No. 652,095. Patented June 19, 1900.

M. R. DRISCOLL.

STAMP.

(Application filed June 23, 1899.)

(No Model.)

Fig 1

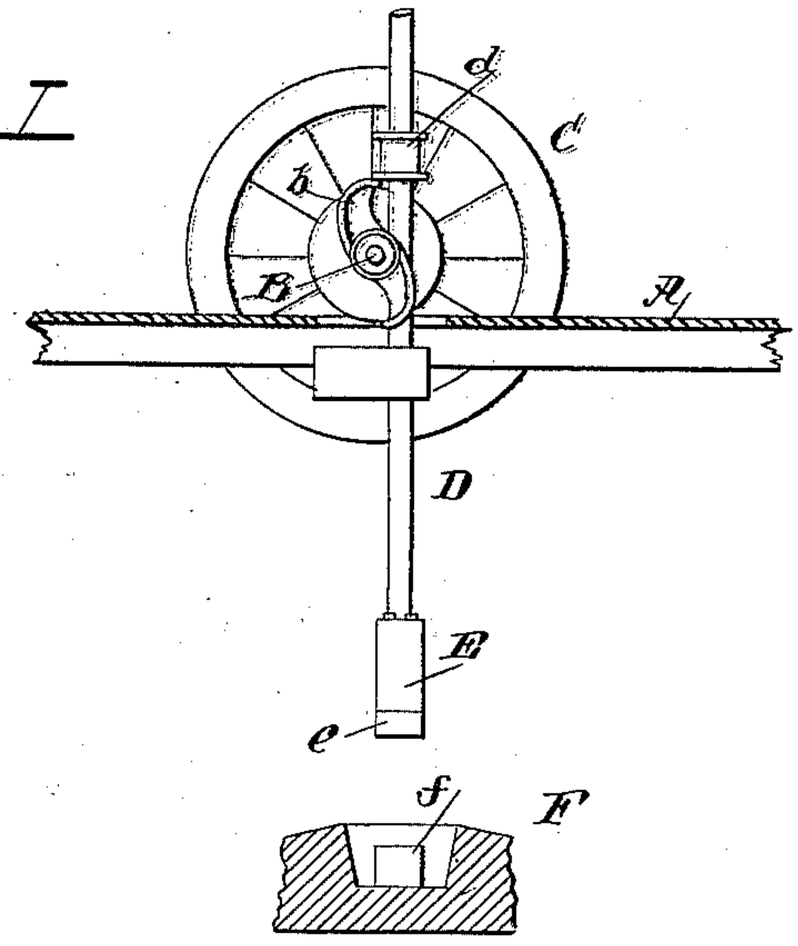


Fig 2

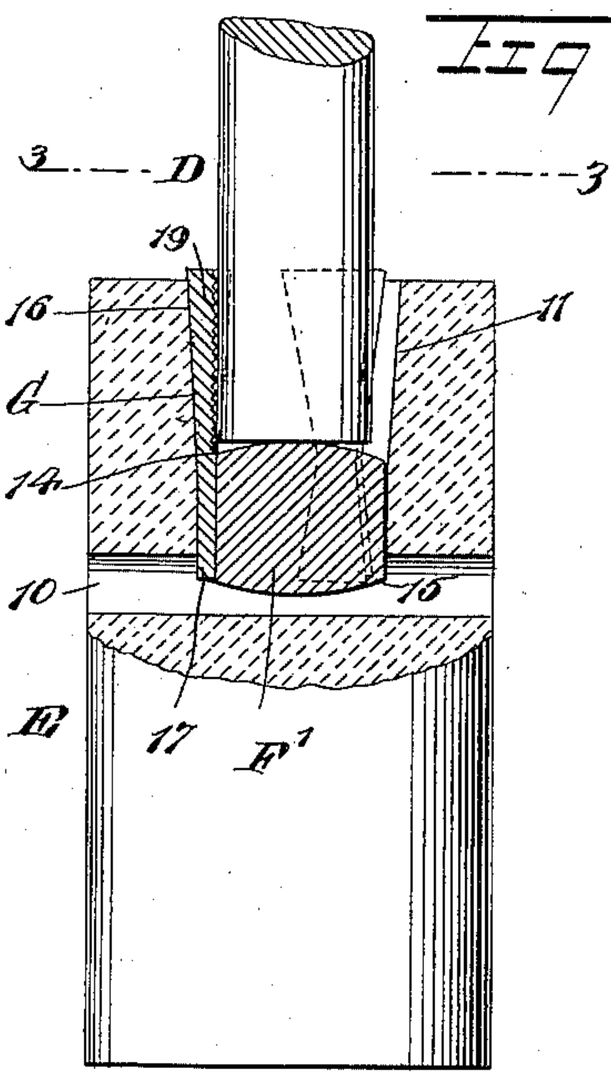


Fig 4

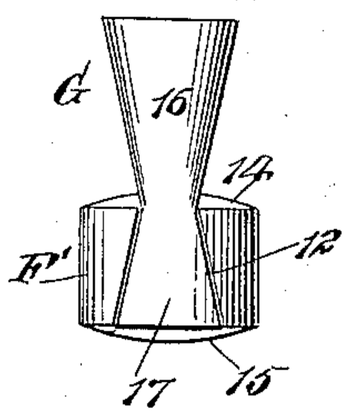


Fig 5

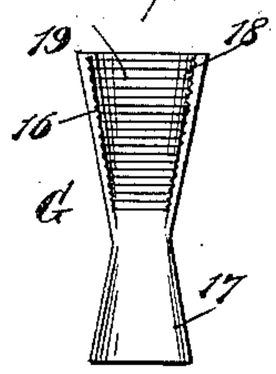


Fig 6

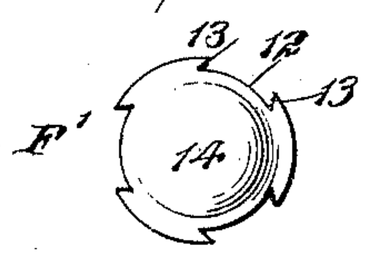
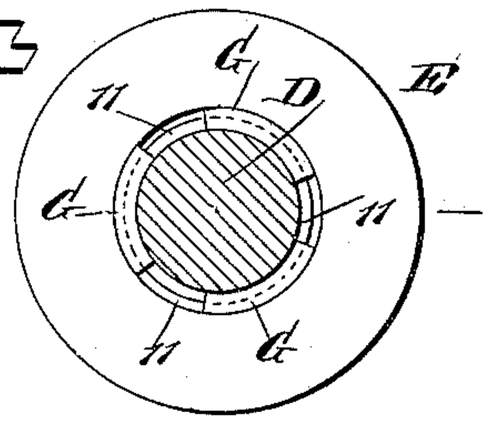


Fig 3



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UNITED STATES PATENT OFFICE.

MARTIN R. DRISCOLL, OF FRISCO, UTAH.

STAMP.

SPECIFICATION forming part of Letters Patent No. 652,095, dated June 19, 1900.

Application filed June 23, 1899. Serial No. 721,582. (No model.)

To all whom it may concern:

Be it known that I, MARTIN R. DRISCOLL, of Frisco, in the county of Beaver and State of Utah, have invented a new and useful Improvement in Stamps, of which the following is a full, clear, and exact description.

My invention relates to an improvement in stamps for stamp-mills, and particularly to the manner in which a stamp head or boss is secured to a stamp.

One object of my invention is to provide a means for attaching a stamp to a boss so that the hitherto troublesome necessity of dressing the end of the stem to fit a socket in the head or boss is avoided and the liability of the stem to breakage is greatly reduced and so that in the event of the breakage of the stem the fracture will be comparatively small and may be expeditiously and conveniently drifted out from the stamp head or boss.

