

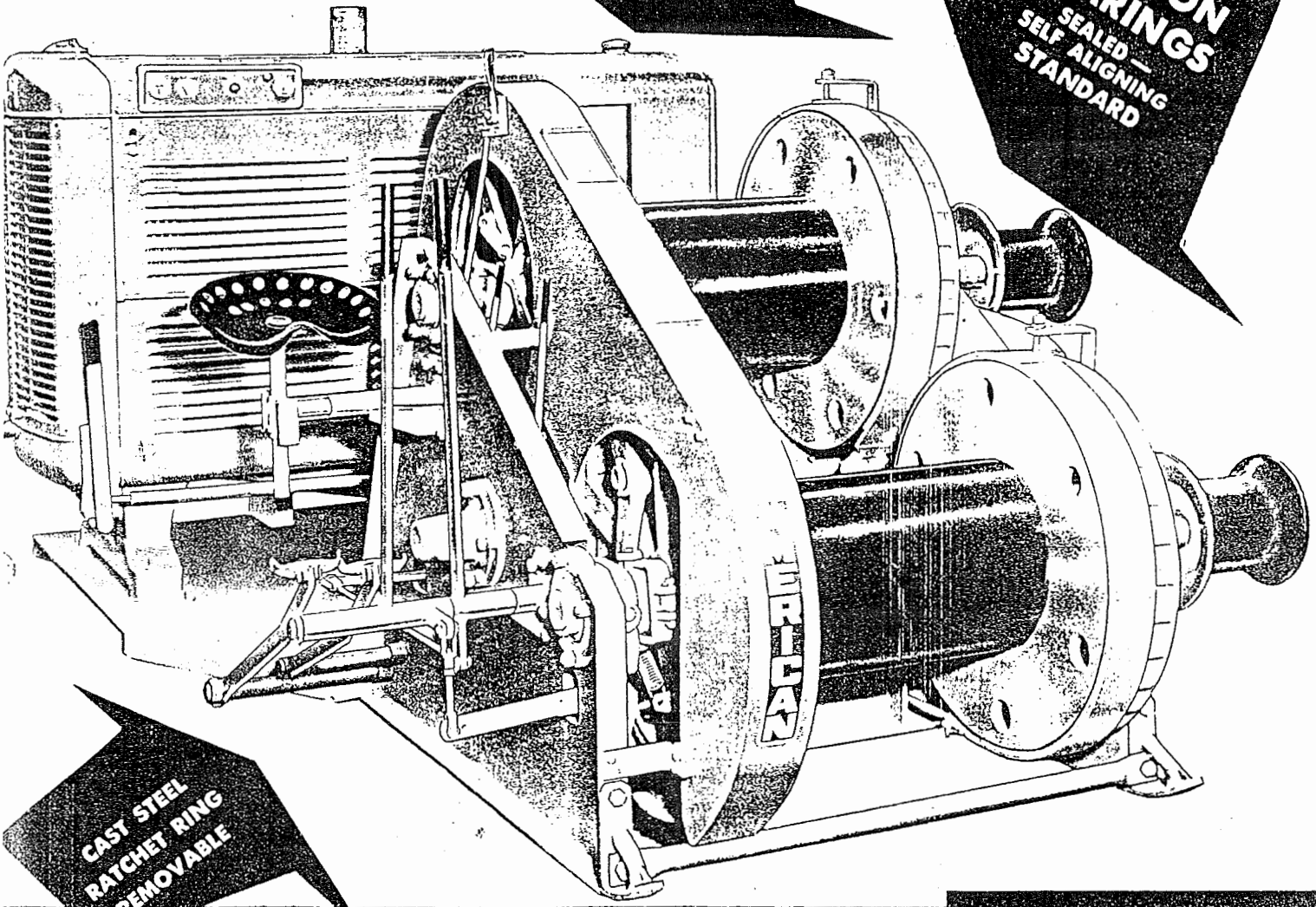
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JUN 23 1938

Here's a dependable hoist, designed for hard work—built to last. It's compact with no excess weight to handle, requires little maintenance and because it's so easy to operate will step up work output on any job.

