

J. F. SHIPPEY.

Tempering Harvester-Knives.

No. 138,349.

Patented April 29, 1873.

Fig. 1.

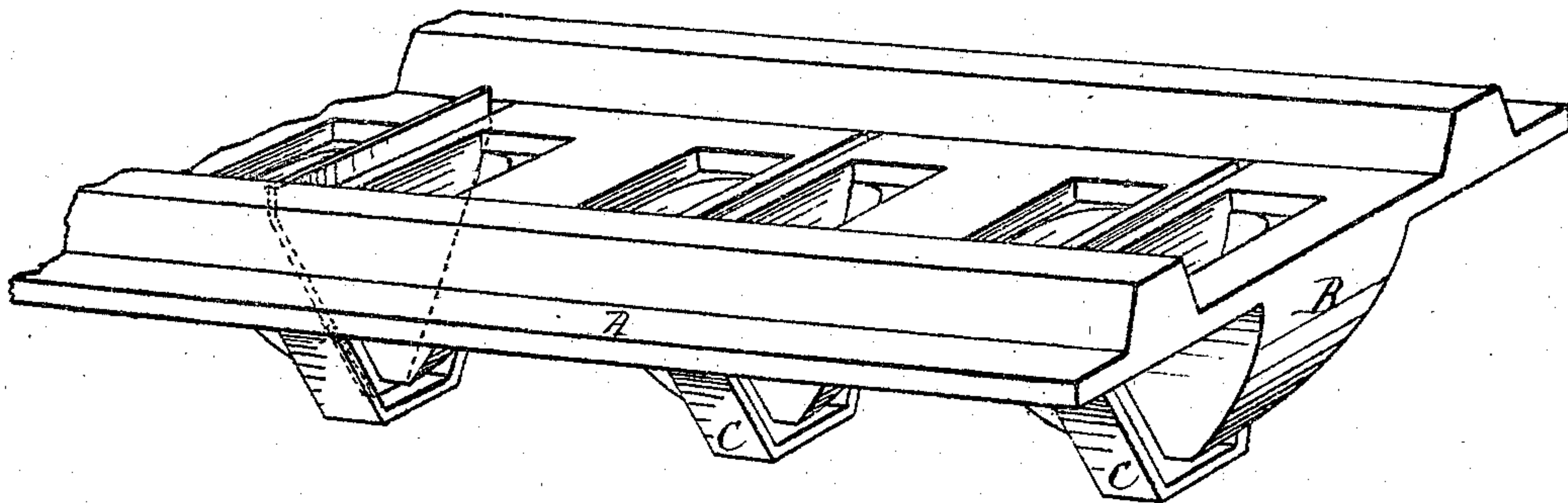


Fig. 2.