Another object of the invention is to assure a firm contact between the stem and stamp head or boss and in a simpler, less expensive, more effective, and more expeditious manner than heretofore.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 represents a stamp head, stem, and mandrel of a stamp-mill, together with the means for operating the same. Fig. 2 is an enlarged view, partly in side elevation and partly in section, of the boss or head of the stamp and likewise a side elevation of that portion of the stem that enters the boss and a vertical section through the device employed for attaching the stem to the boss. Fig. 3 is a horizontal section taken practically on the line 3 3 of Fig. 2. Fig. 4 is a side elevation of the plug and one of the straps or keys used in connection with the plug, the said parts constituting a portion of the fastening device for the stem and boss. Fig. 5 is an inner face view of one of the straps of the fastening device, and Fig. 6 is an end view of the plug of the fastening device.

A represents a platform or floor; B, a drive-shaft; C, a driving-pulley connected with said shaft; D, the stem of a stamp-mill, and E the head or boss connected with the stem, said head or boss being provided with the usual shoe *e*. The drive-shaft B is represented as provided with a cam *b* of any approved construction, adapted for engagement with a collar *b* on the stem D.

F represents a portion of the base receiving the material to be stamped, and *f* a die for said base.

As stated, the improvement consists in the means for attaching the stem to the stamp head or boss E. To that end the stamp head or boss is provided with the usual drift-opening 10, extending horizontally from side to side of the stamp head or boss, which drift-opening is in communication with a vertical socket 11, that extends from the drift-opening to the upper surface of the head or boss E. As shown in Fig. 2, the walls of the lower portion of the socket or that portion below its center are straight, while from the upper portion of the straight surfaces of the walls of the said socket said walls are tapered upwardly or outwardly or are upwardly and outwardly flared, the diameter of the tapering portion of the socket 11 being of greater diameter than the diameter of the stem D, adapted to enter said socket, which stem at its lower end is untrimmed and is not in the least reduced, so that the stem is of equal strength throughout its length. A plug F′ is adapted to fit snugly in the straight lower portion of the socket 11, and this plug is provided with dovetail or tapering recesses 12 in its peripheral surface, the contracted portions of the recesses being at the upper portion of said plug, and the side wall of each recess 12 is undercut, as shown in Fig. 6 at 13. The upper surface 14 of the plug F′ is convexed, as is likewise its bottom surface 15, and when the plug is in position in the socket 11 the bottom of said plug extends into the drift-opening 10.

In connection with the plug F′ a series of straps, arms, or keys G is employed, corresponding in number to the number of recesses 12 in the periphery of said plug F′. The straps or keys G are of like formation and are preferably made in one piece, com-

prising a body-section 16 and a foot-section 17. The body-section is longer than the foot-section, and both of them are tapering or dovetailed; but the taper of the sections is in opposite directions, the contracted ends of the two sections meeting. The foot-section 17 is concaved upon its inner face, and its outer face is convexed proportionately to the convexity of the periphery of the plug F'. The foot-section 17 is of such dimensions that it will snugly enter a recess 12 in the said plug, and the side edges of the foot-section of a strap or key are beveled, so as to fit snugly in the undercuts 13. Under this construction the foot-sections of straps or keys may be placed in position in the recesses 12 without danger of the straps or keys leaving or shifting from the plug when the latter is adjusted to the stem for lowering into the socket of the boss.

The inner face 18 of the body of each strap or key is concaved and the outer surface is convexed. The said outer surface of the body of each strap or key is adapted to fit snugly against the tapering walls of the socket 11 when the plug and straps are introduced into said socket. Therefore the body-section increases in thickness from its bottom portion upward, but the inner face 18 of each strap or key is adapted to fit snugly to the cylindrical surface of the stem D, that is to be driven between the body portions of said straps or keys. The inner face 18 of the body portion of each strap or key is provided with transverse ribs 19 in order that the said straps or keys may take firm hold on the exterior of the stem D.

