

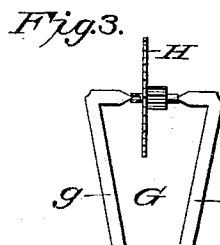
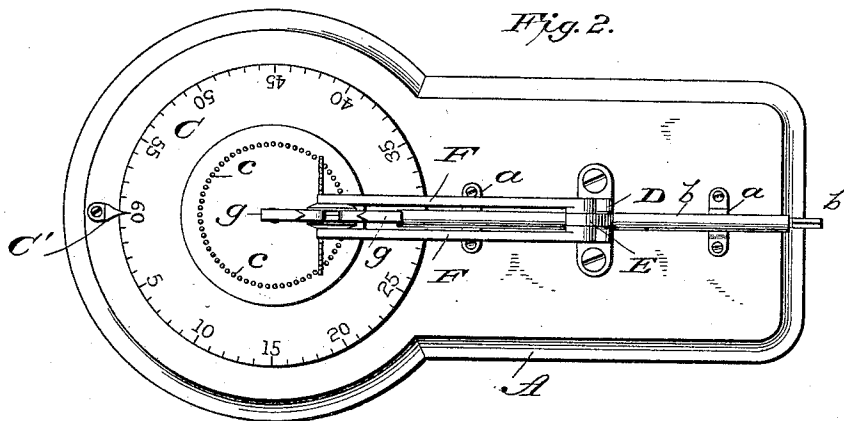
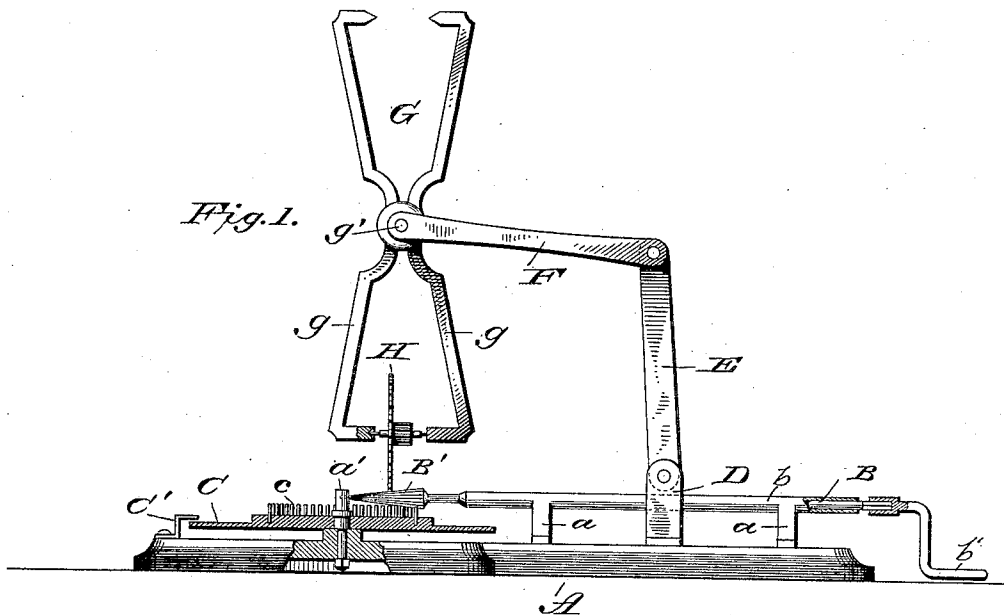
(No Model.)

F. C. STAMM.

MACHINE FOR COUNTING TEETH OF COG WHEELS.

No. 525,671.

Patented Sept. 4, 1894.



Fred C. Stamm  
INVENTOR

**WITNESSES**

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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR COUNTING TEETH OF COG-WHEELS.

SPECIFICATION forming part of Letters Patent No. 525,671, dated September 4, 1894.

Application filed December 29, 1893. Serial No. 495,085. (No model.)

*To all whom it may concern:*

Be it known that I, FRED C. STAMM, a citizen of the United States of America, residing at Princeton, in the county of Mille Lacs and State of Minnesota, have invented certain new and useful Improvements in Machines for Counting the Teeth of Cog-Wheels; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of the invention is to provide a simple device for ascertaining the number of teeth in a cogwheel, and is designed primarily for the use of watchmakers.

