

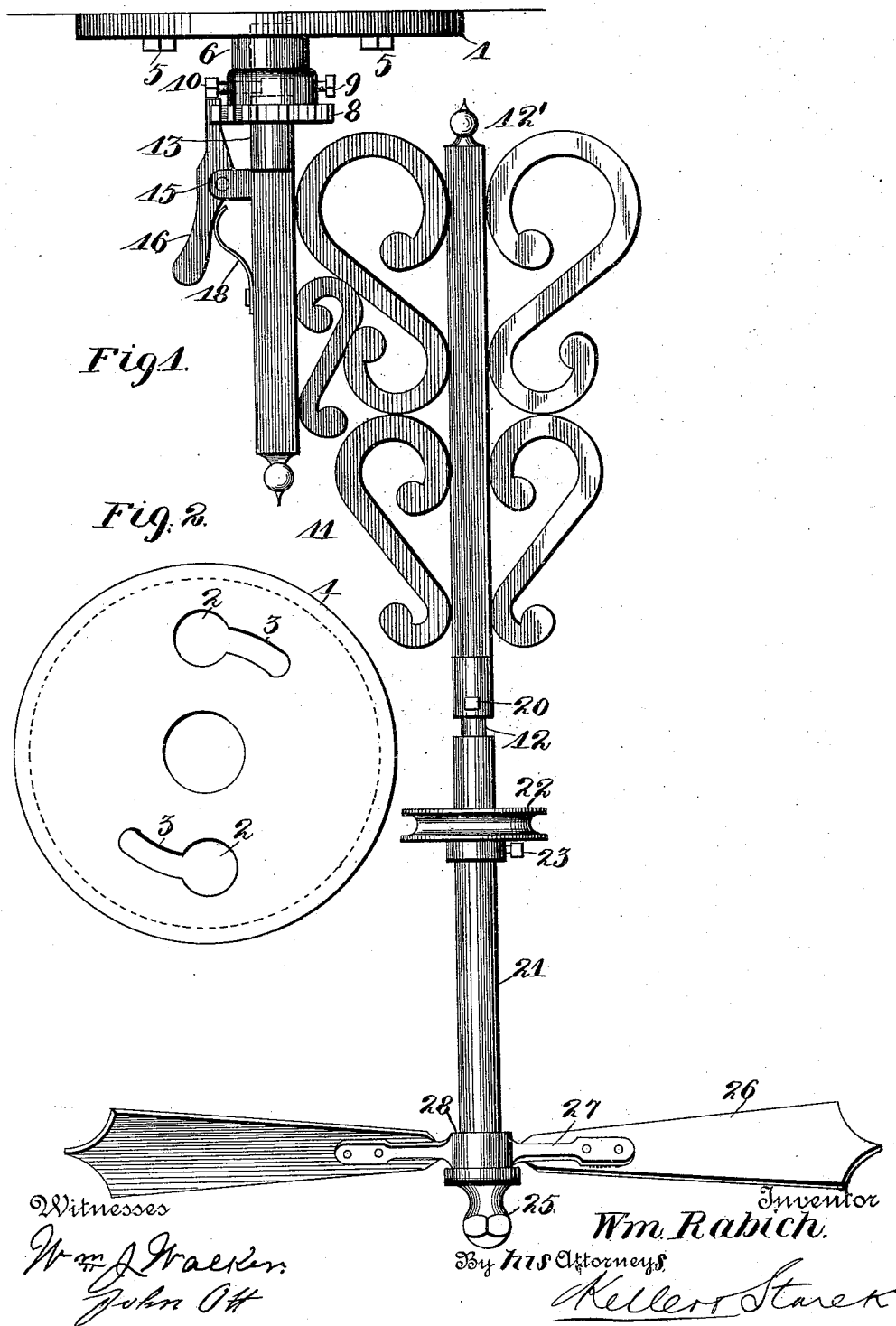
(No Model.)

2 Sheets—Sheet 1.

W. RABICH.
ADJUSTABLE BELT TIGHTENER FOR FANS.

No. 491,024.

