(No Model.)

J. A. FACER & A. SCHAUB.

DEVICE FOR MANUFACTURING CAR WHEEL TIRES.

No. 271,823. Patented Feb. 6, 1883.

FIG. 1.

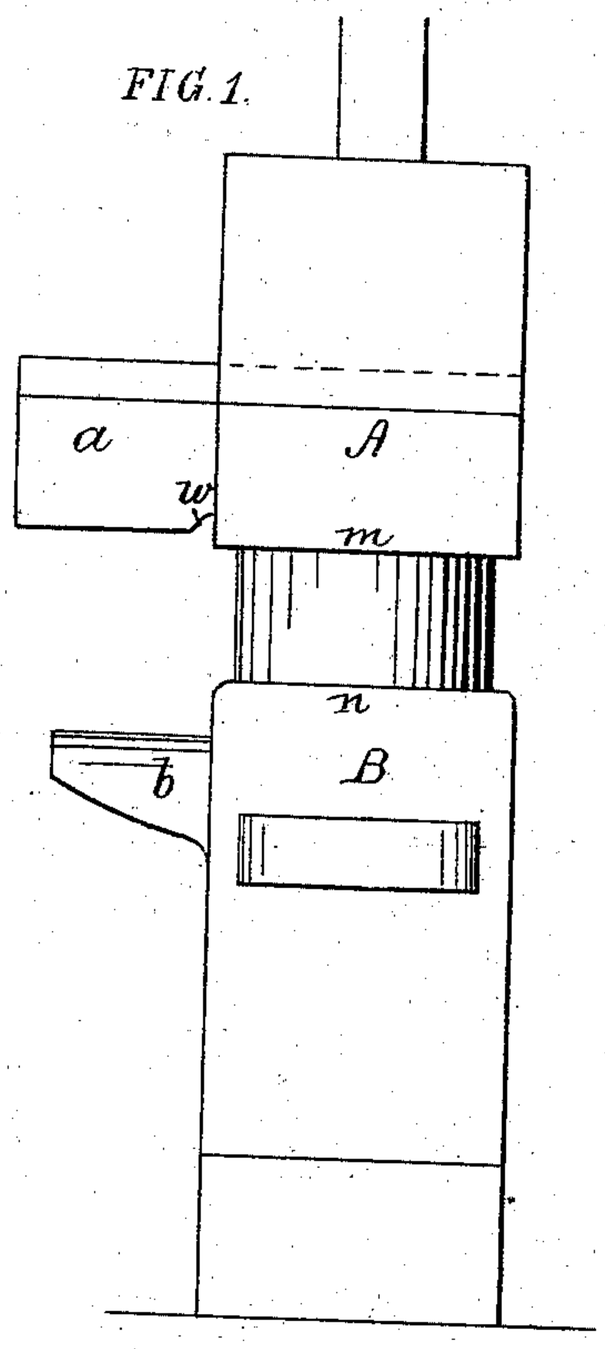


FIG. 5.

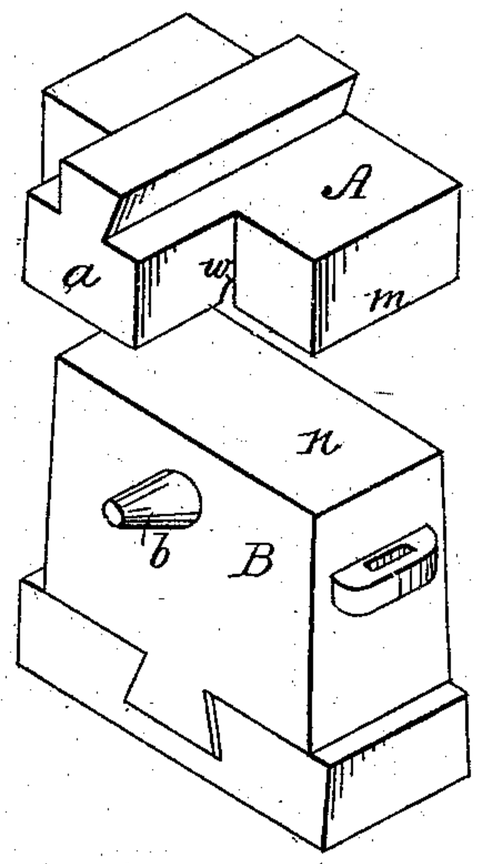


FIG. 2.

