

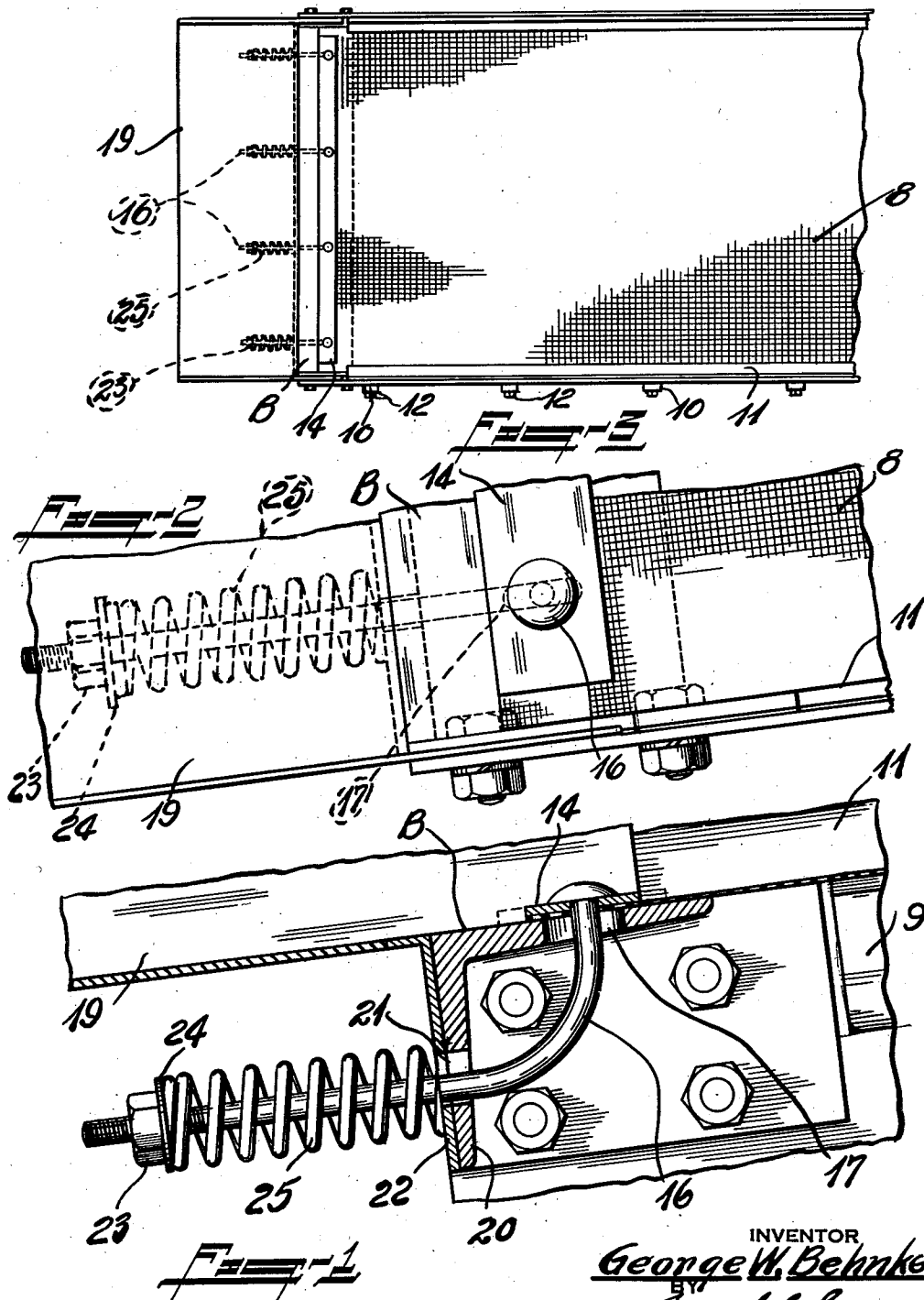
Jan. 6, 1942.

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2,268,853

SCREEN STRETCHING AND TAKE-UP DEVICE

Filed Dec. 1, 1939



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UNITED STATES PATENT OFFICE

2,268,853

SCREEN STRETCHING AND TAKE-UP
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Application December 1, 1939, Serial No. 307,175

3 Claims. (Cl. 209—493)

This invention relates to gyrating screws for screening sand, gravel, and other materials of a fragmentary classification, and more particularly to a means for stretching and providing for increased tension as desired.

One of the prime objects of the invention is to provide a screen take-up including resilient means for exerting a continuous tension on the screen at all times.

