

Nov. 18, 1924.

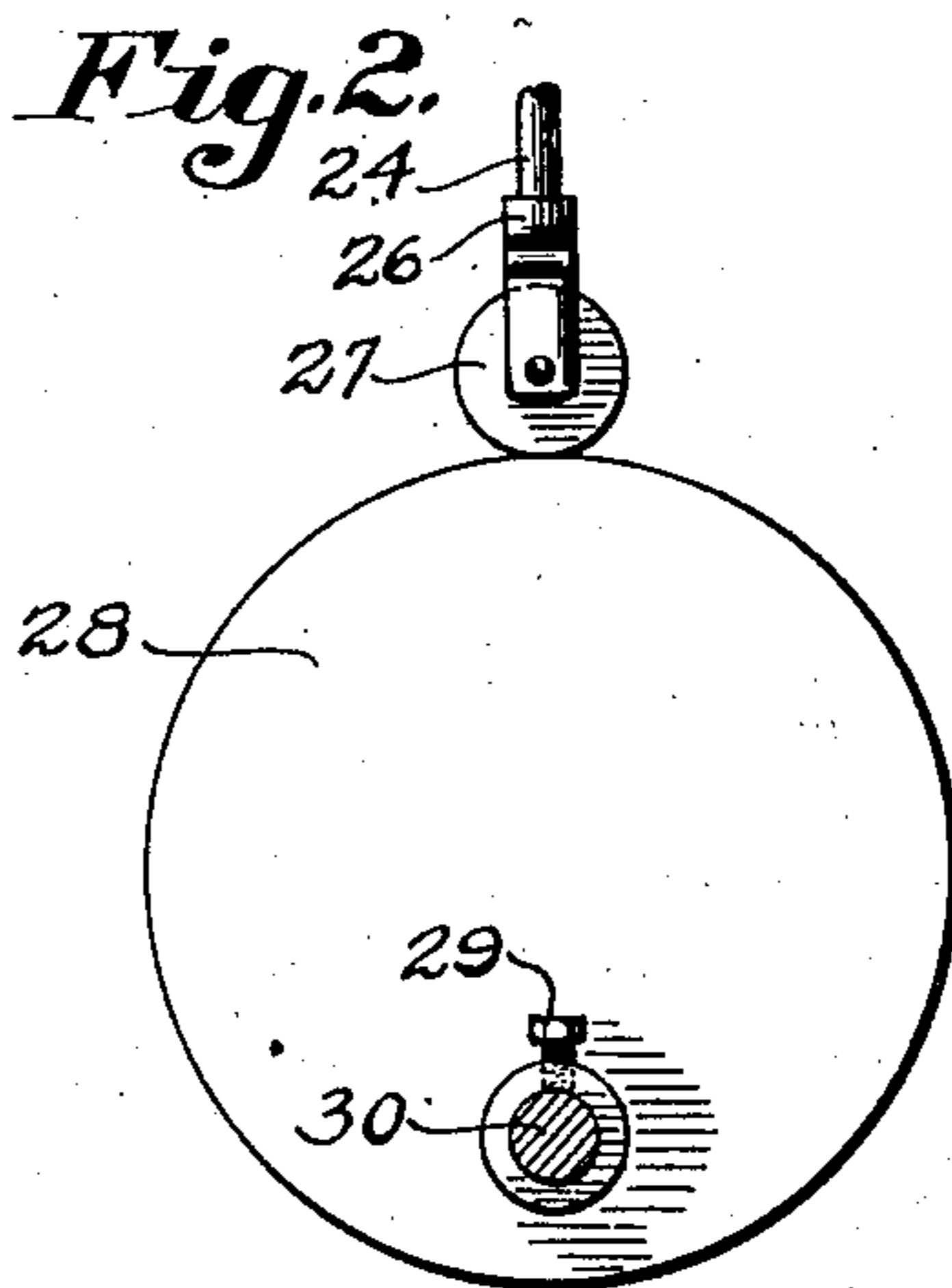
