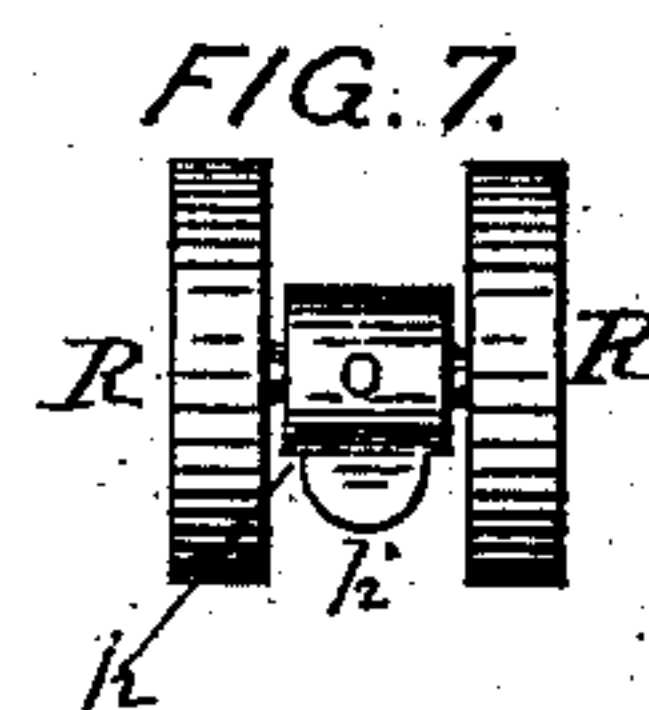
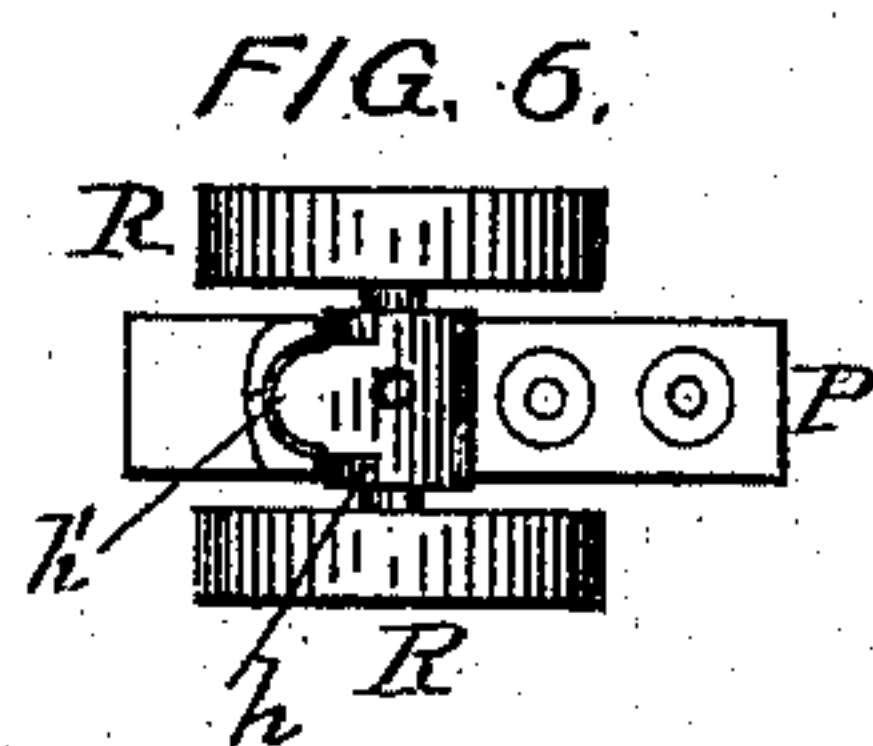