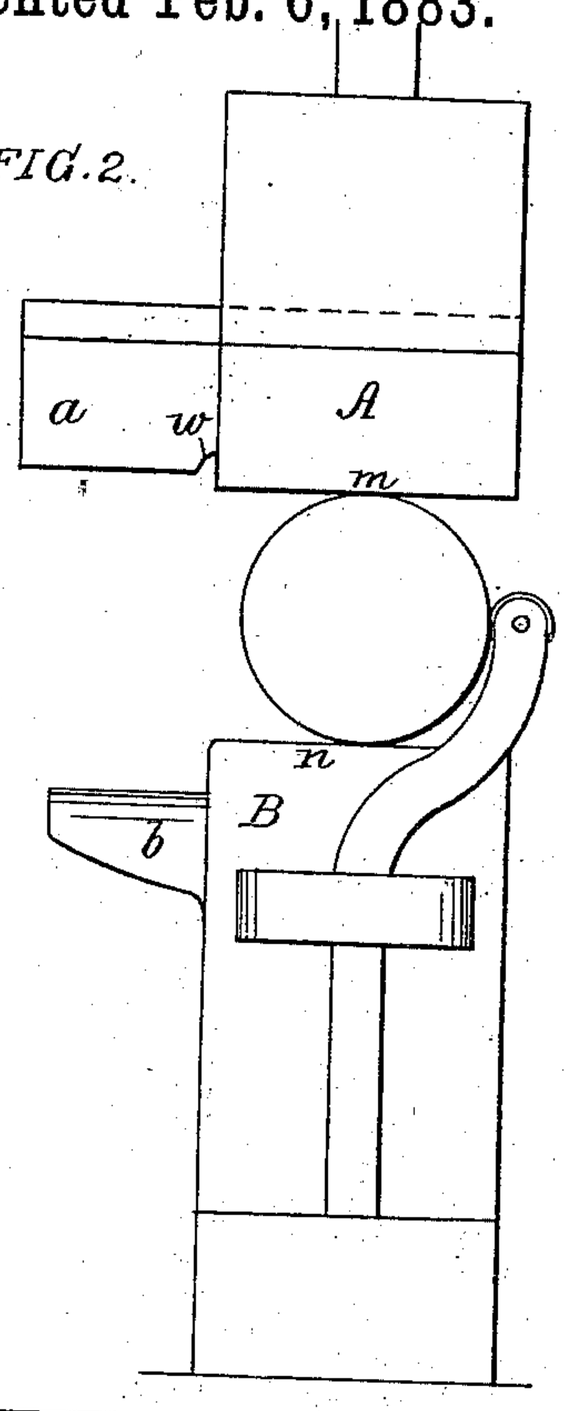


FIG. 3.

