No. 854,242. PATENTED MAY 21, 1907.

W. S. SCOTT.

DEVICE FOR HOLDING AIR BRAKE PISTONS AND CYLINDER HEADS.

APPLICATION FILED SEPT. 17, 1906.

Fig. 1

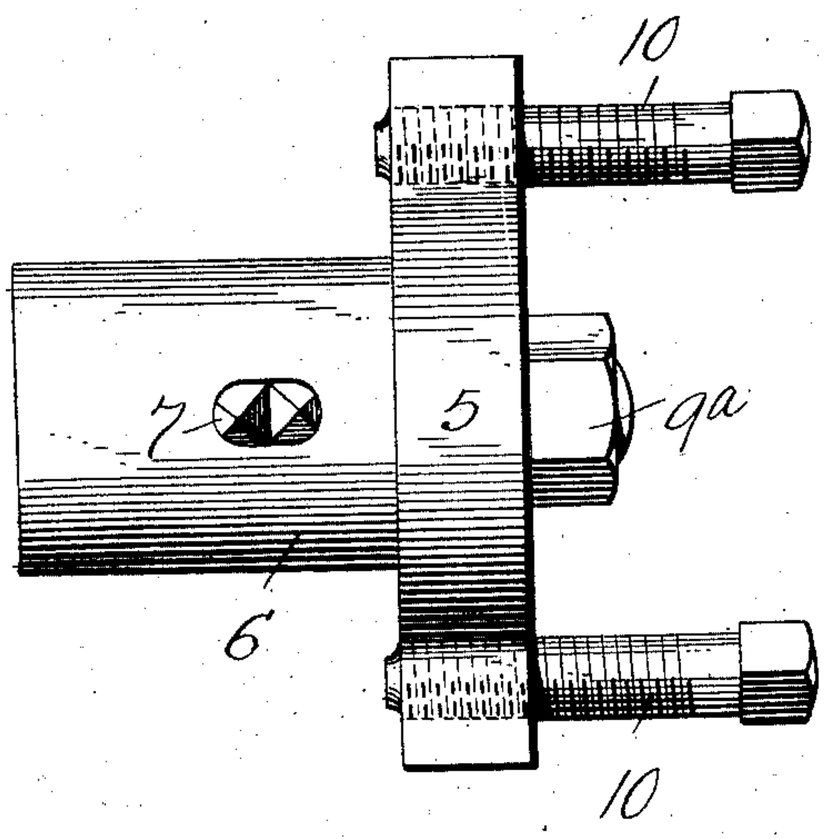


Fig. 4

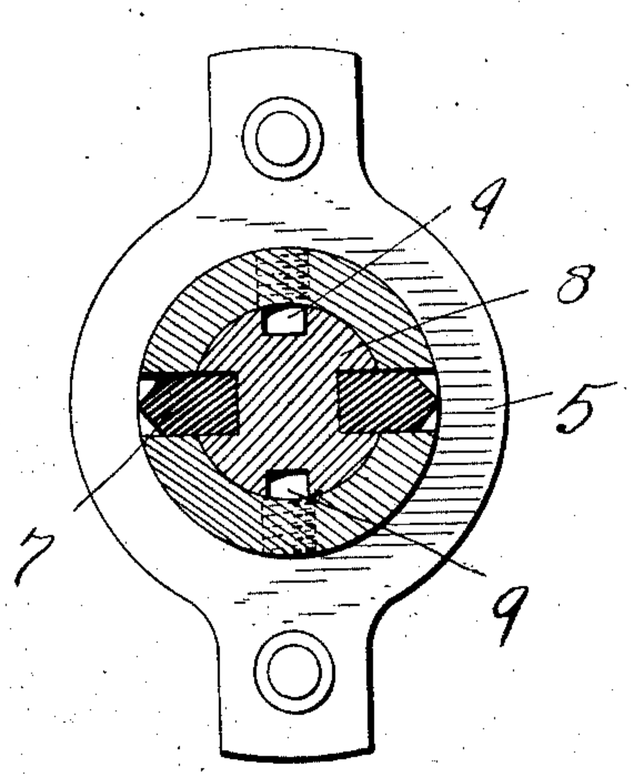


Fig. 2

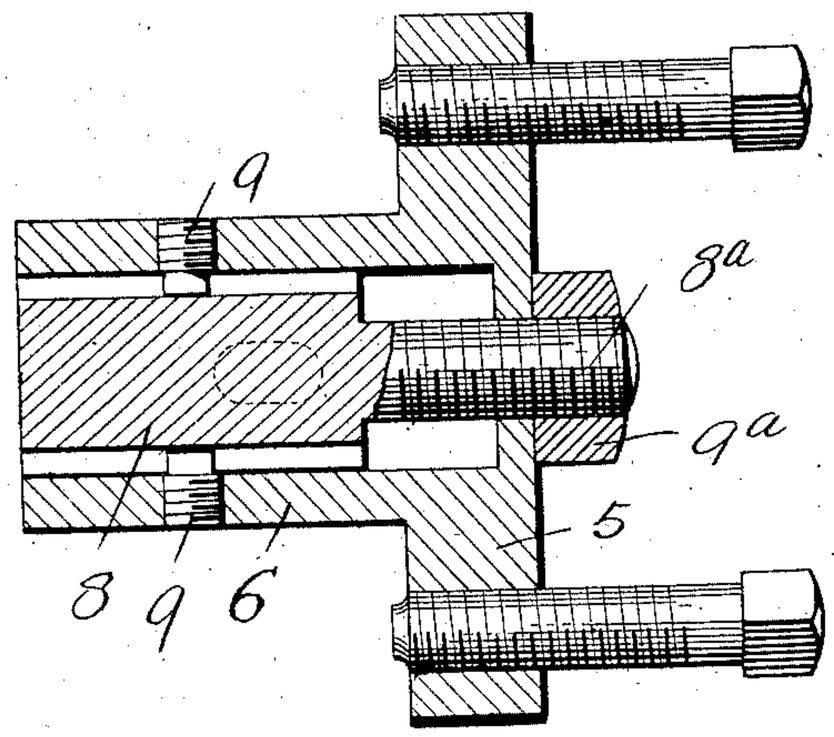
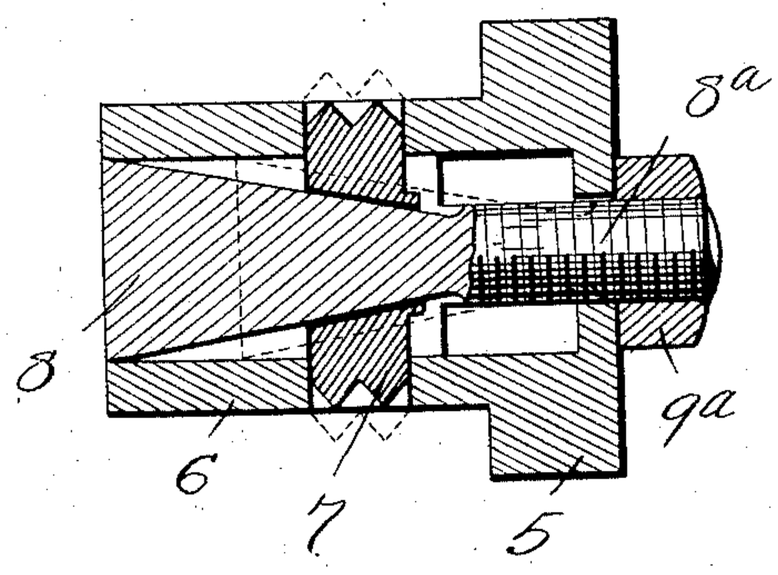


Fig. 3



Attest:

C. L. Maddox
Edward N. Sarton

Inventor
William S. Scott,
by Spear, Middleton Donaldson & Spear
Atty's

UNITED STATES PATENT OFFICE.

WILLIAM S. SCOTT, OF PUEBLO, COLORADO.

DEVICE FOR HOLDING AIR-BRAKE PISTONS AND CYLINDER-HEADS.

No. 854,242. Specification of Letters Patent. Patented May 21, 1907.