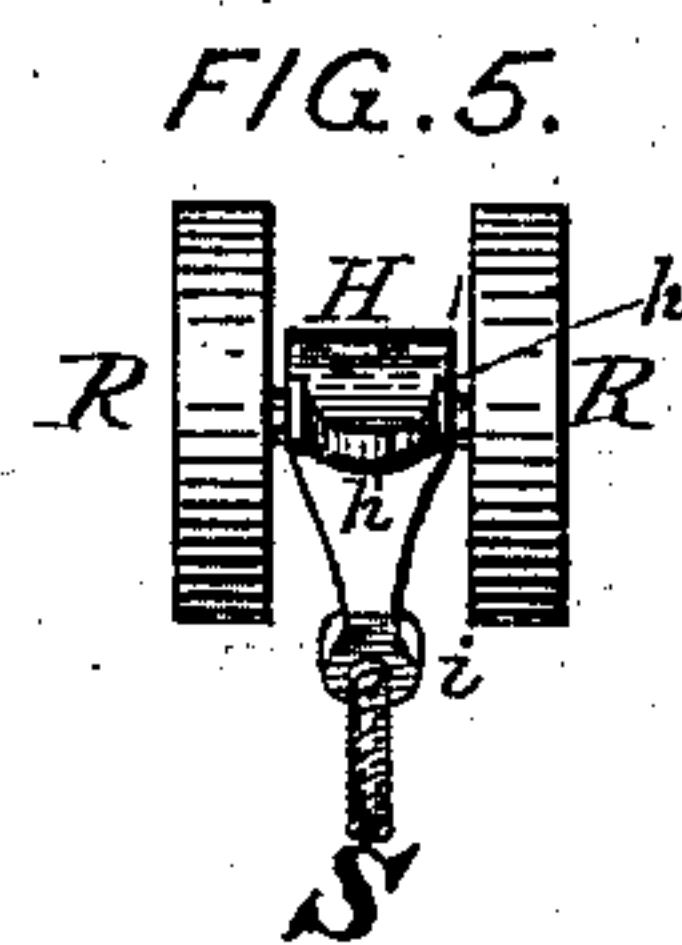
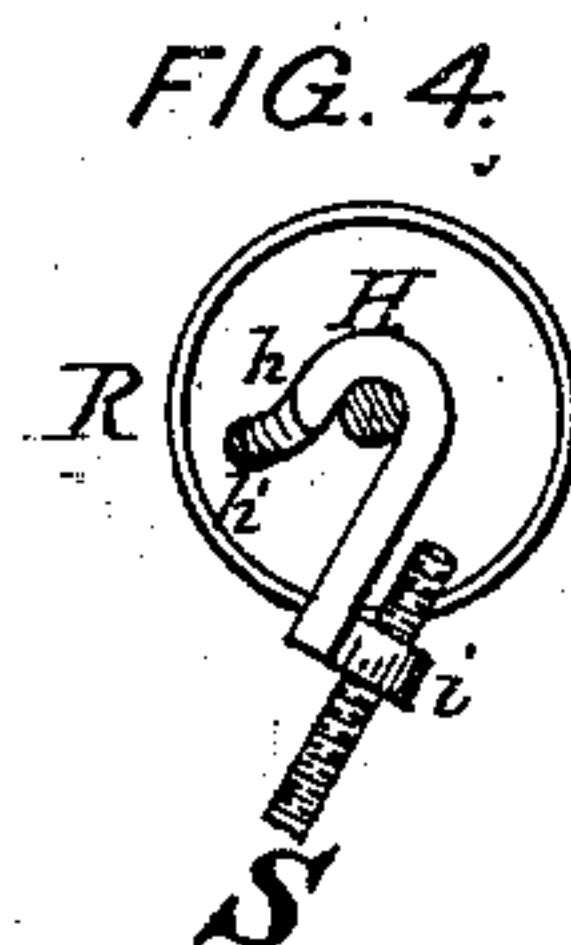