In carrying out the invention I make use of a registering wheel having teeth which mesh with a toothed cone-wheel carried by a shaft, the teeth of the cogwheel also meshing with the toothed cone-wheel being suitably supported to be held in engagement therewith.

The invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view, partly in section, showing the device embodying my improvements. Fig. 2 is a plan view, and Fig. 3 is a detail view.

A designates the base or bed-plate which is provided with supports *a a* having bearings for a horizontal shaft B. Instead of providing the usual shaft bearings I prefer to use a tube *b* through which the shaft passes, as it gives a greater bearing surface. One end of the shaft B is key-ended for the reception of a suitable crank-handle *b'* and the other end carries a toothed cone-wheel B' the end of which bears in a gudgeon *a'*, said gudgeon being secured to the bed-plate as shown in Fig. 1, and upon the same is mounted a registering disk C having peripheral gage-marks as shown in Fig. 2. This registering disk is provided with crown teeth *c* which mesh with the toothed cone-wheel B'. Over the outer edge of the registering disk, so that the gage-

marks will move immediately beneath the same, is located a pointer C', said pointer being rigidly secured to the bed-plate. The number of teeth on the registering disk correspond with the number of gage-marks, sixty being a convenient number for watchmakers' use.

Between the supports *a a* for the bearings of the shaft B is a support D to which one end of a bar E is pivotally attached, the other end of said bar having pivoted thereto a bar or bars F which support the clamp G which holds the cogwheel H in engagement with the cone-wheel B'. The clamp G is made up of arms *g g* which extend on opposite sides of the pivot *g'*, the extreme ends being bent inward and formed into bearings for the spindle of the cogwheel, the ends of one set of arms being recessed to receive a cone-ended spindle while the other set is tapered to a point to receive a hollow spindle.

The device hereinbefore described may be modified in some particulars without departing from the spirit of my invention, and in operation the cogwheel the teeth of which are to be counted is marked on one tooth and placed between one set of jaws *g*, the disk is then set so that the pointer will register with the last gage-mark or starting point and the clamp positioned so that the cogwheel held therein will mesh with the teeth of the cone-wheel B' on the shaft B, the shaft is now turned until one complete rotation is given to the cogwheel when by glancing at the registering-disk the number of teeth in the cogwheel can be ascertained. The cone-wheel will mesh with such cogwheels as are used in time keepers, and it will be noted that by means of the bars E and F and pivotal connection of the clamping jaws *g* thereto a cog wheel can be readily set and moved so that it will properly mesh with the teeth of the cone-wheel.

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

1. In combination with a registering-disk having teeth, of a toothed cone-wheel meshing therewith, and means for holding a cogwheel in engagement with the toothed cone-wheel.

2. In a counting or registering device, the

combination, of a registering-disk suitably  
mounted on a bed-plate and provided with  
teeth which mesh with a toothed cone, a clamp  
movably connected to the base and provided  
5 with reversible clamping jaws, substantially  
as shown.

3. In a device for the purpose set forth, the  
combination, of a bed-plate having mounted  
thereon a rotatable registering-disk and bear-  
10 ings for a shaft having a toothed cone which  
meshes with the teeth of registering disk, and  
a clamp connected to the bed-plate by pivoted  
bars and a support, substantially as shown  
and for the purpose set forth.

15 4. In a counting or registering device for  
the purpose set forth, the combination, of a  
rotatable registering-disk having upwardly-  
projecting teeth, of a shaft having a toothed  
cone which is adapted to mesh with the teeth

of the registering-disk and with the teeth of 20  
a cogwheel, the cogwheel being supported be-  
tween clamping jaws which are pivotally con-  
nected to a support, substantially as shown  
and for the purpose set forth.

5. In a device for the purpose set forth, of 25  
a registering-disk having upwardly-project-  
ing teeth, a toothed cone-wheel suitably sup-  
ported and meshing with the teeth of the reg-  
istering-disk, means for holding a cogwheel  
in engagement with the toothed cone-wheel, 30  
the registering disk having gage-marks cor-  
responding with the number of teeth thereon.

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

FRED C. STAMM.

Witnesses:

E. W. SEVERANCE,  
N. E. JESMER.