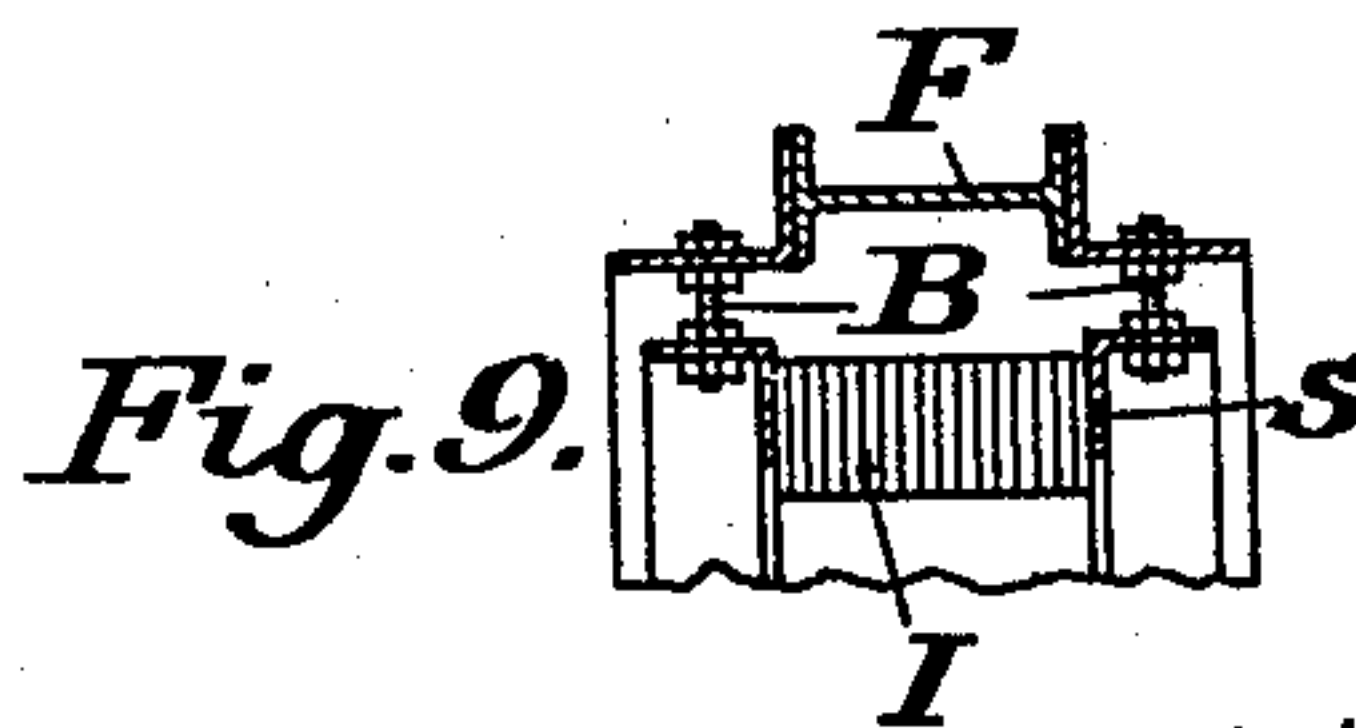
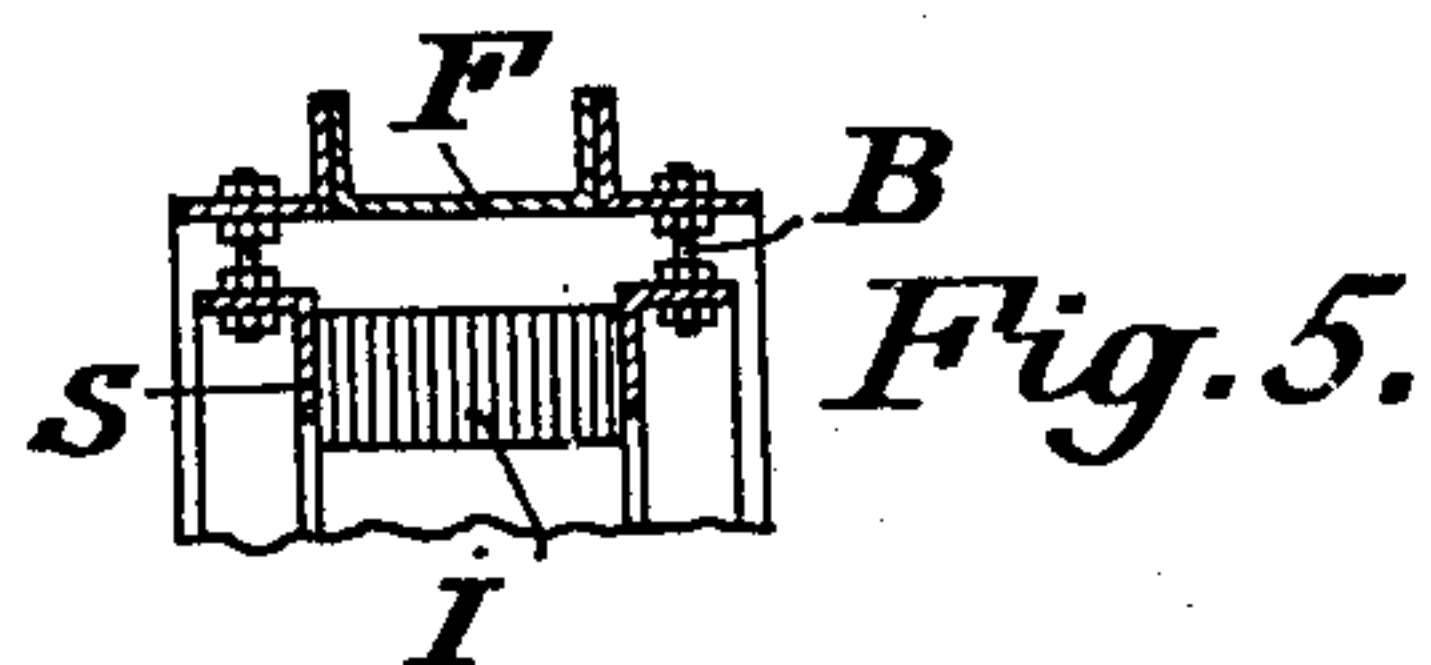
