

No. 815,549.

PATENTED MAR. 20, 1906.

A. W. NELSON.
CUTTER HEAD.

APPLICATION FILED OCT. 8, 1904.

Fig. 1

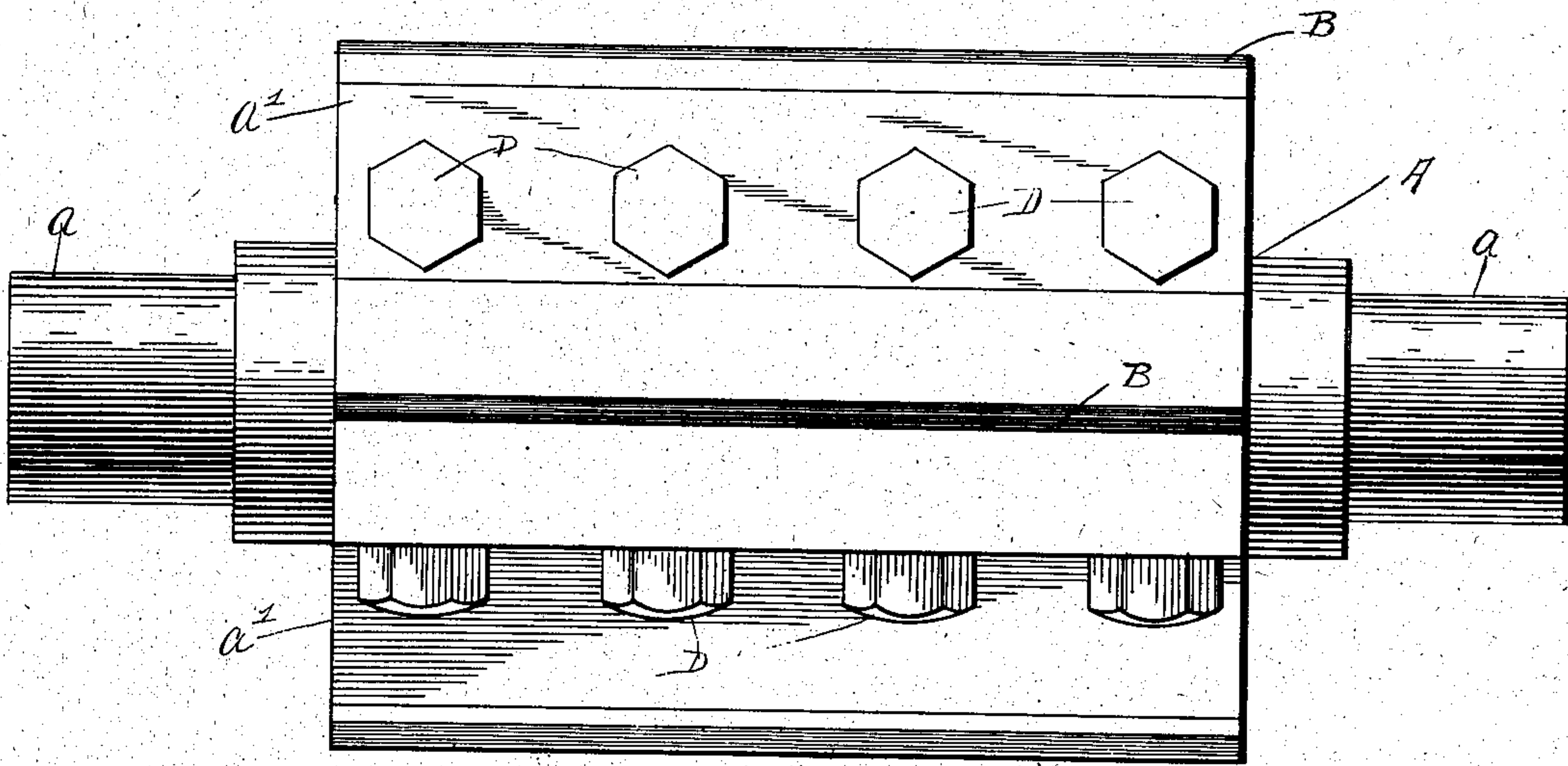
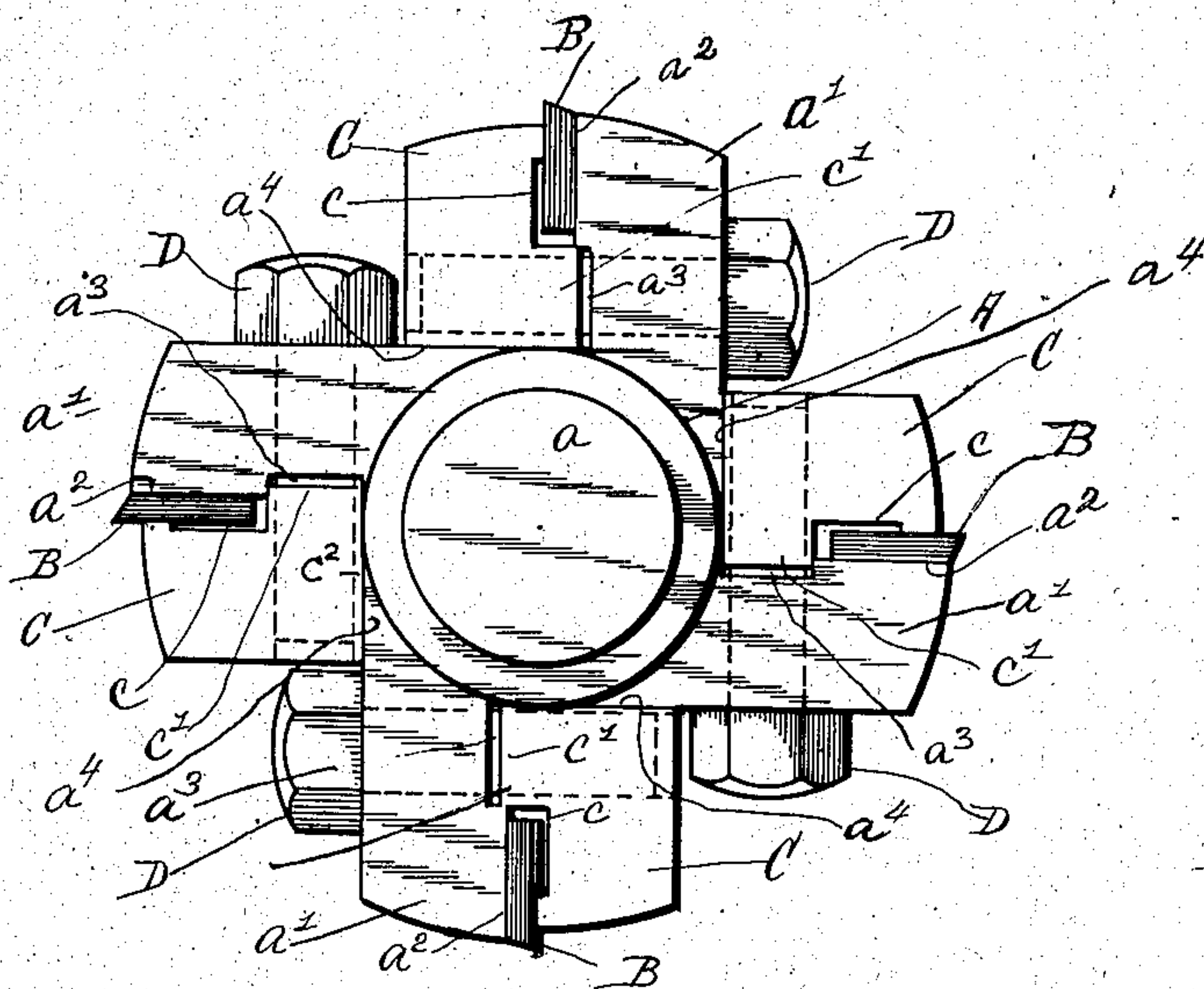


