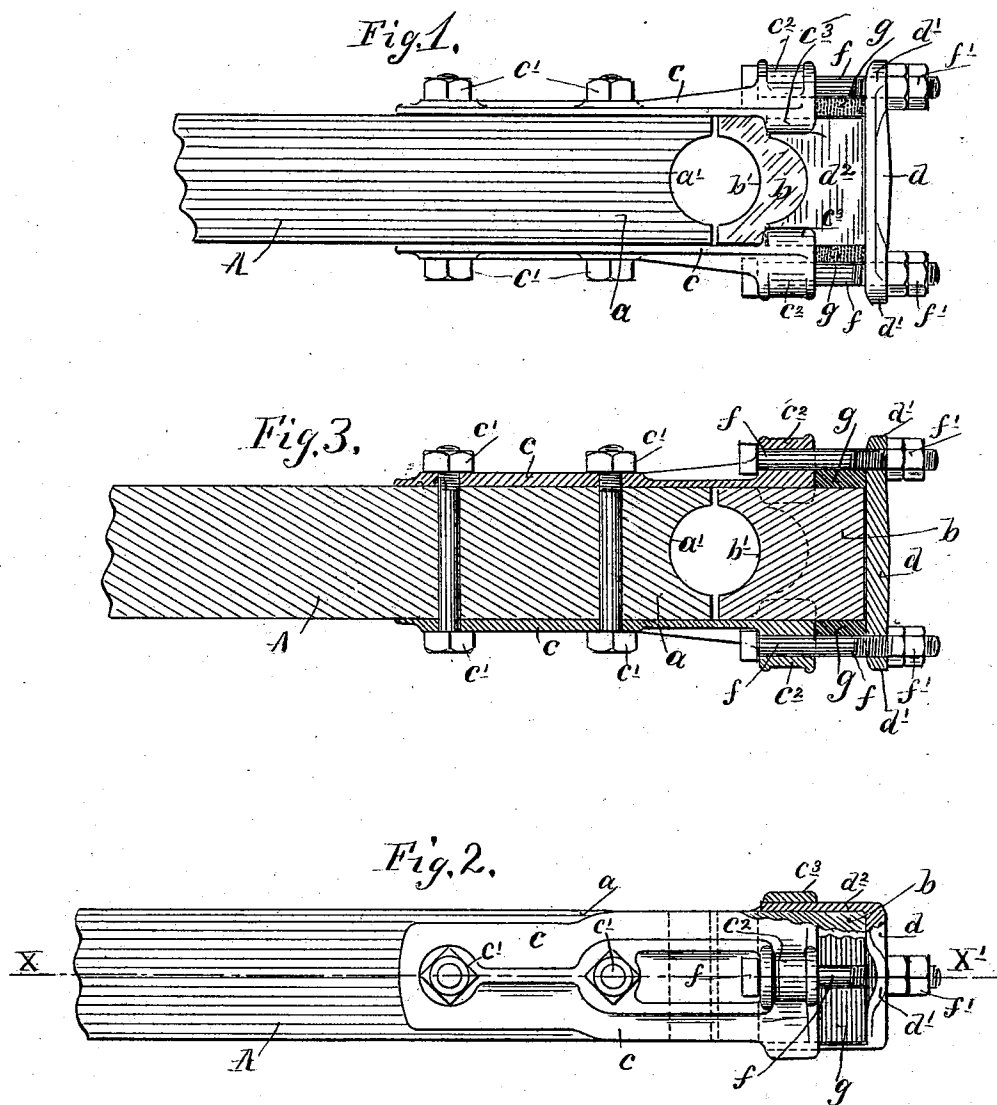


(No Model.)

P. SWENSON.
PITMAN HEAD.

No. 517,177.

Patented Mar. 27, 1894.



Witnesses.
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Inventor.
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UNITED STATES PATENT OFFICE.

PAUL SWENSON, OF MINNEAPOLIS, MINNESOTA.

PITMAN-HEAD.

SPECIFICATION forming part of Letters Patent No. 517,177, dated March 27, 1894.

Application filed November 13, 1893. Serial No. 490,790. (No model.)

To all whom it may concern:

Be it known that I, PAUL SWENSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Pitman-Heads; 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.

My invention is in the nature of an improvement in pitman-heads. By experience, it has become a determined fact, that, for use on machinery which is to be subjected to severe or rough usage, such as agricultural machinery, mining machinery, hoisting machinery, &c., pitmen having wooden boxes, give the best results, to-wit: small wearing friction on the pitman pin or crank, the least pounding action on the parts, and cheapness of construction.

With these facts in view, it is the object of my invention to provide an improved form of pitman head, especially adapted for wooden bearings, which will be simple and cheap in construction and strong, durable and efficient in operation.

To these ends, my invention consists of the novel features of construction hereinafter fully described and defined in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a side elevation of the pitman head and a portion of the pitman rod. Fig. 2 is a plan view of the same, and Fig. 3 is a vertical longitudinal section taken on the line X X' of Fig. 2.

