F. J. FLINN.

SHIM.

APPLICATION FILED JAN. 29, 1920.

1,421,441. Patented July 4, 1922.

Fig. 1.

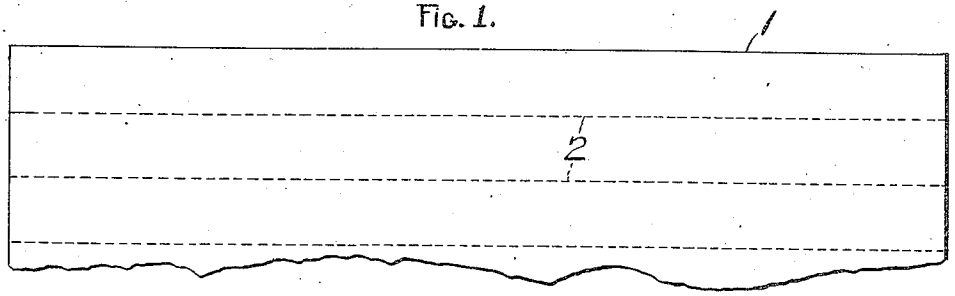


Fig. 2.

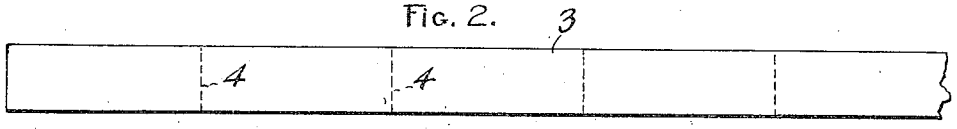


Fig. 3.

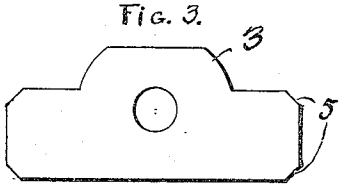


Fig. 4.



Fig. 5.

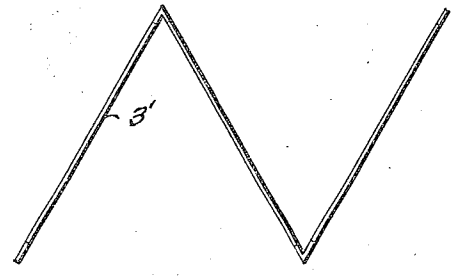
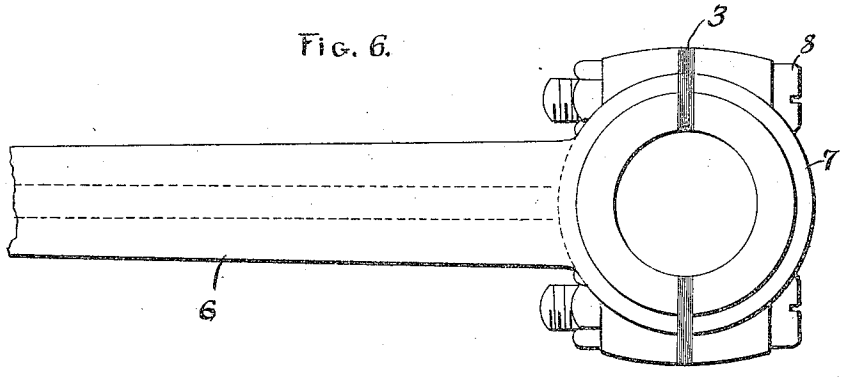


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SHIM.

1,421,441. Specification of Letters Patent. Patented July 4, 1922.

Application filed January 29, 1920. Serial No. 354,923.

To all whom it may concern:

Be it known that I, FRANCIS J. FLINN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Shims, of which the following is a specification.

This invention relates to shims adapted to be interposed between the pillow-block and cap in machine bearings and analogous situations, or in the bearings of connecting rods of gas engines.

It is necessary, as the bearings become worn, to reduce the thickness of the shims so that the distance between the block and cap may be reduced and the bearing tightened. To accomplish this a very slight reduction in the thickness of the shims is necessary. This object is usually accomplished by introducing a thinner shim or by scraping the face of the shim to properly reduce its thickness.

The main object of the present invention is the provision of a shim the thickness of which may be readily and easily changed and which will at all times present a spacer of uniform thickness.

Another object of the invention is the provision of a shim consisting of a series of layers or plates so connected that one or more layers may be readily removed when desired.

The invention also contemplates the provision of strips from which shims of desired form may be readily cut or stamped.

It is also within the province of the invention to generally improve the construction and enhance the utility of shims.

With these and other objects in view, the invention resides in the novel arrangement and combination of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a plan view of a fragment of a blank from which the shim may be cut;

Figure 2 is a similar view of another form of blank;

Figure 3 is a plan view of a shim;

Figure 4 is a side elevation of the same;

Figure 5 is a side elevation of a shim made from a strip folded in a different manner, the shim shown partly open;

Figure 6 is a fragmentary view in elevation of a connecting rod showing the shims in place.

Referring to the drawing by numerals of reference:—

In carrying out the invention a sheet 1 of thin sheet steel or other suitable material is provided which is folded upon itself, as indicated by the dotted lines 2, to a desired thickness. From this blank, so folded, shims of the desired size and form may then be cut or stamped. The plan view of such a shim would resemble that shown in Figure 3, but the strips or folds of the shim would be connected along the sides of the shim.

To form a shim from the strip 3, shown in Figure 2, the strip is folded upon itself substantially along the lines 4 to assume the form shown in Figure 4. To properly fold the strip in this manner, it is wound on a cylinder then removed and placed under pressure and flattened out. From the strip, so folded, the shim is stamped. When stamped out, the corners are angled off, as indicated at 5—5, Figure 3, to assure a straight tear at the fold when a leaf of the shim is to be removed.

In the modified form of shim, 3′, shown in Figure 5, the strip, similar to the strip 3, is folded upon itself, instead of being wound, and the shim is then stamped therefrom.

In Figure 6 a connecting rod 6 is shown with its end yoke held in place thereon by means of the bolts 8 and the shims 3 in place therein.

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

1. A shim comprising a blank of metal folded upon itself to provide a plurality of leaves.

2. A shim comprising a blank of metal folded upon itself to provide a plurality of superimposed sheets separable by tearing along the fold between adjoining sheets.

3. A shim comprising a blank of metal folded upon itself to provide a plurality of superimposed sheets, each sheet connected to the adjoining sheet along one edge and having indentations at the ends of the connected edges.

In testimony whereof I hereunto affix my signature.

FRANCIS J. FLINN.