

# **GREAT NORTHERN RAILWAY LINE.**

GREAT NORTHERN RAILWAY.

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CASCADE DIVISION

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## **TIME TABLE NO. 45.**

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EFFECTIVE 12:01 A. M.

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**SUNDAY, JAN. 3d, 1904.**

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General Rules, Regulating the Movement of Trains, are contained in Book of Rules for the Government of the Operating Department,  
a copy of which must be in possession of each employe in train service while on duty.

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This Time Table is not intended for the information of the public, nor as an advertisement of the time or hours of any  
train. The Company reserves the right to vary from it at pleasure. It is for  
the information of employes only.



BETWEEN LEAVENWORTH AND SEATTLE.

Table with columns for WEST BOUND and EAST BOUND, including train numbers (No. 401, 215, 107, 105, 101, 3, 1), times, and station names (Leavenworth, Drury, Chitwaukum, Nason Creek, Merritt, Gaynor, Barne, Cascade Tunnel, Wellington, Alvin, Cora, Madison, Nippon, Tonga, Skykomish, Grotto, Halford, Index, Roy, Gold Bar, Startup, Sultan, Monroe, Snohomish, Lowell). Includes a 'EFFECTIVE 12:01 A. M. JAN. 3d, 1904.' notice.

West Bound Trains are Superior to East Bound Trains of the same class. See Rule 43. All trains will be handled under absolute control and without regard to making schedule time at all points where land or snow slides or falling rock are liable to be encountered. Destroy all Time Tables of previous date. (See Rule 5.)

Freight trains will use Northern Pacific tracks between Lowell and Delta, and will be governed by N.P. time table between these points



# BETWEEN PACIFIC AVENUE AND BROWNSVILLE.

EAST BOUND						EFFECTIVE 12:01 A. M. JAN. 3d, 1904.	WEST BOUND					
Third Class	Second Class	Second Class	Second Class	First Class	First Class		First Class	First Class	Second Class	Second Class	Second Class	Third Class
No. 409	No. 407	No. 111	No. 109	No. 105	No. 101		No. 102	No. 106	No. 110	No. 112	No. 408	No. 410
Freight Daily Except Sunday	Freight Daily	Mixed Daily Except Sunday	V. T. RY. Mixed Daily	Passenger Daily	Passenger Daily	Passenger Daily	Passenger Daily	V. T. RY. Mixed Daily	Mixed Daily Except Sunday	Freight Daily	Freight Daily Ex. Sunday	
		6.00 AM De	10.35 AM De		10.20 AM De	0 107.2	Brownsville	144.0 NW	D.	3.00 PM Ar		
		6.05	10.40		10.25	47 105.5	Liverpool	142.3 MN	D.	2.50	3.20 PM Ar	
		6.15	10.45		10.30	0 103.2	Bon Accord	140.0		3.15	7.55	
		6.35	11.00		10.45	42 96.6	Port Kells	133.4		3.00	7.45	
		6.50	11.15 AM Ar		10.57	44 91.3	Cloverdale	128.1		2.45	7.20	
		7.10			11.09	0 86.2	Hazelmere	123.0		2.30 PM De	7.00	
		7.20 Ar			11.17	37 83.1	Douglass B.C.	119.9		1.45 De	6.40	
		7.25 De			11.19	18 82.8	Blaine	119.6 BN	D.	1.40 Ar	6.25 De	
		7.37 Ar			11.20	42 76.4	Custer	112.2		1.35 De	6.13 Ar	
		8.00 De			11.30	0 72.9	Enterprise	109.7		1.32 Ar	6.10 De	
		8.40			11.45	42 70.0	Ferndale	106.8 FD	D.	1.18	6.00 Ar	
		8.55			11.51	0 67.7	Brennan	104.5		1.10	5.35	
		9.30			12.01 PM	42 60.2	Whatcom	97.0 HM	D.	1.02	5.15	
		9.45			12.06	0 58.2	Fairhaven	95.0 FN	D.	12.55	5.00	
	10.40 AM De	10.25 AM Ar		7.00 AM De	12.25	67 54.0	Chugkanut	90.8		12.40	4.35	
	10.55			7.08	12.30	42 58.2	Fairhaven	95.0 FN	D.	12.30	4.15 PM De	
	11.25			7.18	12.43	67 54.0	Chugkanut	90.8		12.30	4.00 PM Ar	
	12.01 PM Mt 102			7.30	1.00	70 48.1	Samish	84.9		12.16	3.45	
	12.35			7.39	1.09	67 44.4	Bow	81.2 BO	D.	12.01	3.10	
	1.20			7.50	1.20	67 44.4	Bow	81.2 BO	D.	12.01	2.30	
8.40 AM De	1.58			8.00	1.28	30 39.7	Belleville	78.5		11.52	1.55	
9.10	3.00			8.19	1.40	100 37.1	Burlington	78.9 BU	D.	11.40	1.20	
9.40 Mt 408	3.30			8.31	1.52	60 33.0	Mt Vernon	69.8 NB	D.	11.30	12.50 PM De	
10.39 Mt 102	4.20			8.47 Mt 408	2.09	84 27.6	Fir	64.4 FR	D.	11.14	11.10 PM De	
11.10	5.05 Mt 410			9.00	2.22	100 20.5	Stanwood	57.3 B	D.	10.56	10.25	
12.10 PM	6.10			9.23	2.42	29 15.0	Silvana	51.8 NA	D.	10.39	9.40	
12.50 PM Ar	7.00			9.43 Mt 102	2.57	95 8.9	Marysville	40.7 MS	D.	10.24	8.47	
						0 0.0	Delta	36.8 PG	D.	10.00	8.45	
										9.48 De	4.10	
										9.43 Ar	3.25 PM De	

