

(No Model.)

F. P. BROOKS.  
PUNCHING TOOL.

No. 519,626.

Patented May 8, 1894.

Fig. 1.

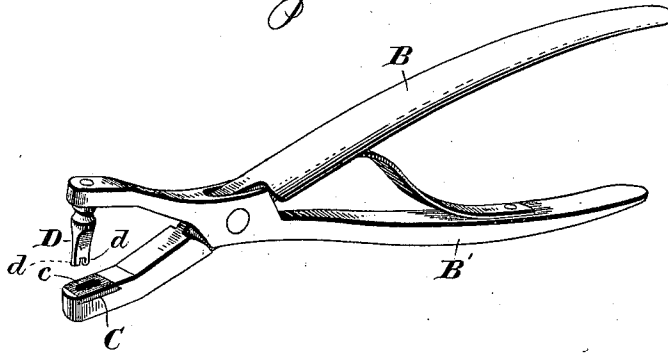


Fig. 2.

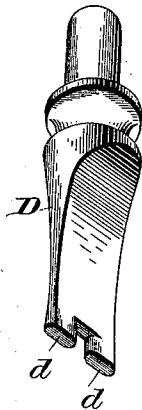


Fig. 3.

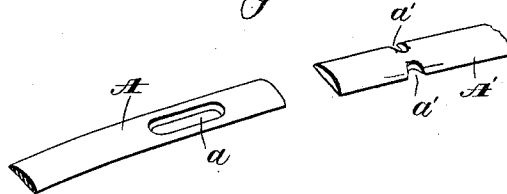
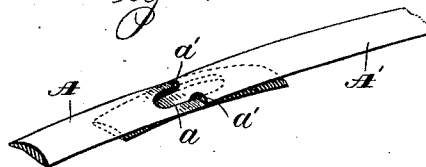


Fig. 4.



Witnesses:  
Jas. Hutchinson.  
Henry C. Hazard.

Inventor.  
Fred. P. Brooks, by  
Crindle & Russell, his Attys

# UNITED STATES PATENT OFFICE.

FREDERICK P. BROOKS, OF OXFORD, NEW YORK.

## PUNCHING TOOL.

SPECIFICATION forming part of Letters Patent No. 519,626, dated May 8, 1894.

Application filed June 9, 1893. Serial No. 477,070. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK P. BROOKS, a citizen of the United States, and a resident of Oxford, in the county of Chenango, and in the State of New York, have invented certain new and useful Improvements in Tools for Forming the Lap-Joints in Cane; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my punch for use in forming the lap-joint of cane. Fig. 2 is a like view, enlarged, of the cutter employed, separated from the punch jaw. Fig. 3 is a perspective view of the ends of two strips of cane, prepared for joining, and Fig. 4 is a like view of the same after they have been united.

Letters of like name and kind refer to like parts in each of the figures.

In the use of cane for seating chairs and for other like purposes, it is requisite that pieces should be spliced together in order that waste may be avoided, and the object of my invention is to enable the ends to be spliced to be easily and accurately cut to shape, to which end, my said invention consists in a cutting tool constructed and adapted to operate in the manner and for the purpose hereinafter specified.

In the use of cane, the splice or lap preferably used is shown in Fig. 4, and is produced by forming near the end of one strip A, an oblong slot *a* which is arranged with its longest axis parallel with the edges of such strip, and providing within opposite edges of the connecting strip A' two notches *a'* and *a'*, which are separated by a space equal to the width of said slot *a*, as seen in Fig. 3. The parts, thus prepared, are combined by inserting the end of the strip A' flat-wise into the slot *a*, until the notches *a'* and *a'* are within the same and then turning said strip into line with the strip A, as shown. The joint thus formed is strong and not bulky and is preferably used in fine work.

In order to prepare the ends of the cane for being joined, I have provided a tool which in general form is like ordinary punches, and

consists of two members B and B' that are pivoted together near one end of each, so that their long portions constitute handles, and their short portions, the jaws of a punch. Within the lower jaw is secured a female die C that is provided with an opening *c*, which corresponds in size and shape to the like features of the slot *a* of the strip A, while within the upper jaw is provided a male die D that transversely, has such size and shape of its lower portion, as to enable it to pass into the opening *c*. The lower end of said die is bifurcated—as shown in Fig. 2—and its parts *d* and *d* are separated by a space equal to the width of the slot *c*, and the distance between the notches *a'* and *a'* of the strip A'.

In the use of the tool for forming the slot *a*, the strip A is placed lengthwise in proper position upon the lower jaw and the die D forced downward through the same, while to produce the notches *a'* and *a'*, the strip A' is placed crosswise of the die C so that the cutting ends *d* and *d* will cut equally into its edges. When said ends have cut through the cane, the solid portion *d'* of said die will engage with the upper face of the cane, and being cross-wise of the grain, will prevent further downward motion of said die D, while when the latter is used for cutting said slot *a*, said solid portion being in a line with the grain of the cane will simply operate to press out the small pieces left between the holes cut by said cutting ends *d* and *d*.

By making the tool larger than is required for cane work, the same may also be used for splint work.

Changes affecting the size of the device and other changes of like unimportant nature, involve no departure from my invention.

Having thus described my invention, what I claim is—

1. As a means for preparing the ends of cane for splicing, a female die which is provided with an oblong opening and a male die that has its operative end adapted for entrance into such opening, and is provided thereon with cutting faces that are separated by a space substantially equal to the width of the opening in the female die, in combination with mechanism whereby said dies may

be moved toward or from each other, substantially as and for the purpose specified.

2. As a means for preparing the ends of cane for splicing, a female die which is provided with an oblong opening and a male die adapted for entrance into such opening having its operative end bifurcated to form two separated cutting faces with a space between them substantially equal to the width of the opening in the female die, in combination

with two pivoted levers, that carry each a die, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of May, A. D. 1893.

FRED. P. BROOKS.

Witnesses:

H. C. STRATTON,

S. S. STAFFORD.