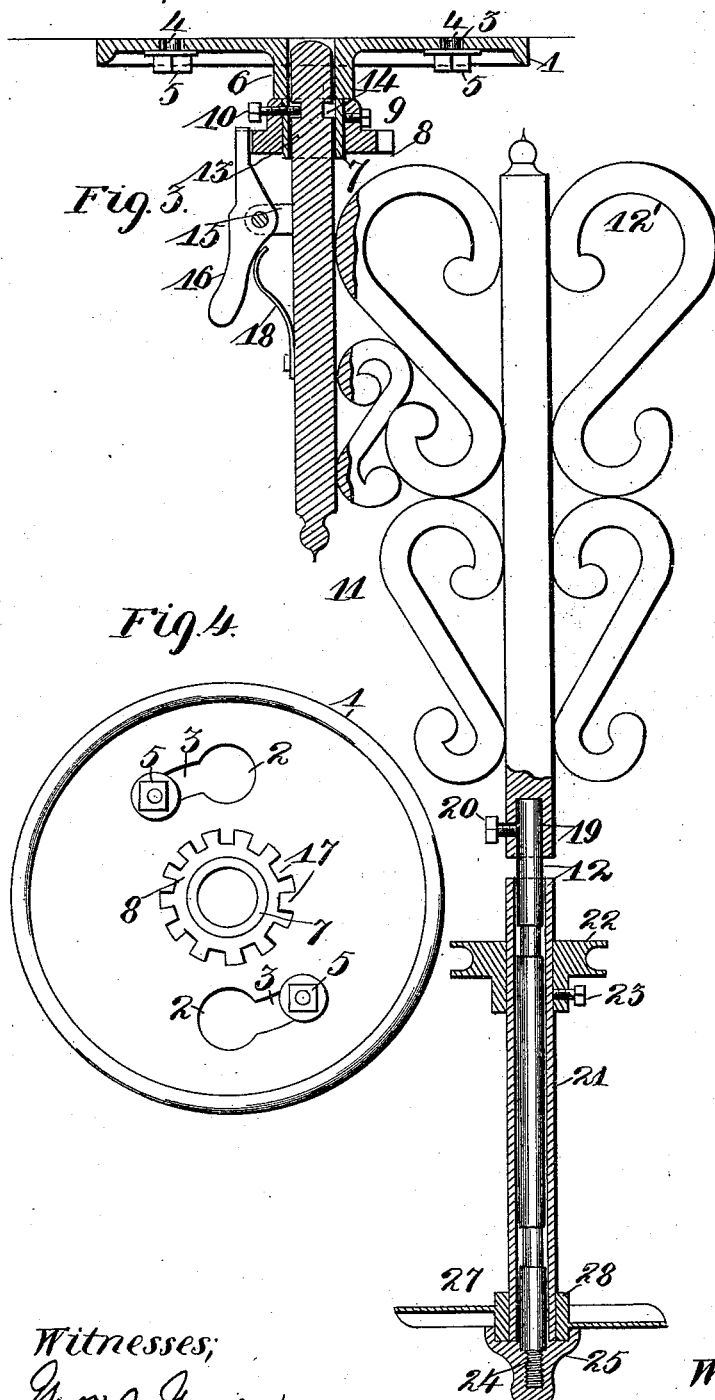
Patented Jan. 31, 1893.



W. RABICH.
ADJUSTABLE BELT TIGHTENER FOR FANS.

No. 491,024.

Patented Jan. 31, 1893.



Witnesses;
Wm. J. Walker
John Ott

Inventor:
Wm. Rabich
By his Attorneys
Keller & Stuck

UNITED STATES PATENT OFFICE.

WILLIAM RABICH, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO THE HERRMANN-RABICH FAN AND MOTOR MANUFACTURING COMPANY, OF SAME PLACE.

ADJUSTABLE BELT-TIGHTENER FOR FANS.

SPECIFICATION forming part of Letters Patent No. 491,024, dated January 31, 1893.

Application filed September 28, 1892. Serial No. 447,122. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RABICH, of St. Louis, State of Missouri, have invented certain new and useful Improvements in Adjustable Belt-Tighteners for Fans, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to belt tightening hangers generally and particularly in connection with fans, and is composed of the novel arrangement and combination of parts more particularly set forth in the specification and covered by the claims.

In the drawings Figure 1 is a side elevation of my complete invention; Fig. 2 is a top plan view of the casting constituting the support; Fig. 3 is a vertical longitudinal section of certain portions of my device, and Fig. 4 is a bottom plan view of the support viewed from the opposite side shown in Fig. 2.

The object of my invention is to construct a hanger that may be turned or adjusted independently of its support, the latter having a socket within which rotates the shaft of the hanger, and the hanger is provided with a supporting spindle located to one side of said shaft, whereby an ordinary belt may be tightened or loosened at will.

The invention is more specially adapted for moving the slack from belts which is generally removed by cutting the belt or introducing "idlers."

Referring to the drawings, 1 represents a supporting casting which may be ornamented in any desirable manner and is provided with two openings 2 of suitable size to admit a nut. Leading from said openings and in communication therewith are two elongated openings 3 which extend in opposite direction and whose sides constitute arcs of circles described from the center of the casting. Fixed to the wall or ceiling are two projecting bolts 4 the ends of which are adapted to receive the nuts 5 sufficient space being left between said nuts and ceiling to receive the thickness of the casting 1 as best shown in Fig. 3. In order to fasten the said casting to the ceiling the nuts are passed through openings 2 after which the casting is slightly

turned bringing the narrow openings 3 in contact with the bolts 4, the said nuts holding the casting in its proper position as best shown in Fig. 4. To release the casting the same is turned in a reverse direction until the nuts 5 register with the openings 2 the nuts passing freely through them.