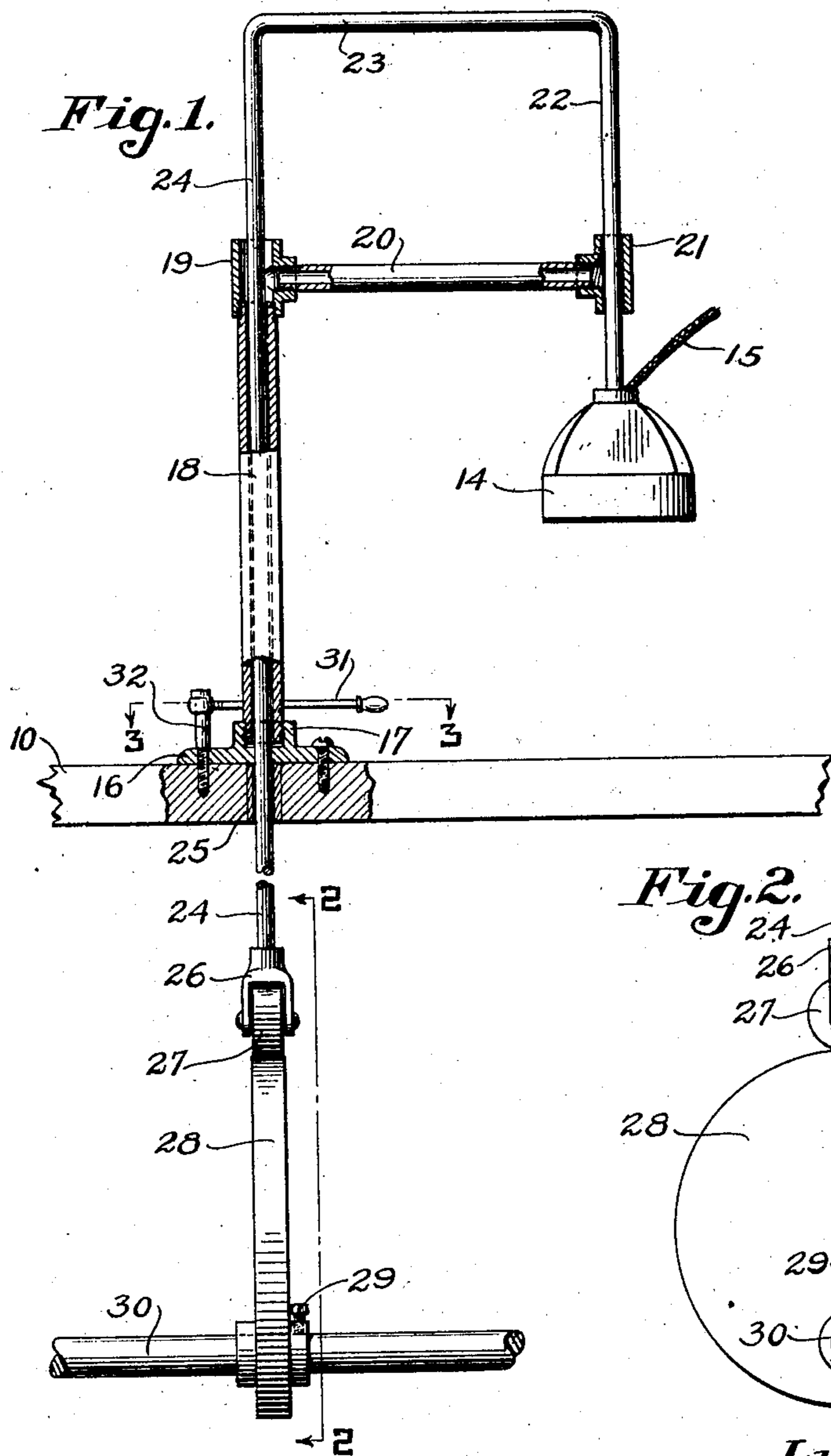
L. S. WILSON

