No. 884,218. PATENTED APR. 7, 1908.

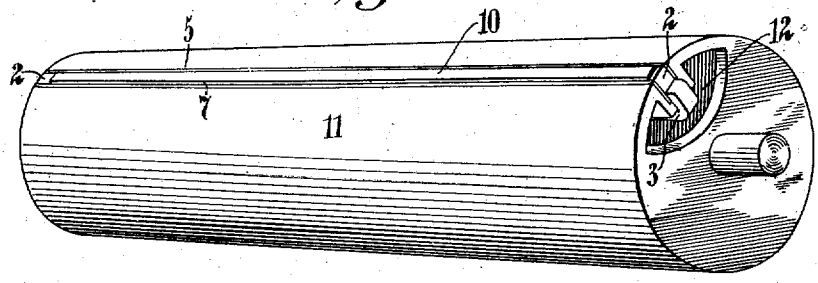
G. & R. SCHWARZ.

CUTTING STICK.

APPLICATION FILED MAY 22, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



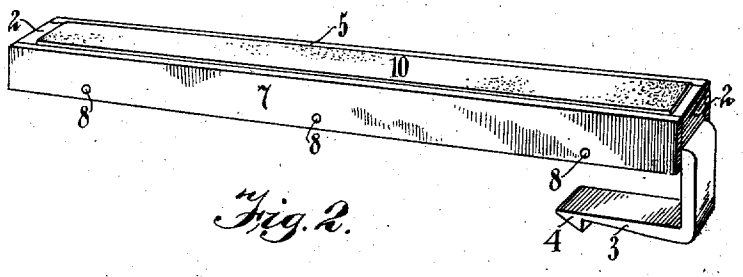


Fig. 2.

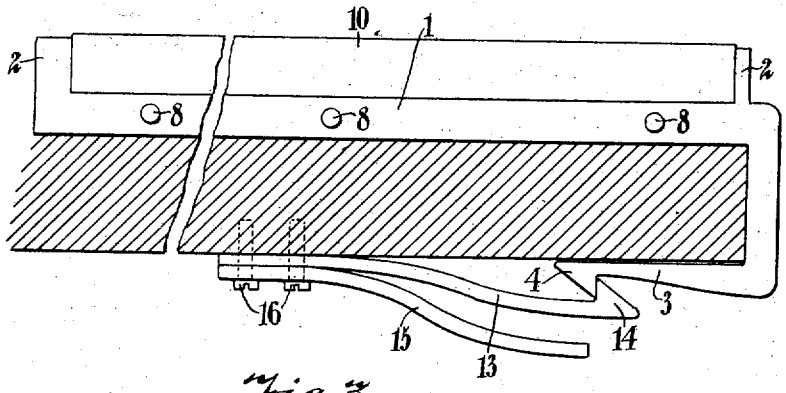


Fig. 3.

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No. 884,218. PATENTED APR. 7, 1908.

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2 SHEETS—SHEET 2.

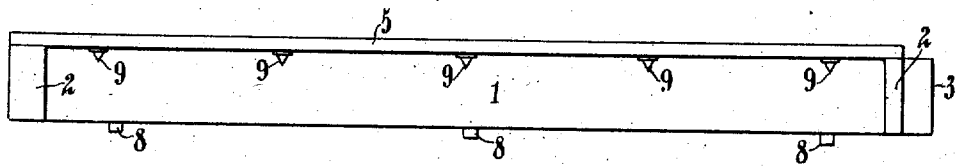


Fig. 4.

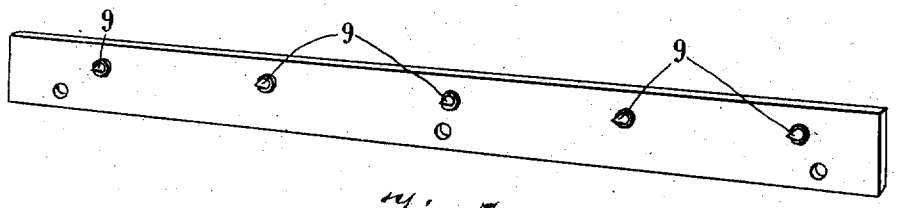


Fig. 5.

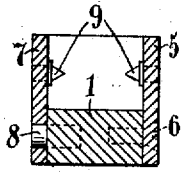


Fig. 6.

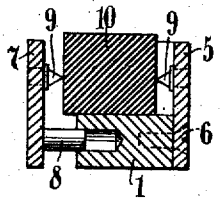


Fig. 7.

