## P. HUFELAND. Manufacture of Fans.

No. 164,839.

Patented June 22, 1875.

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses.

Otto Hughand

Chas. Wahlers.

Inventor.

Thilip Stufeland

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## UNITED STATES PATENT OFFICE.

PHILIP HUFELAND, OF MOUNT VERNON, NEW YORK.

## IMPROVEMENT IN THE MANUFACTURE OF FANS.

Specification forming part of Letters Patent No. 164,839, dated June 22, 1875; application filed May 19, 1875.

To all whom it may concern:

Be it known that I, PHILIP HUFELAND, of Mount Vernon, in the county of Westchester and State of New York, have invented a new and useful Improvement in the Manufacture of Fans, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which-

Figure 1 represents a plan of a block of wood prepared for my purpose. Fig. 2 is a transverse section of the same. Fig. 3 is a plan of a set of fan-leaves when completed.

Similar letters indicate corresponding parts. This invention relates to an improvement in the manufacture of fans composed of a series of wooden leaves.

My improvement consists in a new process of manufacturing wooden fans by first preparing blocks of wood of sufficient length and width for the fan leaves, and of sufficient thickness for one or for two or more complete sets of fan-leaves; then splitting these blocks into sheets of the required thickness, said sheets being left to adhere to each other at one edge, and finally exposing the split blocks to the action of a suitable die to produce the shape required for fan-leaves, so that each set of fan-leaves will be cut out by one stroke of said die, and that the fan leaves, while being cut out by the shaping-die, are not liable to split, and all the fan-leaves composing one set are invariably of the same size and shape.

In the drawing, the letter A designates a block of wood, which is cut out to correspond in length and width to the fan-leaves to be produced. In the example shown in the drawing the thickness of the block is just sufficient for one set of fan-leaves; but it may be made thick enough for two or more sets, and afterward separated into blanks for single sets.

The block A is then split into sheets a, each corresponding in thickness to the fan-leaves to be produced, said sheets being left to adhere to each other along one edge, as indicated in Fig. 2. If the block is thick enough for two or more sets of fan-leaves, it is separated into blanks, each for one set of fan-leaves, and the blanks thus prepared I expose to the action of a suitable die, whereby the same are formed in the shape shown in Fig. 3, the whole set of fan-leaves being cut to the required shape by one and the same action of the die.

It will be readily seen that by this process the manufacture of wooden fans is materially facilitated, and that much time and labor is saved by my invention.

What I claim as new, and desire to secure by Letters Patent, is-

The within-described process of manufacturing wooden fans by first preparing blocks of wood of sufficient length, width, and thickness; then splitting these blocks into sheets of the required size, said sheets being left to adhere at one edge; then separating the block into blanks, each for a full set of fan-leaves. and finally exposing these blanks to the action of a suitable die, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of May, 1875.

PH. HUFELAND. [L. s.]

Witnesses: W. HAUFF, JNO. D. PATTEN.