TRANSFER FRAME

Filed Aug. 29 1923

1,516,369

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

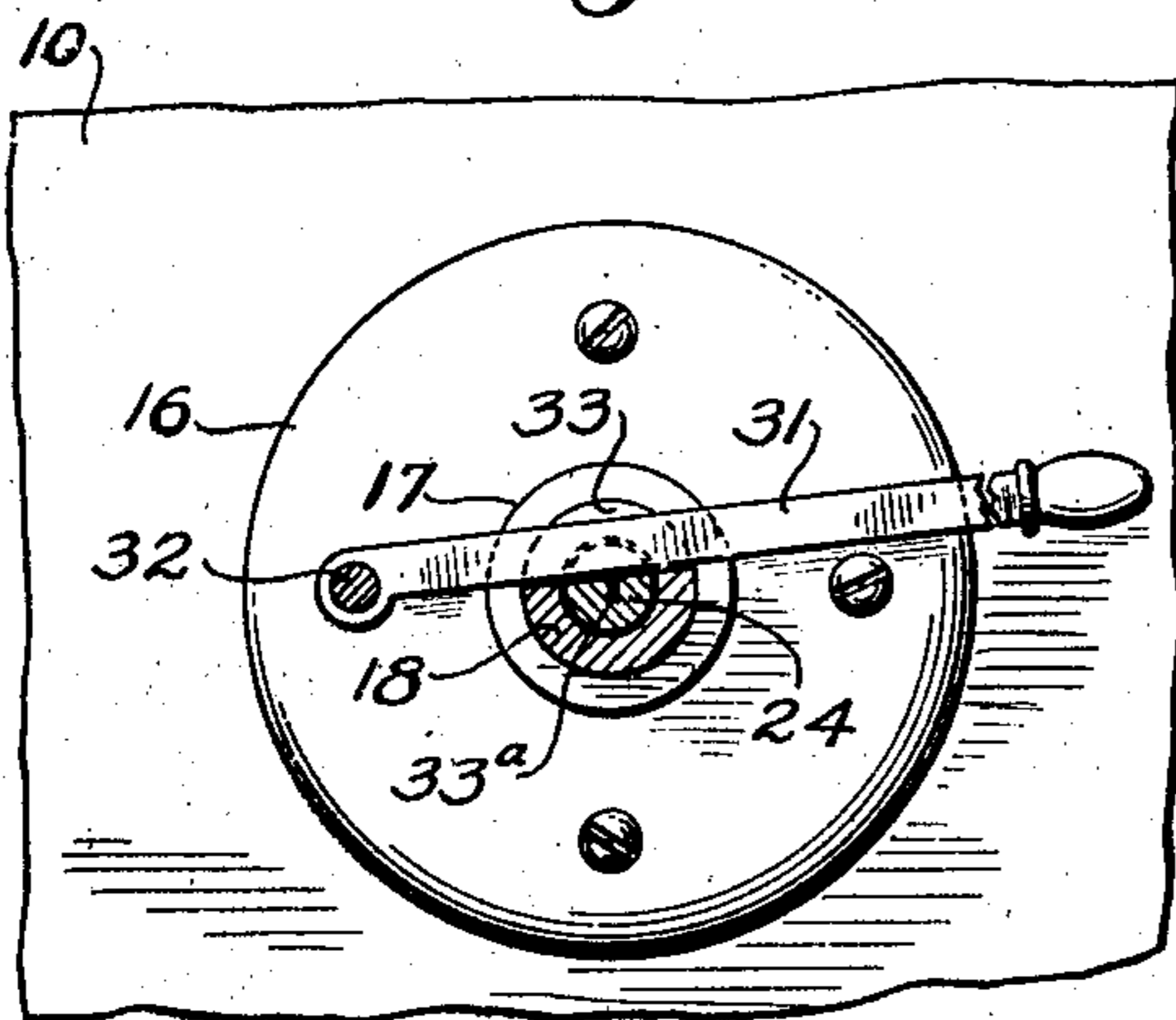


Fig. 4.

