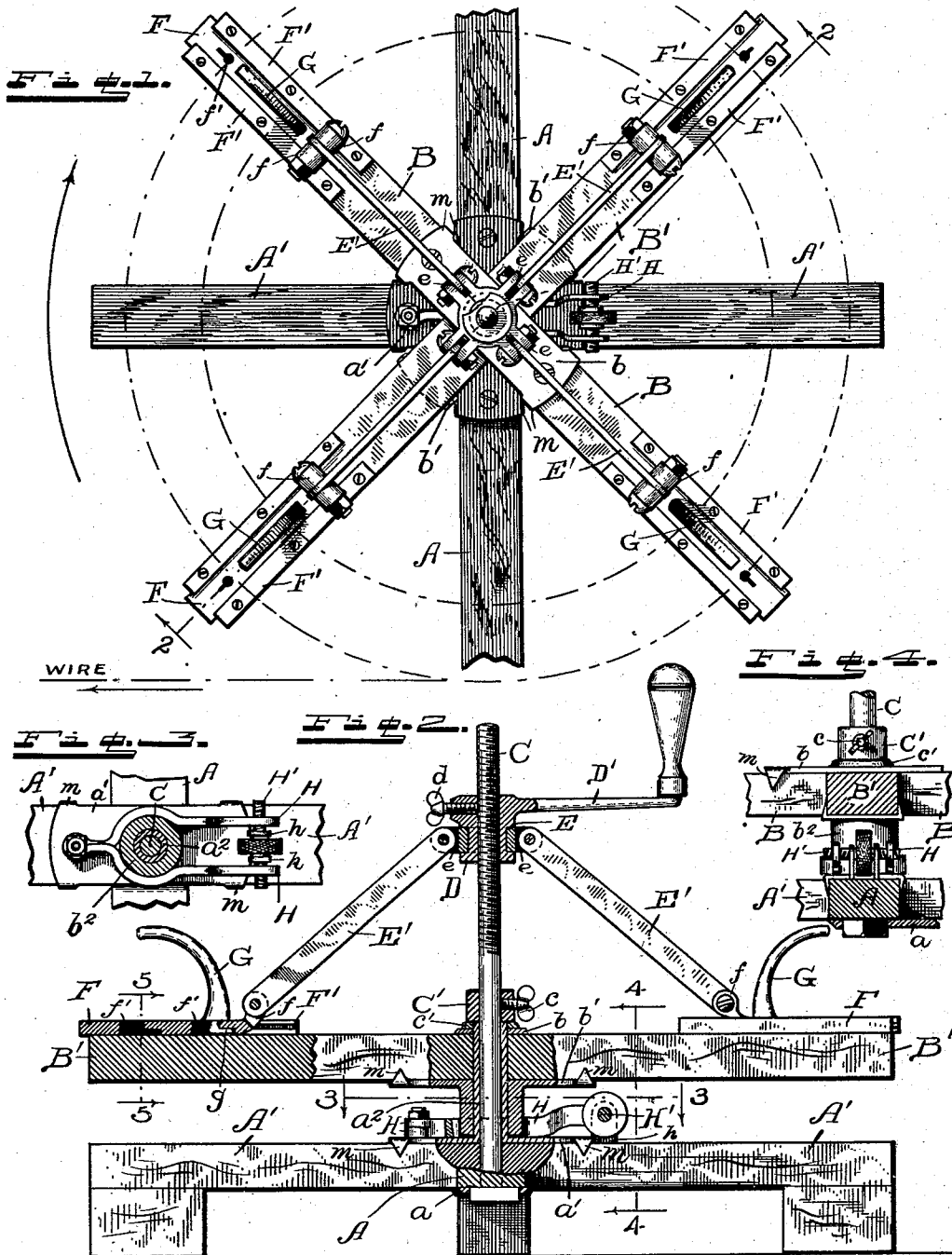


(No Model.)

C. H. FAUT.
WIRE REEL.

No. 570,920.

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WIRE-REEL.

SPECIFICATION forming part of Letters Patent No. 570,920, dated November 10, 1896.