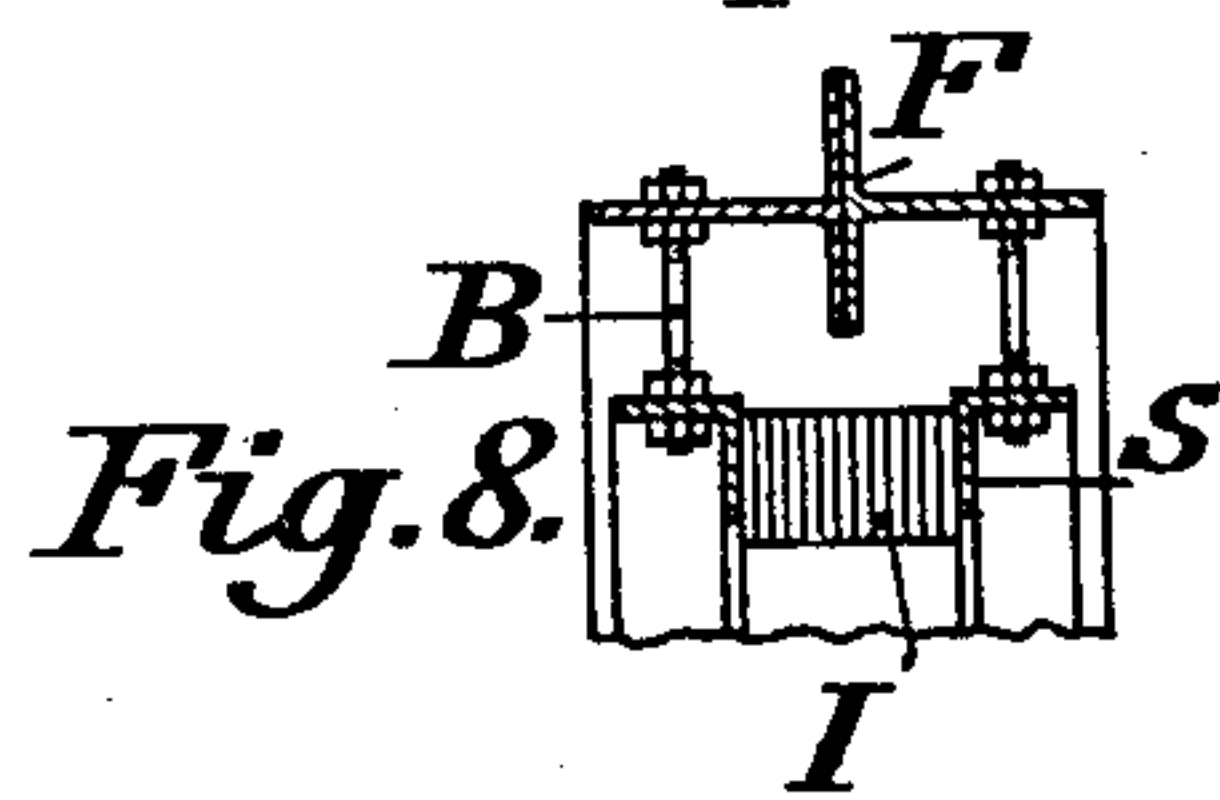