Another object is to provide a screen take-up means which can be adjusted to take up slack or wear, which is so located as to protect it from the abrasive action of the material flowing over the screen, and which eliminates dead screening areas and pockets caused by loosely mounted or slack screens.

A further object is to provide a screen take-up assembly of simple, practical, substantial, and economical construction, which can be quickly and easily manufactured and applied, and which facilitates the quick and easy removal or application of the screen to the screen frame.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a fragmentary, part sectional, side elevational view showing the discharge end of a gyratory screen illustrating my take-up in position, the broken lines illustrating the stretching of the screen.

Fig. 2 is a fragmentary top plan view thereof.

Fig. 3 is also a fragmentary top plan view showing the main body or portion of the screen.

Referring now to the drawing in which I have shown the preferred embodiment of my invention, the numeral 8 indicates a conventional screen such as used for screening sand, gravel, and other fragmentary materials of a similar classification. This is mounted and stretched over a screen frame 9 having screen take-up side brackets 10 on the outside of the side plates and a take-up rail 11 is provided on the inside of the frame as shown, bolts 12 being provided for tightening the screen transversely of the frame in the usual manner.

The conventional method for securing the discharge end of the screen is to provide a plurality

hook-shaped member which are inserted through openings in the screen, the threaded ends of said hook-shaped member extending through a clip, and a nut is then threaded on the hook-shaped member for securing it in position.

In such construction the material being processed flows over the face of the screen and over the entire assembly which makes up this fastening means, and in a relatively short time, the abrasive action of the material being screened, wears it so that frequent replacements are necessary, furthermore such assembly has no automatic take-up or stretching properties.

In the instant construction, an end angle B is provided as shown and forms a part of the frame, being secured in position in any approved manner, and a screen end bar 14 is mounted thereon, suitable openings 15 being provided in said bar in spaced relation and accommodate take-up bolts 16 which extend through slotted openings 17 provided in the horizontally disposed leg 18 of the angle B.

An imperforate plate member 19 forms an extension of the screen frame, the leg 20 being disposed in facial contact with the angle B as shown. The bolts 16 are bent as clearly shown in Fig. 1 of the drawing, the threaded ends projecting through openings 21 provided in the vertically disposed legs 20 and 22 of the members B and 19 respectively, and a nut and washer 23 and 24 respectively, are provided on the threaded end of the take-up bolt, a coil spring 25 being interposed between the leg 20 and the washer 24 so that a tension or stretching action is provided on the screen at all times, and this can be regulated by adjusting the nut 23 to provide for increased tension as required.

The imperforate deck extension lip or plate 19 forms an extension or continuation of the screen body and the material flows thereover so that the spring nut and bolt are protected from the product being processed.

The assembly is simple, sturdy, and economical, it provides a stretching means and a take-up, so that the screen is properly stretched at all times, the tension can be adjusted as desired and necessary to produce the best results commensurate with the product being processed, and it also provides for quick and easy mounting or detachment of the screen proper.

From the foregoing description, it will be obvious that I have perfected a very simple and practical screen take-up and stretching means which exerts a tension on the screen at all times.

What I claim is:

1. In a screening device of the character described, the combination of a frame including spaced side and upper and lower end members, a woven wire screen disposed between and secured to said side members and to the upper end member, slotted openings in the horizontal face of the lower end member, and downwardly curved bolt members anchored in the discharge end of the screen and extending through said slotted openings with the threaded ends projecting forwardly beyond the end of the screen, means associated with said bolt for exerting continuous longitudinal tension on said screen, and an imperforate lip projecting over said means and forming an extension of said screen frame.

2. In a screening device of the class described, the combination of a frame including end and side members, a screen secured to said side members and the upper end of the frame respectively, a bar connecting the side members at the discharge end of the frame, slotted openings in the horizontal face of the bar, curved take-up bolts anchored in the discharge end of the screen and extending through said slotted openings, with the threaded ends projecting forwardly beyond

the end of the screen, adjustable means on the end of the bolts, resilient means interposed between the adjustable means and the screen frame to provide a constant tension on said screen, and an imperforate lip projecting over said resilient means and forming an extension of said screen frame.

3. In a screening device of the character described, the combination of a frame, a woven wire screen disposed over said frame and rigidly secured to the sides and the upper end thereof, longitudinally slotted openings in the lower discharge end of the frame, curved anchor bolt assemblies anchored to one end of the screen and extending through said slotted openings with the free ends curved to extend substantially at right angles and projecting through the end wall of the frame, adjustable means on the threaded ends of the bolts, springs interposed between said adjustable means and said frame to provide a constant tension on the screen in a longitudinal direction, and an imperforate lip forming an extension of the screen and a shield for said assembly.

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