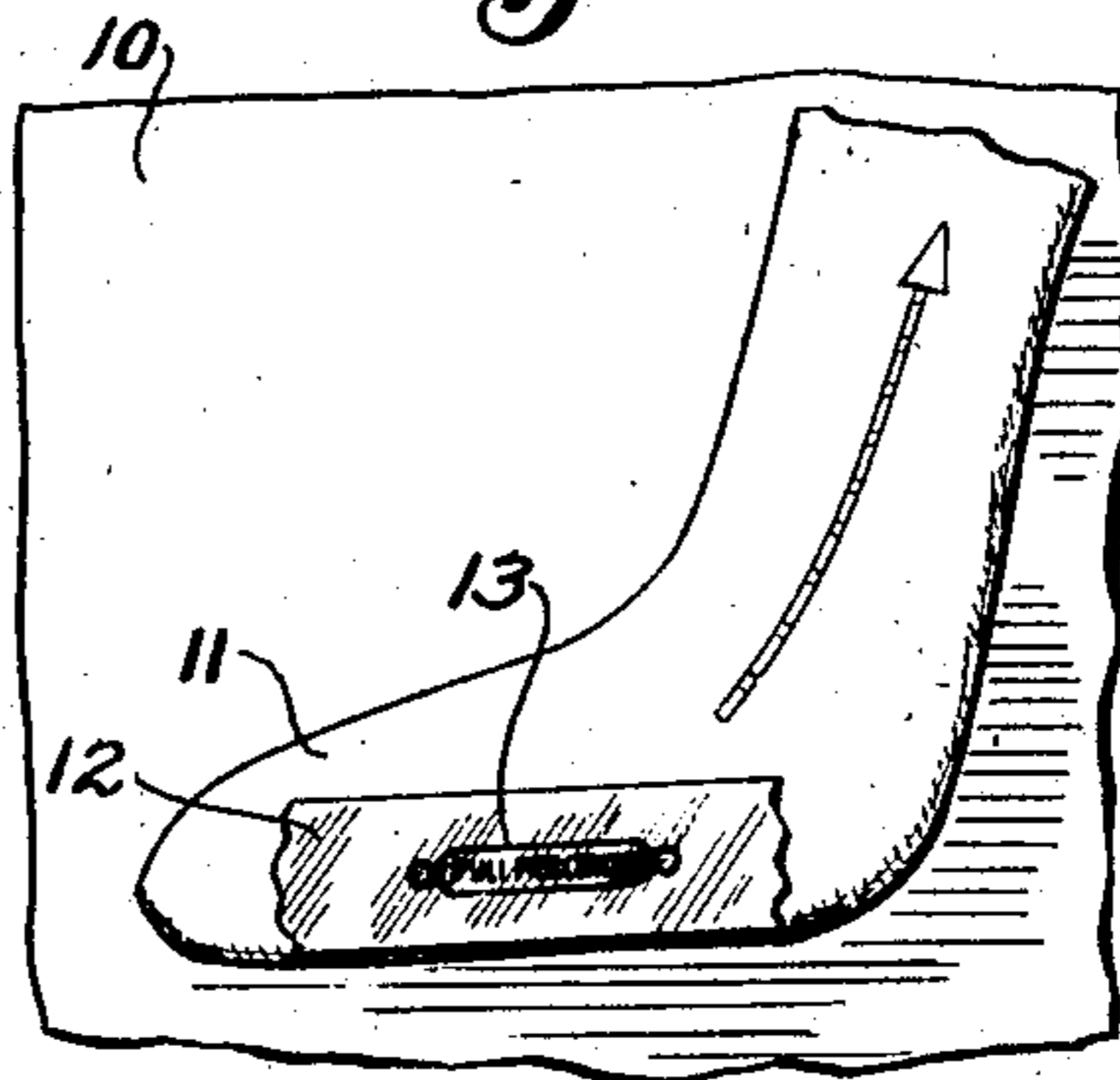
