

(No Model.)

G. W. BLAIR.
THILL COUPLING.

No. 335,676.

Patented Feb. 9, 1886.

Fig. 1.

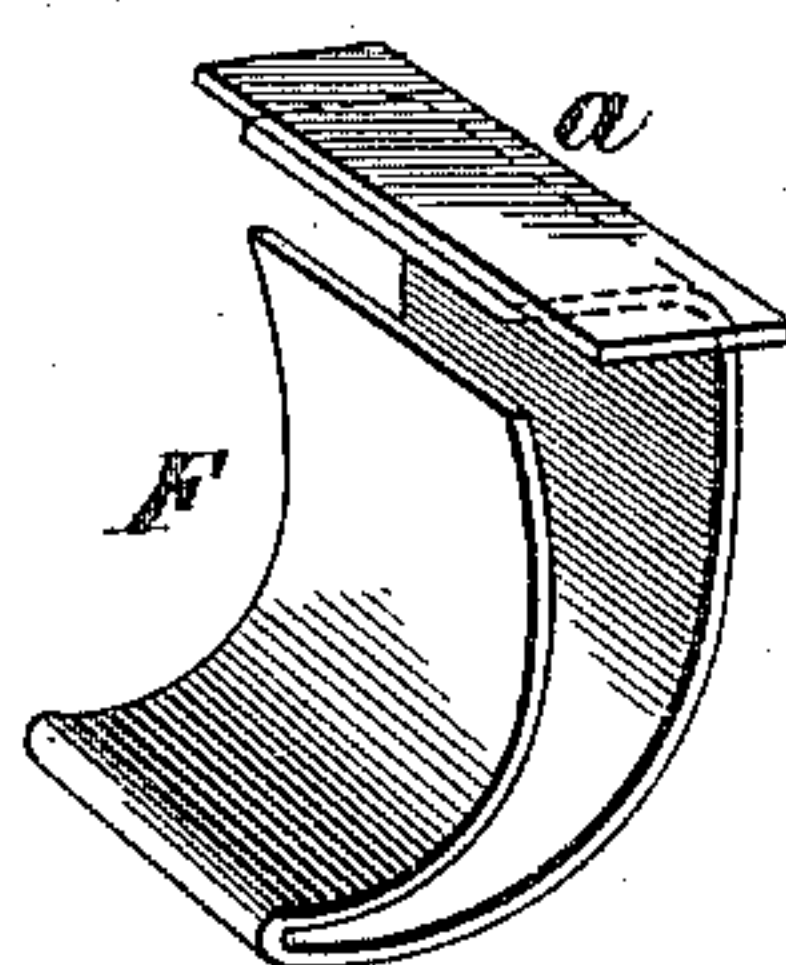


Fig. 2.