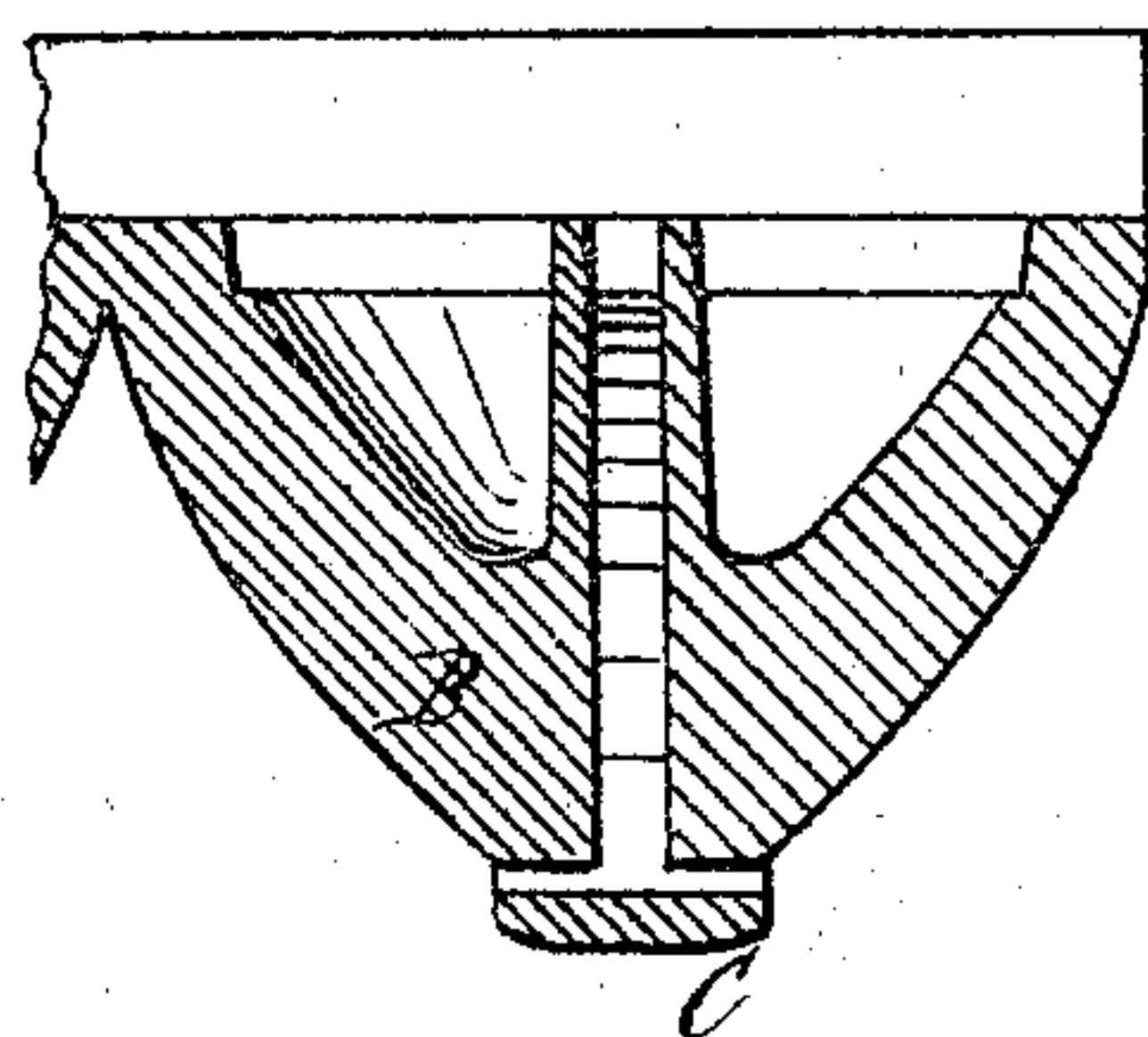
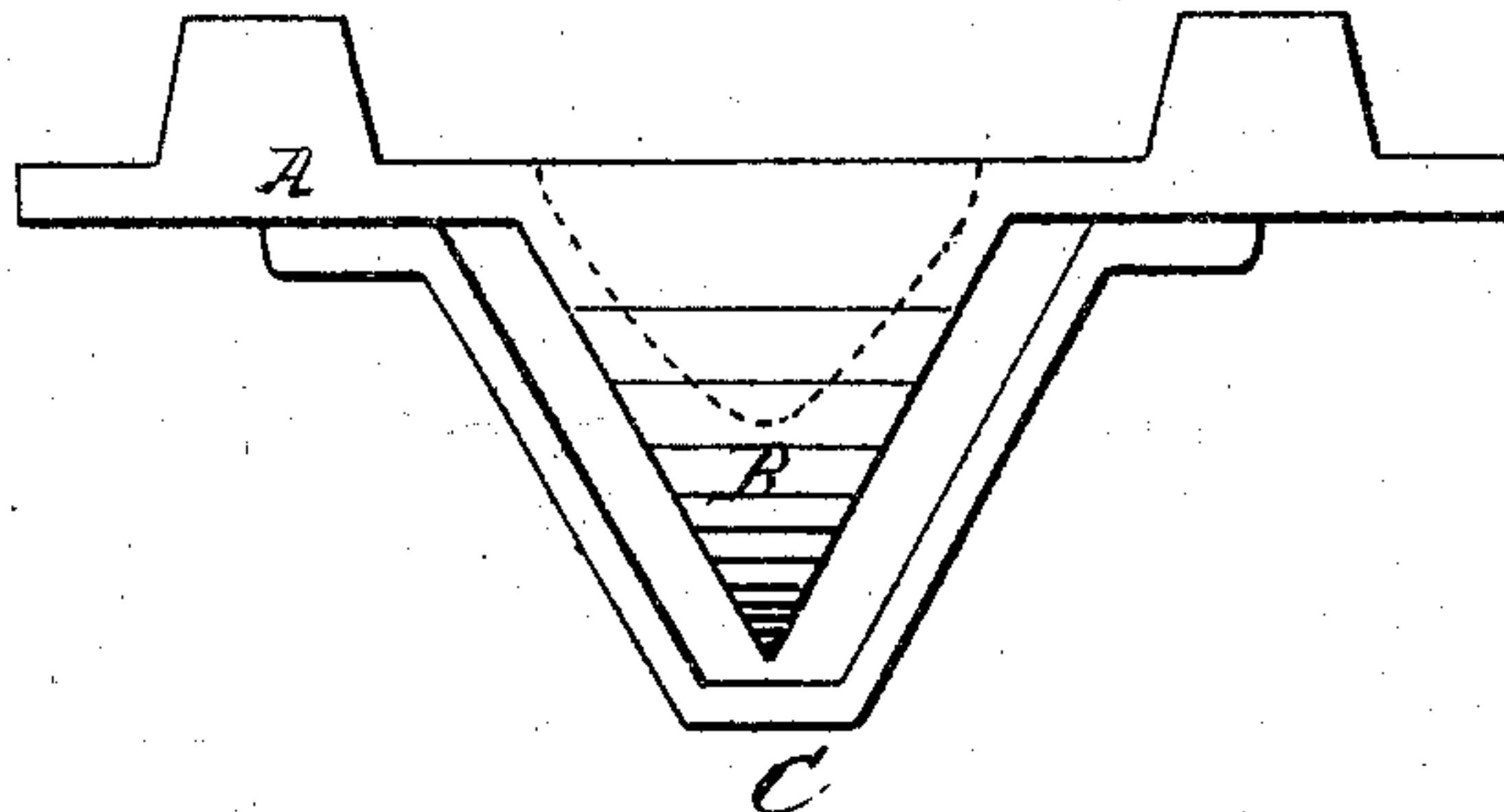


