

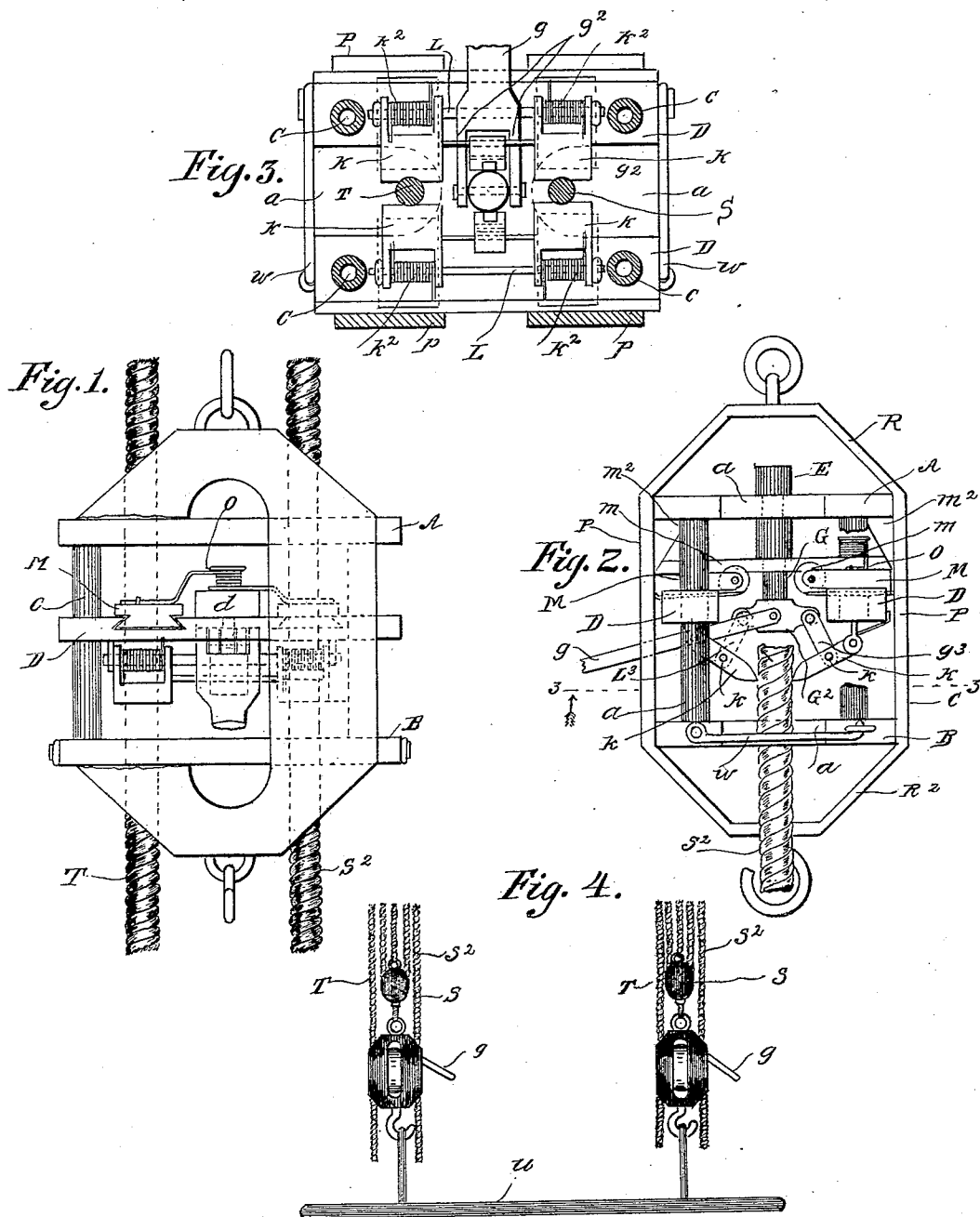
(No Model.)

H. SCHUBERT.

DOUBLE SAFETY CLUTCH FOR SUPPORTS FOR SCAFFOLDS.

No. 569,240.

Patented Oct. 13, 1896.



WITNESSES

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DOUBLE SAFETY-CLUTCH FOR SUPPORTS FOR SCAFFOLDS.