ALL TRAINS WILL USE NORTHERN PACIFIC TRACKS BETWEEN DELTA AND N. P. JUNCTION, 1.2 MILES.

				9.47	3.02	0	N. P. Junction	32.1		9.38	7.05				
				9.55	3.09	127	Pacific Avenue	34.1	D.	9.34 AM De	7.00 PM De				
No. 409 daily ex. Sunday	No. 407 daily	No. 111 Mixed Daily ex. Sunday	No. 109 Mixed V. T. RY. Daily	No. 105 daily	No. 101 daily					No. 102 daily	No. 106 daily	No. 110 Mixed V. T. RY. Daily	No. 112 Mixed Daily ex. Sunday	No. 408 daily	No. 410 daily ex. Sunday

East Bound Trains are superior to west bound trains of the same class. (See Rule 43.)

## SPECIAL RULES---Pacific Avenue to Brownsville.

### Destroy all Time Tables of Previous Date [See Rule 5.]

All except first-class trains must be under absolute control while passing through yard limits at Delta, Burlington, Fairhaven and Whatcom. West yard limit board Whatcom, located 400 feet west of round house track switch. Delta yard limit commences 500 feet east of junction switch, east of coal chute and extends to draw bridge at west end of Delta yard on Coast Line and around the point on the Bay side (old Coast Line) to Everett jct. yard limit board. Between the hours of seven (7) p. m. and seven (7) a. m. the yard limit rules are suspended between Everett Junction and Delta Yard and all trains will be operated by train orders over this district. (Going toward Seattle is west bound.)

Switch at Everett Junction will be kept set for main line.  
 Destroy all time tables of previous date. See rule No. 5.  
 Standard clocks are located at telegraph office at Delta and Whatcom.  
 Trains on this division will be governed by Pacific Standard time.  
 Conductors of all trains, and Engineers running without conductors, must register their arrival and departure at Pacific Avenue, N. P. Junction, Delta, Belleville, Whatcom, Blaine, Cloverdale and Brownsville, stating whether they are or not

carrying signals. No train will be considered registered unless such notation is made, and in case of omission, Conductors of trains affected will govern themselves accordingly and report the fact to the Superintendent.  
 No trains will cross international boundary at Blaine without permission of customs officers.  
**Trains must not follow each other out of stations less than 15 minutes apart.**  
 Pacific Avenue, Whatcom and Brownsville are terminals for passenger trains. Delta Whatcom and Brownsville for freight trains.  
 All trains must stop at draw bridges and railroad crossings at a distance not exceeding 200 feet from same.  
 Conductors of trains hauling logs must stop on all summits and see that brakes are properly set before descending grades.  
 Trains 407 and 408 will not carry passengers.  
**All trains will be handled under absolute control and without regard to making schedule time at all points where land or snow slides or falling rock are liable to be encountered.**  
**J. C. DEVERY, Chief Train Dispatcher.**