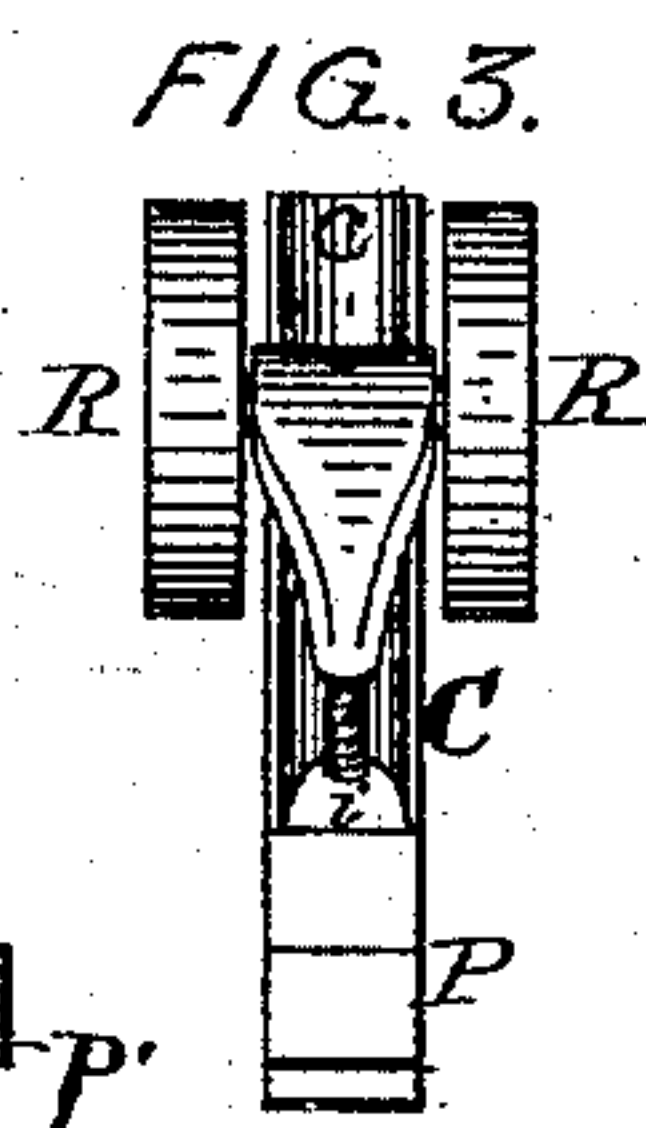
