

(No Model.)

3 Sheets—Sheet 1.

J. MUNTON.

METALLIC MOLD FOR CASTING DRAW BARS.

No. 482,688.

Patented Sept. 13, 1892.

Fig. 1.

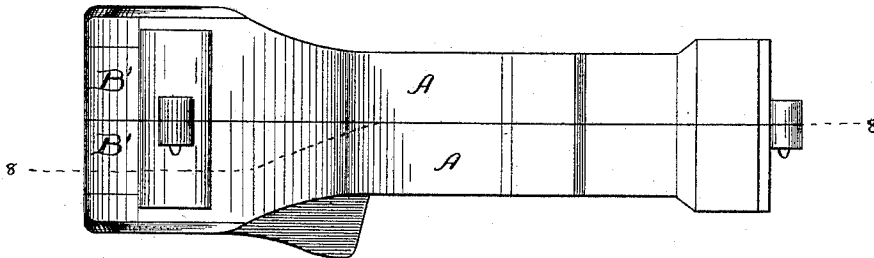


Fig. 2.

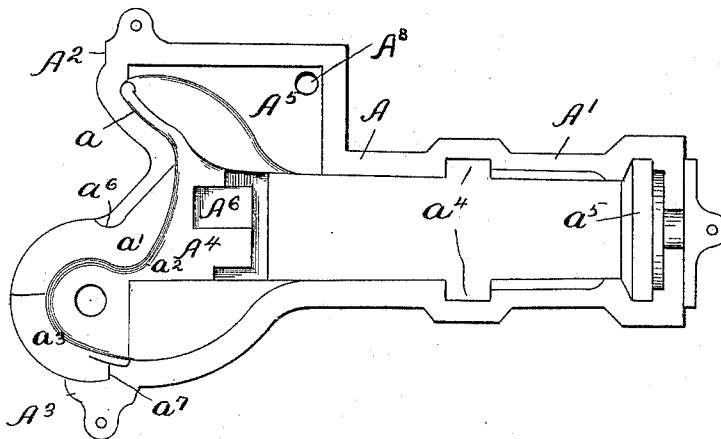
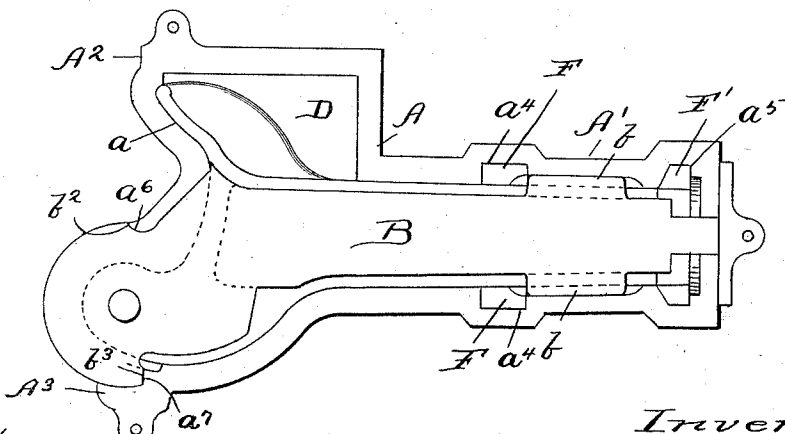


Fig. 3.



Witnesses:

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(No Model.)