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOEL F. SHIPPEY, OF VALLEY FALLS, NEW YORK.

IMPROVEMENT IN TEMPERING HARVESTER-KNIVES.

Specification forming part of Letters Patent No. **138,319**, dated April 29, 1873; application filed April 1, 1873.

To all whom it may concern:

Be it known that I, JOEL F. SHIPPEY, of Valley Falls, county of Rensselaer, State of New York, have invented a certain new and Improved Device or Holder for Tempering Knives or Sickle-Sections for Harvesters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of a portion of the frame, showing three of the sickle-holders. Fig. 2 is a longitudinal section through a portion of the frame, and Fig. 3 is an end view of the frame.

Similar letters of reference denote corresponding parts in all the figures.

The ordinary process of tempering knives or sections for mowing and reaping machines is to hold the knife or section to be tempered in a pair of tongs, the outer faces of which conform to the shape of the knife, but of smaller diameter, the portion to be tempered projecting beyond the edge of said tongs. They are then immersed and held in melted lead, the lead coming in contact only with the projecting edge of the knife, which would bring it to the proper heat, after which it is withdrawn and dropped into water having a coating of oil floating upon the top. This process is very tedious from the fact that only one knife or section can be tempered at a time, and each one has to be set to the tongs before it can be tempered.

My invention has for its object the tempering of a set or more of knives or sections at one operation, and at the same time to dispense with the tedious operation of separately adjusting or fitting the knives referred to; and consists in the employment of a frame or casting, provided with a series of sockets or holders for the knives or sections, made in such form that the knives can be dropped into said sockets and held in place therein, and at the same time permit the edges to be tempered to be exposed to the action of the heated lead-baths, while the remaining or central portion of the sickle-section is protected by the sides of the box or holder, and also so constructed that the sections may be readily dumped or discharged therefrom into the tempering-bath.

In the drawing, A is a plate or frame, which has cast with it or attached to it upon its lower surface a series of pyramidal or conical shaped holders, B, which are slotted transversely of the plate A, the slots extending also through the plate A, and made wide enough to receive the knife or section. Around these pyramidal or conical holders is placed a band, C, which covers the slot, but sufficiently removed therefrom to leave a space between the face of holder B and the inner face of the band C, said space being about equal to the extent of surface or edge of the knife or section required to be tempered. The conical holders B are made hollow and filled with fire-clay to prevent the heat from the lead from reaching the portion of the knife to be left malleable, and at the same time serving to reduce the weight of the frame, making it practicable to increase its capacity or the number of sockets it may contain without rendering it too heavy for convenience in handling. The bands C conform in their outline substantially to the exposed edges or outline of the sections to be tempered.

The tempering-frame thus constructed may be provided with any convenient form and construction of handles for convenience in manipulating.

The process of tempering the sections is as follows: The knives are dropped into the slots in the plate A, their edges coming in contact with the inner face of the band which covers the slot, leaving the surface of the knife to be tempered exposed in the space between the cones or holders and the bands. The frame is then, by means of the handles, immersed in a tank containing melted lead, the lead coming in contact with the portion of the knife to be tempered, which is the only part exposed. After the edge has been heated sufficiently the frame is withdrawn and the knives or sections immersed in another tank containing water with a coating of oil upon its surface; or they may be thrown from the holder into the tank by inverting the frame or holder by means of the handles. If preferred, however, the frame may be connected with and made stationary over the tank holding the melted lead; and the knives or sections can be dropped into place therein, heated, and then removed from

the sockets by tongs and dropped or dipped into the tank containing the tempering liquid or compound in the usual way, except that ordinary tongs may be used, as no precision of adjustment therein is required.

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

1. A frame or holder, provided with sockets or recesses for receiving and holding the knives or sickle-sections for the purpose of tempering, substantially as described.

2. The slotted holder, provided with hollow or chambered sides, substantially as and for the purpose set forth.

3. The slotted frame or holder A, in combination with the slotted pyramidal or conical projections B and the bands C, arranged substantially as and for the purpose set forth.

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Witnesses:

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