

Oct. 13, 1925.

1,556,735

H. G. TIFFANY

ADJUSTABLE STAND

Filed May 29, 1922

2 Sheets-Sheet 1

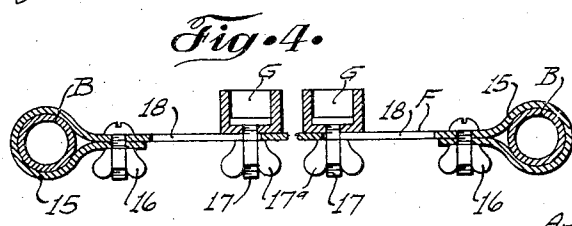
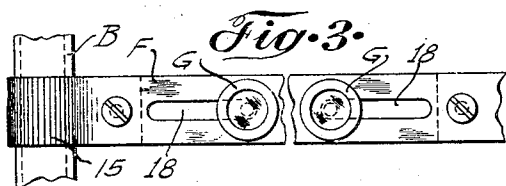
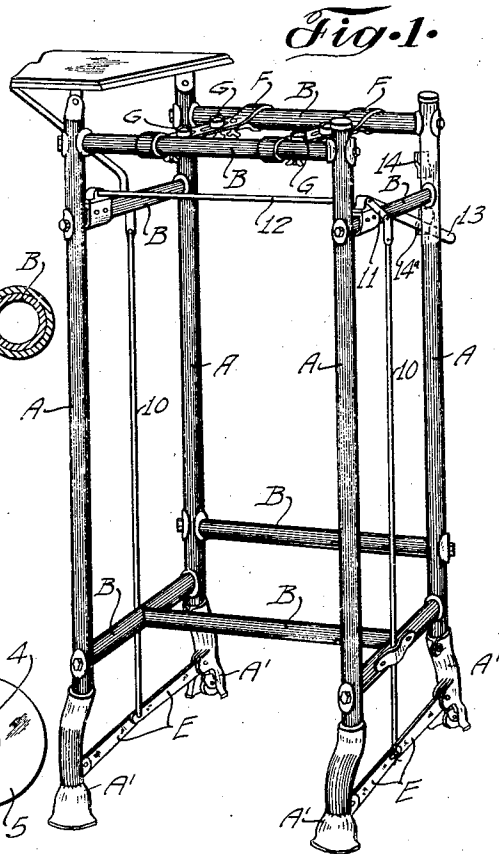
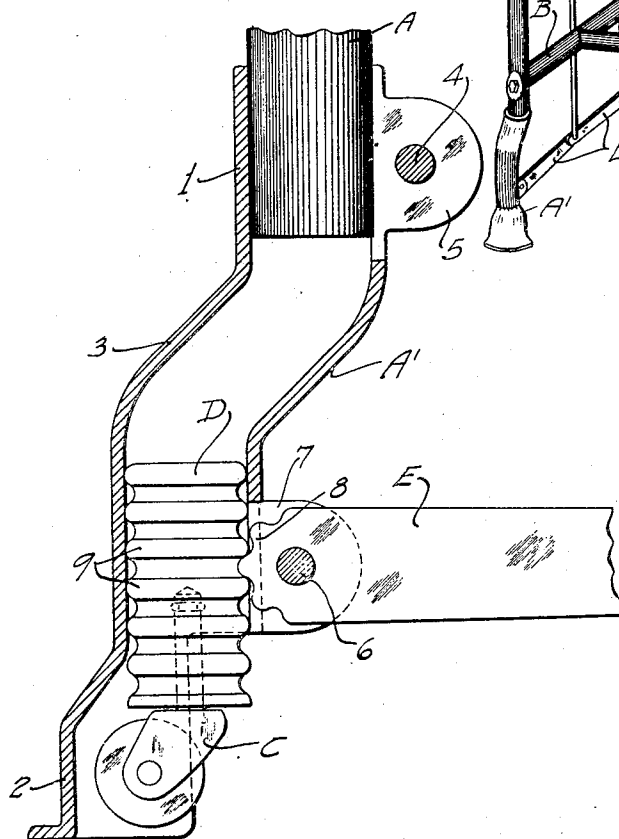


Fig. 2.