## SKAGIT BRANCH.

EAST BOUND							STATION NUMBERS Distance from Anacortes	EFFECTIVE 12:01 A. M. JAN. 3d, 1904	TELEGRAPH CALLS Capacity of Sidings in Cars	WEST BOUND						
Third Class No. 137	First Class No. 135	First Class No. 133	First Class No. 129	First Class No. 127	First Class No. 125	First Class No. 121				First Class No. 122	First Class No. 126	First Class No. 128	First Class No. 130	First Class No. 134	First Class No. 136	Third Class No. 138
Freight Daily Except Sunday	Passenger Daily	Passenger Daily	Passenger Sunday Only	Passenger Sunday Only	Mixed Daily Ex. Sunday	Mixed Daily Ex. Sunday				Mixed Daily Ex. Sunday	Mixed Daily Ex. Sunday	Passenger Sunday Only	Passenger Sunday Only	Passenger Daily	Passenger Daily	Freight Daily Except Sunday
						7.00 AM De	on 54 53.7	Rockport.....YW	RO 42	6.30 PM Ar						
						7.25	on 48 47.9	Faber.....	67	5.50						
						7.45	on 44 43.5	Grassmere.....W	42	5.20						
						8.10	on 39 38.2	Birdsview.....	44	4.50						
			7.00 PM De	10.40 AM De	8.00 AM De	9.00	on 34 33.1	Hamilton.....T	HM 47	4.20	9.45 PM Ar	2.35 PM Ar	9.35 PM Ar			
			7.15	10.50	6.20	9.25	on 30 29.8	Lyman.....W		3.20	9.20	2.23	9.23			
					6.50	9.55	24.5	Cokedale Junction.....	22	2.40						
		8.30 AM De	7.40	11.10	7.20	10.35	on 23 21.3	Woolley.....Y	WL 27	2.10	9.00	2.00	9.00	8.20 AM Ar		
							on 20 19.0	Sterling.....	8							
12.45 PM De	8.45 PM De	8.45	8.00 PM Ar	11.30	7.55 AM Ar	11.15 AM Ar	on 17 16.5	Burlington.....Y	BU 54	1.30 PM De	8.30 PM De	1.35 De	8.45 PM De	8.05 AM Ar		
12.55	8.52	8.52		11.37			on 15 13.7	Avon.....	16			1.13	7.45	8.30 PM Ar		
1.06	8.59	8.59		11.44			on 13 11.1	Fredonia.....	5			1.05	7.38	8.24		
1.18	9.04	9.04		11.49			on 11 9.6	Whitney.....	20			1.00	7.30	8.17		
							on 8 7.4	Draw Bridge.....					7.30	8.09		
1.39	9.21	9.21		12.06 PM			on 5 4.1	Fidalgo.....					7.14	7.53		
1.54	9.32	9.33		12.18			on 2 0.5	Tenth Street..TWC	20				7.03	7.43		
2.00 PM Ar	9.35 PM Ar	9.35 AM Ar		12.20 PM Ar			on 0 0.0	Anacortes.....	X 10				7.00 AM De	7.40 PM De		
Daily Ex. Sunday	Daily	Daily	Sunday Only	Sunday Only	Daily Ex. Sunday	Daily Ex. Sunday				Daily Ex. Sunday	Daily Ex. Sunday	Sunday Only	Sunday Only	Daily	Daily	Daily Ex. Sunday

### NOTE.—CHANGE OF DIRECTION.

DESTROY ALL TIME TABLES OF PREVIOUS DATE. (SEE RULE 5.)

East Bound Trains are superior to West Bound Trains of same class. (See rule 43.)

All Trains will Register at Anacortes, Burlington, Hamilton and Rockport.

Yard limit at Burlington 2,500 feet west of transfer switch. All trains must be moved under perfect control expecting to find trains occupying main line within these limits.

All Trains will come to full stop Two Hundred Feet from Draw Bridge, and will not proceed until they get signal from Bridge Tender, nor exceed Four Miles an hour while crossing Draw Bridge.

All Trains will come to Full Stop before passing over R. R. Crossing at Burlington and Woolley.