SPECIFICATION forming part of Letters Patent No. 569,240, dated October 13, 1896.

Application filed March 21, 1896. Serial No. 584,244. (No model.)

To all whom it may concern:

Be it known that I, HERMANN SCHUBERT, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Double Safety-Clutches for Supports for Scaffolds, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to supports for scaffolds such as are usually employed by painters, carpenters, and others in connection with buildings; and the objects thereof are to provide an improved safety or friction clutch which is adapted to be secured to the ropes by which the scaffold is supported and from which the latter is adapted to be suspended; and with these and other objects in view the invention consists in the device hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved safety-clutch; Fig. 2, a side view at right angles to that of Fig. 1; Fig. 3, a section on the line 3 3 of Fig. 2; and Fig. 4, a side view of a scaffold and the ropes by which it is suspended, showing also the application of my improved safety-clutch.

In the practice of my invention I provide a frame which consists of top and bottom plates A and B, in the ends of which are formed deep notches or recesses *a*, and the end plates A and B are connected by corner-posts C, four of which are employed.

Mounted on the corner-posts C, between the end plates A and B and movable thereon, is a supplemental frame consisting of side plates D, which are united by a cross-plate *d*, and connected with the cross-plate *d* and centrally thereof is a tube E, which extends upwardly through the top plate A and in which is mounted a vertically-movable rod G, the lower end of which is provided with a head *G*¹, and I also provide a lever *g*, the inner end of which is provided with a yoke *g*², which is pivotally connected with the head *G*¹, and the head *G*¹, at the opposite sides thereof, is pro-

vided with pivoted arms *g*³, and pivotally suspended below the side plates D of the movable frame at each side are two jaws or levers K, which are connected by transverse rods *k*, with which the lower ends of the arms *g*³ are pivotally connected.

It will be understood that two of the levers or jaws K are employed, one on each side, as shown in Fig. 3, and said jaws or levers are pivotally supported on shafts L, and by operating the lever *g* the free ends of said jaws or levers may be raised or lowered or brought together and separated, as will be readily understood. The lever *g* is not fulcrumed excepting when being used to release the supporting-ropes S² and T. When raised for such purpose, the lower surface of side plate D constitutes the fulcrum.

Each of the jaws or levers K is provided with a spring *k*², one end of which bears upon the lower side thereof and the other being secured to the plates D of the movable frame, and the operation of these springs is to force the free or inner ends of the jaws or levers upwardly.

Mounted on each of the plates D and crosswise thereof are sliding plates or jaws M, four of which are employed, and two of which are located on each of the plates D, one on each end thereof, and the connection between the plates or jaws M and the plates D of the frame is made by means of a tongue-and-groove joint, as shown in Fig. 1, and mounted at the inner end of each of said plates or jaws is a roller *m*, and connected with the upper side of the cross-plate *d* of the movable frame, at each end thereof, is a strong spring O, one end of which is connected with each of the plates or jaws M adjacent thereto, and the normal operation of this spring is to force the jaws outwardly. The main frame is also provided with vertical side pieces P, which form a part thereof, four of which are employed, and secured to the inner side of each, adjacent to the outer ends of the sliding plates or jaws M, are inclined blocks *m*², and as the movable frame is raised in the operation thereof, as hereinafter described, the sliding plates or jaws M are forced inwardly by said blocks. The clutch-frame is also provided with a top piece or yoke R and a similar bottom piece or yoke R², and in

practice I connect with the top piece or yoke R a pulley S, as shown in Fig. 4, and a rope is connected therewith and passes over a suitable support at the top of the building and is carried down and passed around said pulley and back up over said support, and then brought down and passed through one side of the clutch, this rope being shown at S², the said rope being passed through the deep notches or recesses *a* in the top plate A and bottom plate B of the main frame, and in passing it through the clutch it is passed between the jaws or levers K at one side, as shown in Figs. 1, 2, and 3. I also provide another rope T, which is suitably secured at the top of the building and brought down and passed through the opposite side of the clutch and between the jaws or levers K at that side, and each of these ropes is also passed between the corresponding sliding plates or jaws M or the rollers mounted therein.

