

J. W. Kingsbury,
Making Horseshoe Blanks,
N^o 39,773. *Patented Sep. 1, 1863.*

Fig 3.

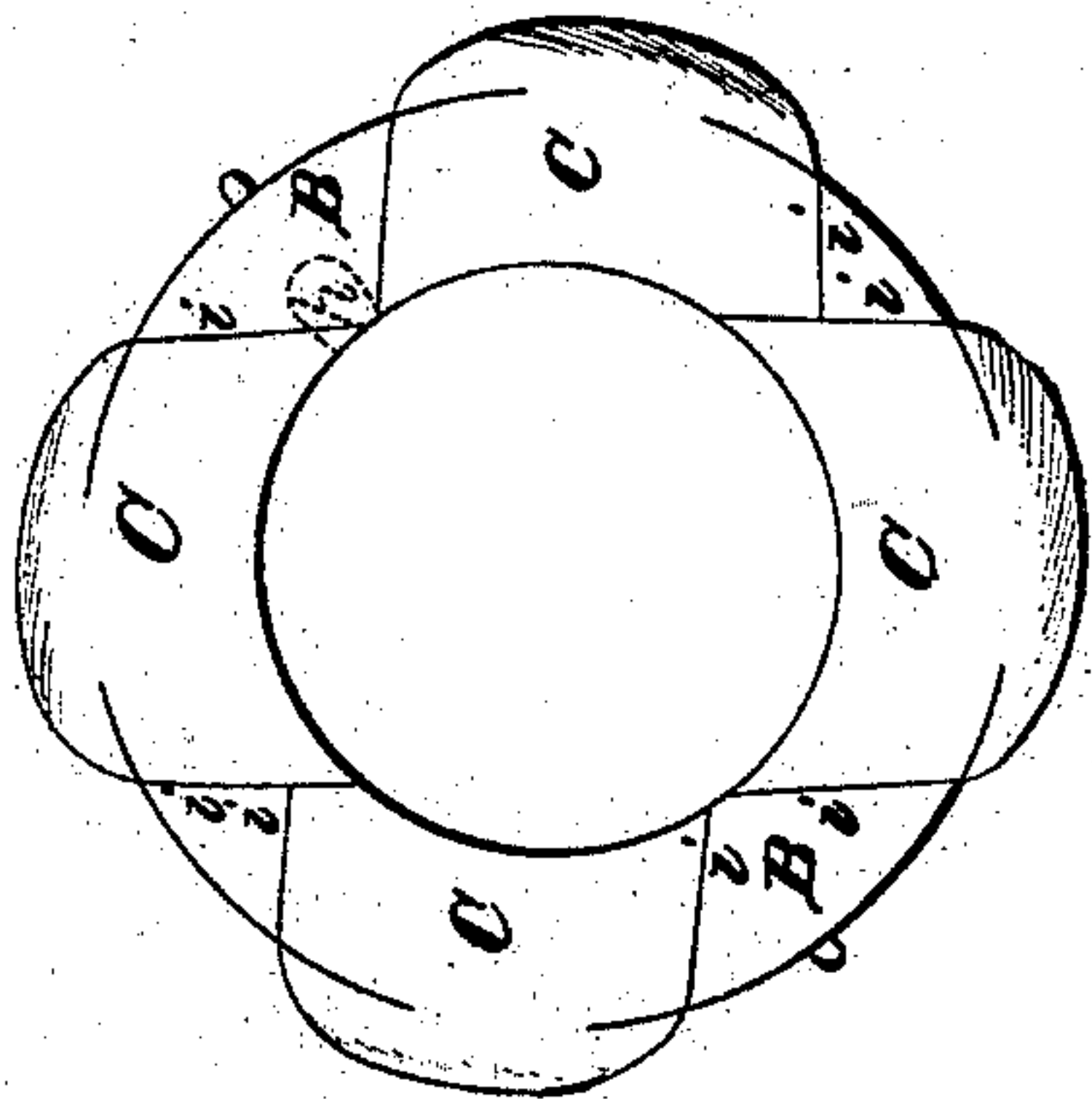


Fig 1.