Water tank at Minkler's Mill, two miles east of Lyman.

### NAME AND LOCATION OF SPUR TRACKS.

NAME OF SPUR	Loca- tion M. P.	STATIONS		Distance	Track Opens	Capacity Cars	NAME OF SPUR	Loca- tion M. P.	STATIONS		Distance	Track Opens	Capacity Cars	NAME OF SPUR	Loca- tion M. P.	STATIONS		Distance	Track Opens	Capacity Cars	
		WEST	EAST						WEST	EAST						WEST	EAST				
House Track.....	0.0	Anacortes		0.1	West	4	Hawkins Spur.....	11.7	Fredonia		0.7	West	5	Hitchcock-Kelly.....	29.4	Lyman			East	3	
Repair Track.....	0.6	Tenth St.		0.2	West	15	J. C. Waugh Spur.....	13.6	Avon		0.3	East	2	McLeod's Spur.....	39.1	Lyman		0.2	East	3	
Store Track.....	0.6	Tenth St.		0.2	West	7	Burlington Mill Spur.....	16.0	Burlington		0.6	East	6	Hop Ranch Spur.....	39.6	Lyman		0.8	East	3	
Skagit Mill Spur.....	1.1	Tenth St.		0.7	West	28	Holbrook's Spur.....	20.8	Woolley		0.4	East	8	L. L. Spur.....	33.0		Hamilton		0.2	East	3
Storm Mill Spur.....	1.5	Tenth St.		0.9	West	12	Sound Iron Spur.....	21.2			0.0	East	7	Alder Spur.....	35.1	Hamilton		1.9	East	27	
Cavanaugh Spur.....	2.2	Tenth St.		1.4	East	4	Johnson's Spur.....	22.2	Woolley		1.0	East	3	Hightower No. 2.....	35.5		Birdsview		1.8	East	19
Skagit Mfg. Spur.....	2.3	Tenth St.		1.7	West	6	Tyee Spur, Y.....	22.6	Woolley		1.4	Both ends		Wiley Spur.....	44.6	Grassmere		1.0	East	9	
Log Rollway.....	2.5	Tenth St.		1.9	Both ends	22	Green Mill Spur.....	24.5	Woolley		3.3	East	22	Van Horne's Spur.....	47.2		Faber		0.5	West	16
Fidalgo Mill Spur.....	3.6	Tenth St.		2.0	East	3	Duncan's Spur.....	26.0	Cokedale Jct.		1.5	East	33	Tower Mill Co.....	46.0		Faber		0.3	West	19
Gravel Pit Spur.....	6.5	Tenth St.		5.9	East	9	Minkler's Mill.....	27.6	Cokedale Jct.		3.0	Both ends	13	Hightower No. 3.....	46.8		Faber		1.0	West	15
Fox Lumber Co. Spur.....	11.8		Fredonia	0.5	West	6	Child's Spur.....	28.2	Cokedale Jct.		3.6	East	3	Sauk Spur.....	51.5		Rockport		2.0	East	2



