F. L. SCHOENING.

SIGNAL.

APPLICATION FILED JULY 18, 1917.

1,305,836.

Patented June 3, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

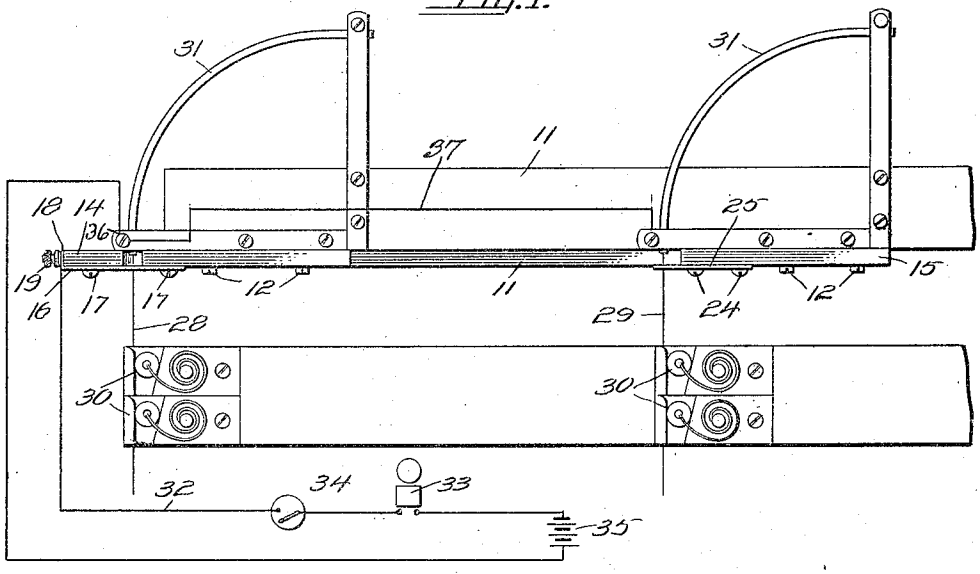
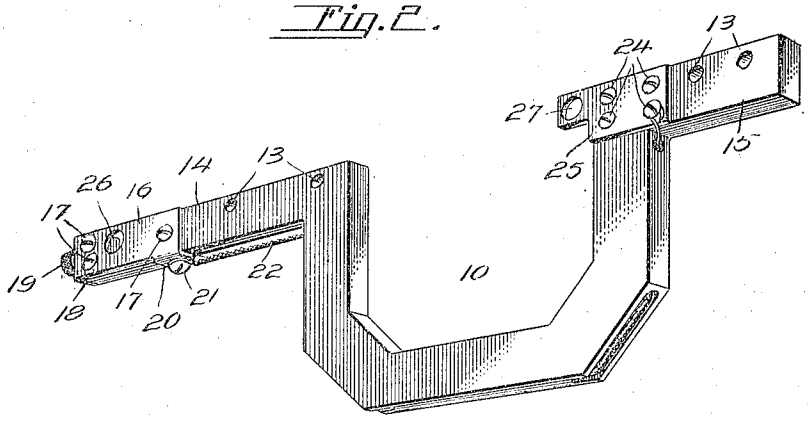


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

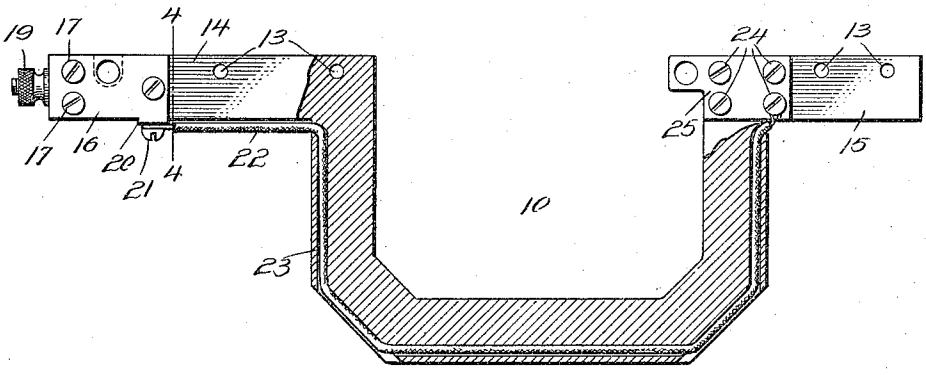


Fig. 4.

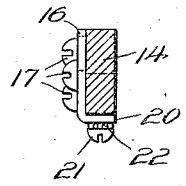


Fig. 5.

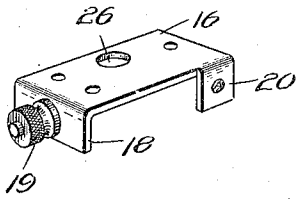
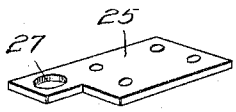


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SIGNAL.