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To all whom it may concern:

Be it known that I, CHARLES H. FAUT, a citizen of the United States, residing at Palestine, in the county of Hancock and State of Indiana, have invented certain new and useful Improvements in Wire-Reels; 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.

This invention relates to improvements in reels for holding coils of wire during the operation of stringing said wire, in the making of fences and gates, and in the construction of telegraph, telephone, and electric-light lines.

The objects of the invention are, first, to provide an adjustable holder that can be contracted or expanded to suit the diameter of different-sized coils, and that can be expanded to make the coil tight on the reel as fast as it loosens up by the use of a part of the wire of the coil; second, to provide a brake mechanism whereby the paying-out speed of the reel can be regulated, and, third, to provide a cheap and durable wire-reel that will be simple in construction, easily and quickly adjusted, and that will save the annoyance and expense resulting from the tangling together of the wires heretofore experienced, especially where the progress of the work has carried the workmen to a considerable distance from the reel.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of my improved wire-reel, a portion of the ends of two of the base-arms being broken off to save space in the drawings. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a detail in vertical section on the line 4 4 of Fig. 2, and Fig. 5 is a vertical section on the line 5 5 of Fig. 2.

Similar letters of reference indicate like parts throughout the several views of the drawings.

The base of the machine consists of two bars A and A', which are crossed in the middle and mortised half-way through the thickness of each arm to let the faces of the bars stand flush with each other when completed.

The bars will preferably be of wood. The bar A will have the under plate *a*, reaching across the joint and screwed or bolted at each end to the arms of the bar. The bar A' has the plate *a'*, crossing the joint and secured to the upper face of the bar with screws or bolts. The plate *a'* will be provided with an integral upwardly-projected sleeve or hub *a*², as shown in Fig. 2.

The frame of the reel proper consists of two bars B and B', crossed in the middle to form four arms, and mortised at their place of jointure in the manner as described for the bars A and A'. The joints are strengthened by means of the plate *b*, bolted on top of the bar B, and by the plate *b'*, which is bolted to the under side of the bar B'. The plate *b'* has the integral downwardly-projected sleeve or hub *b*². The plates *a* and *a'* and *b* and *b'* are each provided with the marginal spurs *m* to prevent rotary movement of the plates on their respective bars, and enabling the plates to be held securely with less bolts or screws than could be done without the spurs. The plate *b* and the hub *b*² have central openings through which the sleeve *a*² is projected. The hub *b*² on the plate *b'* is long enough to hold the bars B and B' a requisite distance from the bars A and A' and bears upon the plate *a'*. The hub *a*² is provided with an opening large enough to allow the bolt C to be projected therethrough in the manner as shown in Fig. 2, and the under plate *a* will be provided with an opening to receive the head of the bolt and prevent its turning when it is inserted therein. The withdrawal of the bolt C will be prevented by providing a collar C', which will be held at any desired point by means of a set-screw *c*.

The sleeve *a*², it will be noticed in Fig. 2, is long enough to reach a short distance above the plate *b* on the bar B and allow of the insertion of a washer *c'* between the collar C' and the plate *b*. By this construction the reel will be bolted to its supporting-base securely and yet not tight enough to interfere with the free rotary movement of the reel.

The upper end of the bolt C is provided with screw-threads (preferably square threads) to receive a head D, which has a threaded opening to fit the threaded end of the bolt. This head has a crank D', by which it is rotated

and is provided with a wing bolt *d*, whereby it can be locked at any position on the bolt C. The lower portion of the head D is provided with a circumferential depression, bordered on each side by a square shoulder to prevent a collar E, which will be inserted in the said depression, from longitudinal movement on the head, but allowing for rotary movement of the collar on said head. This collar E will be in two parts to enable it to be placed on the head. It will be provided with eight outwardly-projecting ears *e*, arranged in pairs in two series at right angles to each other, as shown in Fig. 1. These ears form parts of the hinge connections between the collar E and bars E', as will be more fully described hereinafter, and the two parts of the collar will be held together by means of the bolts, which are used also as hinge-pins.