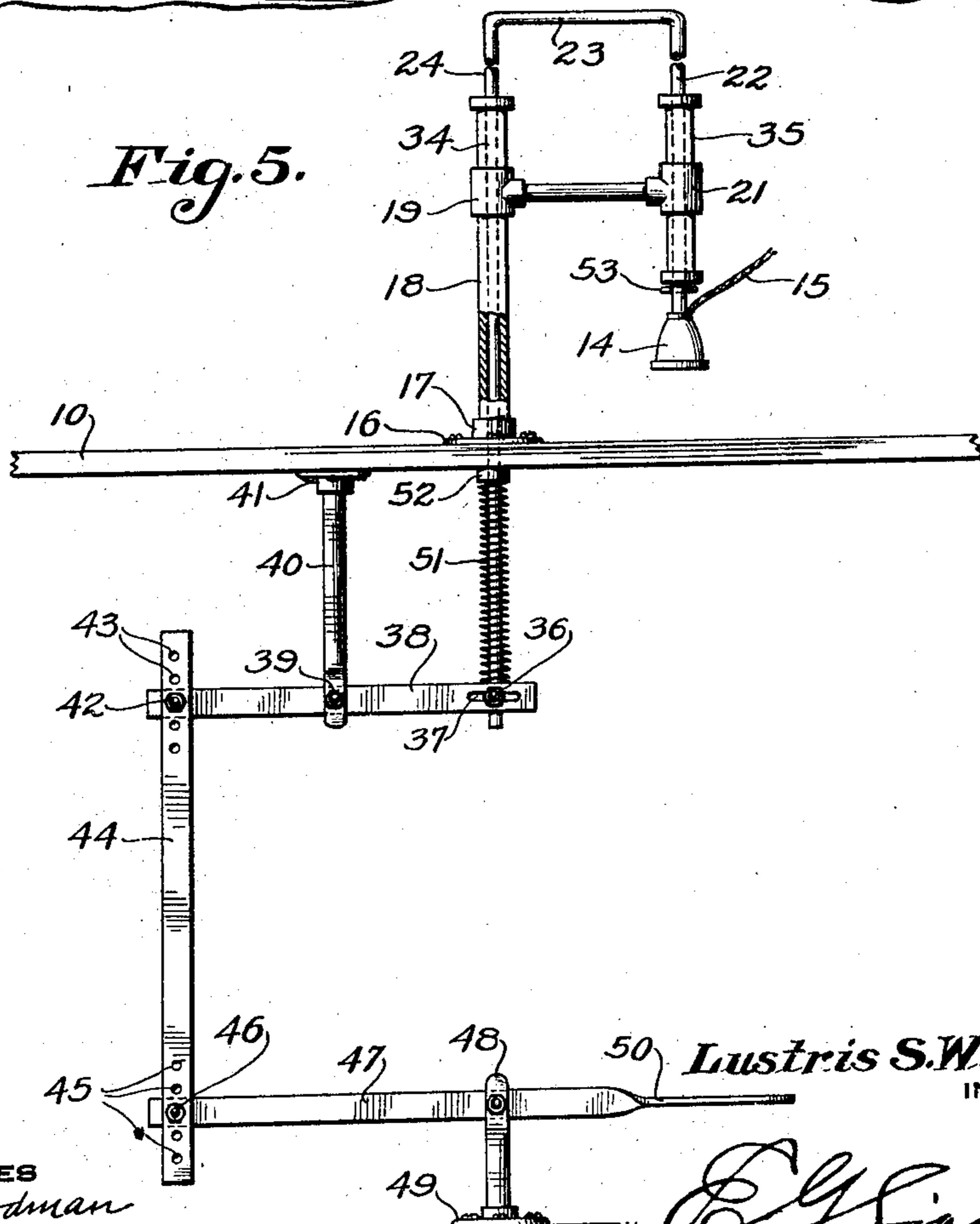