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR W. NELSON, OF CHICAGO, ILLINOIS.

CUTTER-HEAD.

No. 815,549.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed October 8, 1904. Serial No. 227,733.

To all whom it may concern:

Be it known that I, ARTHUR W. NELSON, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Cutter-Heads for Woodworking-Machines, of which the following is a full, clear, and exact specification.

This invention relates to rotary cutter-heads for woodworking-machines, and especially to means for adjustably securing the knives.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a view in end elevation of a cutter-head which embodies the features of my invention. Fig. 2 is a view in side elevation of the cutter.

In the drawings, A represents the head-stock, to which the cutting blades or knives are adjustably secured. This is preferably formed of a single forging, provided at each end with journals a , whereby it may be mounted in the usual manner in a planer or like machine. Ribs a' project radially from the head-stock, the adjacent faces a^2 and a^4 being at right angles to each other and the faces a^2 being cut away to form a rectangular slot whose outer side is parallel to the inner side, which is a continuation of the face a^4 .

The cutters or knives comprise flat bars B, preferably of tool-steel, which are secured against the faces a^2 by clamps C. Said clamps are each provided with a tongue c' , which is adapted to have sliding engagement with the mating slot a^3 in the adjacent rib, the inner side c^2 bearing against the face a^4 of the head-stock. Cap-screws D, having screw-threaded engagement with the clamps and passing through the ribs parallel to the faces a^4 , draw the clamps against the knives, the bearing-faces of the clamps being relieved, so as to contact with the knives near the cutting edges only. By this arrangement of the parts the clamps readily adjust

themselves to different thicknesses of knives. Further, the parallel guiding-surfaces of the head-stock prevent any tendency to angular displacement of the clamps, and the entire force exerted in driving the screws home is transmitted directly to the clamps and to the knives, as the clamps do not bear against the head-stock in any way, save in the direction of motion of the screw. The interlocking of the head-stock and clamps likewise relieves the screws of any side strain when the head is rotating. There are no apertures formed in the cutting-blades, thereby saving stock and permitting the use of very hard steel, as the grinding necessary to form the slight bevel of the cutting edge is all the tooling to fit the bar for use. The principal feature of the device, however, is the arrangement of the clamps whereby the entire force of the screws is exerted on the knives alone, and that in the line of the screw-axes, the fact that the clamps do not bridge or bear jointly on both the head-stock and knives, as in the usual forms of cutters, greatly increasing the rigidity of the head.

It is obvious that many details of construction may be varied without departing from the spirit of the invention, and I do not limit myself to any particular form or arrangement of parts, except as set forth in certain of the appended claims.

I claim as my invention—

A cutter-head comprising a head-stock, knives radially disposed thereon, guideways in the head-stock perpendicular to the knives, and clamps having sliding engagement with the guideways, bearing against the knives.

In testimony whereof I have hereunto signed my name, in the presence of the subscribing witnesses, this 19th day of July, A. D. 1904.

ARTHUR W. NELSON.

Witnesses:

ED. J. RODGERS,
C. R. STICKNEY.