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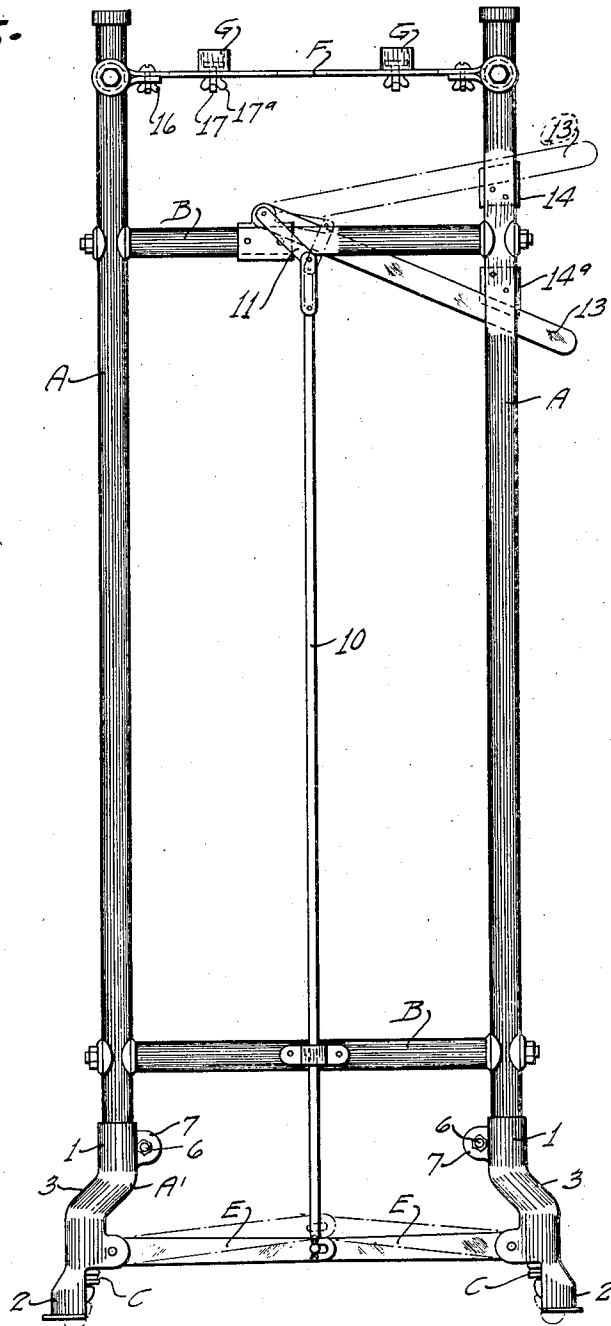
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2 Sheets-Sheet 2

Fig. 5.



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UNITED STATES PATENT OFFICE.

HIERO G. TIFFANY, OF ST. LOUIS, MISSOURI, ASSIGNOR TO TIFFANY ADJUSTABLE STAND COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

ADJUSTABLE STAND.

Application filed May 29, 1922. Serial No. 564,467.

To all whom it may concern:

Be it known that I, HIERO G. TIFFANY, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Adjustable Stands, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to stands of the kind in which the legs of the stand are equipped with rollers or casters that are adapted to be moved relatively to the legs into and out of engagement with the floor, so as to facilitate the movement of the stand from one place to another.

One object of my present invention is to provide a stand of the general type referred to which is so constructed that the stand will be perfectly rigid when the rollers or casters on the legs are arranged in their elevated or inoperative position.

Another object is to provide a stand of the general type referred to that can be manufactured at a low cost and which is equipped with a raising and lowering mechanism that is exceptionally rugged and easy to operate.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a perspective view of a stand constructed in accordance with my invention.

Figure 2 is an enlarged vertical sectional view, illustrating a portion of one of the legs of the stand.

Figure 3 is a top plan view of one of the adjustable members at the upper end of the stand that carries two of the machine rests.