**RIGID
STRUCTURAL
STEEL
BED & SIDE
FRAMES**

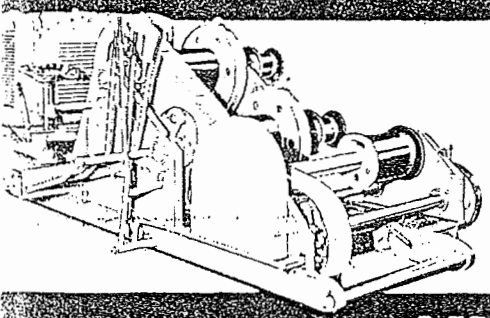
**ANTI-FRICTION
BEARINGS**
SEALED —
SELF ALIGNING
STANDARD



**CAST STEEL
RATCHET RING
REMOVABLE**

AMERICAN HOIST MODEL 120-B

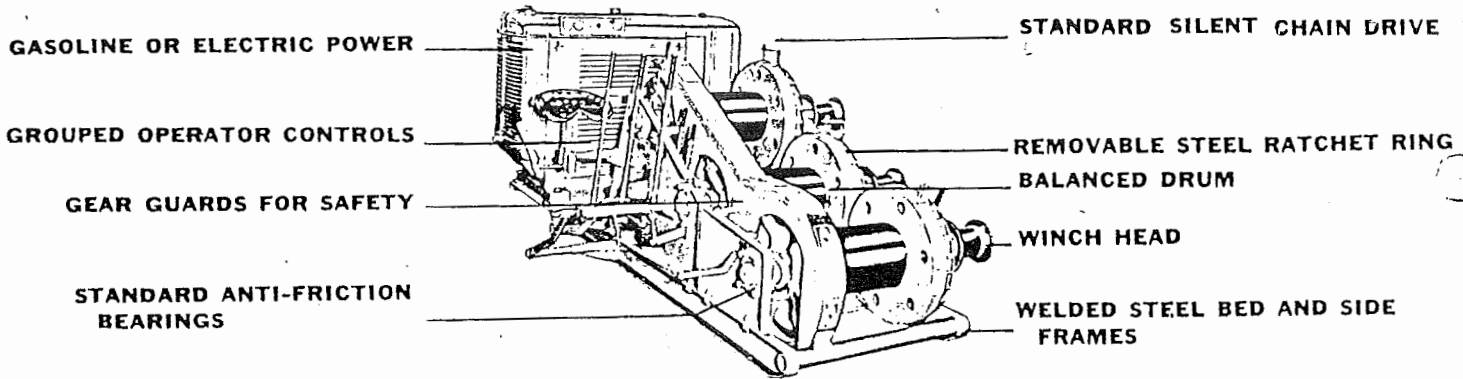
CATALOG NO. 100-B-172



SWINGER FOR BOTH
TWO AND THREE
DRUM HOIST

AVAILABLE WITH OR
WITHOUT POWER

AMERICAN BUILDS THE HOISTS



Specifications **MODEL 120-B** HOIST

CAPACITY (on each drum)	12,000 lbs. SLP ON SECOND LAYER OF ROPE		
DIMENSIONS	Width	Height	Length
Double Drum	7' 9"	59"	10' 7"
Three Drum	7' 10"	68"	14' 8"
WEIGHT (Less Power)			
Double Drum	6040 lbs.		
Three Drum	9000 lbs.		
ROPE CAPACITY ON DRUMS	Dia. of Rope	Work	
	5/8"	2620 ft.	
	3/4"	1884 ft.	

CONSTRUCTION FEATURES

BED AND SIDE FRAMES—Heavy welded steel to easily absorb severest shock—ends formed to permit easy skidding and protect gears when hoist is moved.

DRIVE—Silent chain drive from engine. Efficient smooth economical power transmission. Standard—available through leading distributors everywhere.

SHAFTS—Heavy alloy steel.

BEARINGS—Standard, self aligning, sealed ball, cartridge type . . . require lubrication once a year. Get greatest efficiency possible from your power.

GEARS—Drum gears cast steel — machined teeth. Cut steel pinion meshes smoothly. No need to "grind" in on job. Drum gears are interchangeable.

FRICTION CLUTCHES—Contracting band—lining of woven asbestos. Easy to adjust or remove for re-lining.

FRICTION BRAKES — Contracting band. Brake located on opposite end of drum from clutch for perfect balance and cooler running. Lining of woven asbestos—bands reversible to equalize wear—easy to adjust or remove.

DRUMS—Barrels 14" dia., 26" long with 28" flange. Barrels fully machined. Two drums turn in same direction—wind rope in over. Third drum winds rope in under.

RATCHET AND DOGS — Cast steel ratchet ring bolted to brake drum easily removed or replaced. Dogs are chisel, compression type. Dog drops out of engagement when load is hoisted. Safest arrangement known.