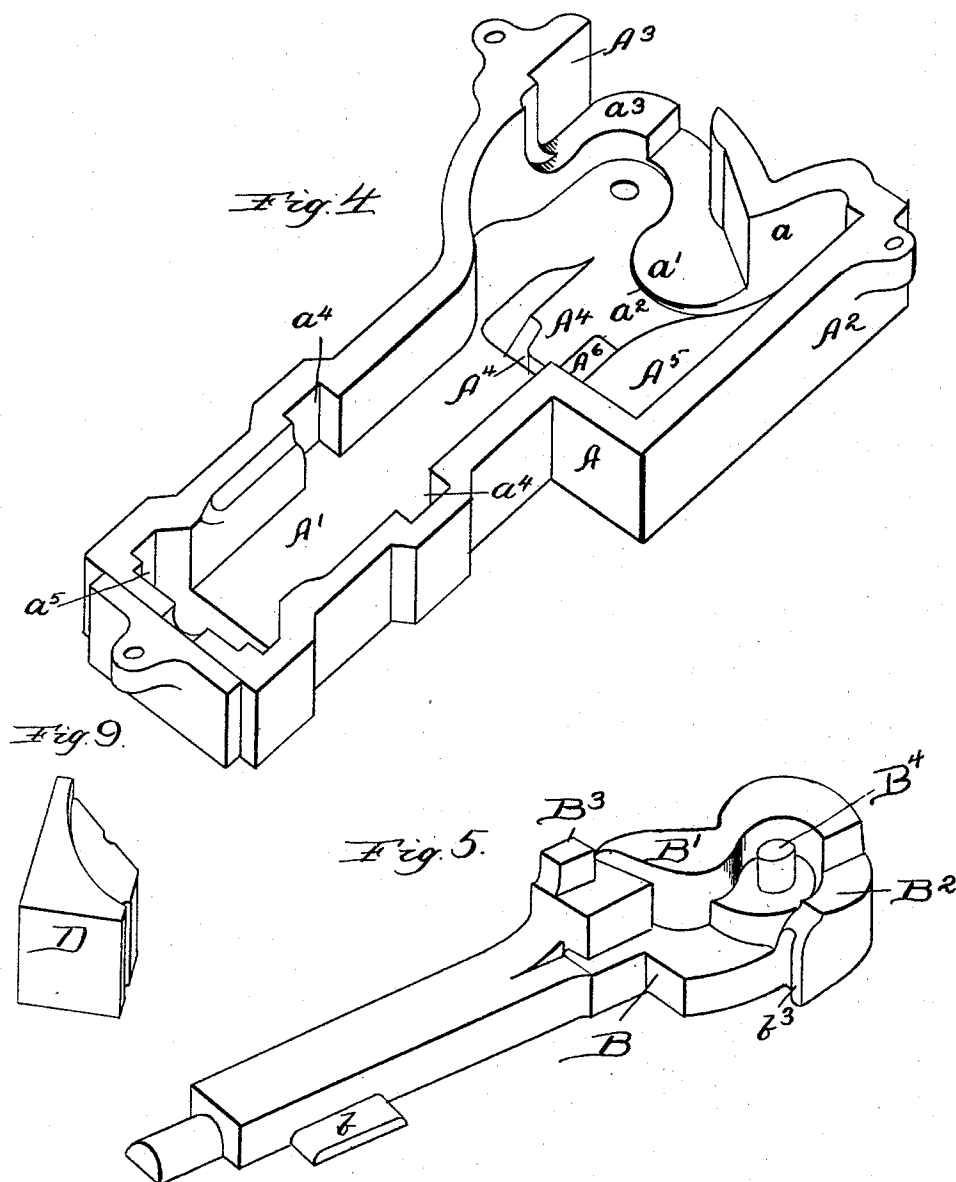
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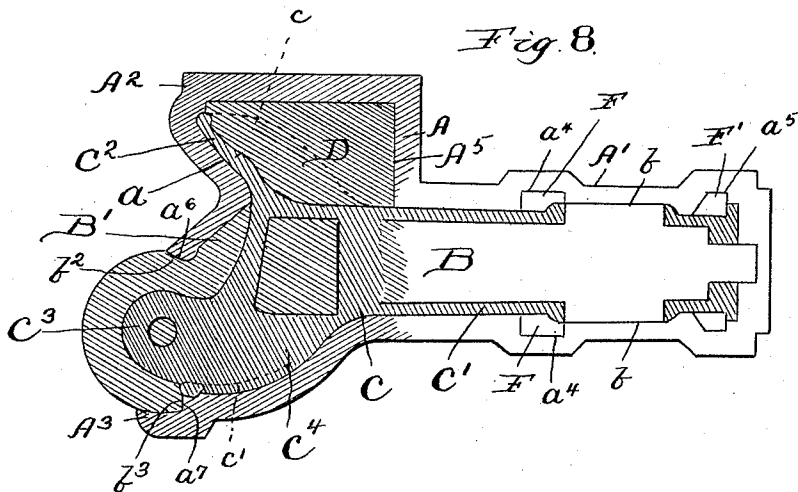
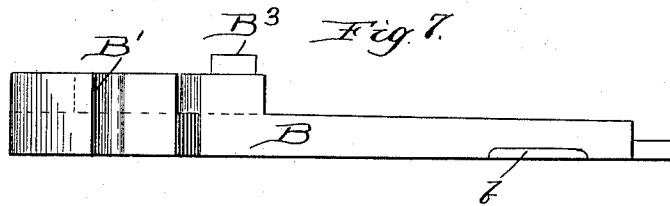
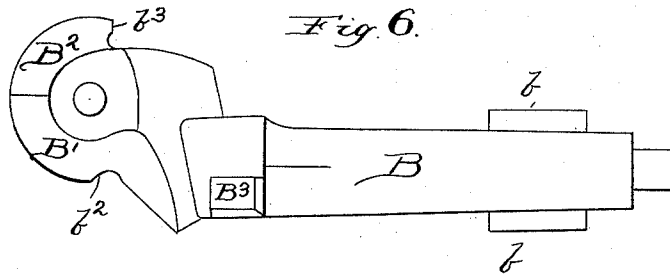
3 Sheets—Sheet 3.