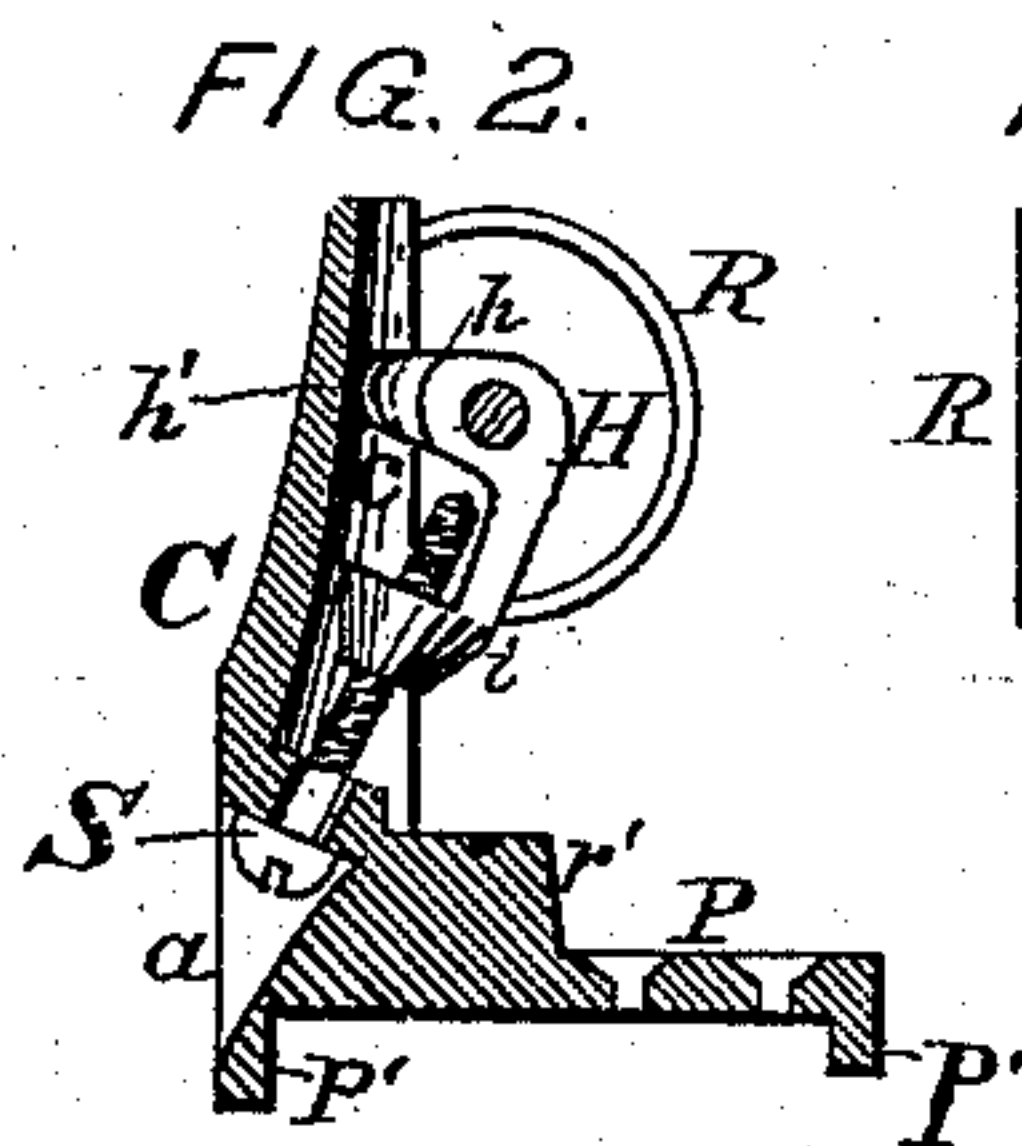
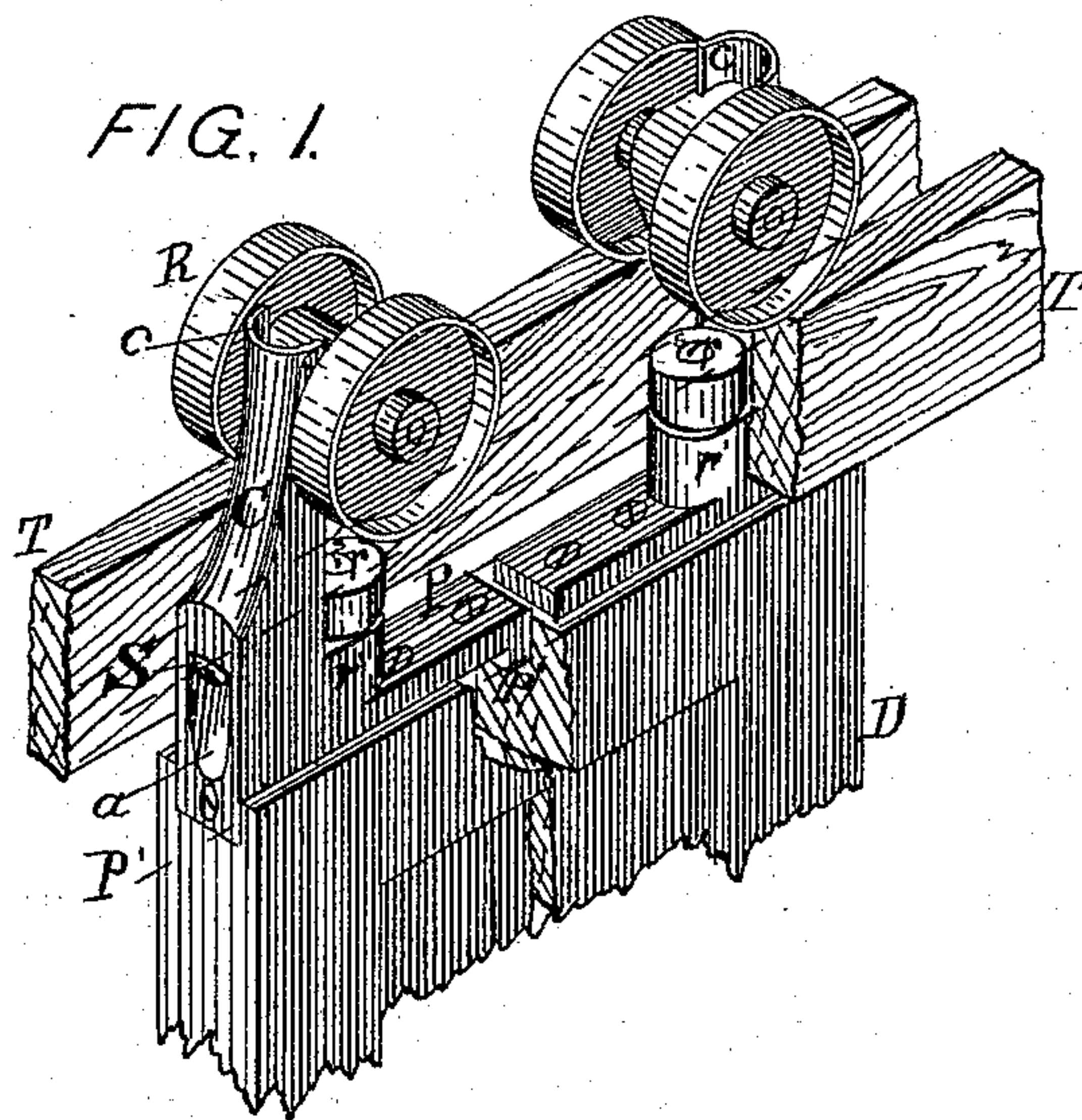