Application filed September 17, 1906. Serial No. 334,960.

To all whom it may concern:

Be it known that I, WILLIAM S. SCOTT, a citizen of the United States, residing at Pueblo, Colorado, have invented certain new and useful Improvements in Devices for Holding Air-Brake Pistons and Cylinder-Heads, of which the following is a specification.

My invention relates to that class of devices or tools which are intended to be used for securing an air brake piston rod and cylinder head together to hold them while being removed from the cylinder for the purpose of cleaning, oiling, repairing and replacing the same.

The object of the invention is to provide a simple, economical, durable and efficient device, capable of all necessary adjustment and one which may be readily manipulated and which will hold the parts firmly together.

The invention is illustrated in the accompanying drawing, in which,—

Figure 1 is a side elevation. Fig. 2 a central longitudinal section. Fig. 3 a similar section taken at right angles to Fig. 1, and Fig. 4 is a transverse section.

Referring by reference characters to this drawing, the numeral 5 represents a head or body portion which has a tubular extension 6 which is designed to be inserted within the hollow end of the piston. This extension 6 is provided with transverse openings, oppositely placed, in which are seated the radially movable clamping members 7, which are serrated on their outer ends to provide gripping surfaces and are inclined on their inner ends, as clearly shown in Fig. 3. Within the tubular extension 6 is located a longitudinally movable member 8 which is of cylindrical form to fit the interior of the tubular extension, as shown in Fig. 4, and which is provided with oppositely located grooves with inclined bottoms to receive the gripping devices. The member 8 is also provided with another set of grooves into which project the set screws or pins 9 with a sliding engagement, this serving to prevent the rotation of the member 8, when it is being moved longitudinally by the action of the nut hereinafter described, and to relieve the gripping devices 7 of the side strain which would otherwise be thrown upon them.

The sliding member 8 is provided with a threaded extension 8^a which passes freely through an opening in the head 5, and upon this threaded extension is mounted a nut 9^a which is designed to be rotated by a wrench or other suitable tool, whereby the sliding or wedge member 8 may be thrown outwardly to force the gripping members radially outward into engagement with the inner surface of the hollow piston rod.

The head portion is provided with two set screws 10, which project through the extended wings and are designed to bear against the cylinder head, and it will be seen that these may be adjusted to fit any inequalities in the cylinder head, or to permit the extension 6 to be inserted to a greater or less degree into the end of the piston.

From the foregoing description it will be seen that I provide an extremely simple, durable, economical and efficient device by which the piston rod and cylinder head may be firmly secured together and removed from the cylinder without permitting the spring to recoil, thereby saving the time and labor incident to its readjustment.

Having thus described my invention, what I claim is:—

1. In combination, a head having a reduced cylindrical extension, gripping members radially movable in the walls of said extension, a wedge located within the extension engaging the inner ends of said gripping devices, the said wedge having a threaded shank extending through the head, and a nut on said shank bearing against the face of the head, substantially as described.

2. In combination, a head having a reduced cylindrical extension, gripping members radially movable in the walls of said extension, a wedge located within the extension engaging the inner ends of said gripping devices, the said wedge having a threaded shank extending through the head, a nut on said shank bearing against the face of the head, and an adjustable cylinder head contact device carried by said head, substantially as described.

3. In combination, a head having a reduced cylindrical extension for insertion within the hollow end of a piston, a cylindrical member slidably mounted within said extension and having grooves with wedge shaped bottoms, gripping devices seated in openings in the wall of said extension and engaging said grooves, means for moving said cylindrical member longitudinally within the cylindrical extension, and set screws passing through the head for bearing against the cylinder head, substantially as described.

4. In combination, a head having a cylindrical extension, a cylindrical member longitudinally movable within said extension, and having two sets of grooves, the grooves of one set having inclined bottoms, radially movable gripping devices seated in openings in the wall of said extension and engaging the said inclined bottomed recesses, and pins carried by the wall of said extension and engaging the other set of recesses, substantially as described.

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

WILLIAM S. SCOTT.

Witnesses:
CHAS. GEISER, Jr.,
NICHOLAS BOLLMAN.