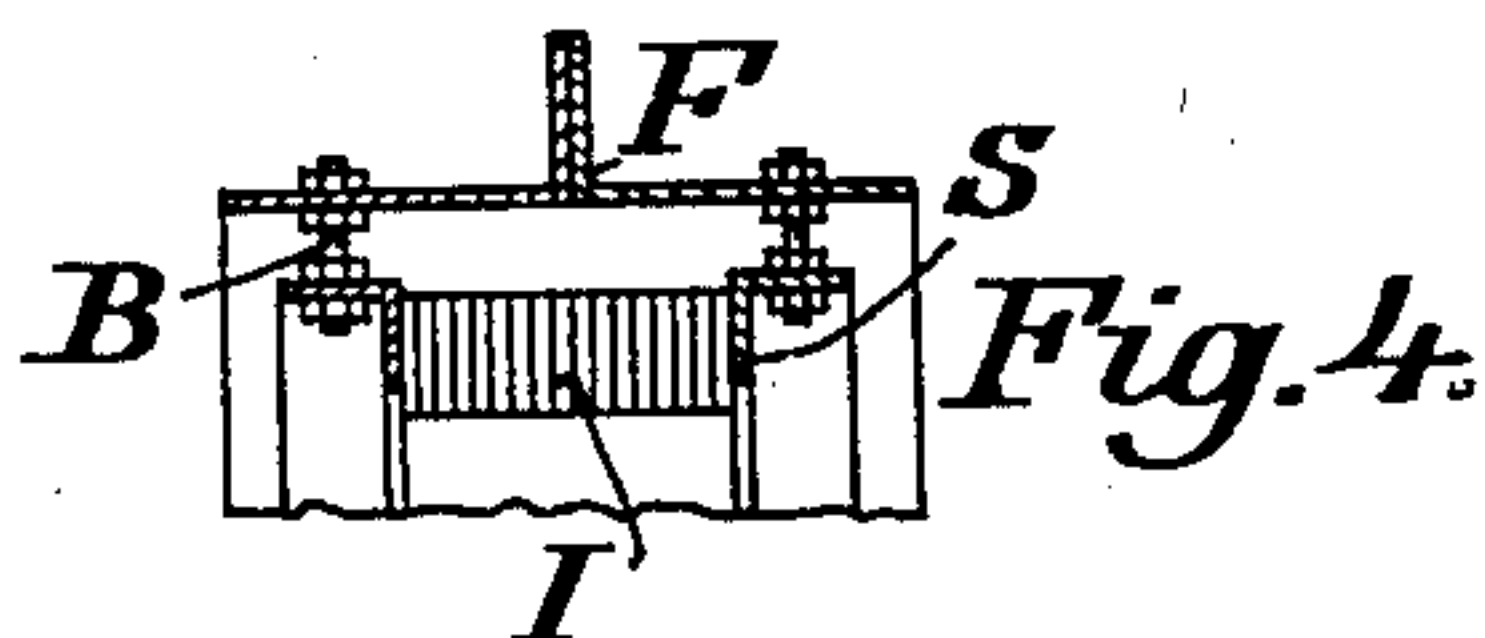
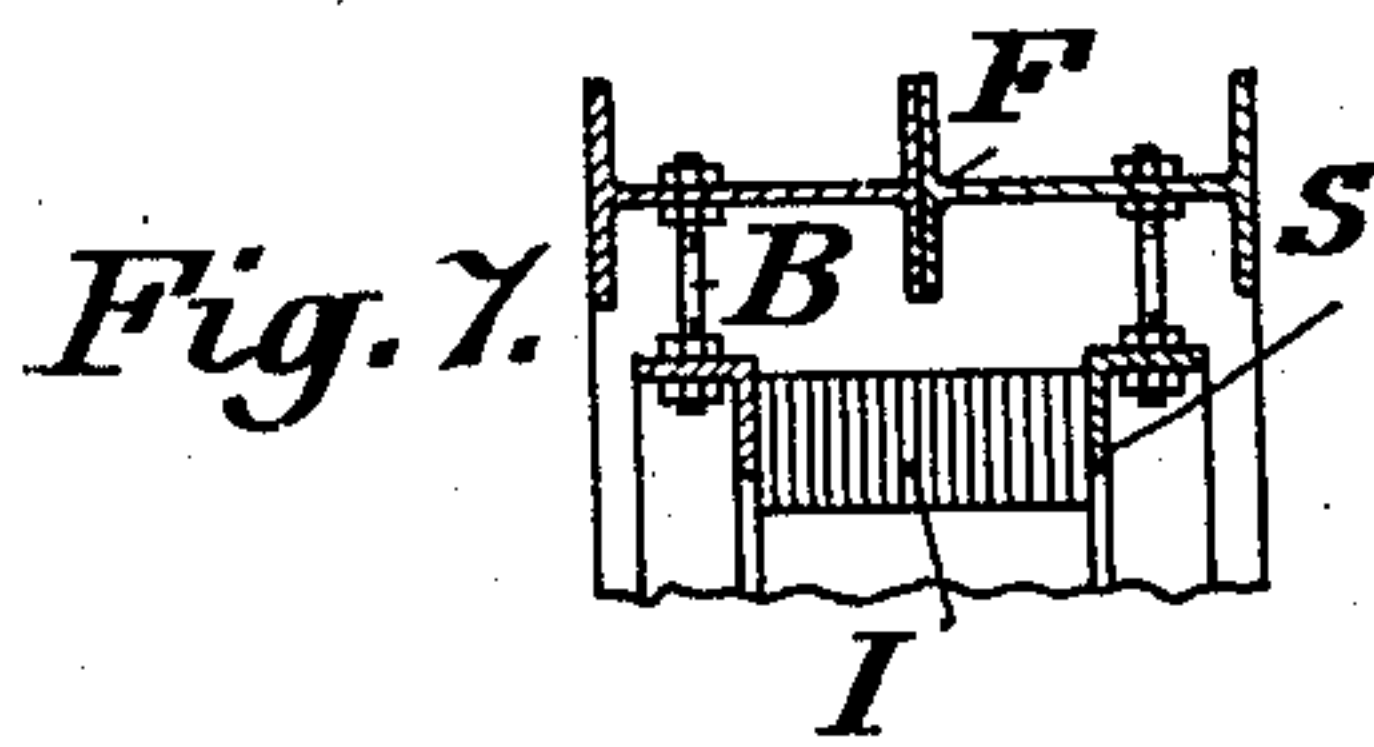