Fig. 5.



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UNITED STATES PATENT OFFICE.

LUSTRIS S. WILSON, OF KINGSPORT, TENNESSEE.

TRANSFER FRAME.

Application filed August 29, 1923. Serial No. 659,996.

To all whom it may concern:

Be it known that I, LUSTRIS S. WILSON, a citizen of the United States, residing at Kingsport, in the county of Sullivan and State of Tennessee, have invented a new and useful Transfer Frame, of which the following is a specification.

This invention relates to a transfer frame which may be used for supporting an iron, preferably of the electric type, such as is customarily used for transferring an appropriate mark or inscription from a previously prepared strip onto hoisery, underwear or similar manufactured articles.

Hitherto, it has been customary to carry out this process entirely by hand work, and it is the object of this invention to provide a simple and practical device for supporting and operating the iron with a view to increasing production, and enabling the manufacturer to decrease the cost per unit of this operation. I prefer to use for this purpose a supporting frame which is operated entirely by automatic means, but it is also within the scope of the invention to operate it by foot power, as long as both hands of the operator are free to handle the work.

The invention will be best understood from a consideration of the following description taken in connection with the accompanying drawings, which illustrate the preferred forms of the invention.

In the drawings:

Figure 1 is a view of the invention, partly in side elevation and partly in section.

Figure 2 is a detail view of the power operated means taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1, particularly illustrating the stopping device.

Figure 4 is a detail view illustrating the nature of the work performed.

Figure 5 is a view similar to Figure 1, but showing a modified construction.

As shown in the drawings, a table 10 is adapted to support the article to be stamped, which in the present instance is represented as a sock 11. A thin strip 12, which is in the nature of a decalcomania provided with an inscription 13 to be transferred to the sock, is arranged to be placed above the same by any suitable means, and the inscription is transferred to the sock by heat and pressure by means of an iron 14, preferably

of the electric type, and connected by wires 15 to any suitable source of current.

In carrying out my invention a flange 16 is suitably secured to the table 10, and is formed with an upstanding internally threaded boss 17 into which is threaded a tubular housing 18. A T 19 is secured to the upper end of the housing 18 and carries a laterally projecting brace 20, the outer end of which supports a second T 21. The iron 14 is supported at the end of the shorter arm 22 of a U-shaped frame 23, the longer leg 24 of the frame being slidably mounted in the housing 18, and extending downwardly through the flange 16 and through a bushing 25 in the work table 10, and terminating beneath the table in a fork 26 in which is journaled a roller 27. The leg 24 is adapted to reciprocate in the housing 18, while the leg 22 is guided by the T 21 and raises or lowers the iron 14. As shown in Figures 1, 2 and 3, the roller 27 rides on the periphery of a cam or eccentric 28, which is secured by means of a set screw 29, or other suitable means, to a power shaft 30, which is adapted to be constantly driven. As the roller rides over the larger portion of the cam 28, the iron is raised, and the weight of the iron and frame are ordinarily sufficient to cause the roller 27 to follow the surface of the cam as the latter rotates.

While the shaft 30 is constantly driven, the operator may check the action of the iron when necessary by means of a stop lever 31, pivotally supported by a pin 32 and engageable through a slot 33 in the housing 18 and with a notch 33^a in the leg 24.

In the modification shown in Figure 5, the parts above the table 10 are the same as those shown in Figure 1, except that the housing 18 is extended above the T 19, as shown at 34, while the T 21 supports an elongated housing 35, thus providing more extensive bearing members for the legs 22 and 24 of the frame, which supports the iron 14. The longer leg 24, as shown in Figure 5, carries at its lower end a pivot pin 36, which is slidably received in a slot 37 formed at one end of the lever 38. This lever is immediately pivoted at 39 to a depending support 40, secured by means of a flange 41 to the underside of the table 10. The rear end of the lever 38 is adjustably connected by a pivot pin 42 to any one of a series of holes 43 formed in the upper end of a con-

necting rod 44. The lower end of this connecting rod is provided also with one or more holes 45, one of which is connected by means of a pivot pin 46 to the rear end of a foot lever 47, which is intermediately pivoted to a yoke 48 supported by a floor flange 49, and the front end of the lever 47 is provided with a treadle 50, whereby it may be conveniently actuated by the foot of the operator.

The depression of the treadle 50 will cause the iron 14 to be lowered into contact with the work placed therebeneath on the table 10 by the operator. As soon as the treadle is released, the frame 23 and the iron 14 will be restored to the position shown in Figure 5 by a contractile spring 51 surrounding the lower end of the leg 24 and connecting the front end of the lever 38 with a boss 52, which forms a bearing for the leg where it passes through the table 10. The upward movement of the frame 23 is limited by a pin 53, which engages the lower end of the housing 35.