The scaffold U is supported from the bottom of the clutch, as shown in Fig. 4, and whenever it is desired to lower the scaffold the outer end of the lever *g* is raised and the jaws or levers K will be released from the ropes S and T, which will slide through the clutch to the desired extent, and whenever the scaffold is properly adjusted the outer end of the lever *g* will be depressed and the jaws or levers K will securely hold said ropes.

The rope T is provided to guard against accidents or the breaking of the rope S, and if the rope S should at any time be broken the rope T will operate to securely hold and support the scaffold.

It will be understood that in the operation of this device the movable frame is drawn upwardly by the cords or ropes S and T, and that in this operation the sliding plates or jaws M are forced inwardly by the blocks *m*² and caused to firmly press upon the side ropes or cords at the same time that the levers or jaws K are caused to securely grasp and hold the same, and I also provide pivoted arms W, which are adapted to close the openings of the notches or recesses *a* and to retain the ropes or cords S and T in proper position, and these arms W may be secured to both the top plate A and the bottom plate B, if desired.

This device is perfectly adapted to accomplish the result for which it is intended, and by means thereof a scaffold may be raised to any desired point and suitably lowered to any desired extent, and the danger to life and limb which frequently results from the breaking of the ropes by which the scaffold is supported is largely if not entirely avoided, and the raising and lowering or adjusting of the scaffold to any desired position is made much easier than heretofore.

My invention is not limited to the exact form, construction, and arrangement of parts herein described, and I reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a double safety-clutch, adapted to be used in connection with cords or ropes for supporting scaffolds and other devices, a stationary frame, a vertically-movable frame mounted therein, four jaws or levers pivotally connected with said movable frame, two of said levers being arranged at each side, two ropes adapted to pass through said levers and means for operating said levers, substantially as shown and described.

2. In a double safety-clutch, adapted to be used in connection with cords or ropes for supporting scaffolds and other devices, a stationary frame, a vertically-movable frame mounted therein, four jaws or levers pivotally connected with said movable frame, two of said levers being arranged at the side of the same and being inclined toward the others, two ropes adapted to be passed between the edges of said jaws, a rod vertically movable in said frame, the lower end of said rod being provided with a head and lever pivoted to said head and projecting through the sides of the frame, arms pivotally connected with said head and jaws also connected therewith, substantially as described.

3. In a double safety-clutch adapted for use in connection with cords or ropes for supporting scaffolds or other devices, a stationary frame, a vertically-movable frame mounted therein, jaws or levers pivoted to said frame on the lower side thereof, said jaws or levers being arranged on the opposite side, ropes adapted to be passed between said levers, a roller connected with each of said jaws and adapted to operate in connection with said ropes, substantially as described.

4. In a double safety-clutch adapted for use with cords or ropes for supporting scaffolds or other devices, a stationary frame a vertically-movable frame mounted therein, four jaws or levers pivotally connected with said movable frame and arranged in pairs at each side thereof, each pair being adapted to be inclined toward those on the opposite side, ropes passing through said levers, means for operating said jaws or levers, four sliding plates or jaws upon the upper side of said movable frame, a roller carried by each of said jaws and adapted to be operated in connection with each of said sliding plates or jaws, and adapted to force the same inwardly, substantially as described.

5. In a safety-clutch adapted for use in connection with ropes or cords for scaffolds or other devices, a stationary frame, a vertically-movable frame mounted therein, four levers or jaws pivotally connected with said movable frame, two of said jaws being arranged at each side thereof, ropes passing between said jaws, means for operating said jaws or levers, four sliding plates mounted upon said movable frame and arranged in pairs at each side thereof, a roller carried by

each of said plates and adapted to operate in
connection with said sliding plates or jaws
mounted adjacent to said frame, inclined
blocks or surfaces adapted to force the same
5 inwardly, springs connected therewith and
adapted to draw the same outwardly, sub-
stantially as shown and described.

In testimony that I claim the foregoing as

my invention I have signed my name, in pres-
ence of the subscribing witnesses, this 18th 10
day of March, 1896.

HERMANN SCHUBERT.

Witnesses:

C. GERST,

W. J. SUNESON.