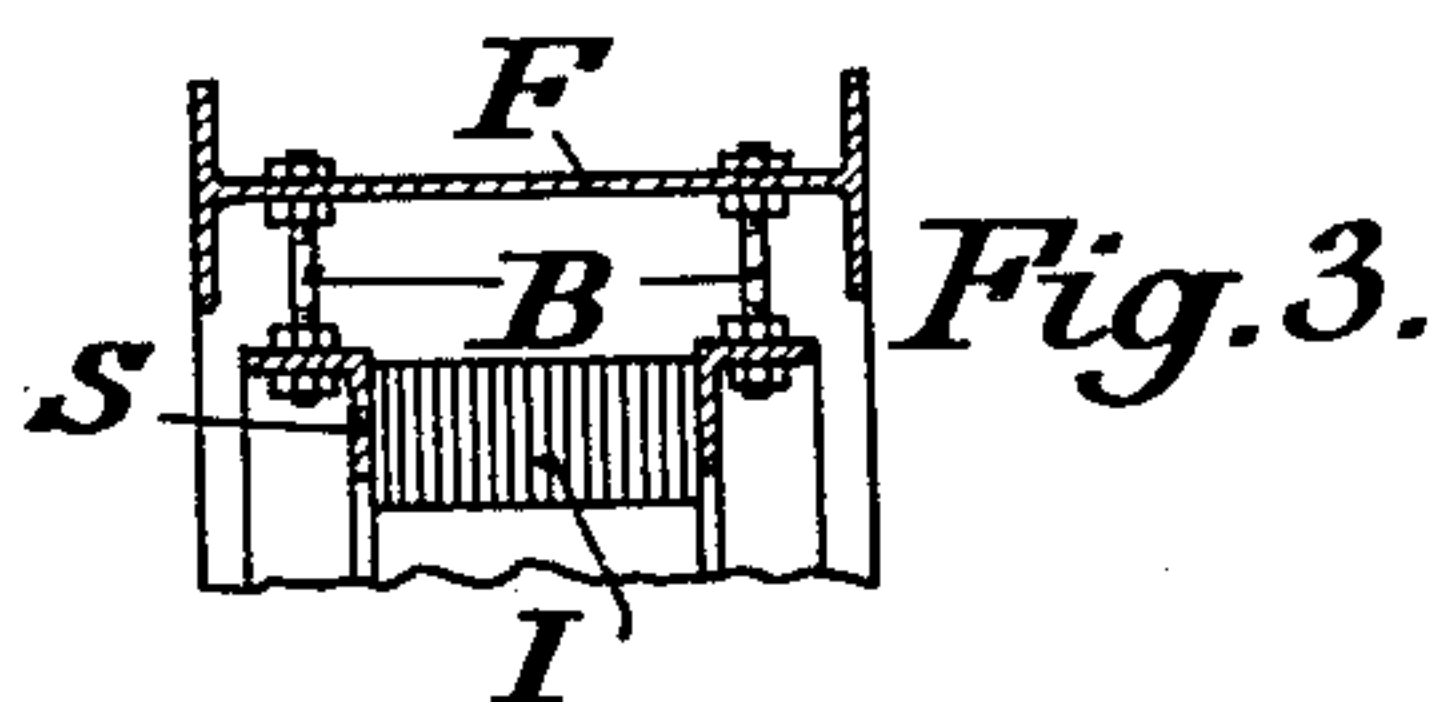
