(No Model.)

F. O. GROVES.

DEVICE FOR STRAIGHTENING THE TEETH OF BURR CYLINDERS.

No. 438,413. Patented Oct. 14, 1890.

Fig. 1.

Fig. 2.

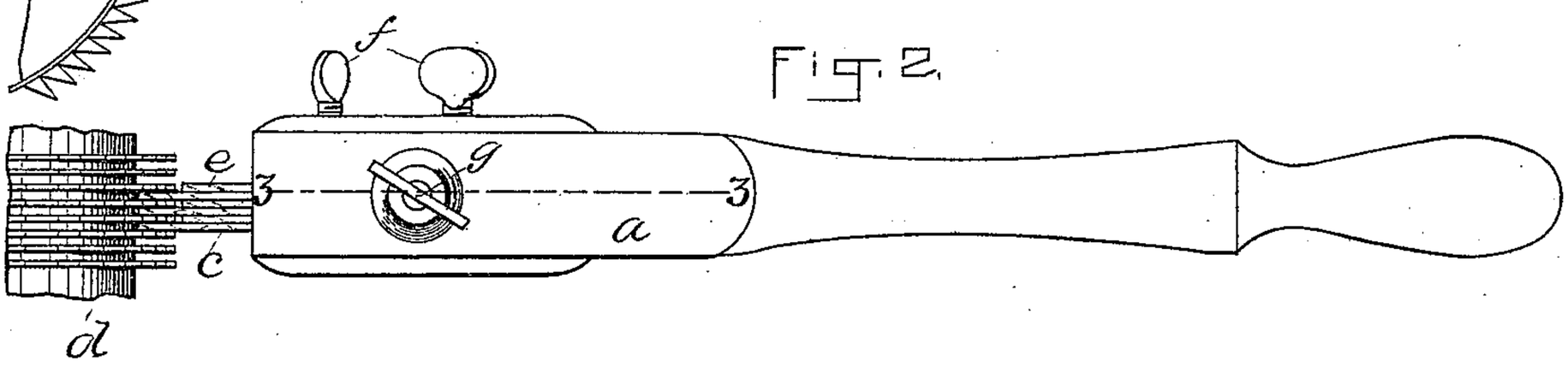


Fig. 3

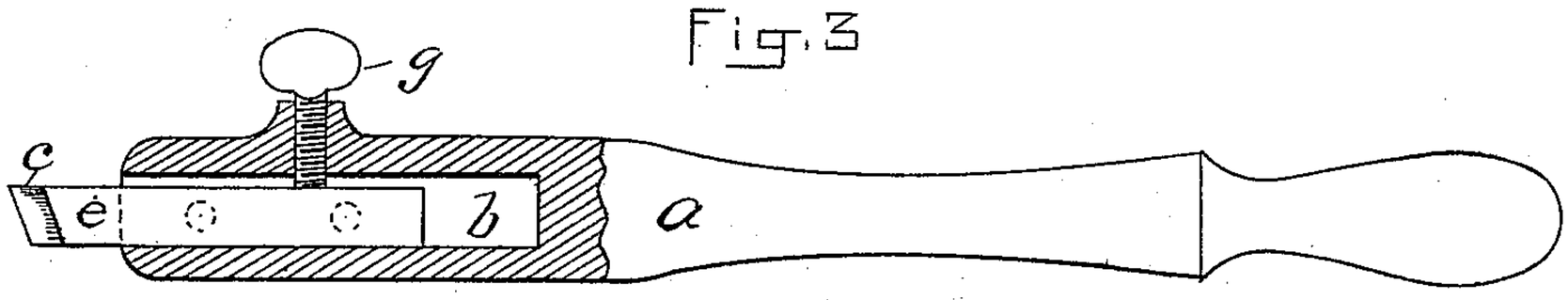
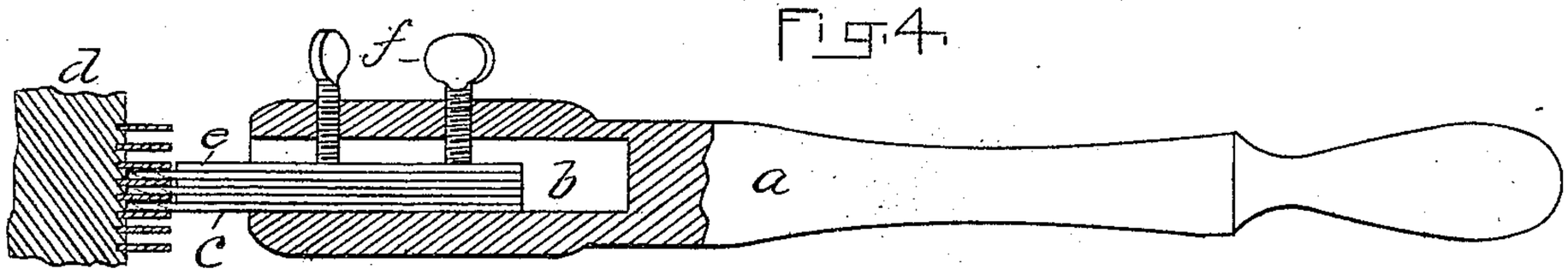


Fig. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FURGUS O. GROVES, OF NEWTON LOWER FALLS, MASSACHUSETTS.