Figure 4 is a vertical longitudinal sectional view of said adjustable member; and

Figure 5 is a side elevational view of my improved stand, illustrating the operation of the raising and lowering mechanism.

My improved stand is composed of four legs whose lower end portions are flared outwardly, and each of which comprises a straight portion A that projects upwardly from a foot piece A' that normally rests upon the floor. The four legs of the stand are tied together by connecting members B combined with the legs in any preferred

manner, and an adjustable means is arranged at the upper end of the stand for sustaining the machine supported by the stand. Each leg of the stand is equipped with a roller or caster C, and a raising and lowering mechanism is provided for moving said rollers relatively to the legs into and out of engagement with the floor, so as to permit said rollers to be rendered operative when it is desired to move the stand from one place to another and rendered inoperative when it is desired to have the legs of the stand rest directly on the floor.

In the form of my invention herein illustrated the portion A of each leg is formed from a straight piece of metal tubing and the foot piece A' of each leg is formed from a hollow casting provided at its upper end with a tubular portion 1 that surrounds the piece of tubing A, provided at its lower end with a floor engaging portion 2 and provided with an intermediate portion 3 that projects outwardly from said upper portion 1 so as to produce a foot piece whose floor engaging portion extends outwardly some distance beyond the straight portion A of the leg. The foot piece A' can be connected to the straight portion A of the leg in various ways without departing from the spirit of my invention, but I prefer to equip the tubular upper portion 1 of the foot piece with a vertically-disposed slot so as to enable said portion to be clamped securely to the piece of tubing A by tightening a bolt 4 that is arranged transversely in lugs 5 on said tubular portion 1 arranged at opposite sides of the vertically-disposed slot in said portion. By constructing the legs of the stand in this manner, I am able to manufacture the stand at a very low cost, owing to the fact that each leg is composed of a piece of straight tubing and a casting of simple design that can be securely connected to said piece of tubing simply by tightening one bolt.

The raising and lowering mechanism of the stand consists of vertically-movable members D in the foot pieces of the legs which receive the rollers or casters C, rockable actuating devices E provided with teeth or racks that mesh with teeth or racks on the vertically-movable members D which carry the rollers, and a system of links and levers for operating the devices E. In the stand herein illustrated each of the rockable

actuating devices E consists of a lever pivotally connected by means of a transversely-disposed pin 6 to a pair of ears 7 on the foot piece A' with which it co-operates and provided at its inner end with a segmental rack 8 that meshes with a rack on the vertically-movable member D in the foot piece. For convenience in manufacture, the rack on the member D is formed preferably by cutting annular grooves in a cylindrical piece of metal that constitutes the member D, so as to form a plurality of horizontally-disposed, annular ribs 9 on the exterior of said piece. By constructing the member D in this manner it is possible for said member to turn in the foot piece A' in which it is arranged without affecting the action of the co-operating racks or teeth on said member and on the actuating device E which moves the member D vertically relatively to the leg, so as to move the roller C on said member into and out of engagement with the floor. If desired, the floor engaging portion 2 of each of the foot pieces A' can be cut away on the inner side of the foot piece, as shown in Figure 2, so as to facilitate the turning of the rollers or casters of the stand in the members D which carry said rollers. The actuating devices or levers E are arranged in pairs, as shown in Figure 1, and each pair of actuating devices are pivotally connected at their inner ends to a vertically-disposed rod or link 10 whose upper end is pivotally connected to an arm 11 on a horizontally-disposed operating shaft 12 at the upper end of the stand that is provided with a handle 13. Normally, the foot pieces A' of the legs of the stand rest directly upon the floor, thereby producing a stand that is exceptionally rigid, due to the fact that the foot pieces are not connected to the legs by means of links or the like, but are rigidly connected directly to the straight portions A of the legs. If it is desired to move the stand from one place to another the operating handle 13 is moved upwardly from the position shown in full lines in Figure 5 into the position shown in broken lines in said figure, so as to raise the inner ends of the actuating devices E, and thus move the members D downwardly, so as to force the rollers into engagement with the floor, and thus lift the foot pieces A' of the legs upwardly away from the floor, one of the legs of the stand being equipped with a catch or stop 14 with which the operating handle 13 is engaged when it is desired to retain the rollers in their depressed operative position and also being equipped with a stop or catch 14' with which said operating handle 13 is engaged when it is desired to retain the rollers in their raised or inoperative position.

