No. 799,449. PATENTED SEPT. 12, 1905.

DE LASKI T. CLEMONS.

CUTTING DIE.

APPLICATION FILED JAN. 5, 1905.

Fig. 1.

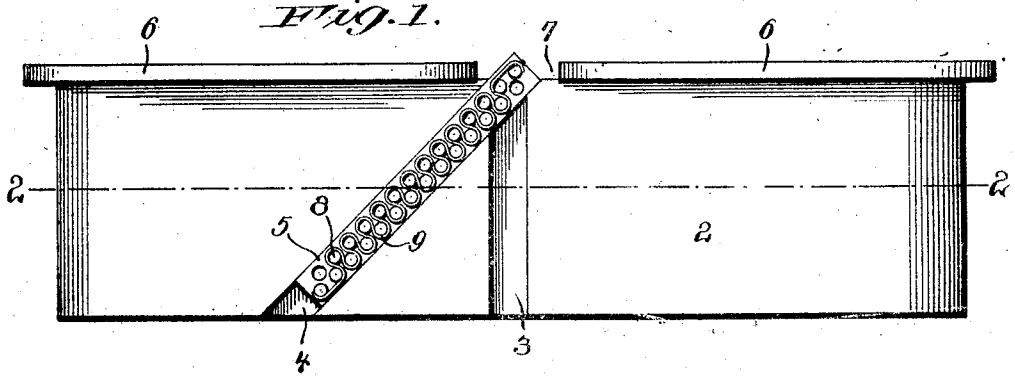


Fig. 2.

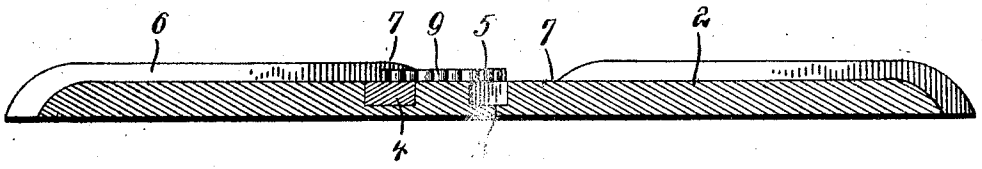


Fig. 3.

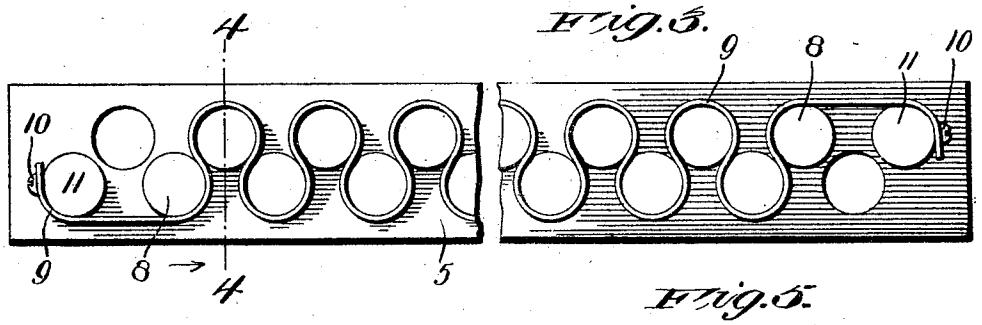


Fig. 4.

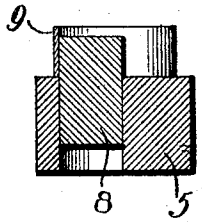
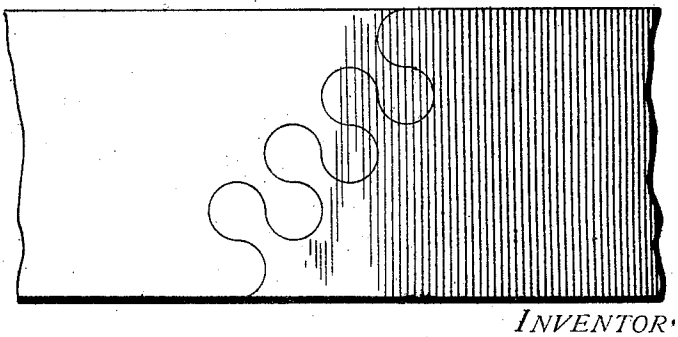


Fig. 5.



