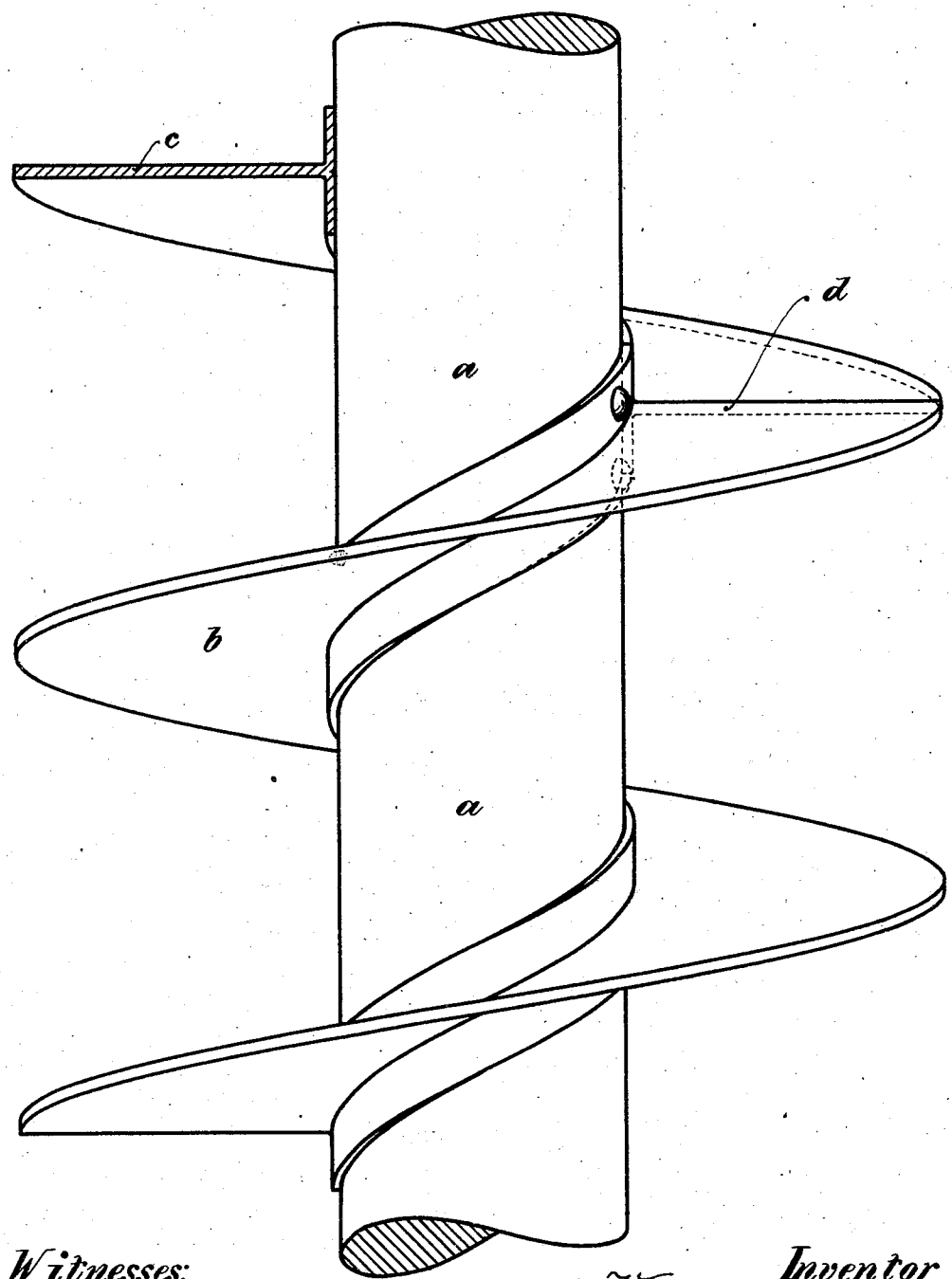
W. SCHROER.

CONVEYER SPIRAL.

APPLICATION FILED MAY 9, 1908.

915,702. Patented Mar. 16, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILHELM SCHROER, OF DAHLERBRÜCK, GERMANY.

CONVEYER-SPIRAL.

No. 915,702. Specification of Letters Patent. Patented March 16, 1909.

Original application filed October 9, 1906, Serial No. 339,695. Divided and this application filed May 9, 1908. Serial No. 431,928.

To all whom it may concern:

Be it known that I, WILHELM SCHROER, a subject of the King of Prussia, German Emperor, residing at Dahlerbrück, in the Province of Westphalia, Kingdon of Prussia, German Empire, have invented a certain new and useful Manufacture of Conveyer-Spirals, of which the following is a specification.

This invention relates to the manufacture of conveyer spirals.

A process is already known by which metal bands are made of a T-section by rolling out metal bars of the breadth of the desired metal band, these bars being notched at the side and then rolled, keeping the breadth constant, so that a longitudinal slot is left in the band; the sides of this slotted part are afterward splayed out and rolled to form the finished section. Such profile iron has the advantage of greater lightness and cheapness as compared with the ordinary T-section iron. Moreover by this simple process profile iron can be formed with a high stem portion and short arms or flanges, these latter being of half the stem thickness, a form which could not be produced by the previously known rolling processes.

It is the object of the present invention to apply the profile irons or bands in the formation of conveyer spirals for which purpose they are found to be particularly useful. The necessary spiral shape is produced in known manner by coiling or rolling the bands and these latter are then fixed by means of their flanges on the shaft or on a tube serving as a shaft. In stretching out the spiral it is usually sufficient to fix only its ends to the shaft, but it is better to effect the fixing at several places besides.

At the meeting point of two bands no further connection is required, it being quite unnecessary to employ connecting plates or pieces attached to the webs of the spiral. This is especially of advantage in facilitating the interchange of the parts of a spiral when this becomes worn out, as by this construction much time and labor is then saved. Further in a conveyer spiral made in this way there is the great advantage that the whole spiral has a flat acting surface without any perceptible projecting portions so that there is very little friction against the material which is being fed by the spiral. Moreover if the flanges are fixed in position by means of countersunk bolts or rivets there will be no projecting pieces left to break the smooth surface of the whole band. Quite apart from other advantages of this arrangement there is a saving in work during the operation of the conveyer, particularly when it is of large size.

It is already known to make conveyer spirals of cast or rolled metal strips which have a flange on one side. Conveyer spirals made by this method have the disadvantage that, on account of having a flange on one side only, any pressure on the side of the flange would cause a bending of the web in the opposite direction. In conveyer spirals made according to the present invention the strips stretch several times around the axis necessitating few attachments as compared with conveyer spiral strips made hitherto which only extended for a short distance around the periphery of the axis.

The accompanying drawing illustrates a portion of a conveyer made by the present method.

a is the shaft carrying the spiral band *b* shown in cross section at *c*.

d is a butt joint between two consecutive bands and it is seen that no connecting plates are provided between the two parts. Conveyer spirals formed of bands in this way have not been previously used, but as a rule the web portion of a spiral was formed of flat iron spirals which were attached to the shaft by angle pieces and the ends of which were connected one to another by fish-plate connections. The disadvantages of this older form of spiral will be evident without further statement, from the preceding description of the present invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

A conveyer spiral consisting of a screw blade extending around a shaft for more than a full pitch and of a spiral base integral therewith and in T-shape adapted to fit over a shaft, and having only half the thickness of that of the screw blade.

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

W. SCHROER.

Witnesses:
MYRA E. BUSEY,
BESSIE F. DUNLAP.