AMERICAN HOIST

& DERRICK COMPANY

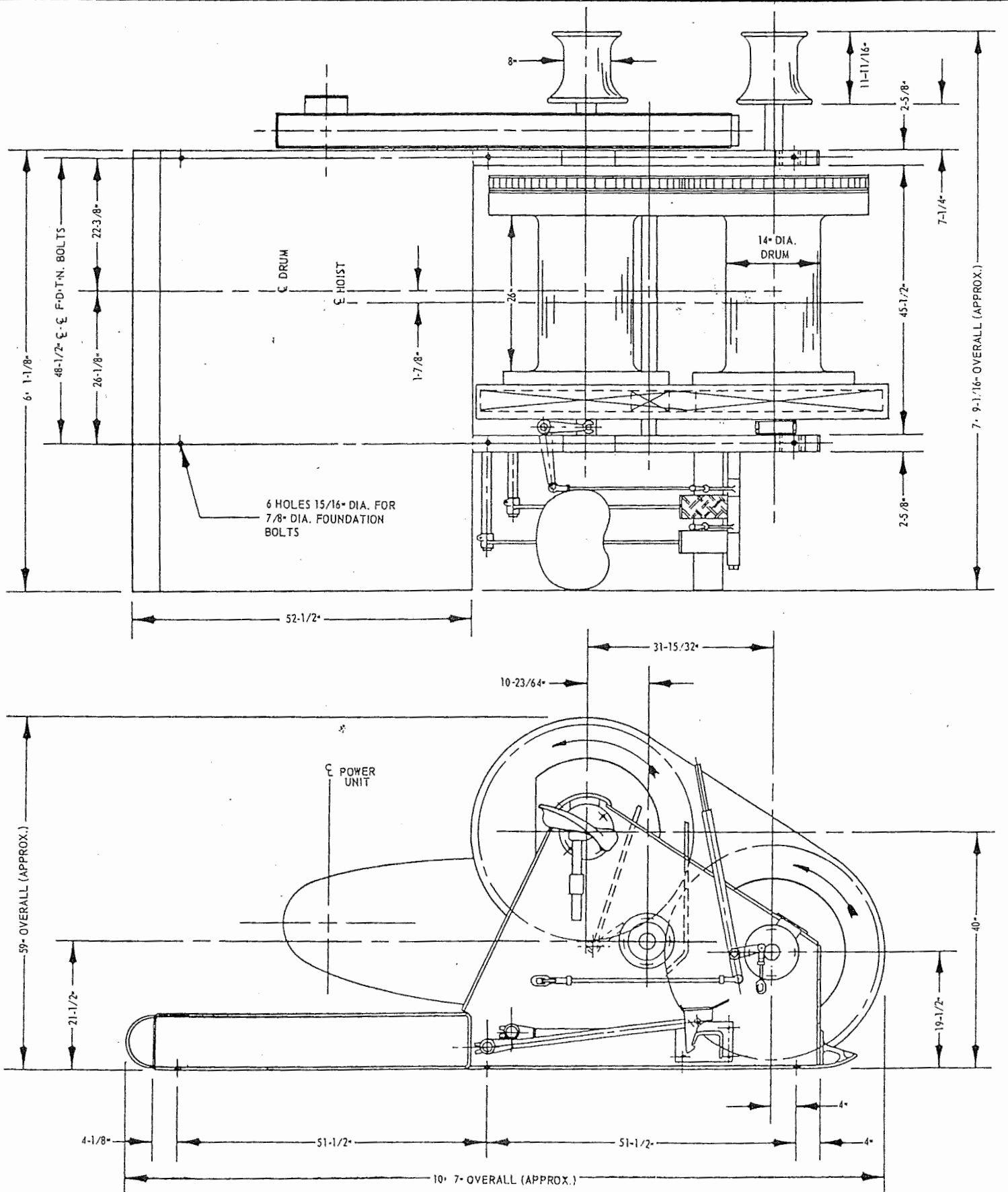
ST. PAUL, MINNESOTA 55107

Established 1882

DRUM CAPACITIES
Model 120B Hoist
14" Dia. x 26" Drum - 28" Flange Dia.