A represents a portion of a pitman-rod.

a b are the wooden half box-sections of the pitman-head formed, respectively, with semi-bearing seats *a'* and *b'*. Of these half-boxes the section *a* is, as shown, formed integral with the pitman rod proper A, while the section *b* is in the form of a loose block. The semi-seats *a'* and *b'*, are each somewhat less than a semi-circle in extent, for the purpose of permitting an adjustment of these half box-sections, as will presently appear. The box-

clamping device, the construction of which will now be described.

c c are a pair of strap-like joint irons, secured as shown, one to the upper and the other to the under edge of the box-section *a*, by nutted bolts *c'*, and provided at their outer ends each with a perforated bolt lug *c²* and a pair of keeper-lugs *c³*. It should here be noted, that the outer ends of these joint irons *c* project outward beyond the end of the box-section *a*, to embrace and form a partial guide or keeper for the box section *b*.

d is a cap-like joint-iron, bearing against the outer end of the box-section *b*, provided with a pair of perforated bolt-lugs *d'* and having a pair of side flanges *b²* embracing the side faces of said loose box-sections *b*, and working between the pairs of keeper-lugs *c³* on the extended ends of the bolt-irons *c*. The above set forth engagement between the joint-irons, gives a telescoping adjustment of the parts and serves to keep the box-sections *a, b* longitudinally in line.

f is a pair of bolts, provided, (as shown) with double or jam nuts *f'*, working one through each of the bolt-lugs *c²* on the joint-irons *c* and the bolt-lugs *d'* on the cap-like iron *d*. It should be here noted, that the bolts *f* are spaced away from the edge faces of the box-section *b*, thus forming between the same, and the opposing ends of the respective strap-irons *c* and the cap-iron *d*, keeper-like seats. In these keeper-like seats are interposed resistance pieces, as shown and preferred in the form of strips or blocks of soft wood, indicated at *g*. This strip constitutes a yielding resistance device, which reacts against and opposes the drawing or clamping action of the bolts *f*. To prevent any angular movement longitudinally of the bearing surfaces *a'* and *b'*, the opposing ends of the strap-irons *c* and the cap-piece *d* are arranged parallel, the resistance-strip *g* is formed with parallel longitudinal edges, and the draw-bolts *f* are positioned centrally of said strap-irons *c*.

The use and operation of the device are obvious. In placing the pitman-head in working position on the pitman-pin or shaft, the box section *b* may be entirely removed, if the nature of the pin or shaft requires it by

removing the nuts f' and withdrawing the cap-piece d . In adjusting the head to the pitman-pin or shaft, the nuts f' are tightened, drawing the cap-piece d and the box-section b toward the box-section a and compressing or crushing the resistance-strips g between the joint irons. As the bearing surfaces or seat portions a' and b' wear away, under their work, the box-sections may, by still further tightening the nuts f' on the bolts f , be drawn together to compensate for or to take up the slack or lost motion produced by said wear. Under this action, the wooden resistance strips g will, of course, be further compressed. A considerable movement, as above described, is permitted in virtue of the fact that the bearing surfaces or seat-portions a' and b' are less than a semi-circle. When, however, the outer edges of said seat portions, will, under this movement for taking up the slack, be brought into engagement, they may of course, be cut away so as to permit the further adjustment of the box-sections, and, hence, to prolong the life of the same. As is evident, the cap-like joint-iron d will be firmly held wherever set, by the clamping action of the clamping bolts and the opposing action of the resistance pieces or strips g .

It is obvious, that various alterations in the details of construction of this pitman head, may be made without departing from the spirit of my invention. For instance, the resistance device, while described and preferred, as formed of wooden strips, might be formed of various other solid and compressible material, such as rubber or leather; or even stiff metallic springs might be employed. Again, the box-sections might be constructed of metal, and formed integral with the parts corresponding to the pieces herein called "joint-irons."

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A pitman-head, comprising wooden-half-box sections, one of which is formed integral with the pitman-rod and the other of which is loose, and a clamping device, consisting of a pair of joint irons secured to the rod mem-

ber of the box-sections, provided with bolt lugs and having their ends projecting to form a partial guide and keeper for the loose box-section, a cap-like joint-iron working against the outer end of the loose box-section and having a pair of bolt-lugs, and nutted clamping bolts working through said bolt-lugs on said joint-irons, for drawing the parts together, substantially as described.

2. A pitman-head, comprising wooden box-sections, one of which is formed integral with the pitman-rod and the other of which is loose, the pair of strap-like joint irons, secured to the rod member of the box-sections, provided with bolt-lugs and having their ends projecting to form a partial keeper and guide for the loose box section, a cap-like joint iron working against the outer end of the loose-box section and having a pair of bolt-lugs, nutted clamping bolts working through said bolt lugs on said joint irons, and a pair of wooden resistance strips interposed one between each of the strap-like joint-irons and the cap-like joint iron, substantially as and for the purpose set forth.

3. A pitman-head, comprising the wooden half-box sections a and b , having respectively, the semi-bearing seats a' and b' , the strap like joint irons c secured to said box section a with their ends projecting and embracing the box-section b to form a partial keeper or guide for the same, said joint-irons c being provided with the bolt-lugs c^2 and the keeper-lugs c^3 , the cap-like joint-irons d having bolt-lugs d' , and the side flanges d^2 embracing said box-section b and working between the keeper-lugs c^3 on said joint-irons c , the nutted draw-bolts $f f'$ working through said bolt lugs c^2 and d' , and the wooden resistance strips g interposed in the seats formed between said joint-irons c and d , the bolts f and the box-section b , substantially as described.

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

PAUL SWENSON.

Witnesses:

FRANK D. MERCHANT,
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