F are slides, one for each of the four arms of the reel, and have longitudinally-reciprocating movement on said arms. They are placed near the outer ends of the arms and are controlled by the plates F', which have inside grooves to receive corresponding tongues on the slides and form ways for the slides. The inner ends of the slides are each provided with a pair of ears *f* to form hinges with the bars E'. The bars E' are hinged at their lower ends to the ears *f* and at their upper ends to the ears *e* on the collar E, whereby when the head D is moved up and down on the screw-threaded bolt the slides F will be given a corresponding longitudinal movement on the bars B and B'. The slides are provided with the upwardly and outwardly curved fingers G, which preferably will be removably secured to the said slides. The coil of wire to be handled on the reel will be placed on the slides F on the outside of the fingers, that is, around said fingers, as shown by the dotted lines in Fig. 1. As the wire is used from the coil and the coil thereby becomes looser on the reel the slides F are run out, carrying the curved fingers with them until the coils are tightened up again. For convenience in placing the coils on the reel over the outwardly-hooked fingers the latter will be pivotally secured to enable them to be rotated, so as to present the hooks inwardly or out of the way of the coil, after which they will be turned back into normal position.

As the diameters of the coils of wire vary frequently it is desirable to have the fingers removably secured to the slides, so they can be taken out and placed in an adjoining position nearer to or farther from the center of the reel, as circumstances require. I have provided for this by making a series of holes *f'* in the slides, shaped in such a fashion that hooks *g* on the ends of the fingers G can be inserted and withdrawn when the fingers are turned one hundred and eighty degrees out of their normal working position.

When the slides F are out, so as to give the coil of wire the requisite tension, the head D

is locked by means of the set-screw, and to keep the reel from revolving too freely I have provided a brake, consisting of a pair of friction-bars H, which are hinged together and to the plate *a'* at one of their ends by the same bolt that fastens that end of the plate *a'* to its bar. The other ends of the friction-bars are drawn together or separated from each other by means of a bolt H', having right and left threads and having a milled wheel held stationary by being mounted between the two ears *h* and placed between the two friction-bars, whereby, by properly rotating the milled wheel the friction-bars will be drawn together or forced apart and by so doing will be drawn into or forced out of contact with the hub *b*².

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent, is—

1. In a reel for handling coils of wire, the combination, with a revolving frame consisting of a plurality of radial arms, of slides having outwardly-curved fingers and mounted on each of said arms near the outer ends of said arms, a pivotal bolt around which the arms revolve, said bolt having a screw-threaded upper end, a head having a screw-threaded opening therethrough and adapted to work on the threaded end of said bolt, a crank whereby said head will be rotated on the bolt and bars connecting the head with the slides, substantially as described and specified.

2. In a reel for handling coils of wire, the combination, with a revolving frame consisting of a plurality of radial arms, of slides having fingers to engage the coil of wire, said slides being secured, one to each arm near the end of said arm and having adjustment longitudinally of said arm, and means for imparting an equal and simultaneous movement to all of said slides, substantially as described and for the purposes specified.

3. In a wire-reel, a base consisting of two bars crossed at right angles to form four equal arms and held together at the joint by outside plates of metal one of said plates having a hub projecting at right angles from the arms, a revolving reel-frame consisting of two bars crossed in like manner and reinforced at the joint with metal plates, the inner of which has a projected hub to hold the reel-frame and base a suitable distance apart and to give engagement for a friction-brake, a friction-brake pivoted to the base and contacting with the hub, said hub and reel-frame having an opening through which the hub extension from the base-frame is projected, a bolt passing through the base-frame and the reel-frame and secured by means of an adjustable collar said bolt having its outer end threaded, a head having a screw-threaded opening therethrough and adapted to work on the threaded end of the bolt and having a crank by which the head will be rotated, slides having outwardly and upwardly curved fingers, said slides being mounted on the outer ends of the revolving arms, and bars hinged at one end

to the head on the screw-bolt and at the other
end to the slides whereby the slides will be
given a simultaneous adjustment longitudi-
nally of the said arms, all of said above-men-
5 tioned parts being combined and arranged
substantially as described and for the pur-
poses specified.

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

CHAS. H. FAUT.

Witnesses:

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