WITNESSES.

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CUTTING-DIE.

No. 799,449. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed January 5, 1905. Serial No. 239,750.

To all whom it may concern:

Be it known that I, DE LASKI T. CLEMONS, a citizen of the United States, residing at Hornellsville, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Cutting-Dies, of which the following is a specification, reference being had therein to the accompanying drawings.

The present invention relates to dies or punches for making a belt-splice of the same general character as that disclosed in the patent granted to me August 9, 1904, No. 766,930, and has for its object to provide a cutting-die which will permit of the making of the splice shown in the patent aforesaid in a simple and expeditious manner, this splice being particularly adapted for use in connection with sanding-belts, such as are used in sanding-machines, and in which it is necessary on account of the thinness of the belt that the splice be so cut as to be a secure one and one in which the continuity or smoothness of the sanding-surface of the belt be not interfered with.

In the drawings herewith I have illustrated one embodiment of my invention and have shown it as adapted to form the particular splice shown in my Patent No. 766,930, above referred to, although it will be understood that the drawings herein are merely illustrative of one form of the invention, and the construction therein shown and hereinafter described may be varied within the range of mechanical skill without departing from the spirit of my invention.

In the said drawings, Figure 1 is a plan view of the die-supporting bed with the die mounted therein. Fig. 2 is a longitudinal sectional view on line 2 2, Fig. 1. Fig. 3 is a detail view, on a somewhat larger scale than that of Fig. 1, of the die proper. Fig. 4 is a transverse section of the die, taken on line 4 4 of Fig. 3. Fig. 5 is a view of the splice formed by the die.

Referring to the drawings by numerals, like numbers indicating like parts in the several views, 2 denotes the work-bed and die-support, which, as shown, comprises a board or support having its end chamfered or rounded off and having in its upper face, as shown in the present instance, two grooves 3 and 4, which form seats for the die 5, said grooves 3 and 4 being of such depth as to receive the die-bar and leave the cutting elements carried by the bar projecting above the surface of the bed 2, as shown. It will be seen that the seat 3 is at right angles to the length of the bed 2, while the seat 4 is inclined or oblique, so that the die 5 may be seated in either of said grooves and utilized to form a splice straight across the belt or a splice which is inclined or oblique to the length of the belt. The bed 2 is provided at one edge with an abutment 6, against which the edge of the belt may be trued when it is placed upon the bed for cutting, said abutment 6 being broken away at the point 7 where the seats 3 and 4 converge to permit transverse adjustment of the die 5 in its seat 3 or 4 in the bed 2, the said seats 3 and 4 being preferably so arranged that they terminate at the same point—namely, at the opening 7 in the abutment 6—so that a shorter bed may be utilized than would be the case if the grooves 3 and 4 were separated and passed through the abutment 7 at separated points and a compact construction secured.

The die 5 is preferably made as shown in Figs. 3 and 4 and comprises a bar in which is mounted a series of staggered studs 8, which studs are slightly separated from and arranged in regular relation to one another, so as to permit a continuous strip or ribbon of thin steel 9 to be wound in and out or interwoven between the studs 8, as clearly shown in Fig. 3, and provide a continuous cutting member made up of opposed curved cutting elements. The said steel ribbon 9 projects slightly above the tops of the studs 8 to present a cutting edge, the extreme ends of the ribbon being drawn tight and fastened by any suitable means, as screws 10, to the holding or anchor studs 11 at each end of the die 5. (See Fig. 3.)

It will be seen that in order to form the interlocking tongues of the belt-splice shown by my patent above referred to the studs 8 must be arranged as shown in Fig. 3 of the drawings herewith—that is, in the staggered or offset relation shown—and spaced apart longitudinally of the bar a distance less than the diameter of the studs, so that when the steel ribbon 9 is laid about them it takes the form of a series of two ogee curves, having their bulges disposed in opposite directions, so that the dovetailed splice shown in Fig. 5 of the drawings may be formed.