**NAME AND LOCATION OF SPUR TRACKS.**

NAME OF SPUR	Location M. P.	STATION		Distance	Track Opens	Capacity Cars	NAME OF SPUR	Location M. P.	STATION		Distance	Track Opens	Capacity Cars	NAME OF SPUR	Location M. P.	STATION		Distance	Track Opens	Capacity Cars
		EAST	WEST						EAST	WEST						EAST	WEST			
Woods Spur	1688.1		Chiwaukum	2.5	East	11	Nail House Spur	32.8		Everett Jct.	1.0	West	24	Gaudett Spur	82.5	Alger		0.0	East	8
Poss River Spur	1728.0		Tonga	1.0	East	5	Nickerson Mach'y Co.	33.1	Everett		0.0	West	4	Samish Lake Spur	85.2		Samish Lake	0.1	East	90
Kirby Mill Spur	1732.0	Skykomish		0.1	East	12	Everett Milling Co.	33.5		Everett Jct.	1.5	East	15	Owens Spur	85.2		Off Samish Sp'r	0.1	West	5
Skykomish Mill Co.'s Spur	1732.4		Skykomish	0.3	East	20	Clark-Nickerson Mill	34.0		Everett Jct.	1.8	West	31	Lindley Spur	85.2		Off " Lake	0.1	East	1
Great Republic Mining Co.	1733.6		Skykomish	1.5	West	14	Log Dump Spur	34.0		Everett Jct.	1.8		21	Winner Shingle Co.'s Spur	81.2	Bow		0.2	West	6
Herlin Spur, Miller Riv. Co.	1733.6		Skykomish	1.5	West	4	Wheelihan Spur	34.1	Everett Jct.		1.9	West	3	McCoy Spur	80.3	Bow		1.2	West	3
Grotto Mill Spur	1735.6	Grotto		0.5	East	8	Neffa Spur	34.5		Long Siding	1.0	East	50	Alger Mineral Spur	82.5		(Old Line)			9
G. N. Shingle Co.'s Siding	1739.6		Grotto	3.8	Both ends	24	Blackman Spur	36.0	Long Siding		0.4	East	7	Blanchard Spur	84.1	Samish		1.0	West	3
Heybrook Spur	1744.7	Index		1.5	East	2	Union Slough	37.3	Marysville		1.5	East	6	Fairhaven Dock Spur	94.8		Fairhaven	0.0	West	23
Ellis Quarry Spur	1745.7	Index		0.5	West	9	Cox's Spur	42.7		Marysville	2.0	West	2	Puget Sound Mill Track	94.9		Fairhaven	0.0	West	9
Soderburg Spur	1746.9		Index	0.7	West	10	Marysville Shingle Co.	42.7		Marysville	2.0	East	3	Fairhaven Log Dump Spur	95.0		Fairhaven	0.0	West	19
May Creek Spur	1754.6	Gold Bar		0.5	West	3	Zindorf Spur	42.7		Marysville	3.9	East	2	Export Mill Spur	95.0		Fairhaven	0.0	West	10
Robinson's Spur	1755.6		Gold Bar	0.5	East	26	Kennedy Spur	45.2		Marysville	4.2	East	6	Cannery Track	95.2		Fairhaven	0.0	Both Ends	17
Black Bros. Spur	1757.4	Wallace		0.0	West	26	British Spur	45.5	Silvana		4.4	East	2	Pacific Sheet Mill	95.3		Fairhaven	0.4	East	3
Casery Spur	1759.5			1.3	East	5	Summit Mill Co.	46.0		Marysville	4.7	East	2	Loggie Spur	97		Whatcom	0.0	West	21
Sultan Lumber Co. Spur	1763.2	Sultan		1.5	West		English Spur	47.0	Silvana		2.9	East	16	Mill Spur (Simpson)	98.3		Whatcom	1.0	West	8
Owens Spur	1763.6	Monroe		4.7	East	16	Norman Spur	51.0		Silvana	1.1	East	2	LaPointe Spur	104.2		Brennan	0.0	East	2
Holmquist Spur	1767.3	Monroe		1.0	East	4	Rabels Spur	51.7		Silvana	1.8	West	2	Henry Spur	103.0	Brennan		1.0	East	2
Monroe Mill Spur	1768.0	Monroe		1.0	East	9	Washington Shingle Co.	53.4			1.1	East	3	Sand Pit Spur	108.7	Enterprise		0.5	East	17
Monroe Gravel Pit	1768.3	Monroe		0.0	West	56	Manley & Church Spur	54.2	Stanwood		1.4	East	4	Shields Spur	108.9	Enterprise		0.3	East	2
Wood and Iverson Spur	1771.3		Monroe	3.0	East	8	Hals Spur	54.3	Stanwood		1.5	West	2	Enterprise Spur	109.2		Ferndale	3.1	East	3
Cascade Cedar Spur	1775.2	Snohomish		0.3	East	27	Ketchum Spur	59.6		Stanwood	2.0	East	2	Red Cedar Shingle Co.	110.5		Custer	2.5	East	3
Creosote Spur	1780.6	Lowell		0.5	West	25	Morrison Mill Spur	61.6	Fir		2.5	East	8	McDonald Spur	113.0		Custer	1.2	East	2
House Track	1781.1	Lowell		0.0	East	25	Milltown	62.2	Fir		2.2	East	6	Melrose Spur	114.3		Custer	2.5	East	5
Seibert Spur	1781.3		Pacific Ave.		East	9	Hawley Spur	62.4	Fir		2.0	West	5	Blaine Spur	119.0	Blaine		1.9	East	
State Mill Co.	35.2		Everett	0.5	East	12	Skagit Crossing Tr. Track	63.4	Fir		1.0	East	2	Shelton Spur (off Blaine spr.)					East	2
Power House Spur	1782.2		Everett	0.1	West	5	Little Mountain Spur	67.7	Mt. Vernon		2.0	East	2	City Dock Spur (off Blaine spur)					East	81
G. N. Clay Co. Spur	10.2		Metum	2.0	West	7	Skagit Spur	69.8		Mt. Vernon	2.0	East	3	Erie Mill Spur (off City Dock Spur)					East	6
E. W. Mills Spur	12	Richmond Bch		2.3	East	2	Burlington Quarry	72.5		Burlington	0.5	East	11	Monarch Mill Spur (off City Dock Spr.)					East	14
Ready's Spur	17.4		Edmonds	0.0	West	3	Samish Pit	77.0	Belfast		0.6	East	52	Hazelmere Spur	122.4		Blaine	3.4	West	8
Sand Spur	14.0		Edmonds	3.4	West	7	Sound Shingle Co.'s Siding	79.4		Bellville	2.9	Both Ends	3	Gravel Spur	137.0		Port Kells	2.4	East	3
Hall Hill Mill Co.	32.5		Everett Jct.	0.5	East	9	Butler Spur	77.6		Bellville	1.0	East	2	Liverpool Wharf Spur	141.8		Liverpool	0.6	East	21
Weyerhaeuser Timber Co.	32.8		Everett Jct.	1.0	East	38	Desmond Spur	81.7	Alger		1.4	West	3	Dominion Bridge Co.	142.6	Liverpool		0.2	East	11
														Brownville Spur	144.5	Liverpool		2.1	East	9

