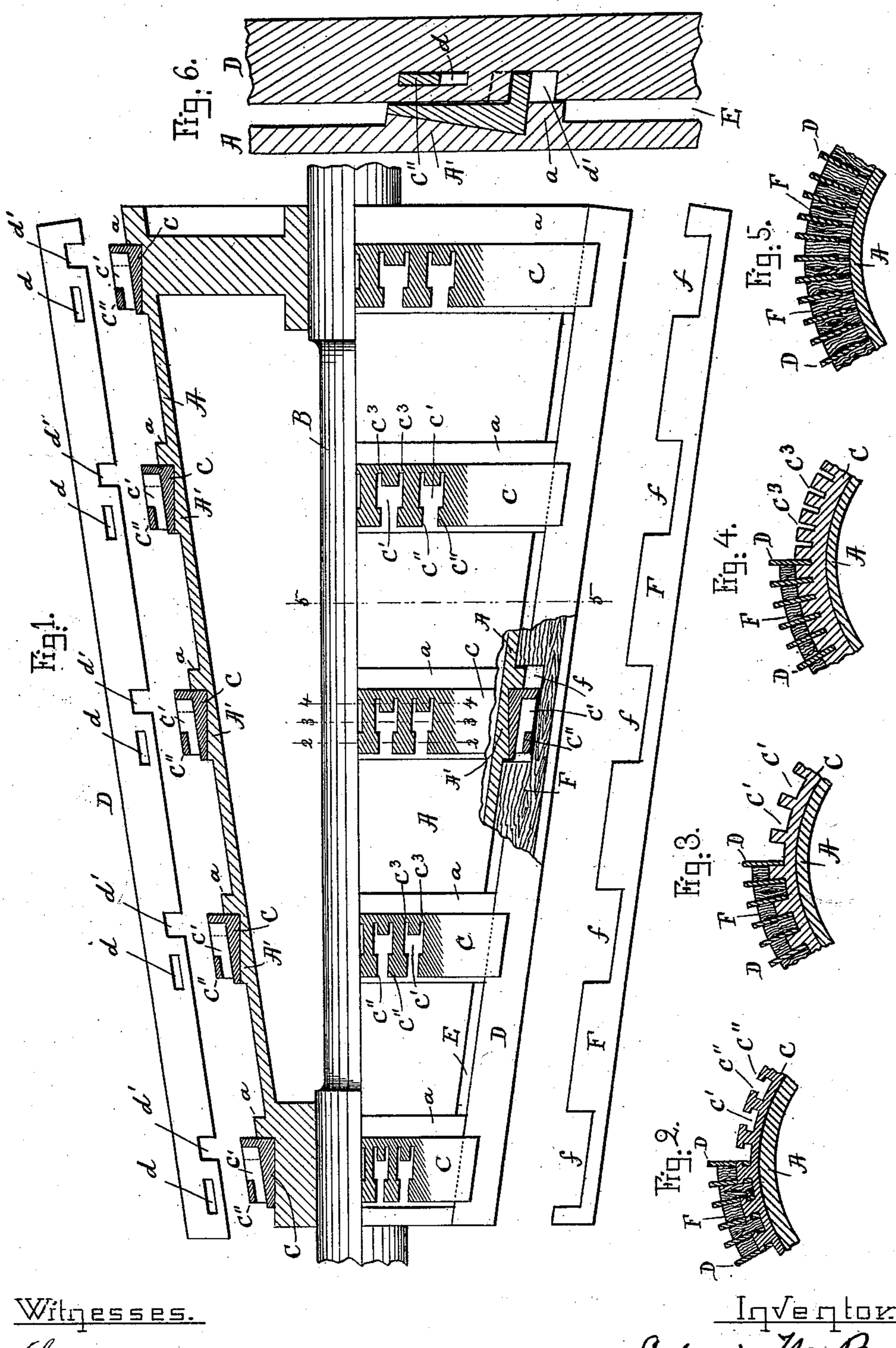
(No Model.)

E. W. BARTON.

ROLL FOR JORDAN ENGINES.

No. 533,857. Patented Feb. 12, 1895.



Witnesses.

Lauritz. N. Möller.

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UNITED STATES PATENT OFFICE.

EDWIN W. BARTON, OF LAWRENCE, MASSACHUSETTS.