In making the splice the belt is tightly drawn across the bed 2, the chamfered or rounded ends of the bed 2 permitting this to be done without undue creasing of the belt over the die 5, which is mounted either in the oblique position shown in Fig. 1 or at right angles to the length of the bed 2, according as to whether a straight or oblique splice is to be made. The workman then takes an ordinary wooden mallet and hammers the belt down against the cutting edges of the steel ribbon 9, thus forming the interlocking splice shown in Fig. 5. It will be seen that the die 5 may be adjusted transversely of the bed 2 in either of its seats 3 or 4, so as to arrange the said die to form the splice for the belts of different widths, and while it is preferable to make the die 5 of a length equal to the width of the table or bed 2 it will be seen that a short die could be used with a wide table and that by simply shifting it in its seat transversely of the bed 2 successive splicing cuts across the belt may be made, and an extremely wide belt can thus be spliced with a relatively short die.

Having thus described my invention, I claim—

1. A cutting-die comprising a die-bed having a transverse die-seat therein, and a die member fitting said seat, whereby a splice may be formed transversely of a belt, said die member being adjustable in said die-seat, transversely of the said bed, to provide for the splicing of belts of different widths.

2. A cutting-die comprising a die-bed having a plurality of die-seats therein, disposed at different angles to the length of the die-bed, and a die member fitting in any one of said seats and thereby adapted to form splices transversely of a belt at different angles to the length thereof, said die member being adjustable in any one of said die-seats, transversely of the said bed, to provide for the splicing of belts of different widths.

3. A cutting-die comprising a bed having a die-seat, an abutment for the edge of a belt which projects above the surface of said bed at one side thereof, said abutment having an opening therein coinciding with said die-seat, and a die member mounted in said seat and adjustable transversely of the bed through said abutment-opening.

4. A cutting-die comprising a bed having a plurality of converging die-seats, an abutment for the edge of a belt which projects above the surface of said bed at one side thereof, said abutment having an opening or aperture between its ends coinciding with said converging die-seats, and a die member adapted to be mounted in any one of said converging seats and adjustable transversely of the bed through the said abutment-opening.

5. A die member for cutting-dies comprising a supporting-bar, a plurality of studs carried by said bar, and a strip of thin sheet-steel wound about and supported by said studs with its edge projecting above the tops thereof.

6. A die member for cutting-dies, comprising a supporting-bar, a series of staggered slightly-separated studs carried by said bar, and a thin strip of steel wound about and supported by said studs with its edge projecting above the tops thereof.

7. A die member for cutting-dies, comprising a supporting-bar, two rows of staggered or offset studs carried by said bar, and arranged in regular relation to one another and a thin strip of steel interwoven between said studs so as to form a continuous cutting member made up of opposed curved cutting elements, said steel strip projecting above the tops of said studs to form a cutting edge.

8. A die member for cutting-dies, comprising a supporting-bar, two rows of staggered or offset studs carried by said bar and arranged in regular relation to one another, a thin strip of steel interwoven between said studs so as to form a continuous cutting member made up of opposed curved cutting elements, said steel strip projecting above the tops of said studs to form a cutting edge, and anchor-studs at each end of said bar to which the ends of said interwoven ribbon are secured.

9. A die member for cutting-dies comprising a supporting-bar, a plurality of staggered or offset studs carried by said bar, each of said offset studs being spaced longitudinally from its neighbor a distance less than the diameter of said stud, and a strip of thin sheet-steel wound about and supported by said studs with its edge projecting above the top thereof.

10. A die member for cutting-dies comprising a supporting-bar, a plurality of staggered or offset circular studs carried by said bar and arranged longitudinally thereof so as to overlap one another, and a thin strip of steel wound about said studs with its edge projecting above the tops thereof.

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

DE LASKI T. CLEMONS.

Witnesses:

JULIUS PEYTRENET,

FLOYD G. CROSS.