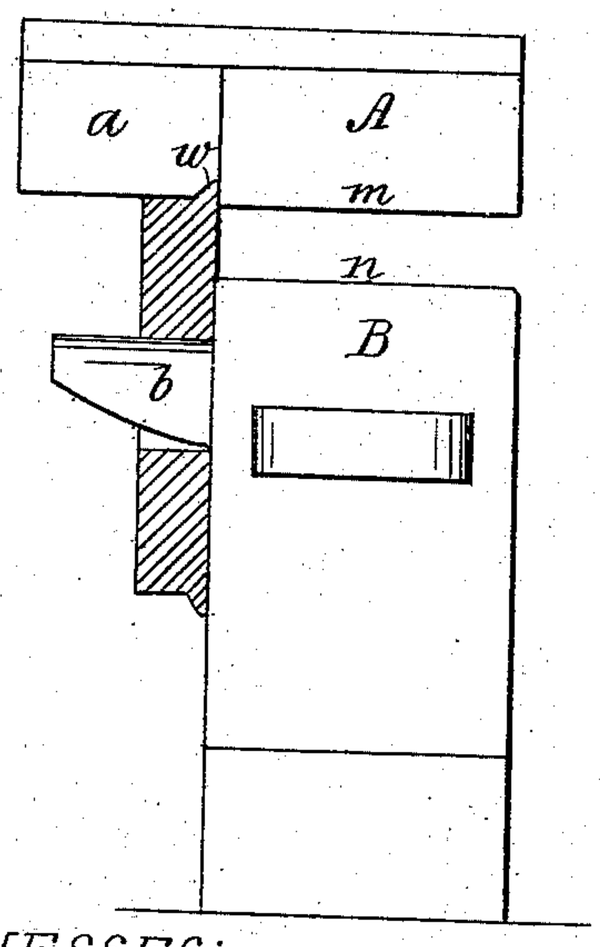
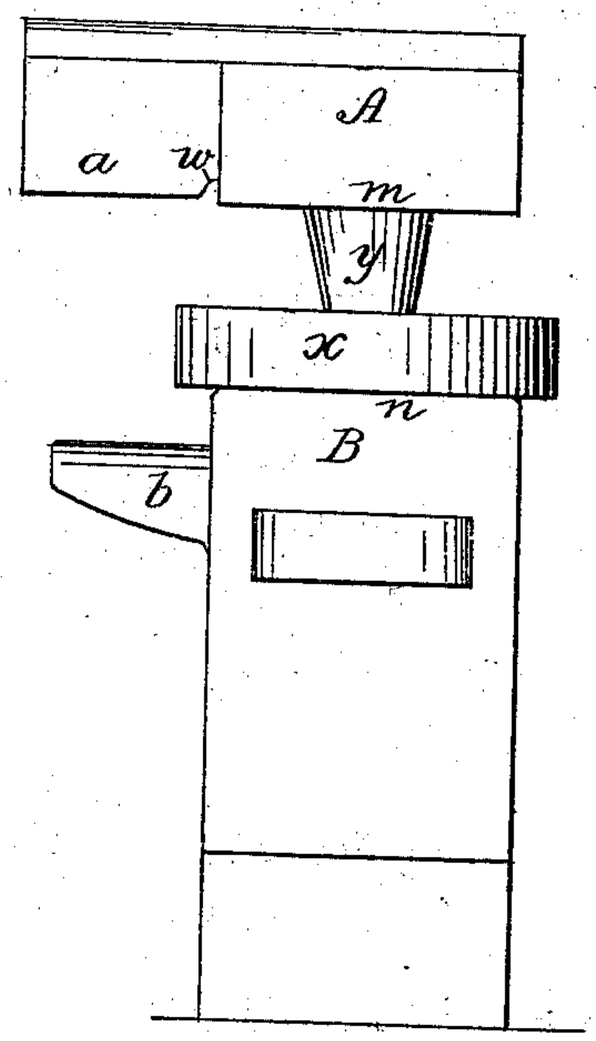


FIG. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES A. FACER AND ADOLPH SCHAUB, OF PHILADELPHIA, PENNSYLVANIA; SAID SCHAUB ASSIGNOR TO SAID FACER.

DEVICE FOR MANUFACTURING CAR-WHEEL TIRES.

SPECIFICATION forming part of Letters Patent No. 271,823, dated February 6, 1883.

Application filed September 29, 1882. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. FACER, a subject of the Queen of Great Britain and Ireland, and ADOLPH SCHAUB, a citizen of the United States, both residing in Philadelphia, Pennsylvania, have invented certain Improvements in Power-Hammers, of which the following is a specification.

