No. 665,949. Patented Jan. 15, 1901.

F. ALBERT.

SHEET METAL STEP PULLEY.

(Application filed Sept. 29, 1900.)

(No Model.)

Fig. 1.

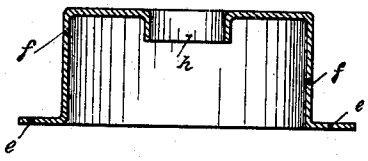


Fig. 2.

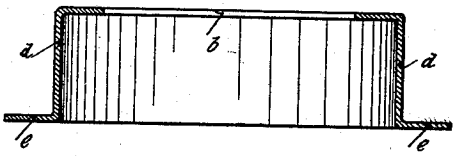
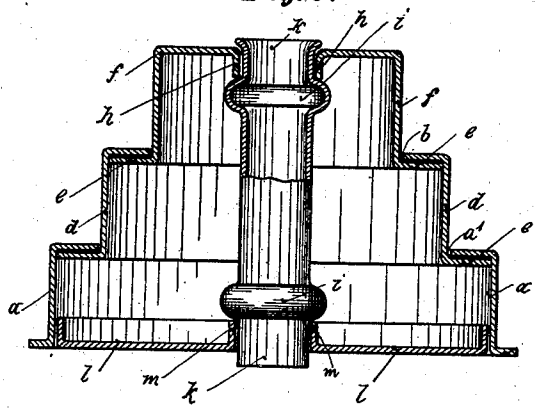


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRIEDRICH ALBERT, OF NUREMBERG, GERMANY.

SHEET-METAL STEP-PULLEY.

SPECIFICATION forming part of Letters Patent No. 665,949, dated January 15, 1901.

Application filed September 29, 1900. Serial No. 31,571. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH ALBERT, manufacturer, a subject of the King of Bavaria, residing at Nuremberg, Bavaria, Germany, (whose post-office address is Nos. 9 and 11 Mathildenstrasse, Nuremberg, Bavaria,) have invented certain new and useful Improvements in Sheet-Metal Step-Pulleys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention consists in sheet-metal step-pulleys formed in such manner that each individual step engages the next adjacent step by means of overlapping flanges and is bound thereto by the wedging contact of the peripheries of said flanges with the interior surface of one and exterior surface of the other of said steps.

In the accompanying drawings, Figures 1 and 2 represent two single steps detached, and Fig. 3 a finished pulley.

The single steps of the pulley are produced by drawing in the well-known manner and each provided with an insetting flange adapted to engage with the external periphery of the next smaller step. Each step has also an outsetting flange at the other side of said step from the insetting flange intended to engage within the next larger step and of such diameter that it will wedge tightly against the internal periphery of said step and force will be necessary to drive it home against the insetting flange of said step.

A description of a finished pulley of three steps will suffice to an understanding of my invention.

The larger step *a* has an insetting flange *a'*, adapted to engage with the exterior surface of the next smaller step *d*, and an outsetting flange *e* for wedging into and driving against the insetting flange of any next larger step that it may be desired to add. The step *d* has also an outsetting flange *e*, which is wedged into the step *a* and driven home against the insetting flange *a'* thereof. In like manner the step *f*, which is the last and smallest, has an outsetting flange *e*, which wedges into step *d* and is driven home against the insetting flange thereof. The insetting flange of step *f* is, however, practically a closed bottom with a central sleeve or shoulder *h* insetting in the axial line of the pulley. A plate *l*, with annularly-flanged border, is set into the outer side of the larger step and firmly secured thereto by rivets, welding, or otherwise. This plate has also a central insetting annular sleeve or shoulder *m*, corresponding to the sleeve *h*, insetting from the smaller step and axially in line therewith. These shoulders *h* and *m* serve as naves. A more advantageous connection of the end steps with each other is, however, attained if between the steps *a* and *f* a tube or pipe *k* is inserted, having annular ribs *i*, which abut against the inner edges of these shoulders *h* and *m* and whose pipe ends are upset exteriorly to said shoulders. This mode of construction has the advantage that pulleys with any number of steps can be produced without any danger of distortion, as is often the case in drawing such pulleys out of a single piece.

I claim—

1. A sheet-metal step-pulley comprising a series of individual steps, each, except the smaller end step, having an insetting flange adapted to take over the next adjacent reduced step, and an outsetting flange adapted to wedge tightly into the next adjacent larger step and lap against the insetting flange thereof, an annular sleeve insetting from the smaller step in the axial line of the pulley, and a plate fixedly secured to the larger step and provided with a like annular insetting sleeve or shoulder in axial line with the aforesaid sleeve.

2. The combination with the series of steps united together by outsetting and insetting flanges, as described, and with the plate fixedly secured to the larger step, and the two insetting axial sleeves, of the tube or pipe *k* having ribs abutting against the inner ends of said sleeves, and upset exteriorly thereto.

In testimony whereof I affix my signature in presence of two witnesses.

FRIEDRICH ALBERT.

Witnesses:
ALEX WIELE,
MAX SCHNEIDER.