L. KRAUSS.

ROTARY BRUSH.

APPLICATION FILED AUG. 31, 1918.

1,326,744.

Patented Dec. 30, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

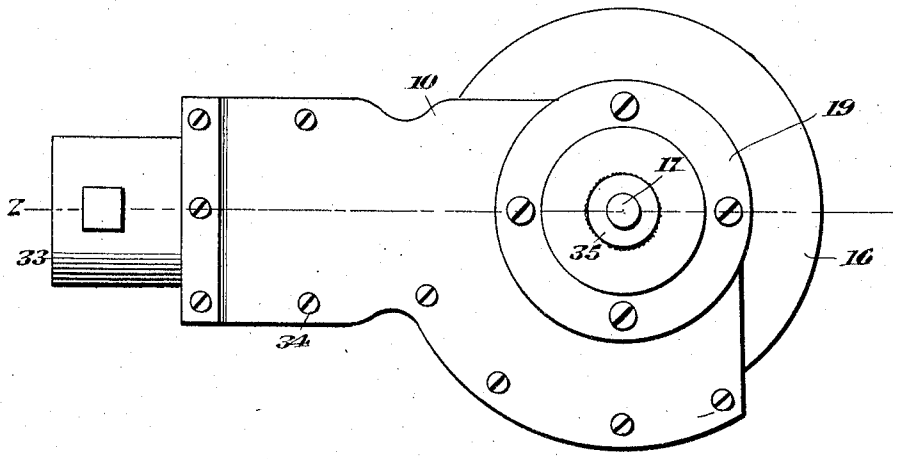
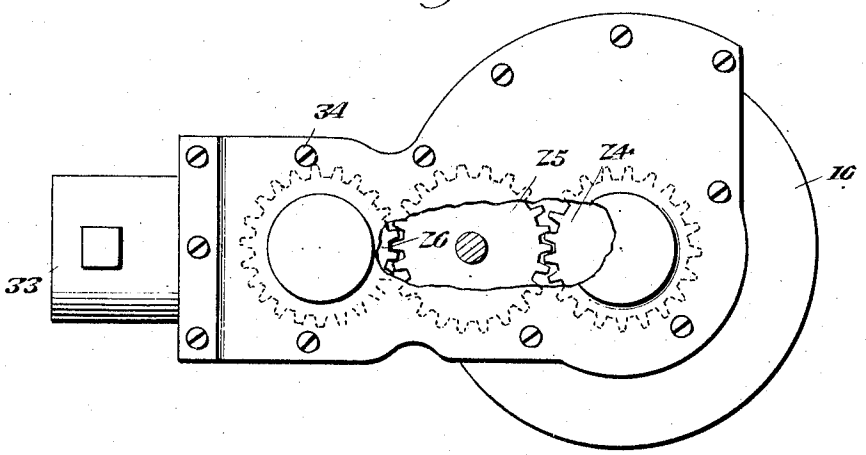


Fig. 4.



Inventor

Louis Krauss

By Victor J. Evans

Attorney

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2 SHEETS—SHEET 2.

Fig. 2.

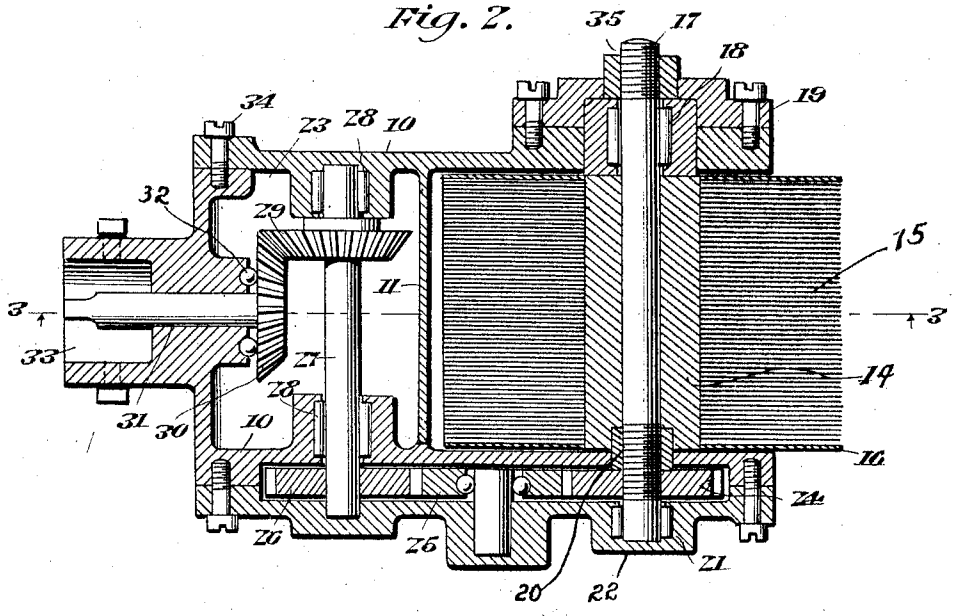
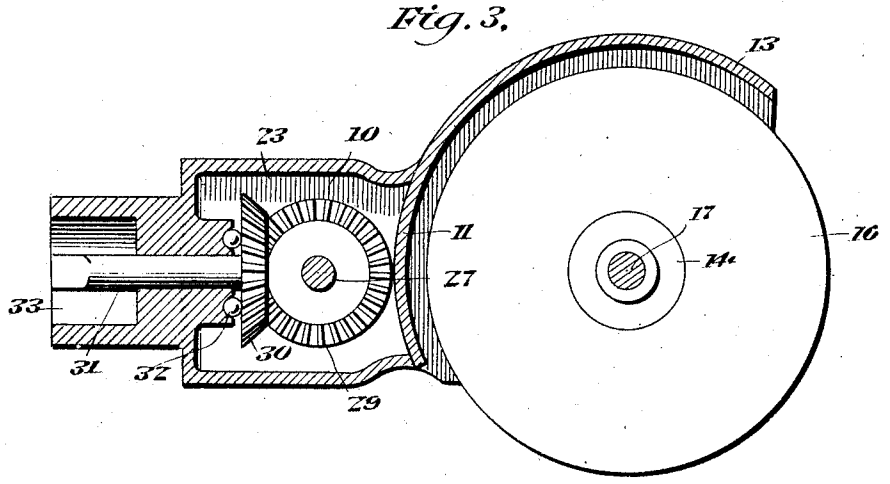