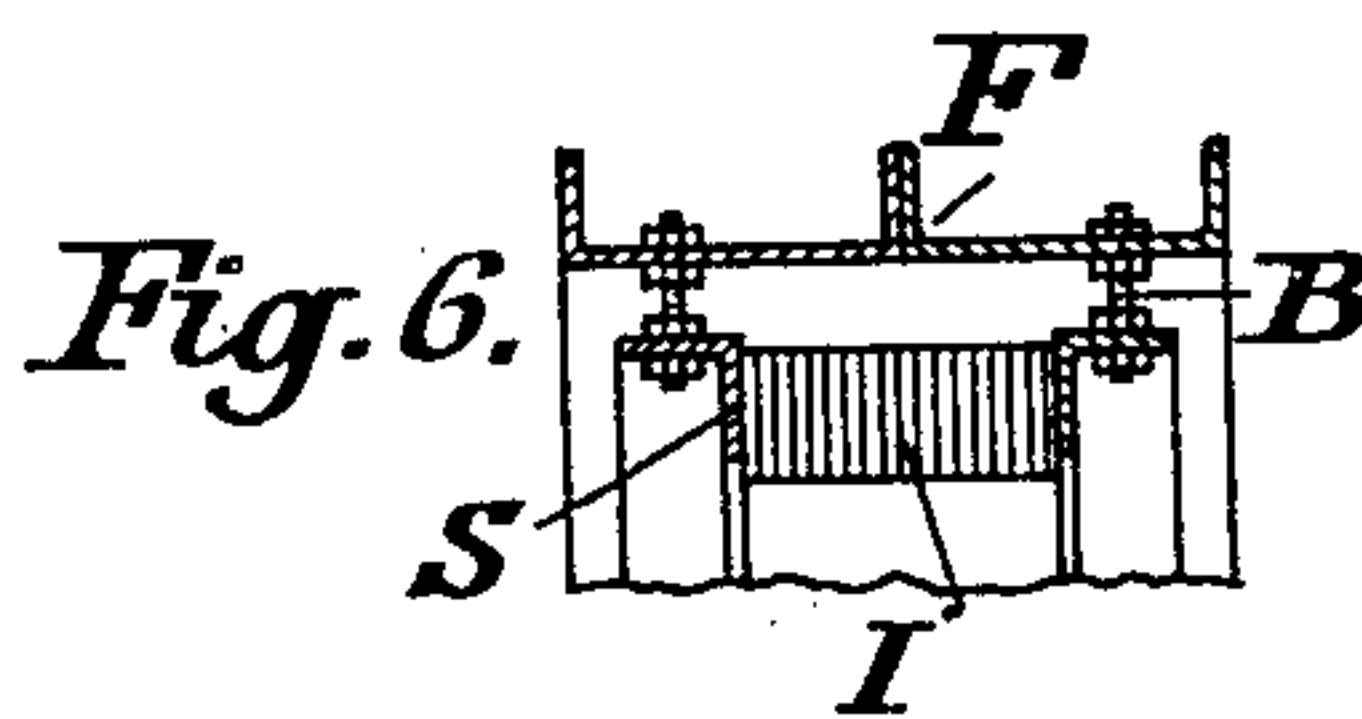
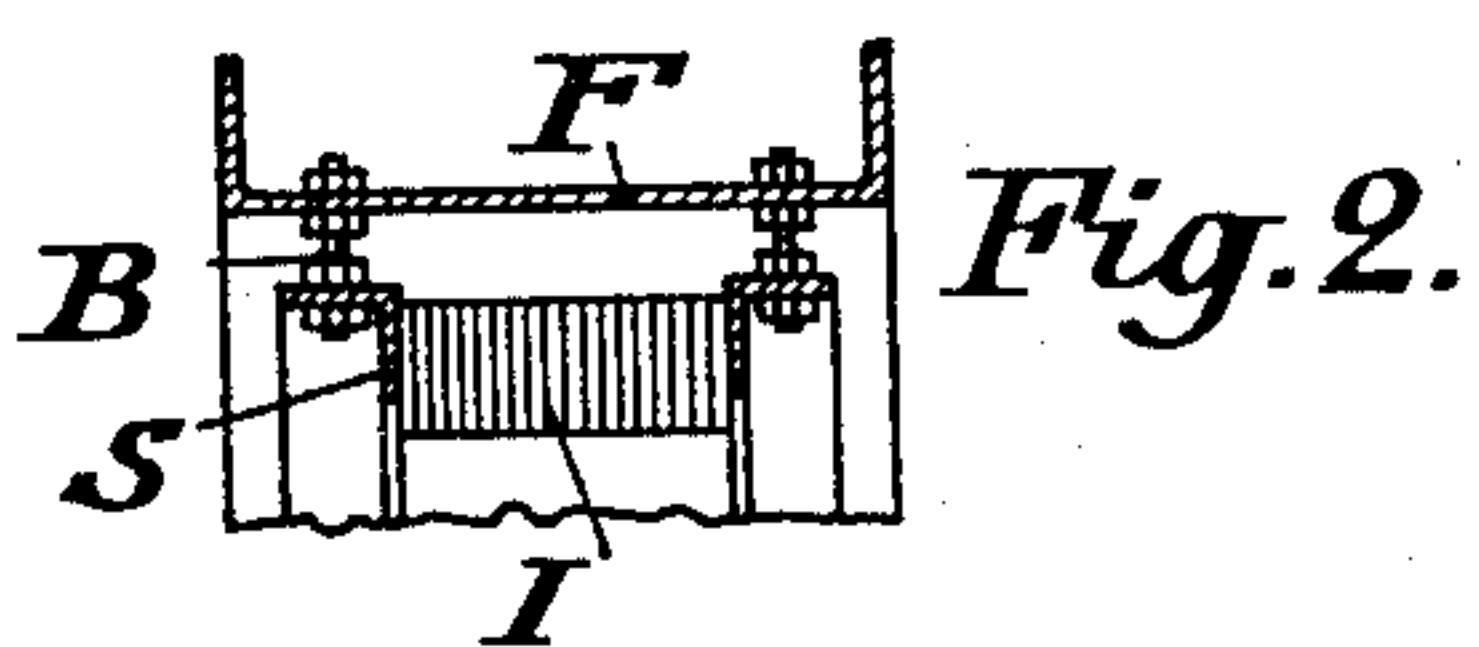