Layer	Rope Pitch Dia.	Rope in Layer	Rope on Drum	Single Line Pull Of Wrap	Ratio of Speed To Rated Speed Second Wrap
5/8" DIA. CABLE					
1	14.63	141	141	12000	
2	15.67	151	292	12000	1.00
3	16.71	161	453	11200	1.07
4	17.76	171	624	10600	1.13
5	18.80	181	805	10000	1.20
6	19.84	191	996	9450	1.27
7	20.89	202	1198	9020	1.33
8	21.93	212	1410	8580	1.40
9	22.98	222	1632	8170	1.47
10	24.02	232	1864	7840	1.53
11	25.06	242	2106	7500	1.60
12	26.11	252	2358	7180	1.67
13	27.15	262	2620	6940	1.73
3/4" DIA. CABLE					
1	14.75	120	120	12000	
2	16.01	130	250	12000	1.00
3	17.27	140	390	11100	1.08
4	18.53	151	541	10320	1.16
5	19.79	161	702	9670	1.24
6	21.06	172	874	9100	1.32
7	22.32	182 _{1/2}	1056	8630	1.39
8	23.58	192	1248	8160	1.47
9	24.84	202	1450	7750	1.55
10	26.10	212	1662	7360	1.63
11	27.36	222	1884	7030	1.71
7/8" DIA. CABLE					
1	14.88	104	104	12000	
2	16.35	114	218	12000	1.00
3	17.83	125	343	11000	1.09
4	19.31	135	478	10170	1.18
5	20.79	146	624	9450	1.27
6	22.26	156	780	8830	1.36
7	23.74	166	946	8280	1.45
8	25.22	177	1123	7800	1.54
9	26.70	187	1310	7360	1.63

DIMENSIONS
Model 120B Single or Double Drum Hoist



HOIST BRAKE DUTY CYCLE

Hoists are designed primarily to lift and secondarily to lower. They are generally selected to provide a specific lifting capacity and speed with the usual lowering requirement that of handling an empty cage or bucket. In most instances the heat dissipating capacity of the standard hoist brakes will suffice.

Where extremes of height, weight to be lowered or duty cycle are encountered the brake capacity should be analyzed. The following sheets provide a simple and accurate means for making this analysis.

If it is found that the brake capacity of the selected hoist is insufficient for the lowering application the alternatives are to use double width brakes now shown as an extra in the price book or if still lacking to use a larger hoist.

Examples:

Hoisting requirements	- 6500# L.P. @ 250 F.P.M.
Load lowering requirements	- 1500# L.P. lowering 175 feet
Duty cycle desired	- 2 minutes

For hoisting requirement use the model 70B hoist. For load lowering requirement refer to the model 70B hoist graph. To lower 1500# 175 feet requires a time cycle of three minutes. Therefore the standard brake of the model 70B hoist does not have sufficient heat dissipating capacity.

Extra wide brakes provide approximately 50% greater heat dissipating capacity on the models 70B to 120B inclusive giving a factor in using the graphs of 1.5.

Applying this factor of 1.5:

$$1500\# \text{ load} \div 1.5 = 1000$$

On the graph the line marked 1000 intersects the two minute time cycle with 175 feet lowering distance. Therefore the model 70B hoist with extra wide brake will handle all the requirements.

Extra wide brakes require special manufacture - apply to factory for shipment.

MODEL 120B HOIST
Line Pull and Speed Ratings
With Available Power Units

Ratings on Standard 14" Dia.
Drum 2nd Layer 3/4" Rope

Power Unit	Single Line Pull - Lbs.	Single Line Speed - FPM
GASOLINE		
Clutched PTO		
82-HP Minneapolis Moline 425B-6A, 6 cyl., 1600 RPM	12000	215
104-HP Waukesha 135 GZU, 6 cyl., 1900 RPM	12000	255
109-HP Minneapolis Moline 605B-6A, 6 cyl., 1600 RPM	12000	260
DIESEL		
Clutched PTO		
72-HP Minneapolis Moline D-425-6A, 6 cyl., 1600 RPM	12000	175
90-HP Cummins NHC-4-IP, 4 cyl., 2000 RPM	12000	220
111-HP GM 4-71, 4 cyl., 2100 RPM	12000	280
Single Stage Torque Converter		
90-HP GM 3-71, 3 cyl., 2100 RPM	12000	170
90-HP Cummins NHC-4-IP, 4 cyl., 2000 RPM	12000	170
130-HP GM 4-71, 4 cyl., 2100 RPM	12000	255
ELECTRIC		
60-HP Electric Motor	12000	165
75-HP Electric Motor	12000	205
20-HP Gearhead Electric Motor	12000	55

See Price Book for weights and prices.