As previously stated, the stand is equipped with an adjustable means for sustaining

the computing machine, typewriting machine or other machine supported by the stand. Preferably, said means is composed of two horizontally-disposed supporting members F arranged in parallel relation to each other, as shown in Figure 1, and slidably mounted on the two tie members B at the upper end of the stand, and four cup-shaped machine rests G carried by the supporting members F. Each of the supporting members F is provided at its opposite ends with split sleeves 15 that surround the tie members B on which said member F is slidably mounted, and an adjustable device, such, for example, as a bolt equipped with a wing nut 16, for drawing said sleeve into snug engagement with the tie member which it surrounds. Each of the supporting members F carries a pair of the machine rests G which are mounted on said member in such a manner that they can be moved towards and away from each other. As shown in Figures 3 and 4, each of the machine rests G is retained in adjusted position by means of a bolt 17 projecting downwardly from same through an elongated slot 18 in the supporting member F and equipped with a wing nut 17', which, when turned in one direction, causes the machine rest to be clamped securely to the supporting member F, and when turned in the opposite direction, permits said machine rest to be adjusted lengthwise of the elongated slot 18 in the member F with which it co-operates. It will thus be seen that by moving the supporting members F longitudinally of the tie members B towards and away from each other and by adjusting the machine rests G on said supporting members towards and away from each other, the machine rests can be moved in two directions at right angles to each other, and thus adapt them to various sizes or makes of computing machines or the like.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A stand provided with legs, rollers or casters associated with said legs, vertically-movable members carrying said rollers and combined with the legs in such a way that they can turn or rotate relatively to the legs, rockable actuating devices, and co-operating teeth or racks on said vertically-movable members and actuating devices constructed so as to provide for the turning or rotation of said vertically-movable members.

2. A stand provided with legs, vertically-movable members revolvably mounted in the lower end portions of said legs, rollers or casters carried by said vertically-movable members, and means for moving said members vertically relatively to the legs so as to raise and lower the stand, constructed in

such a manner as to not interfere with the rotary movement of said members.

3. A stand provided with legs, vertically-movable members mounted in the lower end portions of said legs in such a way that they can turn or rotate relatively to said legs, rollers or casters carried by said members, rockable actuating devices pivotally connected to the legs of the stand, and co-operating teeth or racks on said actuating members and on said vertically-movable members constructed so as to not interfere with the turning of said vertically-movable members.

4. In a stand, a leg, a vertically-movable member housed in the lower end portion of the leg in such a way that it is free to turn about its vertical axis, a roller or caster carried by said member, and a rockable actuating device pivotally connected to the leg and provided with a segmental rack that meshes with a rack on said vertically-movable member.

5. In a stand, a leg, a vertically-movable member housed in the lower end portion of said leg in such a way that it is free to turn, horizontally-disposed, annular ribs on said member arranged one above the other, a roller or caster carried by said member,

and a rockable actuating device on the leg provided with a segmental rack that meshes with the ribs on said vertically-movable member.

6. A stand provided with legs, comprising straight pieces of metal tubing, cast metal foot pieces rigidly connected to the lower end portions of said pieces of tubing, vertically-movable members in said foot pieces equipped with rollers or casters, rockable actuating devices pivotally connected to said foot pieces and provided with segmental racks, and co-operating racks on said vertically-movable members.

7. A stand provided with legs, comprising straight pieces of metal tubing, cast metal foot pieces connected to the lower end portions of said pieces of tubing and provided with outwardly-projecting floor engaging portions, vertically-movable members in said foot pieces equipped with rollers or casters, racks on said vertically-movable members, and rockable actuating devices pivotally connected to said foot pieces and equipped with segmental racks that mesh with racks on said vertically-movable members.

HIERO G. TIFFANY.