

UNITED STATES PATENT OFFICE.

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SPLIT PULLEY.

SPECIFICATION forming part of Letters Patent No. 745,928, dated December 1, 1903.

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To all whom it may concern:

Be it known that I, JOHN E. THRON, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improve-
5 ment in Split Pulleys, of which the following is a specification.

In securing split pulleys upon their shafts much difficulty has been experienced, owing to the necessity of holding the sections in
10 place while they are being secured together.

It is the object of my invention to provide the split pulley with means which may be quickly and easily operated to temporarily
15 fasten the pulley-sections together on the shaft, so that no further support is necessary while the sections are being permanently secured. These devices are of such character that they may be left in place when the pul-
20 ley is permanently secured without affecting its utility.

While my devices are primarily intended for temporarily fastening the sections together while they are being permanently secured, they may in some instances be used as
25 the sole means of clamping the sections on the shaft.

In the drawings, Figure 1 is a side view of a split pulley employing my fastening device having parts in vertical section. Fig.
30 2 is a transverse vertical section on the line A A of Fig. 1. Fig. 3 is a plan view of part of the pulley. Fig. 4 is a perspective view of the detached clamping dog and lever. Fig. 5 is a similar view of the plate which carries the dog-lever. Figs. 6 and 7 are side ele-
35 vations of modified forms of the clamping-dog; and Fig. 8 is a perspective view of a portion of a pulley-section, illustrating a modification in the dog-engaging piece.

The pulley may be composed of the usual two sections *a a'*, hinged together, as at *b*, and secured to one another by bolts *e e* on the shaft *c* with the intervening split bushing
40 *d* in the usual manner.

My invention is not concerned with the construction of the pulley itself or with the manner of permanently securing it upon the shaft, and it is to be understood that the particular construction shown is for the purposes
50 of illustration only.

My invention is particularly concerned with the means for temporarily clamping the sec-

tions together on the shaft while they are being permanently secured by whatever means may be employed for that purpose.

In the end of one of the members, as *a*, is a pivoted dog *f*, adapted to engage a transverse pin or piece *g*, carried by the end of the other member, as *a'*. 55

In the preferred construction (shown in 60 Figs. 1 to 5) the periphery of the member *a* is formed with a recess *h* opening through the end. A lever *i* is pivoted at one end, as on the pin *j*, in the forward end of the recess *h*, and the dog *f* is pivoted by a pin *k'* in the
65 forked forward end of the lever *i* in the rear of the pivot *j*. I prefer to set a plate *e'* in the end of the section *a*, having ears *e²* extending into the open end of the recess *h*, and to insert the pivot-pin *j* through the ears *e²*. 70
In the recess *m* in the end of the other pulley-section *a'* in line with the recess *h* is arranged a transverse pin *g*.

When the pulley-sections are closed upon the shaft *c*, with the bushings *d d* in place 75 and the free ends of the sections *a a'* butted together, the lever *i* is moved toward the section *a'* until the dog *f* is brought into the recess *m* in front of the pin *g*. The lever *i* is then moved back, and by reason of the pivot-
80 ing of the dog in the rear of the lever-pivot *j* the dog will be drawn back into engagement with the pin *g*. The sections will then be fastened together, and the lever *i* may be turned down into the recess *h*, and its free end may
85 be secured by a screw *i'*. The pulley will then be clamped on the shaft, and its further support will not be necessary while the pulley-fixer is permanently securing the sections together by the bolts *e e* or by such other
90 means as may be employed for that purpose.

As the dog *f* and lever *i* when closed down do not project above the periphery of the pulley-sections, they may be left permanently in place. 95

To enable the engagement of the dog *f* with the pin *g* to be adjusted, the dog may be provided with a set-screw *o*, as shown in Fig. 6.

In some cases, as where pulleys of wide peripheries are used, it may be necessary to use 100 two or more of the fastening devices. In such cases also it may be inexpedient to use a pin *g*, inserted transversely through the pulley, and as a substitute therefor the face

of the section a' may be provided with plates g^2 , secured adjacent to the recesses m and having transverse bars g' to engage the dog.

Instead of forming the engaging end of the dog f integral with the body, as shown in Figs. 1, 5, and 6, it may be formed by a set-screw o' , and this may be adjusted to bear against the inner face of the bar g' , as shown in Fig. 7.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. In a split pulley, the combination with the sections to be fastened, of a lever carried by the free end of one section, a dog pivoted to said lever, and a transverse piece carried by the free end of the other section and adapted to be engaged by said dog when the lever is closed down.

2. In a split pulley, the combination with the sections to be fastened, of a lever carried by the free end of one section, a dog pivoted to said lever in the rear of its fulcrum, and a transverse piece carried by the free end of the other section and adapted to be engaged by said dog when the lever is closed down.

3. In a split pulley, the combination with the sections to be fastened, of a lever carried by the free end of one section, a dog pivoted to said lever and having an adjustable clamping-tooth, and a transverse piece carried by the free end of the other section and adapted to be engaged by said dog when the lever is closed down.

4. In a split pulley, the combination of one pulley-section having a recess in its periphery opening through the free end, a lever pivoted in said recess adjacent to its open end, a dog pivoted to said lever in the rear of its fulcrum, the other pulley-section having a recess in its periphery at the free end in line with the recess in the other sections, and a piece extending transversely across said recess adapted to be engaged by said dog when the lever is closed down.

5. In a split pulley, the combination of one pulley-section having a recess in its periphery opening through the free end, a lever pivoted in said recess adjacent to its open end, a dog pivoted to said lever in the rear of its fulcrum, the other pulley-section having a recess in its periphery at the free end in line with the recess in the other section, a piece

extending transversely across said recess adapted to be engaged by said dog when the lever is closed down, and means for permanently securing said lever and dog in closed position in said recesses.

6. In a split pulley, the combination with the sections to be fastened, of a pivoted dog carried by one section and a transverse piece carried by the other section and adapted to be engaged by said dog when the same is closed.

7. In a split pulley, the combination of one section having a recess in its periphery opening through its end, a dog pivotally supported in said recess, the other pulley-section having an open recess in its end in line with the recess in the first-mentioned section, and a transverse piece carried by said second section extending across the recess therein and adapted to be engaged by the dog carried by the first section when the same is closed down into the recesses.

8. The combination of one pulley-section, a lever i pivoted adjacent to the end thereof, a hooked dog f pivoted to said lever in the rear of its fulcrum, the other pulley-section, and a transverse piece carried by the second section and adapted to be engaged by the dog when the lever is closed.

9. The combination of one pulley-section, a lever i pivoted adjacent to the end thereof, a hooked dog f pivoted to said lever in the rear of its fulcrum, a set-screw o carried by said dog, and a transverse piece carried by the second section and adapted to be engaged by the dog when the lever is closed.

10. The combination of one pulley-section having a recess in its periphery open through the end, a plate e' secured to the end of said pulley-section having ears e^2 extending in the recess, a lever i pivoted to said ears e^2 in the recess, a dog pivoted to said lever, the other pulley-section having a recess m in its end in line with the recess in the first section, and a transverse dog-engaging piece carried by the recess of said second section.

In testimony of which invention I hereunto set my hand.

JOHN E. THRON.

Witnesses:

M. J. EYRE,
R. M. KELLY.