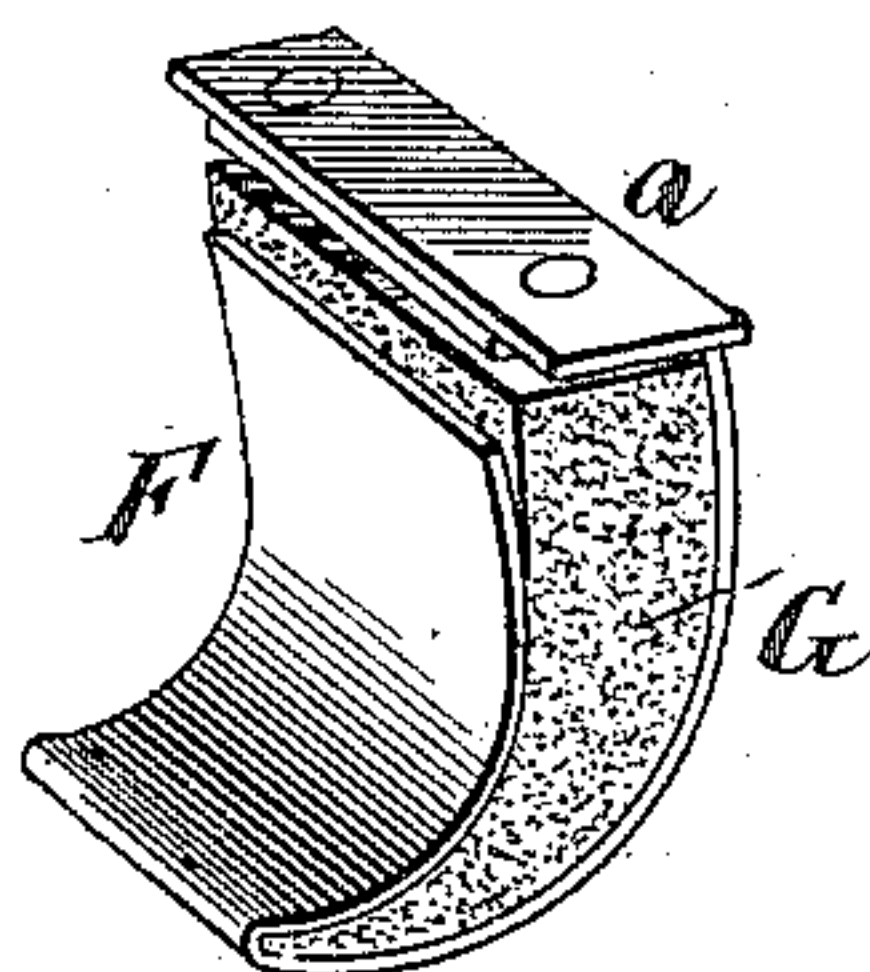


Fig. 3.