ROLL FOR JORDAN ENGINES.

SPECIFICATION forming part of Letters Patent No. 533,857, dated February 12, 1895.

Application filed April 9, 1894. Serial No. 506,820. (No model.)

To all whom it may concern:

Be it known that I, EDWIN W. BARTON, a citizen of the United States, and a resident of Lawrence, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Rolls for Jordan Engines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in rolls for Jordan engines and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1, represents a partial side elevation and section view of my improved Jordan roll. Figs. 2, 3, 4 and 5 represent partial cross-sections on the respective lines 2—2, 3—3, 4—4, and 5—5, shown in Fig. 1; and Fig. 6 represents a longitudinal section of one of the blades showing its attachment to the roll.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents the conical Jordan roll secured to the shaft B as shown in Fig. 1. The exterior of the roll A has a series of annular bearing surfaces A′, A′, preferably turned and trued on which are shrunk or otherwise firmly secured the metal blade holding rings C, C, which are preferably placed against abutting annular shoulders or projections *a*, *a*, on the exterior of the roll A as shown in Fig. 1.

D, D, represent the detachable blades or knives having a series of preferably elongated or slotted perforations *d*, *d*, by means of which said blades may be locked onto the blade-holding rings C, C, as will hereinafter be described. In addition to such perforations I prefer to make on the under side of each blade or knife a series of notches or cut away portions *d′*, *d′*, as shown in detail in Figs. 1 and 6, although such notches may be dispensed with if so desired without departing from the essence of my invention.

Each ring C is provided with a series of notches C′ C′, adapted to receive the blades D, and in practice I prefer to construct each of such notches so as to be capable of receiving and holding two knives or blades as will hereinafter be more fully described. One end of each notch is open and there provided with inwardly projecting locking lips C″, C″, adapted to be hooked into the blade perforations *d*, *d*, when the blades D, D, are to be attached to the blade holding rings of the roll. The opposite end of each notch C′ is provided with one or two steady grooves C^3, C^3, (Figs. 1 and 4) adapted to receive and steady the blade or blades D when locked in position on the blade-holding rings of the roll.

In attaching a blade D to the roll I hold it above the said roll as shown in the upper portion of Fig. 1 and drop it into the notches C′, C′, on the rings C, then move it slightly sidewise so as to cause the projection C″ to enter the perforation *d*, after which the blade is moved toward the larger end of the roll so as to cause the edge of the blade adjacent to the cut away portion *d′* to enter the groove C^3 as fully shown in Fig. 6. When the blade is thus hooked into position a space E is left between its inner edge and the outer circumference of the roll. The other blades are then hooked onto the rings C, C, in a like manner after which the wood filling bars F, F, are driven between the successive blades, such filling pieces having cut away parts *f*, *f*, (Fig. 1) adapted to receive the rings C, C, when driven in between the blades.

The inner edge of each wood filler F is driven far enough to rest against the periphery of the roll, that is below the inner edge of the blades where it is free to expand laterally into the space E above mentioned thus forming a lock whereby said wood fillers are firmly held in position and prevented from working loose as fully illustrated in Fig. 5.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. A tapering Jordan roll having a series of blade holding rings combined with a series of blades secured thereto and intermediate wood fillers having their inner edges extended below said blades and adapted to enter a space between the blades and roll, substantially as and for the purpose set forth.

2. A tapering Jordan roll and blade holding rings secured thereto, and having notches and lateral locking projections combined with blades having perforations adapted to receive such lock projections and cut away recesses on the inner edge of said blades and inter-

mediate wood fillers, substantially as and for the purpose set forth.

3. A tapering Jordan roll and blade holding rings secured thereto and having notches and lateral locking projections and steady grooves combined with blades having perforations adapted to receive such locking projections and cut away recesses on the inner edge of said blade and intermediate wood fillers, substantially as and for the purpose set forth.

4. A tapering Jordan roll having blades secured on its periphery but not in contact therewith combined with intermediate wood fillers extending below the inner edges of said blades so as to allow the inner portion of such wood filler to expand laterally in the space between the roll and blades, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 6th day of April, A. D. 1894.

EDWIN W. BARTON.

Witnesses:

ALBAN ANDRÉN,

SAMUEL J. CRADDOCK.