the block is mounted is pressed inwardly so as to disengage the shoulder from the recess and is then partially turned so that the block presents a fresh cutting surface to the knife. The spring forces the shoulder back into the recess thereby locking the shaft in place and permitting the cutting block to be used for further cuts.

As the cutting block is supported on the shaft, the pressure of the knife on the upper surface of the block will not be communicated to the lower surface thereof but will be taken up by the shaft thereby protecting the under surface of the block, so that when the shaft is partially rotated to bring the under surface on top, the resili-

ency of said surface will not have been destroyed by the pressure from above.

What I claim as my invention and desire to secure by Letters Patent is:

1. A cutting stick for printing presses comprising a frame, a shaft removably supported near its ends on said frame, and a cylindrical cutting block axially mounted on said shaft.

2. A cutting stick for printing presses comprising a frame, a shaft removably supported on said frame, a cylindrical cutting block axially mounted on the shaft, and adapted to be rotated by turning said shaft, and means for locking said shaft in position against the continued rotation thereof.

3. A cutting stick for printing presses comprising a frame having a stationary support and a detachable support, a shaft journaled in said supports and a cylindrical cutting block axially mounted on said shaft, and adapted to be rotated by turning said shaft.

4. A cutting stick for printing presses comprising a frame having a stationary support and a detachable support, a shaft journaled in said supports, a cylindrical cutting block axially mounted on said shaft, and means for locking said shaft against continued rotation.

5. A cutting stick for printing presses comprising a frame having a stationary support and a detachable support, a shaft journaled in said supports, a cylindrical cutting block mounted on said shaft and means for locking the shaft comprising a recess formed in one of the supports and adapted to receive and engage a shoulder formed on said shaft so as to hold said shaft and the cutting block rotated thereby against continued rotation.

In witness whereof I have hereunto signed my name in the presence of two witnesses.

SAMUEL KAUFMAN.

Witnesses:
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