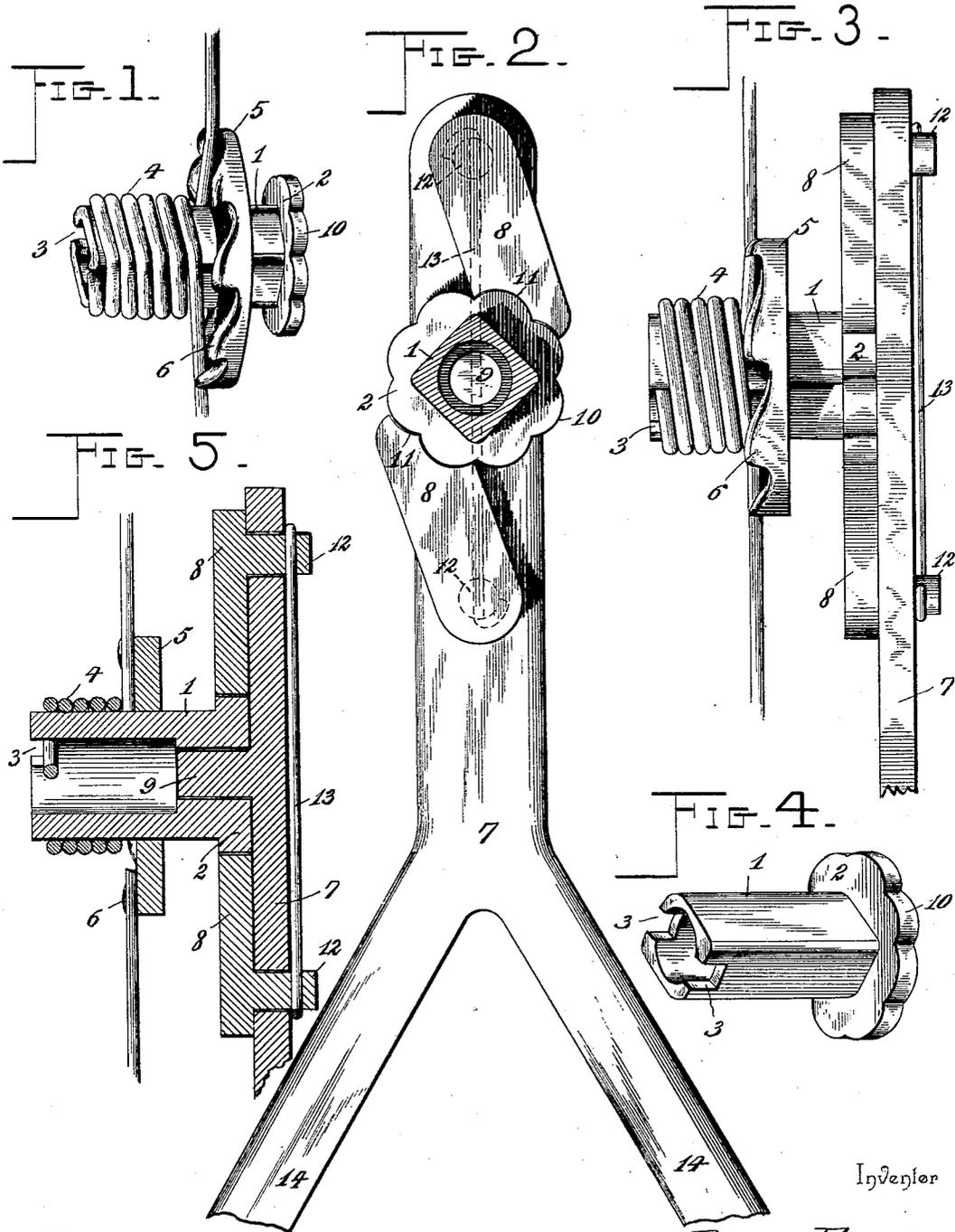


(No Model.)

P. FRANTZ.  
WIRE STRETCHER.

No. 590,308.

Patented Sept. 21, 1897.



Inventor

Peter Frantz.

Witnesses

John F. Deffenhard  
H. H. Riley

By his Attorneys,

C. Snow & Co.

# UNITED STATES PATENT OFFICE.

PETER FRANTZ, OF MOUNT MORRIS, ILLINOIS, ASSIGNOR TO THE CHAIN-STAY FENCE COMPANY, OF SAME PLACE.

## WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 590,308, dated September 21, 1897.

Application filed June 25, 1897. Serial No. 642,312. (No model.)

*To all whom it may concern:*

Be it known that I, PETER FRANTZ, a citizen of the United States, residing at Mount Morris, in the county of Ogle and State of Illinois, have invented a new and useful Wire-Stretcher, of which the following is a specification.

The invention relates to improvements in wire-stretchers.

10 The object of the present invention is to improve the construction of that class of wire-stretchers known as "mid-wire take-ups" and to provide a simple, inexpensive, and efficient device adapted to be readily applied to a fence-wire and capable of enabling the same to be readily stretched to the desired tension.

15 The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a wire-stretcher constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view showing the operating-lever applied. Fig. 3 is a plan view of the same. Fig. 4 is a detail perspective view of the shaft. Fig. 5 is a sectional view taken longitudinally of the shaft.

25 Like numerals of reference designate corresponding parts in the figures of the drawings.

1 designates a squared shaft or spindle provided at one end with a head 2 and having a slot 3 at its other end to receive a fence-wire 4, which is adapted to be wound around the shaft or spindle, as clearly illustrated in Fig. 3 of the accompanying drawings, and it is engaged by a ratchet-disk 5. The ratchet-disk 5, which is provided with a rectangular opening to receive the shaft or spindle, has an annular series of ratchet-teeth 6 at one of its faces for engaging the fence-wire, whereby the latter is held at the desired tension. The shaft is rotated to wind the wire around it, and the wire interlocks with two of the ratchet-teeth 6 to prevent the shaft from unwinding or rotating in the opposite direction.

30 The shaft is readily rotated by an operating-lever 7, which is fulcrumed on the shaft and which is provided with a pair of oppositely-disposed pawls 8, arranged to engage the head 2. The lever is provided at its in-

ner side with a projecting stud or journal 9, which fits into the bore of the shaft at one end thereof and which is located near one end of the lever. The head 2 is provided at its periphery with an annular series of segmental teeth 10, and the pawls 8, which are disposed at a slight angle to the lever, are provided at their engaging end with curved recesses 11, conforming to the configuration of and adapted to receive the teeth 10.

35 The pivoted ends of the pawls are provided with integral journals 12, which are arranged in perforations of the lever and which project beyond the outer face of the same. These journals are perforated and receive a resilient wire 13, forming a spring and performing the double function of securing the pawls to the lever and maintaining them in engagement with the head of the shaft. The pawls engage the shaft when the lever is oscillated in one direction, and they readily slip over the head when the lever is moved in the opposite direction, the ratchet-disk holding the shaft when the lever is moved backward for another stroke.

40 The operating-lever is forked to provide a pair of handles 14, which enables the device to be readily controlled.

The invention has the following advantages:

45 The wire-stretcher, which is exceedingly simple and inexpensive in construction, is strong and durable and is adapted to be readily applied to a fence-wire at any point between the fence-posts, and it is capable of enabling a fence-wire to be readily stretched to the desired tension.

50 The teeth of the head of the shaft are strong and durable and are not liable to be broken, and the spring performs the double function of fastening the pawls to the lever and of holding them in position for engaging the head of the shaft.

What I claim is—

55 1. In a device of the class described, the combination with a shaft provided with a ratchet-disk and having a head with an annular series of segmental teeth, of an operating-lever detachably fulcrumed on one end of the shaft, and a pair of spring-actuated pawls arranged to engage the head of the shaft at opposite sides thereof and provided with curved

recesses conforming to the configuration of the teeth, substantially as described.

2. In a device of the class described, the combination with a shaft provided with a ratchet-disk and having a head with teeth, of a lever detachably fulcrumed on the same, a pair of pawls engaging the head of the shaft and provided with journals extending through the lever, and a spring connecting the journals of the pawls and maintaining the latter in engagement with the head of the shaft,

said spring also serving as the means for securing the pawls to the lever by retaining their journals in the perforations of the same, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PETER FRANTZ.

Witnesses:

CHAS. NEWCOMER,

R. P. McCLURE.