Fig. 3.



Inventor

Louis Krauss

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

LOUIS KRAUSS, OF NEW YORK, N. Y.

ROTARY BRUSH.

1,326,744. Specification of Letters Patent. Patented Dec. 30, 1919.

Application filed August 31, 1918. Serial No. 252,209.

To all whom it may concern:

Be it known that I, LOUIS KRAUSS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Rotary Brushes, of which the following is a specification.

This invention relates to devices especially designed for cleaning plates of metal ships and aims to provide a power operated brush by means of which foreign substances may be quickly and thoroughly removed.

Another object is the provision of a power operated brush in which the operating gears are contained within a leak proof chamber, which serves also as an oil chamber and protects the gears from dust or other extraneous matter, resulting in increased wear and ease of operation.

Another object is to provide a brush of novel construction, in which the sides of the brush are protected by thin metal disks, which prevent the bristles from spreading and wear down with the wear of the brush.

A further object is the provision of a novel form of casing, which is especially adapted for housing the brush and gears in a manner to permit of the ready removal or assembling of the various parts, for purposes of cleaning or repair.

Other objects and advantages of the invention will appear as the following description is read in connection with the accompanying drawings.

In the drawings:—

Figure 1 is a side elevation of a brush constructed in accordance with the present invention;

Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view on the line 3—3 of Fig. 2; and

Fig. 4 is a view looking at the opposite side of the brush with a part of the casing broken away to more clearly show the gears for driving the brush.

Referring in detail to the drawings, wherein like characters of reference denote corresponding parts, the improved brush comprises a casing, which is formed of opposite side sections or plates 10, which are connected by a curved wall 11 carried by one of the plates 10 and which extends for a portion of its length along the edges of the plates and then transversely across said plates, with its free edge contacting with the opposite plate, to provide a brush chamber 13. Mounted within the chamber 13, is a brush of novel construction, which includes a core 14, bristles 15 and side protecting disks 16. These disks are preferably made of thin metal and are of the same diameter as the brush and when the latter is in use the disks wear down with the wear of the bristles. The purpose of these disks is to prevent the brush from spreading, so that it may be subjected to considerable pressure and the bristles retained in proper position.

The brush is mounted upon a shaft 17, one end of which is disposed within a roller bearing 18 carried by one of the side plates 10, a cap 19 secured to this plate serving to hold the bearing in position. The opposite end of the shaft 17 is mounted in a bearing 20 the extremity of the shaft extending beyond this bearing into a bearing 21 formed in an auxiliary side plate 22. This latter plate is secured to and spaced from the adjacent plate 10 to provide a chamber 23 designed for housing the gears used in the operation of the brush. The chamber 23 is dust proof and is adapted to contain oil or other lubricant.

Mounted upon the shaft 17 between the plates 10 and 22, is a gear 24, which through the medium of an idler gear 25 is engaged and driven through a gear 26. This latter gear is mounted upon a counter shaft 27 in roller bearings 28 provided in the casing. Also mounted upon the shaft 27 is a beveled pinion 29, which is driven by a pinion 30 mounted upon one end of a shaft 31 and operating over antifriction bearings 32. One end of the shaft 31 projects into a socket 33 and is formed for connection with suitable power mechanism, such as a portable drill or grinder operated by air.

The gears 29 and 30 are located within the chamber formed by the curved wall 11 which is carried by one of the plates 10 and top and bottom walls and an end wall, all of which are carried by the opposite plate 10. The casing is held in assembled position through the medium of screws 34, while a nut 34 mounted upon the outer end of the shaft 17 serves to regulate the friction between the bearing 18 and the core of the brush.

While the invention is described for connection with suitable power mechanism, it is obvious that a crank or other handle may be attached to the shaft 31 for rotating the brush.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is reserved to make such changes as fall within the scope of the appended claim.

Having described the invention, what is claimed is:—

A device as described comprising a casing including opposite side sections, a curved wall connecting the side sections to provide a brush chamber, a brush mounted for rotation therein, top and bottom walls connecting the side sections, which together with the curved wall define a gear chamber, a plate connected to and spaced from one of the side walls to define an additional gear chamber, gears in said chambers for operating the brush and means for connecting the gears to a source of power.

In testimony whereof I affix my signature.

LOUIS KRAUSS.