(No Model.)

H. MELTZER.

ABUTMENT RING OR COLLAR FOR SHAFTING.

No. 594,261. Patented Nov. 23, 1897.

Fig. 1.

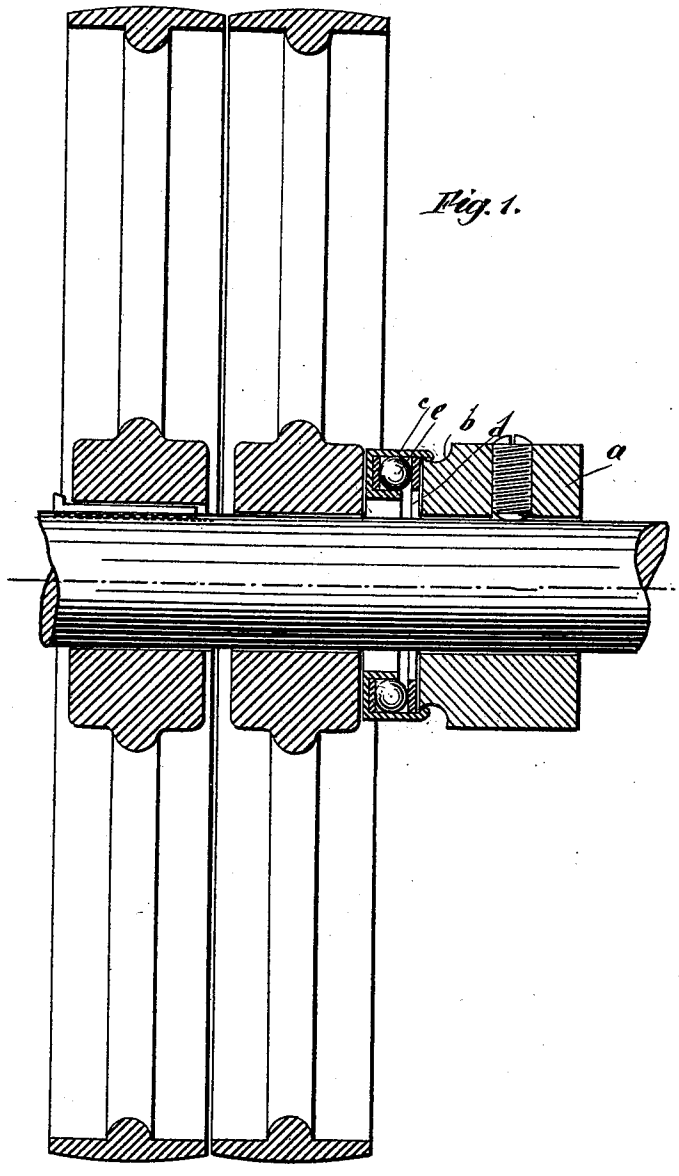
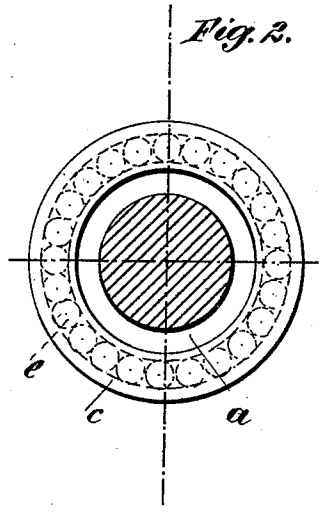


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HEINRICH MELTZER, OF RATIBOR, GERMANY.

ABUTMENT RING OR COLLAR FOR SHAFTING.

SPECIFICATION forming part of Letters Patent No. 594,261, dated November 23, 1897.

Application filed April 8, 1897. Serial No. 631,229. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH MELTZER, a subject of the King of Prussia, residing at Ratibor, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Abutment Rings or Collars for Shafting, of which the following is a specification.

This invention is an abutment ring or collar to be placed on shafting, so that contacts between bearings or loose pulleys and the like may be effected with decreased friction.

This specification is the disclosure of one form of my invention, while the claim defines the actual scope of the conception.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a vertical section of the invention, taken longitudinally with the shaft; and Fig. 2 is an end view of the invention, showing the shaft in section.

On the shaft is fixed a collar *a*. The collar *a* has a groove in one end forming a reduced portion or neck *b*. Encircling the shaft and located at the reduced portion or neck of the collar *a* is a channel-ring *c*, the outer wall of which overhangs the neck *b* and is bent inward slightly, so as to be held in engagement with said neck. The connection between the collar *a* and ring *c* is such as will permit free independent rotation of the parts. Contained within the ring *c* is a series of balls *e*. The balls *e* are sandwiched between hardened-steel washers *d*, arranged one in engagement with the collar *a* and one in engagement with the bottom wall of the channel-ring *c*. The channel-ring has a bottom wall perpendicular to the line of the shaft and has two side walls running transversely thereto and concentric to each other. The outer side wall is contracted at its outer edge to fit the neck of the collar *a*, and the inner side wall terminates adjacent to the collar, so as to confine the balls *e* properly in place.

The channel-ring *c* bearing, for example, against a loose pulley, such as is shown in Fig. 1, permits the pulley to turn independently of the shaft and at the same time holds the pulley from sliding on the shaft, the holding being in a manner to reduce the friction between the two parts. The same operation is performed when the invention is used to engage a bearing or step.

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

The combination of a collar capable of being attached to a shaft, the collar having an exterior groove forming a neck at one end of the collar, a channel-ring having a perpendicular bottom wall with concentric side walls running transversely thereto and forming with the bottom wall the channel-ring, the outer side wall having its outer edge contracted to fit loosely into the neck of the collar, and the inner side wall terminating in close proximity with the adjacent edge of the collar, and antifriction-balls located within the channel-ring and causing pressure to be exerted on the bottom wall thereof and on the said end of the collar.

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

HEINRICH MELTZER.

Witnesses:
EDUARD PEITZ,
G. HÜLSMANN.