**DERAIL SWITCHES.**

Deraul Switches must always be set for deraul except when in actual use, whether there are any cars on these tracks or not.

Cascade Tunnel, east passing track lead, 30 feet from main line.

Wellington, west end passing track.

Wellington Safety Switch, 70 feet west of station, on main line.

Alvin, 150 feet east of west passing track switch head block.

Index Passing track 120 feet from west head block.

Roby, west end passing track.

Ellis Quarry Spur.

Power House Spur, 105 feet from head block.

Samish Lake, M. P. 85.2, on Spur, 3635 feet north from head block.

Chuckanut, east end siding. B. B. & E. Transfer Track east end.

**Capacity of Different Classes of Engines in Tons in Addition to Weight of Engine, Tender and Caboose—Cascade Division.**

GOING EAST									
STATIONS	Ruling Grade	CLASS							
		50, 300, 500, 51	45, 45a, 48	38	39-43	37	35-36	33-34	30
		20x32 210 lb	19x32 200 lb	20x26 180 lb	19x26 180 lb	19x24 180 lb	19x24 150 lb	18x24 145 lb	17x24 145 lb
Everett to Skykomish	1.0	1200	1000	865	775	715	575	435	385
Skykomish to Cascade Tunnel	2.2	600	480	410	360	340	276	200	183
Cascade Tunnel to Leavenworth	Down								

  

GOING WEST									
STATIONS	Ruling Grade	CLASS							
		50, 300, 500, 51	45, 45a, 48	38	39-43	37	35-36	33-34	30
		20x32 210 lb	19x32 200 lb	20x26 180 lb	19x26 180 lb	19x24 180 lb	19x24 150 lb	18x24 145 lb	17x24 145 lb
Leavenworth to Cascade Tunnel	2.2	600	480	400	360	340	275	200	185
Cascade Tunnel to Lowell	Down								

The following will govern when handling empty cars: With 10 or less empty cars in a train no allowance will be made for wheel friction; with 10 to 20 empty cars in a train, add to actual weight 5 tons for each empty car for wheel friction; with more than 20 empty cars in a train add 6 tons per car for wheel friction.

Time Inspectors: Leavenworth, F. S. TAYLOR; Everett, S. O. WALLGREN; Seattle, J. F. HUNTER.

F. S. ELLIOTT, Assistant Superintendent.      W. D. SCOTT, Superintendent.      H. A. KENNEDY, Asst. General Superintendent.      GEO. T. SLADE, General Superintendent.      F. E. WARD, General Manager.