(Model.)

G. W. HEY.
DOOR HANGER.

No. 271,980.

Patented Feb. 6, 1883.



WITNESSES

R. Griffin
Harry White

INVENTOR.

G. W. Hey

UNITED STATES PATENT OFFICE.

GEORGE W. HEY, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF TO
CHARLES H. DUELL, OF SAME PLACE.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 271,980, dated February 6, 1883.

Application filed December 20, 1882. (Model.)

To all whom it may concern:

Be it known that I, GEORGE W. HEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Door-Hangers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in sliding-door hangers of the class described in my application for United States Letters Patent filed August 24, 1882; and it consists essentially in providing for the carrying-rollers, which are mounted on a trackway above the door, a hanger device attached to the door having a stationary journal side bearing, against which the carrying-rollers are supported in their longitudinal movement, the rollers being sustained against the side bearing by a vertically-adjustable top bearing on their axles, which also serves to effect the vertical adjustment of the door to conform the same to the floor or carpet over which it passes. The hanger device, as herein illustrated and described, consists of a bracket-plate adapted to be attached to the top of the door. The inner vertical face of the upright of the bracket-plate is made concave or curved, and the journal-box of the rollers is provided with a projection of suitable shape which bears against the inner curved face of the upright, which allows the carrying-rollers to move on their suspension-rod as a pivot, whereby the carrying-rollers are made to conform to the track-rails notwithstanding any sagging or deflection thereof, which may be occasioned by shrinkage or other defects. The carrying-rollers are also guided to maintain a uniform bearing on the track by the means stated.

It consists, furthermore, in constructing the upright of the bracket-plate and the journal-box of the carrying-rollers so that the said carrying-rollers are mounted and sustained against the upright of the bracket-plate without being connected to said upright, the object being to allow the rollers to act independently of the hanger-plate to adjust themselves against lateral deficiencies, yet to move with said rigid upright in the longitudinal movement of the door. This result I accomplish by

forming a guide-bearing on the inner face of the upright, as previously stated, and by providing on the axle-box the above-mentioned projections and side bearings, which engage respectively the curved guide and the vertical edges of the upright, then by connecting the axle-bearing by a suspension screw-bolt passing obliquely through a recess in the base of the bracket-plate, similar to that shown in my application of August 24, 1882, previously referred to. The advantage of this construction accrues from the fact that the carrying-rollers adjust themselves to their bearing on the track so as to be comparatively frictionless in their movement, and no skill is necessary in applying them in their operative position. Furthermore, the construction is thereby greatly simplified, as the curved hooks of the frame-plate are dispensed with and the bracket-plate cast in one piece, and the cost of the article greatly reduced.

It consists also in detail construction of the parts, all as hereinafter fully described, and pointed out in the claims.

In specifying my invention reference is had to the accompanying drawings, like letters indicating corresponding parts in all the figures, in which—

Figure 1 is an isometric view, showing my improved hanger applied to a door and mounted in its operative position. Fig. 2 shows a vertical section of the device detached; Fig. 3, a rear view of the same. Fig. 4 shows the adjustable axle-bearing, provided with the side guides and forward projection; Fig. 5, front view of the same; Fig. 6, top plan of the bracket-plate and curved upright, showing the guiding devices in engagement; Fig. 7, top plan of Fig. 5.

The letter P represents the hanger-plate, which is composed of a bracket having a flat base and angular projections P'. The base of the plate rests on top of the door, and the projection P' takes in the vertical edge or is let in the top, as shown in Fig. 1. It should be let in so as to be flush with the vertical edge to allow a close joint when the doors are in contact in their closed position. The vertical arm or post C of the bracket rises from the base-plate and is made rigid therewith. Its

inner vertical face, *c*, is made concave or curved, as shown at Figs. 1, 3, and 6 of the drawings, and it forms a stationary journal side bearing for the axle of the carrying-rollers.