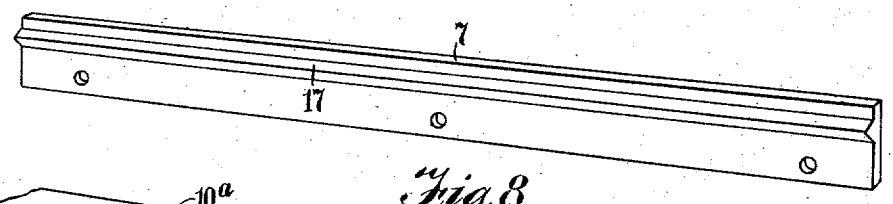


Fig. 8.

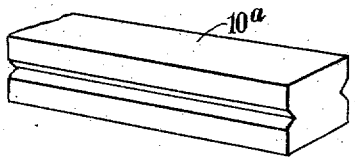


Fig. 9.

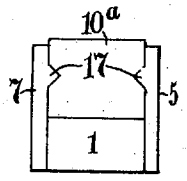


Fig. 10.

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UNITED STATES PATENT OFFICE.

GEORGE SCHWARZ AND RICHARD SCHWARZ, OF NEW YORK, N. Y.

CUTTING-STICK.

No. 884,218. Specification of Letters Patent. Patented April 7, 1908.

Application filed May 22, 1907. Serial No. 375,040.

To all whom it may concern:

Be it known that we, GEORGE SCHWARZ and RICHARD SCHWARZ, citizens of the United States, and residents of the borough of Brooklyn, city of New York, county and State of New York, have invented a certain new and useful Cutting-Stick, of which the following is a specification.

The invention has reference to improvements in cutting sticks of the character for which Letters Patent #786,606 were granted April 4, 1905, this stick being carried by one of the cutting rollers of a web printing press, and which acts to support a web of paper and operate in conjunction with the cutting edge of a knife on a complementary cutting roller. This construction enables a clean cut of the paper by the knife during the travel of the web. These sticks are in need of repairs at frequent periods; especially is this true of that portion of the stick known as the cushion, against which the knife edge on the cutting roller is pressed. As it is necessary to stop the press for removing or replacing the stick or any portion thereof, it is desirable that the work be accomplished with all possible despatch; also that the life of the cushion of the stick be prolonged as long as possible.

To these ends the present invention is primarily directed, one embodiment of the same including a box holder for carrying the cushion having a removable side which is readily detached and applied when the stick is displaced from the roller. The inner faces of both sides of the holder are provided with oppositely disposed teeth or pins which bite into the cushion, and thereby securely hold it in place when the stick is in operative position. The cushion is square in cross section and since the pins which bite into it holding it in place do not impair the faces of the cushion so engaged, said faces may be thereafter thrown to the top of the holder and coact directly with the cutting edge of the knife, thus adapting all four faces of the cushion being used in connection with the knife, before the cushion is discarded and replaced.

Other important features of the invention reside in the compact manner in which it is applied to the roller, presenting a neat appearance when assembled, and in a guard or stop for the locking device which secures the holder in place; the said stop serving to prevent the separation of the locking members beyond a point where breakage would be liable to result.

Reference is to be had to the accompanying drawings, forming a part of this specification, wherein like reference characters refer to like parts throughout, and in which

Figure 1 is a perspective view of one of the cutting rollers of a web printing press with our improved stick applied thereto. Fig. 2 is a perspective view of the stick displaced from the roller. Fig. 3 is a fragmentary section of the roller showing the removable side of the box holder withdrawn and completely disclosing the locking mechanism which secures the stick and roller in assembled relation. Fig. 4 is a plan of the holder portion of the stick with the displaceable side removed. Fig. 5 is a perspective view of said side. Fig. 6 is a cross section of the holder portion of the stick. Fig. 7 is a cross section of the stick in a slightly modified form and showing the displaceable side slightly withdrawn as when securing the cushion in place. Fig. 8 is a perspective view of a modified form of displaceable side for the holder. Fig. 9 is a perspective view of the form of cushion which is used in connection with a holder of which the side shown in Fig. 8 is a part. Fig. 10 is a cross section of a form of our improvement of which the displaceable side shown in Fig. 8 and the cushion shown in Fig. 9 are elements.

More specifically stated, the construction of a stick in accordance with our invention as shown in Figs. 1 to 5 inclusive, includes a box holder of substantially the same length as the cutting roller of the printing press to which it is applied, and comprises the base strip 1 having the upwardly directed portions 2 at opposite ends forming the ends of the holder, the base strip being extended at one end where it is bent upon itself in the form of a U to provide a latching member 3, constructed with the outwardly beveled head 4, a side strip 5 which is preferably made as a separate part and attached to the base strip by the screws 6, as shown in Fig. 6, and a side strip 7 carried on the pins 8 projecting from the base strip 1, and which may be laterally displaced from the remainder of the holder, both the strips being provided with opposed conical pins or teeth 9 arranged at intervals on their inner faces.