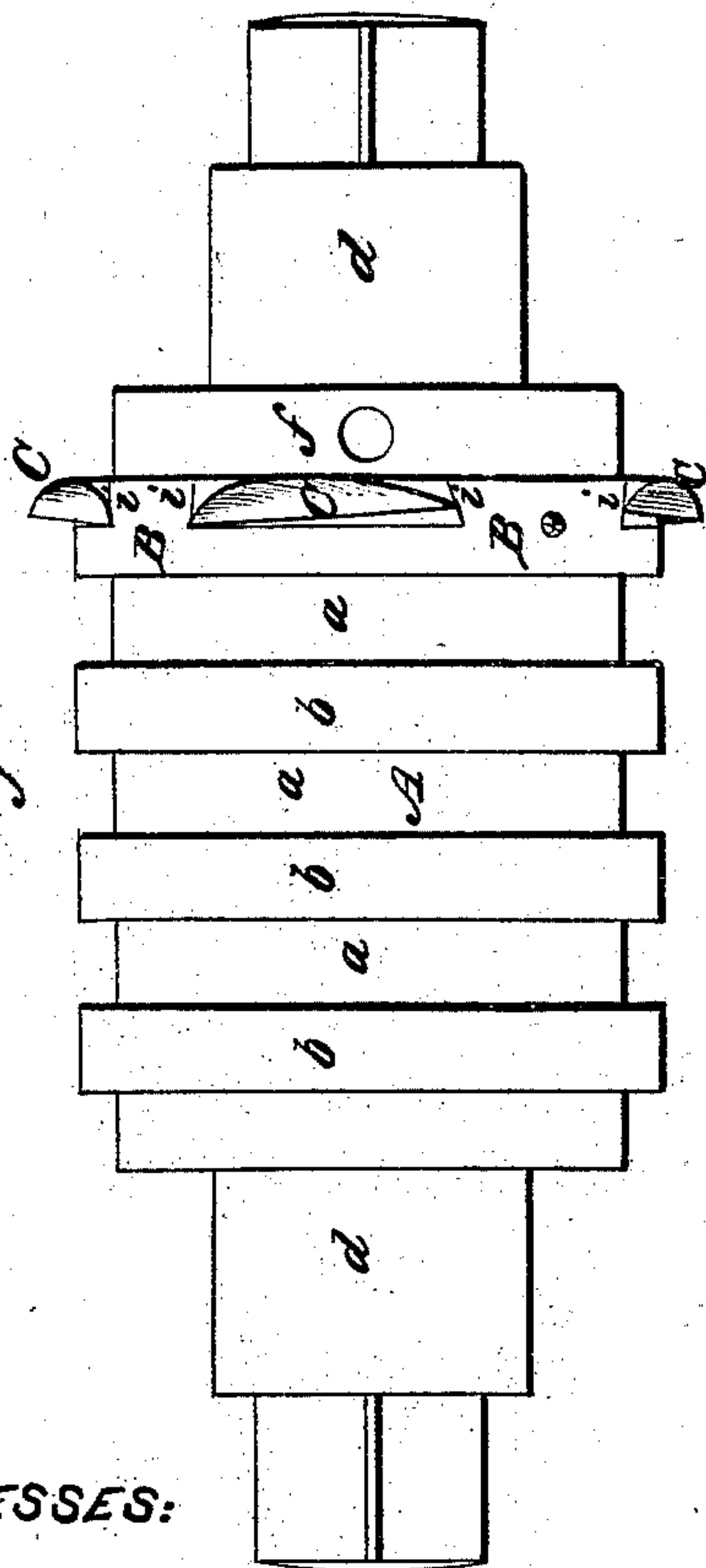
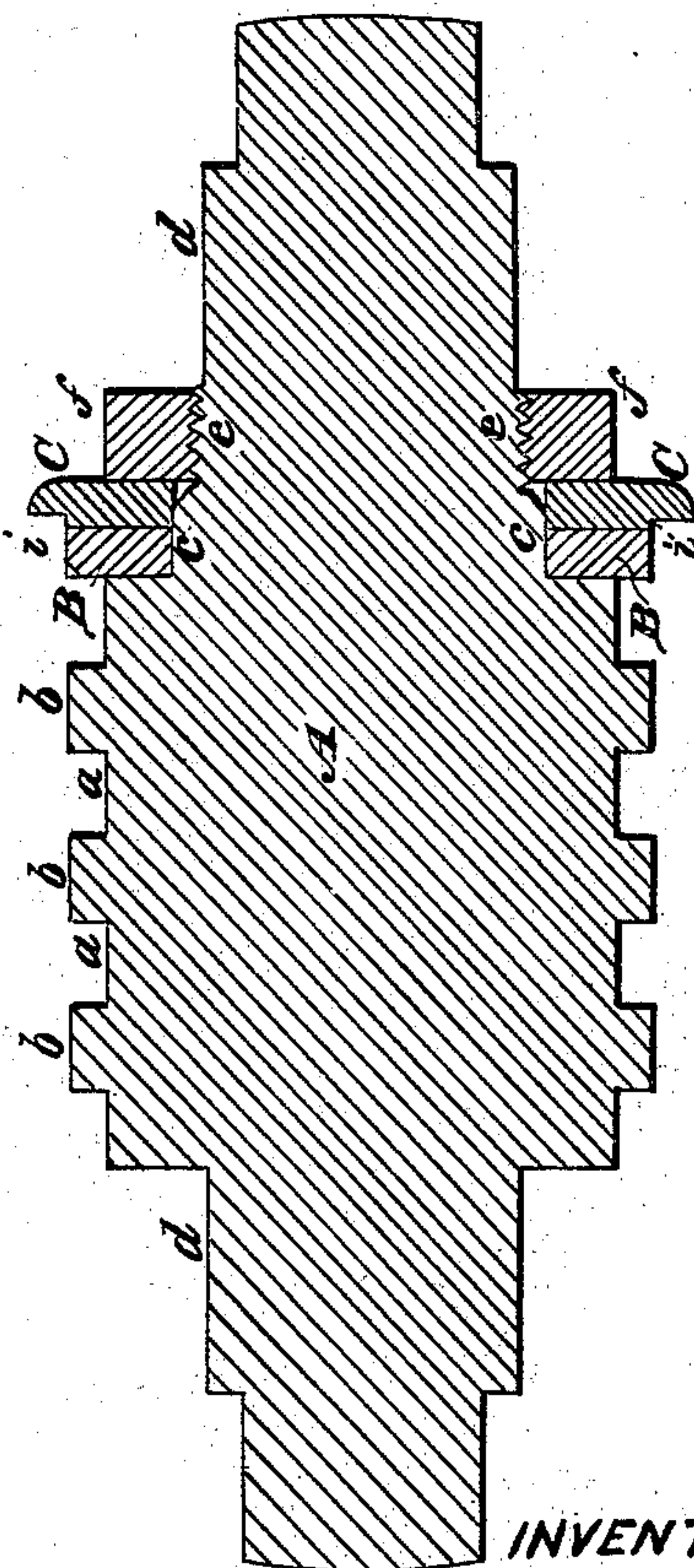