1,305,836. Specification of Letters Patent. Patented June 3, 1919.

Application filed July 18, 1917. Serial No. 181,324.

To all whom it may concern:

Be it known that I, FERDINAND L. SCHOENING, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Signals, of which the following is a specification.

This invention relates to alarm mechanisms and has particular relation to means for signaling the operator of a stitching or other machine in which wire is fed through for any purpose, should the wire become bent or broken, or in the event of all of the wire being entirely unwound from the spool.

The primary object of the invention is to provide means which may be used with any of the machines of the above class, through which wire may be fed, the said wire being normally out of contact with said means, until it is damaged or fed entirely through the spool, when the wire will be thrown out of alinement and be brought into contact, causing the completion of the electric circuit and the sounding of the alarm.

With the above and other objects in view, the invention consists of the following novel combination and arrangement of parts, hereinafter more fully described and illustrated in the accompanying drawings, in which—

Figure 1 is a diagrammatic view of a portion of a gathering and covering machine, showing the direction of feed of the stitching wire and illustrating the position of the alarm mechanism.

Fig. 2 is a detailed perspective view of the supporting frame.

Fig. 3 is a side elevation of the same partly broken away, showing the manner of housing the wire connections between the contact plates.

Fig. 4 is a cross-sectional view on the line 4—4 of Fig. 3.

Fig. 5 is a detailed perspective view of one of the contact plates.

Fig. 6 is a similar view of the other plate.

Referring to the drawings in detail, like characters of reference denote corresponding parts throughout the several views.

In illustrating the invention, there is shown a fragmentary portion of a gathering and covering machine of the usual type and while the invention is shown and described as applied to this machine it is of course understood that it is equally applicable to any machine in which wire is fed and guided therethrough for any purpose.

The invention includes an attaching frame 10, secured to the member 11 of the gathering and covering machine, by means of screws 12 which pass through openings 13 provided in the frame 10.

The frame 10 is substantially U-shaped as illustrated and is provided with oppositely extending arms 14 and 15, the arm 14 having located at its extremity the contact plate 16. The plate 16 is secured to the arm 14 by means of screws 17 and is provided at one end with a right angled terminal portion 18, which is adapted to contact with the extremity of the arm 14 and to carry thereon a binding post 19. The opposite end of the plate 16 is formed with a laterally extending lug 20, which is provided with a threaded opening for the reception of a set screw 21, to provide means for connecting a wire 22 to the plate 16. The wire 22 is preferably insulated and is threaded through a passage 23 formed in the frame 10, which frame is composed of fiber or other insulating material.

The opposite end of the wire 22 is connected by means of one of the screws 24, to a contact plate 25, which is preferably secured to the inner end of the arm 15.

The plates 16 and 25 are provided with openings 26 and 27 respectively, for the passage of the stitching wires 28 and 29 of the machine, which wires are fed through the machine and held in alinement by means of spring guides 30 and tubular guiding members 31, the openings 26 and 27 being located directly in front of and in alinement with the entrance of the tubular guides 31.

One lead of an electric circuit 32 is connected to the binding post 19 and included in this circuit is an alarm 33, a switch 34, and a source of electric energy 35, the opposite lead of the circuit being connected to the frame of the machine as shown at 36, so that an open circuit is provided that includes both contact plates 16 and 25.

The wires 28 and 29 feeding through the machine are held in their alined position and out of contact with the openings 26 and 27 through which they pass, but should either of the wires become completely broken, or for any other reason become dis-alined, the said wire would engage its par-

ticular plate and complete the circuit and sound the alarm. For example, the wire 28 may contact with the plate 16 and the circuit would be established through the binding post 19, the bell and batteries, the connection 36 and through the wire 28 to the plate 16. In the event of disalinement of the wire 29, a circuit would be established from the battery through the conductor 32 and the bell 33, the plate 16, the conductor 22, the plate 25, the wire 29, the conductor 37 and back to the battery.

It is believed that from the foregoing description when taken in connection with the accompanying drawings, the construction, operation and advantages of the invention will be apparent. The right is reserved to make such changes in the form and proportion of the invention as will fall within the scope of the appended claim.

Having described the invention, what is claimed is:

The combination with a wire stitching machine of a stationary contact plate included in a normally open electric circuit, said plate being provided with apertures for the passage of the stitching wire, means for guiding the wire to prevent contact with the edge of the apertures when the wire is feeding simultaneously, an alarm included in the electric circuit whereby the accidental disalinement of the stitching wire will cause the latter to contact with said plate to complete the circuit and sound the alarm.

In testimony whereof I affix my signature.

FERDINAND L. SCHOENING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."