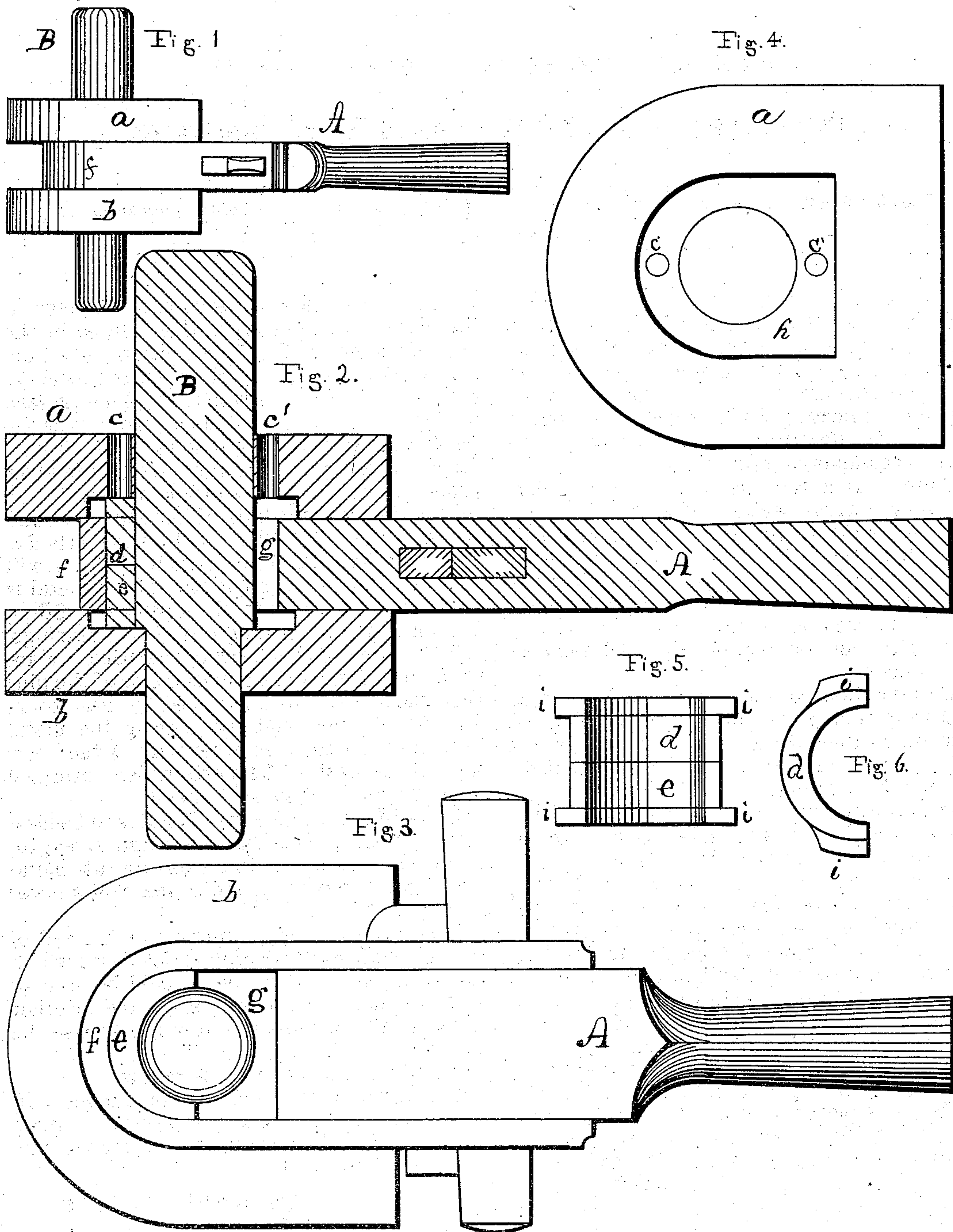


**R. T. CRANE.**  
**Casting Brasses on Journals.**

No. 155,571.

Patented Oct. 6, 1874.



Witnesses:  
*Chas. West.*  
*Wm. Bond.*

Inventor  
*Richard T. Crane*



# UNITED STATES PATENT OFFICE.

RICHARD T. CRANE, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN CASTING BRASSES ON JOURNALS.

Specification forming part of Letters Patent No. **155,571**, dated October 6, 1874; application filed October 25, 1873.

*To all whom it may concern:*

Be it known that I, RICHARD T. CRANE, of the city of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Means for Casting Bearings for Connecting-Rods, of which the following is a full description, reference being had to the accompanying drawings.

Figure 1 is a side elevation; Fig. 2, a longitudinal vertical section; Fig. 3, a plan view with the parts *a d* removed; Fig. 4, an inside view of the block *a*, and Figs. 5 and 6 details.

Heretofore bearings for connecting-rods have been cast from brass in ordinary sand-molds, and it has been necessary to carefully fit each bearing to each connecting-rod, which requires much labor.

My invention consists in the devices used in casting such bearings in the connecting-rod with which they are to be used, and in such a manner that very little, if any, subsequent fitting will be required.

In the drawings, A represents a connecting-rod, *f* being the strap, which passes around the bearings; B, a pin corresponding substantially with the wrist-pin of the crank; *a b*, blocks, one above and one below the strap of the connecting-rod, each being recessed, as shown at *h* in Fig. 4—also represented in Fig. 2; *d e*, two pieces of metal, which, when together, and in place, as shown in Fig. 2, serve the purpose of filling up one-half of the space around the pin B, preventing the hot metal from entering. In the block *a* are two holes, *c c'*, communicating with the space around the pin B. The pieces *d e* are each provided with flanges *i*, to fill up what would otherwise be an open space in the blocks *a b*, which is recessed at *h*. That part of the pin B, which is above the recess in *b*, is to be of the same size as the wrist-pin. The lower part is represented smaller, forming a shoulder which fits snugly upon the recessed top of the block *b*.

In use, the pin B is secured in its place in the block *b*; the piece *e* is then placed in the position shown in Fig. 2; the pitman A is then placed over the part *e*, and upon the block *b*; the piece *d* is then inserted in its place, as seen in Fig. 2; the block *a* is then placed over the pin B, and upon the upper side of the pitman. These several parts are then secured in their proper position by any suitable means. When in this position one-half of the space around the pin B will be filled up by the parts *d e*, and the other, shown in white in Fig. 2, *g*, will be open. The proper quantity of hot metal is then to be poured into the opening *c'*, filling the space *g*, and forming one of the bearings. After removing this bearing the parts *d e* are to be placed upon the opposite side of the pin; then the space before occupied by these parts *d e* will be open, and by pouring the metal into the opening *c* the other part of the bearing will be cast. The parts which form the mold are made of suitable metal.

In casting the bearings, a metal is to be used having the requisite hardness and strength, and which can be cast in metal—a white metal made of tin, antimony, and copper will answer the purpose.

It is evident that a duplicate of the end of the connecting-rod or other article, with which the bearings are to be used, could be used as a part of the mold instead of the rod or other article itself; but this would only increase the expense.

What I claim as new is as follows:

The pieces *d e*, provided with flanges *i*, in combination with blocks *a b*, pitman A, strap *f*, and pin B, substantially as and for the purpose herein set forth.

RICHARD T. CRANE.

Witnesses:

E. A. WEST,  
O. W. BOND.