## CONTENTS OF MEDICAL CASE.

### Conductors Must Study and Familiarize Themselves with the List of Articles in the Case, and Their Uses.

- No. 1. Rubber Bandage and Tourniquet, for stopping hemorrhage; apply on sound flesh above the wound, draw tightly each time, and encircle the limb until the whole bandage is used. **Fasten securely** in slot.
- No. 2. Twelve Assorted Muslin Bandages, to hold dressings in place, assist in stopping hemorrhages, and hold splints upon fractured limbs; wind around the injured part **from below upward**.
- No. 3. Six packages of Borated Gauze, a prepared dressing for open wounds, always used to cover large wounds; **apply wet** (by dipping in solution, see No. 7) directly to the wound.
- No. 4. Four packages Absorbent Cotton. This is for making compresses, and to assist in covering a large wound; **Do not apply directly to the wound**.
- No. 5. One ounce Styptic Cotton. This Cotton is permeated with a substance which stops small hemorrhages: apply directly to small wounds and hold in place with muslin bandage.
- No. 6. Two ounces Bicarbonate Soda, for burns and scalds, one tablespoonful to a quart of water; saturate a piece of the gauze and apply over a burn or scald, and fasten with bandage.
- No. 7. One bottle Corrosive Sub. Tablets. These small tablets are to be dissolved in clean water, preferably warm, in the proportion of one tablet to a pint of water; with this solution you disinfect a wound and keep it free from infection. **THEY ARE POISONOUS** if swallowed or the solution be drunk.
- No. 8. Four Surgical Needles, to be used for closing small cuts or jagged wounds, after thoroughly cleansing with the sublimate solution.
- No. 9. One Pair Scissors, used in cutting dressings, bandages, clothing, etc.
- No. 10. One Pair Forceps, used for removing bits of gravel, and to seize a bleeding artery while it is being tied.
- No. 11. One Dozen Envelopes Catgut (two sizes), to be used in tying an artery when it is seen free and bleeding in a wound, also for closing small wounds. **Never Save any Catgut** once the envelope is open. Note directions on envelopes.
- No. 12. One Roll Adhesive Plaster, for closing small torn or cut wounds, after they are cleansed with the sublimate solution. It needs **no heat**; apply directly to the skin, which must be **perfectly dry**.
- No. 13. One Cake Red Cross Soap, used in cleansing an injured part around a wound.
- No. 14. One Can Chloroform, for anaesthesia.
- No. 15. One Ounce Antifebrine, an antiseptic powder for dusting on fresh wounds.
- No. 16. One Hand Brush, for brushing the hands and nails thoroughly with the Red Cross Soap before handling an open wound.
- No. 17. One Enamel Tray, for corrosive sublimate solution (see No. 7).
- No. 18. One Yard Wire Gauze, for making splints (see directions under fractures, No. 5).
- No. 19. One Dozen Safety Pins.
- No. 20. One Pyramid of Pins.