It will be readily apparent from the foregoing description that the manipulation of the iron by means of the frame 23 will enable the operator to turn out a greater quantity of work, with less effort than when the work is done entirely by hand, and the cost per unit operation will be considerably decreased. With the form of the invention shown in Figures 1, 2 and 3, the entire attention of the operator will be directed entirely to the handling of the articles to be stamped, and the proper association of the same with the respective marks to be transferred thereto from the strip 12. Whenever, for some reason, it becomes necessary to temporarily discontinue the work, the frame 23 may be readily stopped at the uppermost point in its operation by the engagement of the lever 31 with the notch 33^a. The rotation of the shaft 30 and cam 28 may then continue without causing any movement of the iron.

While the automatic operation is generally to be preferred, it will however be noted that with the form shown in Figure 5, the iron may be actuated entirely by the foot at the instant desired, while both hands of the operator are free to take care of the work. It will therefore be apparent that the work may be performed much more accurately and rapidly than by the manual means at present employed.

While I have shown and described specifically the means by which the invention may be carried out, it is to be understood that this is merely for the purpose of illustration, and that various other modifications may be made in the structural details, as well as in the character of the work performed, without departing from the salient features of the invention or sacrificing any

of the advantages thereof, and it is therefore my intention to include all such modifications within the scope of the appended claims. For instance, by the term "U-shaped frame" I do not wish to be limited to a frame formed of one piece as disclosed in the drawing, for it could be made of several pieces connected by couplings in a simple mechanical way.

What is claimed is:

1. In a device of the character described, the combination of a work table, a tubular housing secured to and extending vertically upwardly from the table, a brace member extending horizontally from said housing, a second tubular housing parallel to the first housing and supported by the outer end of said brace member, an inverted U-shaped frame having legs extending downwardly through said housings, one of said legs terminating above the table and adapted to support an iron, the other leg extending downwardly through the table and having a roller thereon, a rotatable power shaft having a cam on which the roller rides to cause the reciprocation of said frame, and a stop lever pivotally mounted for movement in a horizontal plane, said downwardly extended leg having a notch with which said lever is engagable to support the frame at rest in its uppermost position.

2. In a device of the character described, the combination of a work table, an inverted U-shaped frame supported above the table and having a comparatively long leg extending through the table and a comparatively short leg terminating above the table for carrying an iron, means for guiding said frame for vertical movement, means beneath the table for normally lifting the frame periodically and allowing it to drop back by gravity, and a pivotally mounted stop lever, one of said legs having a notch with which the stop lever is engageable to support the frame at rest in its uppermost position.

3. In a device of the character described, the combination of a work table, an inverted U-shaped frame having a pair of legs extending downwardly, one of said legs extending through the table and the other leg terminating above the table and adapted to support an iron, a roller carried by the longer leg below the table, a rotatable power shaft beneath the table having a cam on which the roller rides to cause the reciprocation of said frame, and a stop lever pivotally mounted above the table and engageable with one of said legs to support the frame at rest in its uppermost position.

4. In a device of the character described, the combination of a work table, an inverted U-shaped frame supported above the table, said frame having a comparatively short leg terminating above the table with an electric iron secured to its extremity, and a

comparatively long leg extending through the table, spaced vertically disposed tubular housings supported by the table in which said legs are mounted, said long leg having
5 a roller mounted on its lower end, a rotatable power shaft having a cam on which the roller rides to periodically lift the frame and to permit it to drop by gravity, and means for supporting the frame and iron at
10 rest in their uppermost positions.

5. In a device of the character described, the combination of a work table, a tubular housing secured to and supported vertically above the table, a brace member extending
15 horizontally from said housing, a second tubular housing substantially parallel to the

first-mentioned housing and supported by the outer end of said brace member, an inverted U-shaped frame having legs extending downwardly through said housings, one
20 of said legs terminating above the table and having an electric iron secured to its extremity, the other leg extending downwardly through the table, means beneath the table associated with the downward extension of
25 said other leg for optionally causing the reciprocation of said frame, and means for supporting the frame and iron at rest in their uppermost position.

In testimony that I claim the foregoing as
30 my own, I have hereto affixed my signature.

LUSTRIS S. WILSON.