6 represents a socket which is formed in the center of the casting 1 and is provided with a decreased portion 7 around which a toothed wheel 8 is fixed by bolt 9, the object of which will be hereinafter described.

10 represents a bolt which is passed through the said wheel and through the decreased portion 7 of the socket 6 and is adapted to hold the hanger in its proper position in a manner hereinafter stated.

11 represents the hanger which supports a spindle 12 and 13 represents a shaft forming a part of the hanger and about which the adjustment is made, the shaft spindle 12 being located at a suitable distance to one side of the shaft 13. The socket 6 is adapted to receive loosely the shaft 13 allowing the same to be turned independently of the casting, and formed around the said shaft is an annular groove 14 which receives the end of the bolt 10 for holding the hanger to the casting, the said bolt being tightened after the hanger is adjusted to its proper position in relation to the belt if found desirable. To one side of the hanger 11 are ears 15 to which is movably attached a pawl 16 the engaging end of which is received by the spaces 17 formed between the teeth of the wheel 8, thus holding the hanger rigidly after the same has been adjusted. In order to hold the pawl 16 in engagement with the tooth wheel 8 I employ a spring 18 the free end of which bears against the pawl and its opposite end is fixed to the hanger.

Formed in the lower end of the bracket 12' constituting a part of the hanger is a socket 19 which is adapted to receive one end of the spindle 12 and is held within said socket by a setscrew 20. About said spindle 12 revolves a sleeve 21 below the bracket of the hanger, and adjustably secured to the said sleeve is a belt pulley 22, a tightening bolt 23 being employed to hold the same to the sleeve. The

lower end of the said spindle is screw-threaded as shown at 24 and is adapted to receive a nut or cap 25 for holding the sleeve upon the spindle and also forming a bearing 5 for the same.

26 represents an ordinary double fan the blades of which are attached to a casting 27, the medium portion of which forms a collar 28 which is fixed to the sleeve 21 the lower edge also resting upon the cap 25 as best shown in Fig. 3. If found desirable the sleeve 21 may be dispensed with and the belt pulley 22 secured directly to said spindle 12 in which instance the spindle 12 would constitute a shaft, premising however that the said spindle be secured loosely within the socket 19.

From the foregoing description it will be readily understood in what manner the belt 20 is tightened, and the general operation of the device is made clear. It will be understood that the belt passing around pulley 22 is tightened or loosened in relation to an adjacent pulley or a pulley over which the same 25 belt passes by moving or turning the hanger in either direction within the socket of the support moving the belt pulley in a circle about the socket 6 which supports the hanger. When once adjusted it is held in position by the 30 spring pawl 16 engaging with the tooth wheel 8.

Having fully described my invention what I claim is,

1. A belt tightening hanger comprising a shaft supporting the same, a spindle located 35 to one side of said shaft, and a rotating sleeve loosely mounted on said spindle, substantially as set forth.

2. A belt tightening hanger comprising a casting adapted to be secured to the ceiling 40 there being a socket formed in the casting, a bracket carrying a spindle, a shaft located to one side of said bracket and movably secured within said socket, and means for holding the said bracket in proper adjustment, substantially as set forth. 45

3. A belt tightening hanger comprising a bracket, a spindle forming a part of the same, a sleeve carried by said spindle, to which

sleeve the fan or fans are attached, a belt pulley adjustably secured to said sleeve, a shaft 50 located to one side of the said bracket and having an annular groove formed around it, a casting removably secured to the wall or ceiling and having a socket formed therein adapted to receive the said shaft, a toothed 55 wheel fixed to the said casting, a bolt passing through the said wheel into said socket and into said annular groove, and a pawl fixed to the bracket and engaging with the toothed wheel for holding the bracket in adjustment, 60 substantially as set forth.

4. In a belt tightening hanger, a casting having openings 2 located opposite one another, narrow elongated openings 3 constituting arcs of circles in communication with 65 said openings 2, and extending in opposite directions, and a socket formed in said casting for receiving a bracket, substantially as set forth.

5. A belt tightening hanger consisting of a 70 casting 1, having openings 2 formed in the same, narrow openings 3 communicating with openings 2, bolts 4 projecting from the wall or ceiling having nuts screwed thereon, a socket 6 having a decreased portion 7, a 75 toothed wheel 8 fixed to said portion, a bracket 12', a shaft 13 located to one side of said bracket and having an annular groove 14 formed therein, a bolt 10 passing through said wheel, decreased portion 7, and into said an- 80 nular groove, a pawl 16 movably secured to the bracket and engaging with said wheel, a spring 18 bearing against said pawl, a spindle 12 secured within the socket 19, a sleeve 21 carried by said spindle, a belt pulley adjust- 85 ably secured on said sleeve, a casting 27 also secured to said sleeve, and a cap 25 screwed on the lower end of said spindle, substantially as set forth.

In testimony whereof I affix my signature in 90 presence of two witnesses.

WILLIAM RABICH.

Witnesses:

BRUNO B. HERRMANN,
EMIL STAREK.