5 The bracket or frame is recessed exteriorly, as shown at *a*, Fig. 2, and the suspension-rod, composed of the screw-bolt *S*, passes obliquely through the base of the bracket-frame from its front edge in the recess *a*, up through to the rear of the upright post *C*, and is connected by a thread formed on its upper end to the threaded socket-arm *i* of the journal-bearing *H*.

10 The axle-box *H* *i* forms an adjustable top bearing for the door and its suspending-rod *S*, and forms, in connection with the carrying-rollers *R* and their supporting track-rails *T*, the door-suspending device. When the parts are in their operative position the axles of the carrying-rollers come against and between the upright post *C* of the bracket-plate and the journal-box *H*, the said post *C* forming a stationary journal side bearing, against which the axle is held by the diagonal or oblique draft of the suspension-screw bolt *S*, and the carrying-rollers limited or confined from an independent longitudinal movement, while the box *H* on the axle forms an adjustable journal top bearing, whereby the suspending-screw *S*, when turned into the threaded socket *i*, serves to effect the vertical adjustment of the door, as may be desired, so as to conform the same to the floor or carpet over which the door passes. In this construction the door is hung directly to the axles of the carrying-rollers by the suspending-screws *S*, and the vertical adjustment thereof is effected by simply shortening or lengthening the screw-bolt, the relative position of the parts being preserved by the fixed or stationary vertical journal side bearing, formed, as described, of the extension or post *C* of the bracket-frame, firmly secured to the top of the door. This construction dispenses with the curved hooks shown in my previous application, and also with the cumbersome adjustable longitudinal rider-bars and connecting-rods employed in other parlor-door hangers, as the width of the door is immaterial, the requisite being simply to apply the bracket-plates to the opposite ends, at the top of the door, as clearly shown in Fig. 1.

50 The axle-box *H* may be made as shown in Fig. 2, in which form the axle passes through the box; or it may consist of a hook, as shown in Fig. 4. In either case, however, it has side bearings, *h h*, which engage the vertical edges of the post *c*, and a convex projection, *h'*, which bears in and against the hollow curve *c* in the post *C*.

60 It will be observed that as the door hangs on the top bearing, *H*, the lateral adjustment of the rollers is obtained by the rocking side movement of the top bearing, *H*, on the projec-

tion *h'* in the curved guide *c*, which turns on the screw-bolt *S* as a pivot. This lateral adjustment of the rollers secures a uniform bearing on the track-rails and permits the door to hang plumb in case the rails should become uneven from the shrinkage or sagging of the rails or the studding which supports them.

A boss, *r'*, is cast on the bracket-frame, and it serves as a base for a friction-roller, *r*, which is attached thereto by a stud pin or screw, the friction-rollers bear between and against the inner faces of the track-rails *T*, and serve to keep the plain-faced rollers *R* on the track. When flanged rollers are employed the friction-roller *r* may be dispensed with.

The front edge of the upright *C* may be recessed out for the reception of a yielding bumper of rubber, as described and shown in my prior application. The usual stops and other appliances employed on sliding doors may be used with the hanger herein described.

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

1. In combination with carrying-rollers mounted on a trackway above the door, a stationary journal side bearing and a vertically-adjustable top bearing connected to a plate attached to the top of the door and confining between them the journal of said roller.

2. A door-hanger, consisting of a bracket-plate and carrying-rollers adjustably connected to the plate, said plate having a concave inner vertical face for guiding the carrying-rollers in their vertical adjustment, substantially as specified.

3. In combination with the stationary track *T*, the carrying-rollers *R*, supported against the post *C* of the bracket-plate *P* without being connected to said post, the post *C* rising from the plate sustained on top of the door, and the rollers connected to the plate by a suspension-screw passing through the plate, substantially as described.

4. In a sliding-door hanger, the combination of the post *C*, having concave vertical guide *c*, the axle-bearing *H*, having side guides, *h*, and socket *i*, and the suspension-screw *S*, substantially as specified.

5. The bracket-plate *P*, having concave post *C* *c*, boss *r'*, and recess *a*, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 16th day of December, 1882.

GEORGE W. HEY.

Witnesses:

FREDERICK H. GIBBS,
HARRY WHITE.