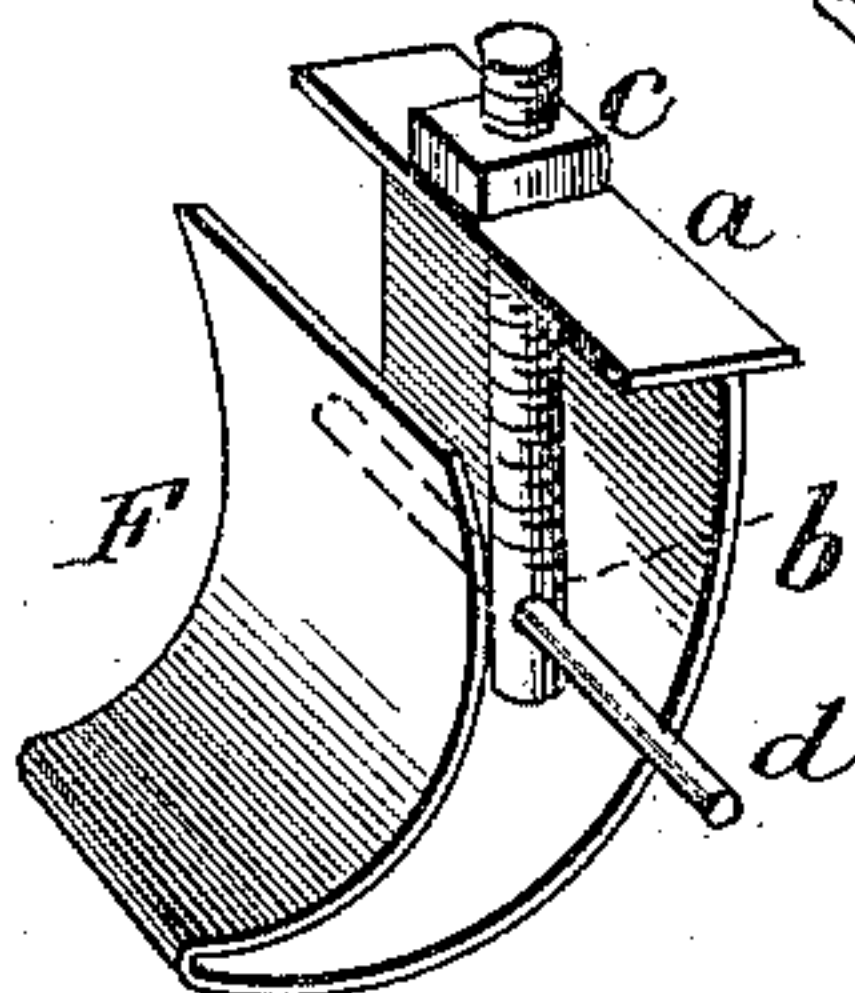
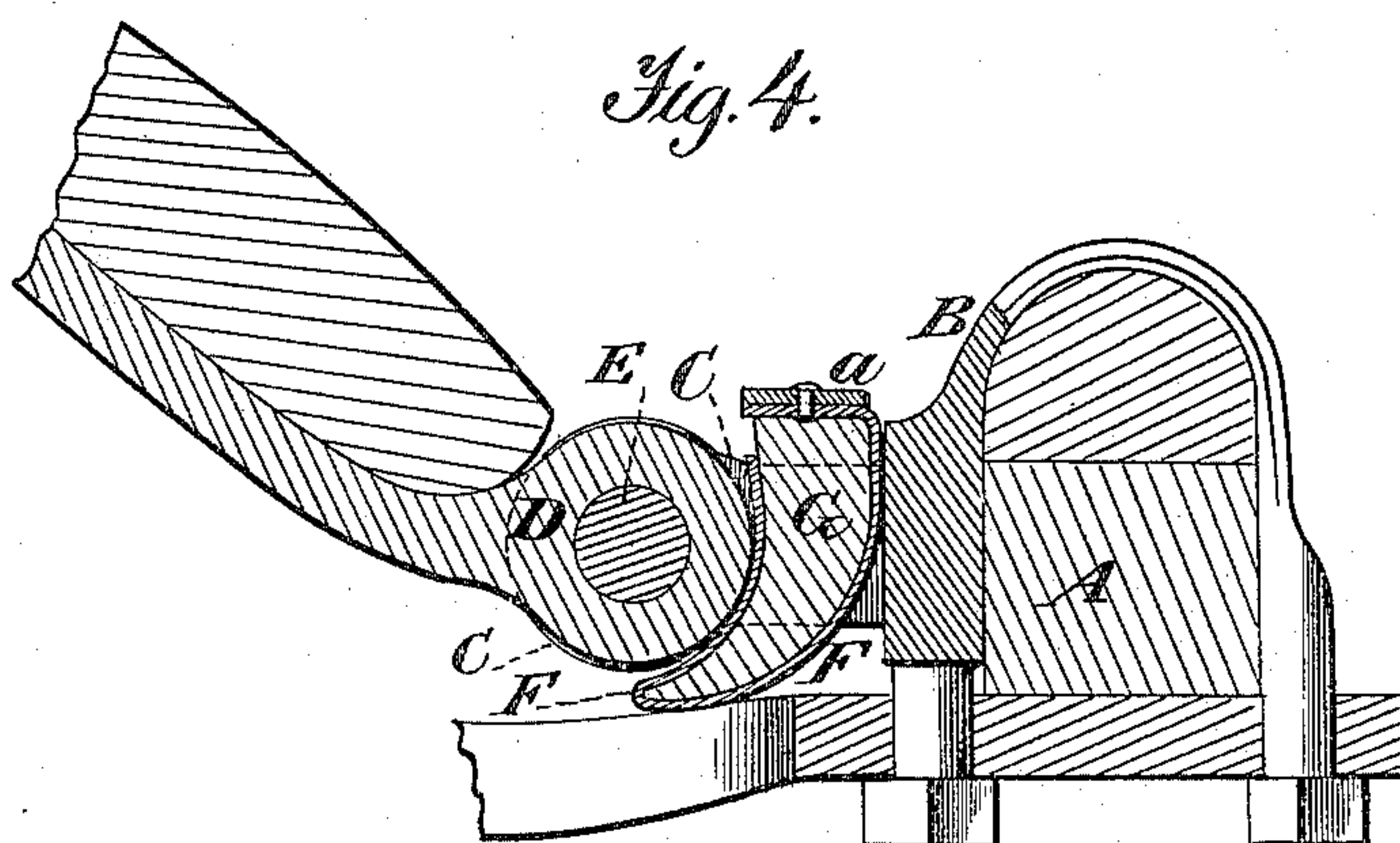


Fig. 4.