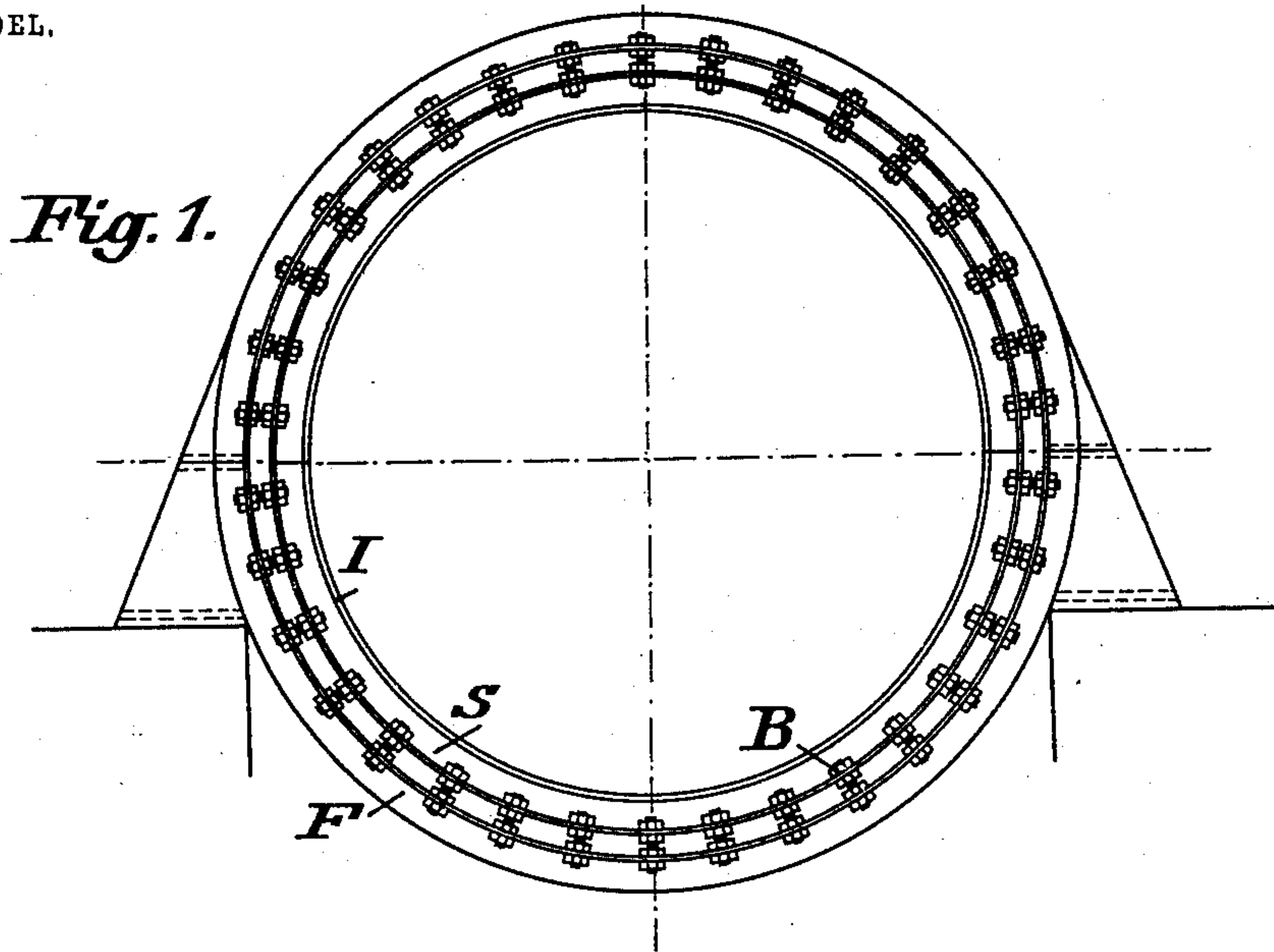