Placed between the teeth 9 of the box holder in assembling the stick is a cushion 10 composed of rubber or some other suitable

material, the cushion being substantially square in cross section, and of such thickness as to snugly fit between the side strips 5 & 7 of the holder when the side 7 is forced to place and to protrude slightly above the top of the holder.

The cutting roller 11 which is to carry the cutting stick is hollow and constructed with a channel or groove passing longitudinally through its perimeter, the depth of the channel being such that the top of the box holder will lie flush with the roller when assembled therewith, leaving the cushion 10 to project slightly thereabove. An opening 12 is made in one end of the roller surrounding the walls of the channel for receiving the latch member 3, this member acting to engage with a corresponding but oppositely disposed spring latch member 13 constructed with the outwardly beveled head 14. The latch member 13 as is also a guard or stop 15 therefor is secured to the bottom face of the wall of the channel in the roller by screws 16, or in any other suitable manner. This stop 15 limits the extent to which the latch member 13 may be depressed and separated from the latch member 3, thereby preventing the accidental forcing of the spring stop member beyond its elastic limit or a point where it would be apt to be broken off.

In Fig. 7 is shown a form of our improved stick in which the box holder for the cushion is slightly modified. This change consists only in making the pins 8 slidable within apertures in the base strip 1 and fixedly held to the displaceable side 7, instead of the reverse construction as in that form of my invention just described.

Figs. 8, 9 and 10, illustrate a still further modified form of the invention in which the pins or teeth 9 are replaced by the continuous longitudinal ribs 17, formed on the side strips 5 & 7. The side strip 7 is made displaceable in this form of invention after the manner of the side strips shown in either Figs. 6 or 7. The cushion 10^a which is to be used in connection with the holder shown in Fig. 10 to form the completed stick, is provided with longitudinal grooves in opposite faces to fit and receive the rib 17. By this construction only two faces of the cushion 10^a are adapted to be used as cutting faces. The pins or teeth 9 on the side strips 5 & 7 as in the form of our invention just described, do not impair the faces of the cushion with which they engage, for use as coacting faces with the cutting edge of the knife, whereby all four faces of the cushion may be used for this purpose before it is necessary that the cushion be discarded and replaced.

It is apparent that the time required to remove the stick and replace or reverse the cushion after the printing press has been stopped, will not be consequential with our improvements, but that the displaceable side of the box holder may be bodily and instantly withdrawn, and likewise replaced as the cushion is adjusted and immediately thereafter slid to operative position within the roller where it will be automatically locked by the engagement of the latch members 3 and 13.

The invention as described and illustrated is obviously susceptible of numerous modifications falling within the scope of the claims annexed.

Having thus described our invention we claim as new and desire to secure by Letters Patent.

1. The combination of a cutting roller having a channel in its perimeter, of a cutting stick slidable to and from operative position in said channel and including a box holder having a side slidable from the stick on removing the stick from the roller, said side being maintained in assembled relation with the holder by the abutting wall of the channel.

2. The combination of a cutting roller having a channel in its perimeter, of a cutting stick movable to and from operative position within said channel and means arranged within the roller for locking the stick in place.

3. The combination of a cutting roller of a cutting stick adapted to be carried by the roller, and means substantially, wholly contained within the roller adapted to automatically lock the stick to the roller.

4. The combination of a cutting roller, of a cutting stick adapted to be carried by the roller, latching members operable to lock the stick to the roller, and a guard for one of said members operating to prevent its separation from the other member beyond a predetermined point.

5. The combination of a cutting roller, of a cutting stick adapted to be carried by the roller, and latching members, one of which is fixed within the roller, and the other carried by the stick, operable to automatically engage and lock the stick to the roller.

6. A cutting stick including a box holder having a displaceable side with pins for slidingly connecting it with the remainder of the holder.

7. A cutting stick comprising a box holder having side strips relatively movable to and from each other and teeth carried on the inner faces of said strips for the purpose described.

8. A cutting stick including a box holder having a displaceable side and a cutting roller having means for holding the displaceable side of the holder assembled therewith.

9. A cutting stick including a box holder having side strips relatively movable to and from each other, a cushion, means carried on the inner faces of the strips for engaging the

cushion, and a cutting roller having means for holding the sides of the holder in engagement with the cushion.

10. The combination of a cutting roller having a channel in its perimeter, and a cutting stick including a box holder adapted to fit said channel and having a removable side held in assembled relation with the holder by the abutting wall of the channel.

11. The combination of a cutting roller, and a cutting stick carried by the roller having a removable side freely slidable to and from the stick when the stick is detached from the roller.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE SCHWARZ.
RICHARD SCHWARZ.

Witnesses:
MAXWELL HALPERIN,
THOS P. GOURLEY.