Witnesses.
A. Ruppert.
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George. W. Blair
by
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his Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. BLAIR, OF WABASH, INDIANA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 335,676, dated February 9, 1886.

Application filed June 12, 1885. Serial No. 168,482. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BLAIR, of Wabash, in the county of Wabash, in the State of Indiana, have invented certain new and useful Improvements upon Thill or Pole Coupling Springs, of which the following is a specification.

In the drawings, Figure 1 represents the spring detached; Fig. 2, the same with rubber block inserted; Fig. 3, device to prevent the spring from working up out of place; Fig. 4, the spring in place.

This invention consists in the construction of the spring, or rather the shape of the spring, as a spring to prevent rattling has been used heretofore.

It further consists in combining a bolt with the spring and shackle in order to hold the spring down into its place.

A is the axle. Around it is the clip B. The clip has two forward projecting ears, CC. Between these ears the metallic eye D is pivoted by the bolt E, as shown.

F is the spring, or the subject-matter of the invention, and to prevent the rattling of the parts it is inserted between the eye and the clip. The top of this spring is re-enforced with a piece of metal, *a*, fastened in a substantial manner, and its use is to prevent injury to the spring when it is being driven into place by the blows of a hammer on the top of the spring. Both top ends are at the top of the shackle. The shape of the spring renders it a very small and compact article. It is put in place without taking out the shafts, which saves much time and labor. In order to do this the smallest part of the spring is at the bottom. The curve is also made entirely at the bottom. By this form of construction the spring may be easily inserted in place, from the fact that it has the shape of the shaft-eye, that the rear of the spring for a portion of its length is flat, and then has a gradual curve in order to throw the lower part underneath the shaft-eye, and to the front and past the ordinary tie-bar which holds the shackle in position. Other pendent anti-rattlers have at the front only a bearing at the top of the shaft-eye, and therefore have not sufficient lifting-power to prevent the rattling of the shafts.

The spring or anti-rattler has an inclination

to work up out of place. To overcome this tendency, a hole is made in the center of the top plate, *a*, through which is put the bolt *b*, having a screw-thread on it above the plate, so as to receive the nut *c*. Near the other end of the bolt is a hole, and through it is inserted the round bar *d*. When the spring has been put down into place, the bar is inserted through the bolt. The nut is then tightened, which draws the bar up against the ears upon the clip.

Other devices for screwing through the anti-rattler were for the purpose of tightening it so it would overcome the wear of the shaft-eye; but this device is not for that purpose, as the steel spring has in itself sufficient elasticity to overcome the wear and tear. It will accommodate itself and take up lost motion. The wear upon a shaft-eye that causes the rattling is at the upper side of the hole of the shaft-eye through which the bolt extends to hold the shaft-eye in the shackle. To overcome the rattle, it is necessary to hold the shaft-eye up and off of the bolt, so that when the jar comes it comes upon the spring and not upon the bolt. Now, the push on the front of this spring makes a draw on the rear, and so makes it a carrier. A rubber block, G, is shown inserted in the spring. Its effect is to form a cushion within the casing or outer leaves of the spring. If rubber be used alone, it causes too much friction, and does not allow the shaft-eye to move freely. Again, the rubber soon becomes cut and worthless from the up-and-down motion of the shaft; but placing the rubber between the leaves of the spring it retains its elasticity.

I claim—

The spring F of two leaves made smallest at the bottom and with its bottom portion curved to the front, re-enforced by the strip *a*, and adapted to receive the rubber block G or the clamping device *b c d*, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 30th day of May, A. D. 1885.

GEORGE W. BLAIR.

Witnesses:

GEORGE I. HERRICK,
JAMES I. HILL.