R. PFEIFER.  
FRAME FOR DYNAMO ELECTRIC MACHINES.  
APPLICATION FILED FEB. 18, 1902.

NO MODEL.



WITNESSES

*Anton A. Chetani*  
*Susan M. Laughlin*

INVENTOR

*Rudolf Pfeifer*  
by *Max Georgii*  
his ATTORNEY

# UNITED STATES PATENT OFFICE.

RUDOLF PFEIFER, OF CHARLOTTENBURG, GERMANY.

## FRAME FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 723,019, dated March 17, 1903.

Application filed February 18, 1902. Serial No. 94,679. (No model.)

*To all whom it may concern:*

Be it known that I, RUDOLF PFEIFER, engineer, a subject of the German Emperor, residing at 71 Schlüterstrasse, Charlottenburg, near Berlin, Germany, have invented certain new and useful Improvements in Frames for Dynamo-Electric Machines; 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.

My invention refers to frames for dynamo-electric machines, and more especially to large machines of this kind in which the stationary active iron core is disposed in the shape of a ring.

The invention consists in forming the frame supporting the active laminated iron core by combining suitable sections of rolled iron in the manner hereinafter described, by which an exceedingly cheap and effective construction is obtained.

Of the accompanying drawings, Figure 1 is an end view of a dynamo-frame with the stationary part of the active iron in place and the rotary part removed. Figs. 2 to 9 are different modifications of the section of said frame and active iron.