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METALLIC MOLD FOR CASTING DRAW BARS.

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Patented Sept. 13, 1892.



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UNITED STATES PATENT OFFICE.

JAMES MUNTON, OF MAYWOOD, ILLINOIS.

METALLIC MOLD FOR CASTING DRAW-BARS.

SPECIFICATION forming part of Letters Patent No. 482,688, dated September 13, 1892.

Application filed April 7, 1892. Serial No. 428,108. (No model.)

To all whom it may concern:

Be it known that I, JAMES MUNTON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Metallic Molds for Casting Draw-Bars and Forked Heads of Steel Car-Couplers, of which the following is a specification.

My invention relates to improvements in molds for casting steel car-coupler draw-bars having forked heads.

My invention relates more particularly to certain improvements upon the mold for casting steel car-couplers forming the subject of my pending application, Serial No. 376,789, filed January 5, 1891.

In the practical use of the mold shown and described in my said application I have found that after the mold has been in use some time and the metallic surfaces which form the two forks of the coupler-head become thereby somewhat roughened that the forks of the casting do not in contracting always properly draw out of the forks of the mold, and that in such instances, the forks being prevented from moving toward each other in contracting by the intermediate portion of the mold, a certain percentage of strained, cracked, or defective coupler-heads is unavoidably produced, thus occasioning material loss or the necessity for very frequent renewal of the metallic molds.

The object of the present improvement is to overcome or remove this difficulty.

This result I accomplish, and herein my invention consists, by cutting away the shell or wall of the metallic mold at the inside of one of the forks and then extending the core so that the inner wall of one of the forks is formed in the core. A part of the core thus lies between the two forks of the coupler-head casting, so that this portion of the core may give the requisite yield to permit the forks to approach each other in contracting in case the contraction in the direction of the length of the draw-bar does not sufficiently withdraw the forks of the casting from the forks of the mold to prevent injury. By this means I entirely overcome the difficulty heretofore experienced and am enabled to produce a perfect steel coupler draw-bar with forked heads without material percentage of loss

from strains or defective castings, while at the same time, owing to the manner in which the head portion of the core is fitted and held in position in and by the metallic shell of the mold, the forked steel coupler-heads are produced of a uniform and accurate shape, so that but very little if any subsequent dressing is required even upon the inner surface of that fork which is formed in or by the core.

In the accompanying drawings I have shown a mold and core embodying my invention, the same being designed to produce an interlocking hooked or forked coupler-head and draw-bar of the same general character as that shown in my said previous application. The coupler, however, is of a different make and somewhat different style from that shown in said former application.

