

UNITED STATES PATENT OFFICE.

HENRI AIMÉ BRUSTLEIN, OF UNIEUX, FRANCE.

CASTING INGOTS.

SPECIFICATION forming part of Letters Patent No. 504,322, dated September 5, 1893.

Application filed December 7, 1892. Serial No. 454,404. (No model.)

To all whom it may concern:

Be it known that I, HENRI AIMÉ BRUSTLEIN, of Unieux, Department of the Loire, in the Republic of France, have invented a new and
5 useful Improvement in Casting Ingots, which is fully set forth in the following specification.

My invention relates to the casting of iron and steel ingots, particularly those of large size, and its object is to facilitate the handling of the ingots in the operations of heating,
10 forging, &c. This object is effected, according to my invention, by casting the ingots with a suitable extension or tail conforming in shape to the socket into which it is to fit, and forming upon this extension or tail, in
15 the process of casting, a recess or recesses, for the insertion of a key to hold the ingot in the socket.

The nature of the invention, and the preferred mode of carrying the same into effect, can be most conveniently explained by reference to the accompanying drawings, in which—

Figure I, is a longitudinal axial section of
25 an ingot-mold. Fig. II, is a plan view of the detachable bottom part of the mold. Fig. III, is an elevation, partly in section, of the socket and handle, the position of the ingot being indicated in dotted lines. Fig. IV is a top
30 view of the socket; and Fig. V is a sectional view showing the ingot in a furnace.

In Fig. I, A represents the main portion of an ingot-mold, and B its detachable bottom. The latter is provided at its lower end with a
35 recess *a*, of relatively small diameter, adapted to form upon the ingot a tail or extension *b*. It also has preferably a cavity *c* above the recess *a*, to form upon the ingot a shoulder *d*. Within the recess *a* is a lug *f*, attached to the
40 wall thereof by means which will permit of the removal of the lug with the ingot. This may be conveniently effected by one or more wooden pins *g* passing through the wall of the recess and into the lug. These pins are

burned out by the heat of the molten metal, 45 so that the lug or lugs *f* (which may be of clay, steel, or other suitable material) remain embedded in the ingot when the latter is removed from the mold. Obviously other means of attaching the lug temporarily to the recess 50 *a* may be employed in place of those described. The lugs are driven out of the ingot by wedges or otherwise, and the tail or extension *b* can now be fitted into a socket *h* of corresponding shape, on the end of handle H (Figs. III and 55 IV). This socket has in its side a recess or recesses which register with those in the extension *b* of the ingot, so that a key or keys *k* can be driven in to hold the ingot firmly in place. For the entrance of a key *k* a chan- 60 nel *l* (indicated in dotted lines Fig. IV) extends transversely through the wall of the socket. The ingot can now be readily manipulated in subsequent operations. When placed in a furnace (as indicated in Fig. V) 65 the shoulder *d* can rest upon a suitable steel support *m*, leaving only the tail *b* of the ingot protruding through the door of the furnace.

Having now fully described my invention, what I claim as new, and desire to secure by 70 Letters Patent, is—

1. An iron or steel ingot having a tail or extension of less diameter than the body of the ingot, and provided with a key hole or recess in the side of said tail or extension, substantially as described. 75

2. An iron or steel ingot having at one end a shoulder of reduced diameter, and a tail or extension provided with a key hole or recess in the side thereof, substantially as described. 80

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRI AIMÉ BRUSTLEIN.

Witnesses:

PHILIP MAURO,
REEVE LEWIS.