AUTOMATIC BACK-UP BRAKE
GENERAL PURPOSE HOISTS
MODELS 70B-90B-120B

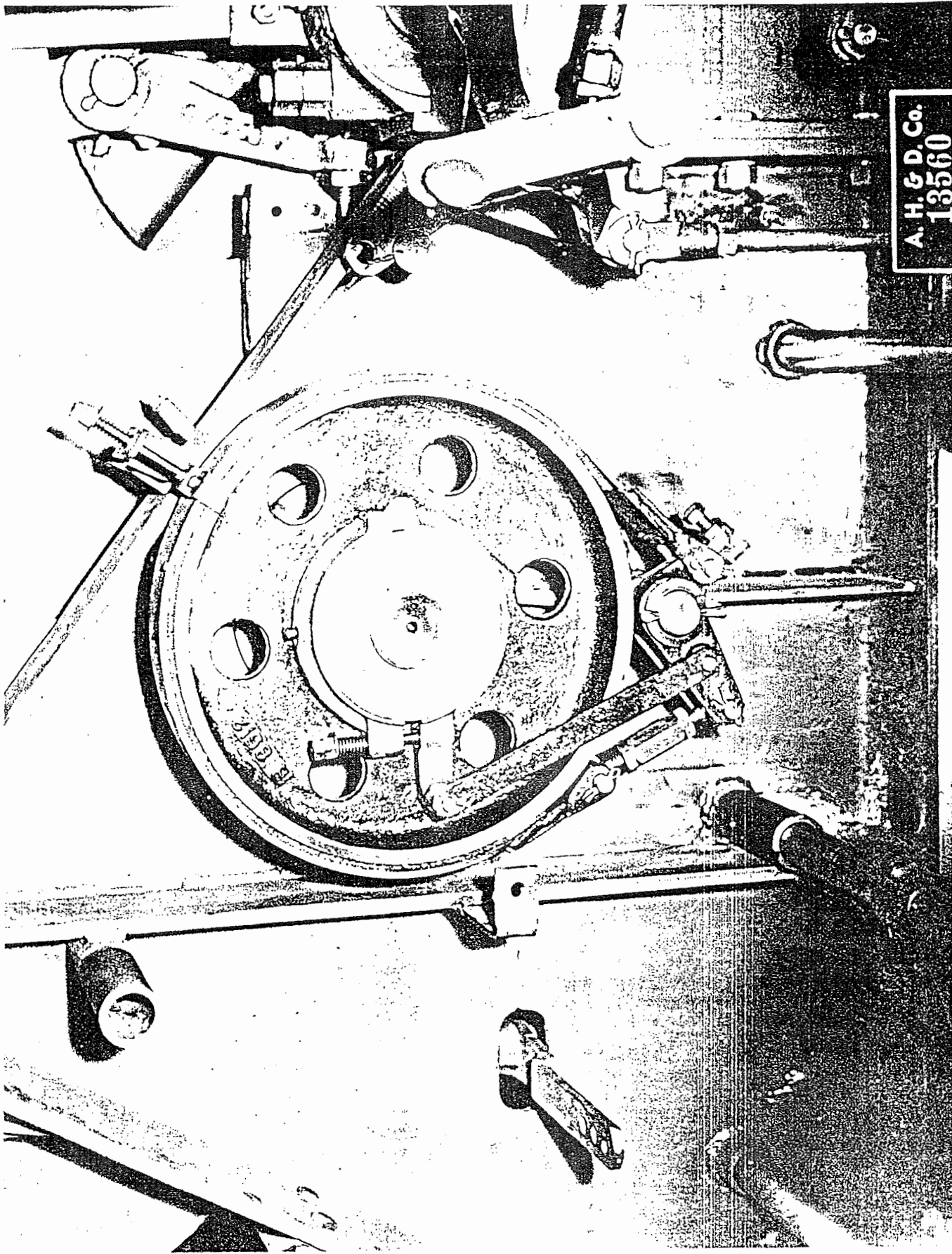
This brake is standard equipment on all electric driven hoists of the above models and very frequently used on gasoline or diesel engine driven hoists. The purpose of this brake is to guard against dropping the hoisted load should the power to the hoist fail as in the case of electric power failure or the stopping of the gasoline or diesel engine.

A high-grade iron brake wheel is mounted on the right-hand end of the drive shaft. A bronze hinged friction collar, mounted on the hub of the brake, is actuated by friction, and is spring adjusted. See cut page 30.

The instant there is rotation of the drive shaft in the reverse direction, the friction collar applies a slight force to the reach rod which acts on the long bell-crank arm of the differential mechanism causing a tightening up of the band connected to this same crank end. The other end of the band connects to the short bell-crank arm. The actuating of the bell crank causes a tightening of the brake band which due to the self-energizing action of the band causes the braking torque to increase as the shaft torque increases. The action of this brake is instantaneous and it requires only a slight motion of the brake wheel before the brake stops the backward rotation.

The automatic back-up brake can be supplied for existing gasoline or diesel driven hoists where safety regulations require it or when such hoists are being converted to electric power.

No alterations to the hoist are necessary when attaching.



MODEL 120B HOIST BRAKE DUTY CYCLE
(For Tower Work)