Our invention relates to a certain improvement in the anvil and hammer-dies of a power-hammer for forging car-wheel tires or tire-blanks, the object of our invention being to insure the proper and efficient action of the dies in punching the blanks or in hammering either the flat faces or the edges of the same.

In the accompanying drawings, Figures 1, 2, 3, and 4 are side views of the anvil and hammer-dies of a power-hammer, showing our improvement and the uses of the same; and Fig. 5, a perspective view of the hammer-die and anvil.

In manufacturing tire-blanks it is the usual practice to first forge a solid disk and to punch the same by one power-hammer, and, after this preliminary forging has, with others of like character, become cool, to reheat them and convert them into the desired blanks by another power-hammer, the anvil of which is provided with a projection, on which the forging, now in the form of a ring, is hung, so that the hammer-die can be brought to bear on the edge of the ring.

In carrying out our invention we use but one power-hammer, of which A is the hammer-die, and B the anvil, the former, instead of being the usual shape, having in front a projection, *a*, of the character best observed in Fig. 5, and on the front of the anvil, immediately below the projection *a* of the hammer-die, is a projection, *b*. In the first instance the bloom is forged into the shape of a solid disk, this being accomplished in the manner shown in Figs. 1 and 2, by and between the usual face, *m*, of the hammer-die and the face *n* of the anvil. After the disk has been reduced to the condition shown at *x*, Fig. 3, a hole is punched through its center by holding a suitable punch, *y*, while it receives the blows of the hammer. The ring thus formed by punching the hole is now placed on the projection *b* of the anvil, as shown in Fig. 4, so that the projection *a* of the hammer-die can be brought to bear on the edge of the ring, which is turned round on the projection *b* as the blows are repeated until the ring has been enlarged sufficiently to form the tire-blank. At intervals during the latter operation the ring may be removed from the projection of the anvil, in order that it may be placed on the face *n* of the same, when the protuberances made by hammering the edge have to be flattened down. In order to prevent the projection *a* of the hammer-die from acting on the blank while the flat sides of the same are being hammered, we cut away the lower edge of the said projection, as shown, so that it is some distance above the lower edge of the main die; and in order to produce on the edge of the blank the necessary flange, we form in the under face of the projection *a*, at its junction with the main die, a groove, *w*.

We are aware that English Patent No. 665 of 1865 describes a hammer in which one side of the anvil is cut away and provided with a projection or horn, on which the tire-blank is hung while its edge is being hammered; but when the anvil is thus cut away not only is the effective face of the same reduced, so as to materially interfere with the hammering of the flat face of the blank, but it practically precludes the use of the anvil for punching the blank, and the English patentee, in his specification, states that the blank is first forged into the shape of a ring and then reheated prior to being subjected to the action of his hammer.

In our hammer the face *n* of the anvil-die is of substantially the same dimensions as the main portion *m* of the hammer-die, and consequently the operations of punching the blank or of hammering the flat faces of the same can be performed, as well as the operation of hammering the edge of the blank, and reheating of the latter is thus avoided.

We claim as our invention—

1. The combination of the hammer-die A, comprising the main portion *m*, with central projection, *a*, in front, and the anvil-die B, hav-

ing a projection, *b*, and flat face *n*, the projection *a* being above the projection *b*, and the face *n* of the anvil-die being of substantially the same dimensions as the portion *m* of the hammer-die, as set forth.

2. The combination of the anvil-die B with the hammer-die A, having a projection, *a*, the lower face of which is some distance above the face *m* of the said die, as set forth.

3. The combination of the anvil-die B and its projection *b* with the hammer-die A, having a projection, *a*, with a groove, *w*, in its under face, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES A. FACER.
ADOLPH SCHAUB.

Witnesses:
HARRY DRURY,
HARRY SMITH.