In the drawings which form a part of this application, Figure 1 is a side elevation of the metallic mold embodying my invention. Fig. 2 is a plan view of one of the two similar halves of the mold. Fig. 3 is a like view showing the core in place. Fig. 4 is a perspective view of the half-mold. Fig. 5 is a perspective view of the core turned upside down, which fits in the half-mold shown in Fig. 4. Fig. 6 is a plan view of the core; Fig. 7, an edge or side view; Fig. 8, a section taken on the broken line 8 8 of Fig. 1 and showing in section the casting; and Fig. 9 is a detail view of the core-block hereinafter to be described.

In all the figures of the drawings similar letters of reference indicate like parts.

In the drawings, A A represent the metallic shell of the mold, the two halves being practically duplicates of each other, so that detailed drawings and descriptions of one-half will suffice for both, and the same is true of the core B. The metallic shell or mold comprises a stem or shank portion A', two forks or limbs A² A³, and an intermediate body portion A⁴ to form, respectively, the stem or shank C of the draw-bar C', its head C⁴, and the two forks C² C³ thereof. One of the forks A² A³ has an inner metallic wall *a*, while the inner wall of the other fork or the greater portion of such inner wall is formed by or consists of an extension B' of the sand-core B, the metal mold A having at the inner wall of this other fork simply a slightly-raised ledge *a'*, with a curved or rounded shoulder

a^2 , as is clearly shown in Figs. 2 and 4. The core B is also preferably provided with an extension B^2 , which fits upon and supplements the wall or ledge a^3 of the metal mold and serves in part or in connection with said ledge a^3 to form the outer wall of this fork.

The intermediate body portion A^4 of the mold A is furnished with a pocket A^5 to receive the core-block D, which forms the strengthening web or flange c of the fork C^2 of the coupler-head. The flange c' of the opposite fork is formed by or in part by the core B at the portion marked B^2 . The intermediate or body portion A^4 of the metal mold A is furnished with recesses A^6 , in which fits the corresponding projection B^3 on the core B. The shank or stem portion A' of the mold is furnished with pockets a^4 and a^5 , which receive the corresponding core-blocks F F and F'. The core B is provided with a projecting web or flange b to form a slot or key-hole through the stem portion of the draw-bar. The core B is provided with registering shoulders b^2 b^3 , which fit corresponding shoulders a^6 a^7 on the metallic mold A.

A^8 is the gate through which the molten metal is poured into the mold.

I claim—

1. The mold for casting the draw-bar and forked head of steel car-couplers, comprising a metallic shell A, having stem portion A' , two limbs or forks A^2 A^3 , one of said forks having a metallic inner wall, and a core B, having an extension forming the inner wall of the other of said forks, substantially as specified.

2. The mold for casting the draw-bar and forked head of steel car-couplers, comprising a metallic shell A, having a shank and body portion and two forks, one of said forks having an inner metallic wall a and the other a raised ledge a' , and a core B, a part of which

fits upon said raised ledge a' and constitutes, with said raised ledge, the inner wall of one of said forks, substantially as specified.

3. The mold for casting the draw-bar and forked head of steel car-couplers, comprising a metallic shell A, having a shank and body portion and two forks, one of said forks having an inner metallic wall a and the other a raised ledge a' , and a core B, a part of which fits upon said raised ledge a' and constitutes, with said raised ledge, the inner wall of one of said forks, said metallic shell A having also a raised ledge or wall a^3 , and the core and extension B^2 , fitting on said raised ledge a^3 , substantially as specified.

4. The mold for casting the draw-bar and forked head of steel car-couplers, comprising a metallic shell A, having a shank and body portion and two forks, one of said forks having an inner metallic wall a and the other a raised ledge a' , and a core B, a part of which fits upon said raised ledge a' and constitutes, with said raised ledge, the inner wall of one of said forks, said metallic shell A having also, a raised ledge or wall a^3 , and the core an extension B^2 , fitting on said raised ledge a^3 , the body portion of said metallic shell A having recess A^6 and the core having corresponding projection B^3 , substantially as shown and described.

5. The mold for casting the draw-bar and forked head of steel car-couplers, consisting of a metallic shell having two forks, one of said forks having an inner metallic wall and the other an inner wall of sand or core material, substantially as specified.

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Witnesses:

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