In all the figures, I is the active laminated iron core, disposed in the shape of a ring, as is usual in large machines. The core is assumed to be held together by bolts (not shown in the drawings) passing through it in the usual way and on either side a strengthening and supporting piece S, preferably of an L-shaped section, is fastened.

The supporting-frame proper is designated by the reference-letter F. Its characteristic feature consists in this that it is not made of cast-iron, as was usual hitherto, but of wrought-iron. In building large machines it is found that a very considerable item in the cost is the expense of transporting so unwieldy and heavy pieces from the building-shop to the place where the machine is to be erected. It is evident that a wrought-iron supporting-frame can be made very much lighter than a cast-iron frame, though of equal strength. However, the difficulty in the way of the general use of wrought-iron frames is

that the cost of their production is greater than that of cast-iron frames. The present invention is directed to a mode of construction of wrought-iron frames by which the cost of their production is reduced to a minimum and at the same time a maximum strength is obtained with a minimum of weight. Besides, it is a special feature of these frames that for equal diameters of the machine they can be produced in equal sizes though the cross-sections of the laminated core may vary. For attaining these ends I build up the frame of pieces of rolled iron of the usual L, U, T, double-T sections, or of combinations of these sections.

Fig. 2 shows a complete section of the frame together with the stationary active core. In this case a U-shaped section has been selected for forming the frame F. In fact, the frame is merely a piece of rolled iron with a U-shaped section as it comes upon the market without regard to its future destination bent into a circular shape. The supporting-pieces S S are fastened to the frame F by means of bolts B B.

Fig. 3 shows the use of a double-T section arranged correspondingly.

In the modifications shown in Figs. 4 and 8 two L and, respectively, T sections are combined to form the frame F, and in the modifications shown in Figs. 5 and 9 two L-sections are combined with a U and a double-T section, respectively.

Figs. 6 and 7 show modifications in which a frame constructed according to my invention is adapted to a cross-section of core which is too broad to be supported by a single-section frame. In Fig. 6 two U-sections are combined and in Fig. 7 two double-T sections.

In all of the modifications shown as utilized by me the L shape is the basis from which by divers combinations are formed the U, T, double-U, double-T, &c.—as, for instance, the U-shaped section is composed of two L-sections having their base-line joined, the T-section is composed of two L-sections having their vertical stems joined. I therefore consider these various modifications as composite figures formed of the unit—the L-shaped section—and desire that this specification and



these claims be so construed as to embrace all modifications resulting from the combination of such basic figure.

It will be readily understood that this system of construction could be further developed without altering the nature of my invention by combining three or more equal or different sections, and I wish it to be understood that I do not limit myself to the examples shown in the drawings.

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

1. The combination with the annular stationary core of a dynamo, of a supporting-frame consisting of a plurality of segments of wrought angle-iron.

2. The combination with the iron core of a dynamo, of a supporting-frame consisting of pieces of wrought-iron having a cross-section forming rectangular figures and bent into a curve corresponding to the size of the machine.

3. The combination with the annular stationary core of a dynamo, of a wrought-iron supporting-frame consisting of rolled pieces having the usual sections forming rectangular figures, and bent into a curve corresponding to the size of the machine.

4. The combination with the annular stationary iron core of a dynamo, of supporting-pieces of angle-iron, a supporting-frame consisting of a plurality of pieces of wrought-iron of rectangular section bent into a curve

corresponding to the size of the machine, and bolts connecting the said supporting-pieces with the said frame.

5. The combination with the annular stationary core of a dynamo, of supporting-pieces preferably made of wrought-iron of an L-shaped cross-section and fastened to said core in the usual manner, a supporting-frame consisting of a plurality of L-shaped wrought-iron pieces bent to form segments and secured to the supporting-pieces by suitable bolts.

6. The combination with the annular stationary core of a dynamo, of a supporting-frame formed of the plurality of pieces of wrought-iron of U or double-L shape in cross-section and bent into a curve corresponding to the size of the machine.

7. The combination with an annular stationary iron core of a dynamo, of supporting-pieces having an L-shaped cross-section, an annular supporting-frame consisting of a plurality of pieces of wrought-iron forming in cross-section combinations of L-shaped figures and bent into a curve constituting segments of the complete frame, and suitable means for securing the supporting-pieces to the annular frame.

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

RUDOLF PFEIFER.

Witnesses:

HENRY HASPER,

WOLDEMAR HAUPT.