The plug F' is convexed at the top for the purpose of centralizing the pressure of the stem in the event the end of the stem should not be quite square as a result of a break. The bottom of the plug F' is convexed in order that the drift may be used more effectually in driving out the stub when the stem breaks. It will be understood that if the bottom of the plug were flat it would present sharp corners that would cut into the drift before the plug could be started. Therefore the convexed bottom is of great utility. After the parts of the stem-holder have been properly assembled the stem-holder is adjusted to the stem and held to such adjustment until the stem has been lowered into the socket 11 of the boss, after which it is driven home. Thus it will be observed that the hitherto troublesome necessity of dressing the end of the stem to fit the socket in the boss is completely done away with and the liability of the stem to break is greatly reduced by reason of having a joint, as it were, midway of the socket, which alleviates the vibratory strain on the stem at its intersection with the boss. Furthermore, it will be understood that in the event of a break there will be only three inches of the stem lost, whereas when the tapered stem is employed under the old method of fastening the stem there would be a loss of at least six inches, and yet the improved plug of the stem-holder, which is the cause of this saving, has the same adhesion as the stem would have if it occupied its place. The straps are preferably of such width at the top that they are separated somewhat when properly grouped in the plug.

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

1. The combination of the head or boss having a socket with a transverse drift-opening at the bottom, a plug having a convexed lower surface projecting into said opening, the stem extending into the socket, and means for connecting the stem with the plug.

2. The combination of the head or boss having a socket substantially cylindrical at its lower portion and widened at its upper portion, a plug located in said lower portion of the socket, keys engaging the plug at the periphery and extending upwardly at the periphery of the widened portion of the socket, and a stem held between the upper portions of the keys.

3. The combination of the head or boss having a socket open at its upper end, a plug located in the lower portion of the socket and having a convexed upper surface, arms engaging the plug at the periphery and extending upwardly therefrom in the socket, and a stem held between the upper portions of the arms and engaging the convexed surface of the plug.

4. In a stamp-mill, a stamp head or boss having a socket provided with a tapering portion and a straight lower portion, a plug fitted to the straight portion of the socket, straps or keys fitted in the said plug and arranged to conform at their outer side surfaces to the taper of the tapering portion of the socket, the keys above the plug inclosing a central space and being arranged for engagement with the cylindrical exterior surface of the stem, for the purpose described.

5. The combination of the head or boss having a socket substantially cylindrical at its lower portion and widened at its upper portion, a plug located in said lower portion of the socket, keys having foot-sections inserted in the peripheral portion of said plug, and body-sections located above the plug and having convexed outer and concaved inner surfaces, the convexed outer surfaces being longitudinally tapered, and a stem held between the upper or body portions of the keys.

6. The combination of the head or boss having a socket open at its upper end, a plug located in the lower portion of the socket, arms connected with the plug and extending upwardly at the periphery thereof, and a stem held between the arms above the plug.

7. The combination of the head or boss having a socket open at its upper end, a plug located in the lower portion of the socket, arms connected with the plug and extending upwardly at the periphery thereof, and a stem

held between the arms above the plug, the inner surfaces of said arms having transverse ribs to better hold the same.

8. A fastening device adapted to attach a stem to a stamp head or boss, the said fastening device consisting of a plug, and straps comprising a longitudinal straight foot-section having a dovetail connection with the plug at its exterior, each strap being also provided with an upwardly-flaring body-section having a concaved inner and a convexed outer face, the outer face of the body of each strap being longitudinally tapered, and the inner face of the body of each strap being roughened, as and for the purpose specified.

9. In a stamp-mill, a fastening device for attaching a stem to a stamp head or boss, the said fastening device consisting of a plug having a convexed upper and a convexed bottom surface, straps comprising longitudinal straight foot-sections having a double dovetail connection with the said plug at its periphery, and an upwardly-flaring body-section outwardly and longitudinally tapered, the outer surface of the body-section of each strap being convexed and the inner surface concaved and adapted to be fitted to the cylindrical exterior surface of a stem, as and for the purpose described.

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Witnesses:
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