DEVICE FOR STRAIGHTENING THE TEETH OF BURR-CYLINDERS.

SPECIFICATION forming part of Letters Patent No. 438,413, dated October 14, 1890.

Application filed April 19, 1890. Serial No. 348,611. (No model.)

To all whom it may concern:

Be it known that I, FURGUS O. GROVES, of Newton Lower Falls, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Devices for Straightening the Teeth of Burr-Cylinders, Burr-Doffers, &c., of which the following is a specification.

My invention relates to devices for straightening the teeth of burr-cylinders, burr-doffers, &c., and particularly cylinders employed in what is commonly known as "Garnett machines."

As is well known to those skilled in the art, the teeth of the cylinders of the machine mentioned after considerable use become bent, and to straighten the same it is usual for workmen to draw out the shank of an old file or other piece of metal, and running the cylinder backward place the said piece of metal between the line of teeth, so that the contact of bent teeth therewith will result in bending such displaced teeth back to place.

It is usual in the construction of burr-cylinders to form grooves in the face of the cylinder running in a slightly spiral direction around the cylinder and to insert strips of metal having saw-teeth on their outer edges in the said grooves. The said grooves are usually formed in pairs, and the tooth-strips are secured in the grooves in pairs, so that in the operation of straightening the teeth with the shank of a file, as before described, the file-shank would pass through only every other space existing between the rows of teeth, and the cylinder would have to be "gone" over a second time, and then with quite unsatisfactory results. With any of the process and means prior to my invention, so far as I am aware, the work of straightening or repairing the teeth of burr-cylinders has been tedious and imperfect.

By my invention the difficulties and objections above noted are entirely overcome.

The invention will first be described in connection with the accompanying drawings, and letters of reference marked thereon, forming a part of this specification, and then be pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a toothed cylinder, showing the manner of using my invention to straighten the teeth in the periphery of the same. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional view of my improved device on the line 3 3 of Fig. 2, the handle being shown in elevation. Fig. 4 is a similar view, the section being taken on the line 4 4 of Fig. 1.

In the drawings, *a* designates the handle of my improved tooth-straightener, the forward end of which is provided with a socket *b*, in which are placed a number of steel blades *c*, beveled on their outer ends, as shown in Fig. 3, said blades being of a width to adapt them to enter the spaces existing between the lines of teeth formed on the cylinder *d* of a burring or other like machine.

e designates strips of metal similar to the blades *c*, which strips *e* do not extend out as far as the blades *c*, so that when the device is placed in the position in which it is represented in Figs. 1 and 2 the ends of the spacing-strips *e* will not strike the points of the teeth of the cylinder.

There may be three or more blades *c* and a corresponding number of spacing-strips *e* secured in the handle, said blades and strips being herein shown as secured in place in the socket *b* by means of thumb-screws *f* at the sides, and a thumb-screw *g* bearing upon their upper edges, as best seen in Figs. 3 and 4.

In use my device will be placed on a suitable rest in such position that the blades *c* will extend between the rows of teeth of the cylinder, and upon the latter being revolved backward such teeth as are bent out of proper line or position will engage the device and be moved or bent back into place.

In instances where the teeth on the cylinder are in spiral form the blades will be caused to follow the spaces between the teeth from one end of the cylinder to the other in a well-known manner.

In case the toothed cylinder is made upon a series of disks, as is sometimes done, it will be necessary, after straightening one or more rows of teeth around the cylinder, to remove the device from contact with said teeth and place it in position between the next two or more rows of teeth.

It is obvious that various devices may be contrived for securing the blades *c* in proper

position; but that herein shown has been found by me to prove effective for the purpose.

Having thus described my invention and explained the working and use of the same, I declare that what I claim is—

1. A device for straightening the teeth of burr-cylinders, burr-doffers, &c., consisting of a handle or support and a plurality of blades *c*, adapted to pass the spaces existing between the lines or rows of the teeth of the cylinder as the latter is revolved, substantially as set forth.

2. A device for straightening the teeth of burr-cylinders, burr-doffers, &c., a handle provided with a socket, alternate blades *c*, and spacing-pieces *e*, secured in the said socket, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 3d day of April, A. D. 1890.

FURGUS O. GROVES.

Witnesses:
WM. TRAVER,
RUFUS MOULTON.