Fig 2.



WITNESSES:

J. W. Coombs
M. M. Livingston.

INVENTOR:

J. W. Kingsbury
per M. M. Livingston

UNITED STATES PATENT OFFICE.

JOHN W. KINGSBURY, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR
TO HIMSELF AND L. H. KOLLOCK, OF SAME PLACE.

IMPROVEMENT IN ROLLS FOR HORSESHOE-BLANKS.

Specification forming part of Letters Patent No. 39,773, dated September 1, 1863.

To all whom it may concern:

Be it known that I, JOHN W. KINGSBURY, of New Bedford, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Rolling-Mill Rolls for Rolling Horseshoe-Blanks and other Articles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical view of a roll for rolling horseshoe-blanks with my improvement. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a face view of the collar which contains the creasing dies.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in a novel and very simple and secure method of attaching creasing or other dies to rolling-mill rolls, whereby in case of the breakage or injury of one of the dies it may be replaced at less expense than when attached in the usual way.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the roll, made with grooves *a a* and ridges *b b* of any suitable shape, to reduce the iron to the proper form by successive rolling operations. This roll is reduced in size, as shown at *c c* in Fig. 2, near one of its journals *d d*, for the reception of a steel collar, B, in which the creasing-dies C C are secured, and it has also cut upon it between the said reduced portion *c c* and the journal a screw-thread, *e*, for the reception of a nut, *f*, by which the said collar is clamped firmly against a shoulder, *g*, formed on the solid portion of the roll. The said collar is prevented from turning on the roll by means of a feather or steady-pin, *h*, on the roll and a groove in the collar. The dies C C are made of proper form, and fit tightly into taper dovetail grooves *i i*, provided for their reception in one face of the collar B. The dovetail construction of these

grooves, which prevents the dies from moving in the direction of the length of the rolls, is illustrated in Fig. 1, and the taper form by which the dies are prevented from drawing out from the grooves in a direction radial to the axis of the roll is illustrated in Fig. 3. The above-mentioned taper form of the dies and grooves renders it necessary for the dies to be inserted in the grooves from the interior of the collar before the latter is put on the roll. The inner ends of the dies are made to conform to the circle of the interior of the collar when the dies have been pushed out to the required position in the grooves to make their outer ends or operating faces project the proper distance beyond the collar and to make them fit tight in the grooves, and by thus conforming to the ring they are caused to have a firm bearing upon the solid portion *c* of the roll when in operation. The dies thus constructed and fitted to the collar B and to the roll, and further secured by the nut *f* screwing up against them, are just as strong and good in every respect as though all made of the same piece with the collar B, and much more economical and more expeditiously replaced, for in case of a die flying in hardening or breaking or being injured in use, it can be taken from the collar and replaced by a new one without requiring the whole collar to be made anew.

An important feature of the invention consists in there being neither bolts nor keys required to secure the dies in place.

What I claim as my invention, and desire to secure by Letters Patent, is—

The dies C C, fitted to taper dovetail grooves in the detachable collar B, and conforming to the exterior of that portion of the roll which receives the said collar, and thereby obtaining a bearing directly upon the roll itself, substantially as herein described.

J. W. KINGSBURY.

Witnesses:

ALANSON BORDEN,
LEMUEL KOLLOCK.