Sept. 12, 1950 A. J. STELLA 2,521,879

VIBRATION DAMPER FOR WIRE DRAWING MACHINES

Filed Aug. 13, 1946

FIG. 1.

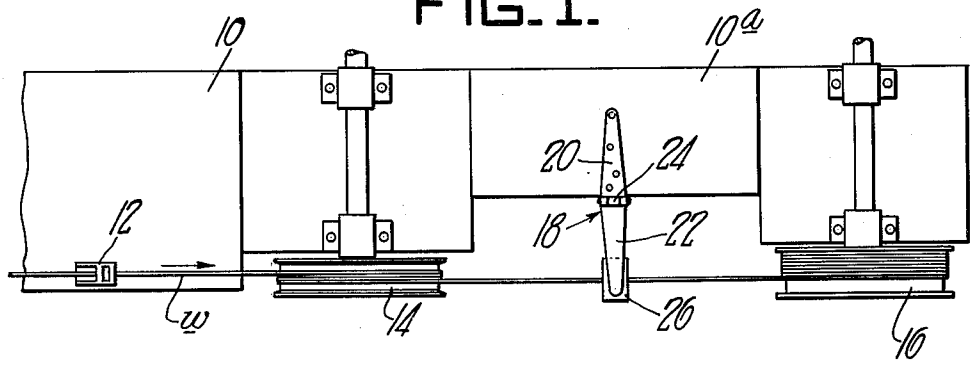


FIG. 2.

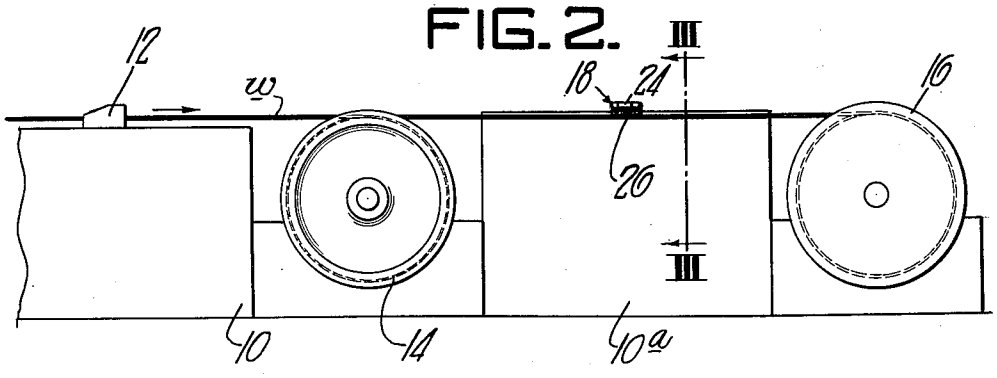
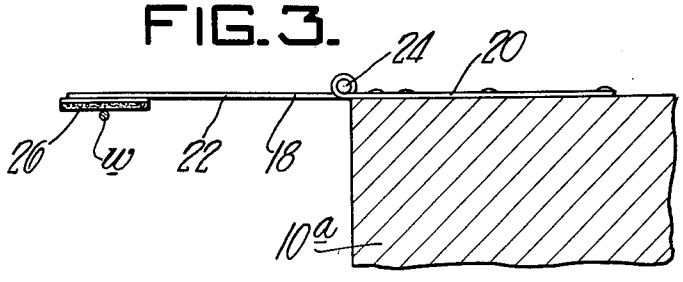


FIG. 3.



Inventor:
ANTHONY J. STELLA,
by: Donald G. Dalton
his Attorney.

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VIBRATION DAMPER FOR WIRE-DRAWING MACHINES

Anthony J. Stella, Worcester, Mass.

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3 Claims. (Cl. 205—22)

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This invention relates to an improvement in wire drawing machines, and more particularly to means for eliminating, damping or changing the period of vibrations of a stretch of wire traveling from a wire drawing machine to a spool or other take-up for accumulating the drawn wire. For a complete disclosure of the invention reference should be made to the accompanying drawing, the following detailed description and the appended claims.

In the drawings:

Figure 1 is a plan view of a somewhat conventional form of wire drawing machine with my improved vibration damping means applied thereto.

Figure 2 is a side elevation of the apparatus shown in Figure 1.

Figure 3 is a vertical section on line III—III of Figure 2.

Referring in detail to the drawings, 10 represents the frame or casing of a conventional form of wire drawing machine for reducing the cross sectional area of the wire drawn therethrough. Such conventional wire drawing machines are usually equipped with a capstan 14 or other pull-out device for drawing the wire *w* through one or more dies 12. The wire is reeved one or more times around the capstan 14 and thence goes to a winding spool 16 or other take-up device for accumulating the finished drawn wire product.

In the operation of a machine such as that referred to above, it is found that the stretch of wire between the last die 12 and the spooling device 16, or the stretch of wire between the capstan 14 and the spooling device 16, vibrates to such an extent that uniform and precision spooling is difficult to accomplish. Such vibration, I have determined, also sets up an undesired condition in the finished wire product. To overcome the difficulties just mentioned, I provide vibration damping means such as indicated as a whole at 18. The particular damping means illustrated comprises a simple strap hinge having one leaf 20 rigidly secured flatwise to the frame portion 10*a* of the wire drawing machine; the other leaf 22 extending generally horizontally therefrom and being free to rock or pivot about the hinge pintle 24. To the underside of the free leaf 22 there is secured a pad 26 of felt, rubber or other suitable compressible material, which is adapted to ride on top of the stretch of wire *w*, preferably between the capstan 14 and the spool or take-up device 16. The weight of the hinge leaf 22 and the pad 26 secured thereto, acting on the top of the wire, is sufficient to damp the vibration in the stretch of wire or to change the period of vibration so that difficulties in spooling heretofore encountered are eliminated. Use of the invention

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has demonstrated that much better spooling of the product can be accomplished thereby than could be obtained with spooling mechanism lacking such provision for eliminating or damping the vibration just ahead of the spool.

While I have described quite specifically an embodiment of the invention, the success of which has been demonstrated by experience on a production basis, it is not to be understood that I am limited thereto, since various modifications and substitutions of equivalents may be resorted to by those skilled in the art, without departure from the invention as defined in the appended claims.

What I claim is:

1. A damper for modifying the vibration of wire traveling from a reducing die to a take-up device, said damper comprising a pair of metal straps hinged together end-to-end on a substantially horizontal axis, one of said straps being secured flatwise to a supporting surface such as the frame of a wire-drawing machine and the other strap extending generally horizontally with its free end resting on the wire adjacent said device and exerting a force thereon by gravity effective to check vibration.

2. The apparatus defined by claim 1 characterized by said other strap having a pad of compressible material on the undersurface thereof.

3. A damper for modifying the vibration of a wire traveling from a reducing die to a take-up spool on which the drawn wire is accumulated, said damper comprising a strap hinge disposed with its axis substantially horizontal and having one leaf secured to a fixed support, the other leaf extending generally horizontally and carrying a compressible pad on the underside thereof riding on the stretch of wire approaching said spool, whereby the weight of said other leaf reduces the vibration of the wire.

ANTHONY J. STELLA.

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