### RULES FOR TREATMENT OF THE INJURED IMMEDIATELY AFTER AN ACCIDENT.

1. Shock. This condition usually follows every severe injury. The chief point is to restore heat to the body as soon as the injured person is put in a comfortable position. Do this by covering with heavy coats, previously warmed, if practicable. Cut off the shoes or boots and wrap the feet in a warmed coat or blanket. Give only small dose of whiskey in hot water.
2. Hemorrhage (Bleeding). This follows shock, and is rarely severe until reaction takes place. Too much stimulation increases hemorrhage and for this reason it is best to give only a little stimulant, well warmed, and repeat the dose if reaction is delayed.
- Bleeding of two kinds: First, arterial, when the blood comes out bright and red and in spurts. Second, venous, when the blood is dark and flows in an even stream.
- A. To stop hemorrhage when the wound is large and the blood comes out in spurts. Apply the rubber band tightly just above the wound, previously raising the wounded part, especially if it be a limb. Be careful to put the band on **UNINJURED FLESH** if the limb be badly crushed and about three inches above the crushed tissues, else it would slip down and increase the hemorrhage. **Be very careful to see that the band be firmly fixed** before leaving it. Small wounds, even though the hemorrhage be arterial, require only a firm compress of the sublimated gauze placed immediately over the wound and bandaged tightly in place with one of the muslin bandages. It is best after this to bandage firmly from the extremity (hand or foot) upward to beyond the wound with muslin bandages.
- B. Venous bleeding, which occurs when the wound is shallow (does not go deeper than the skin), as a rule requires firm pressure over the wound and especially below it. If the wound be quite small, put a wad of styptic cotton into and over it and bandage tightly in place, and then apply a bandage **from below upwards** over and beyond the wound. If the wound be extensive, fill it full of sublimated gauze and then put a thick wad of absorbent cotton over it and **bandage tightly from below upward**.
- C. Bleeding from the head, if only the scalp is involved, may be controlled by bringing the wounded or torn surfaces together and applying along the wound a thick layer of styptic cotton, and over this another layer of absorbent cotton and a tight bandage. It is well to pass the bandage under the chin if the wound be on top of the head, as this holds it firmer and tighter.
3. Remove the clothing from the wounded part by cutting it away. Do not attempt to tear or draw clothing off, as this may further injure the wounded part. **Always see the wound and know by your eye just what the nature of it is.**
4. After Hemorrhage has been stopped. The next point is to prevent the wound from being infected and thus prevent blood poisoning. To accomplish this the wound should be cleaned if badly soiled. If soiled by oil and soot or dirt, bathe it gently with a small quantity of antiseptic soap and warm water. After it is apparently clean, wash it out carefully with a pint of warm water in which one of the corrosive sublimate tablets has been dissolved, using a piece of gauze to do this. Then wet several layers of the borated gauze in a fresh solution of the same strength used in washing the wound and lay them over the wound and bandage in place with a muslin bandage. Always cover an open wound with a piece of gauze

wet in the solution of corrosive sublimate (one tablet to a pint of water) before transporting the wounded man. **Never allow an open wound to remain unprotected longer than the time employed in stopping hemorrhage. Remember a soiled covering is worse than none at all, however.**

5. Fractures. If a bone be broken in any of the limbs the member should be firmly fixed before the injured individual be moved. If this be not done, great injury may result by the movements of the sharp fragments of the bone while the individual is being transported. Use flat piece of wire gauze, broken or cut into strips long enough to reach beyond the two nearest joints, will do. A bundle of twigs or stout straws may also serve when nothing else is to be had. Always put one of the improvised splints on either side of the limb, then tie a bandage over the splints at either extremity and in the middle. If there be a wound treat it according to the foregoing rules and then apply the splints, using some clean gauze as padding or some strips torn from clothing. If there be no wound, apply the splints over the trousers or sleeve. If nothing of any kind can be obtained to make a splint, tie the fractured leg or thigh to the sound one, or the fractured arm firmly to the side of the body, by a muslin bandage.

6. Compound fractures are fractures accompanied by a wound of the soft tissues at the point of fracture, so that the bone is exposed to the air. In these cases treat hemorrhage and the wound according to the foregoing rules and then apply splints. If the bones project beyond the skin, remember to bring them back into place by pulling the extremity in the direction of the displacement, never in the direction the bone normally should be, until the ends of the fragments are quite free from any over-riding. Be very careful always to **cover these WOUNDS** with the wet sublimate **GAUZE** and bandage it on.

7. Burns. Carefully remove the clothing by cutting it off, if the part be clothed, and apply immediately three or four thicknesses of the borated gauze wet in warm water, in which one tablespoonful of the bicarbonate of soda to the quart has been dissolved. As a rule never attempt to clean burns immediately after they occur. Cover the wounded part immediately as directed above and leave the cleansing to the surgeon afterward.

Extensive burns are attended by great shock as a rule, and require free stimulation. As burns are very rarely followed by hemorrhage, stimulants may be and should be given in considerable quantities.

8. Prostration from Excessive Heat. In these cases (not sunstroke) the face is pale, lips colorless or blue, breathing slow and quiet, pulse slow and very weak. Place the patient on his back, with his head level with his body, and loosen clothing. Apply heat to the surface of the body and extremities. Bathe the face with warm water into which a little alcohol or whiskey has been poured, and if he can swallow, give the patient an ounce of whiskey as much warm water.

B. Prostration from Drinking too much Ice Water when Overheated. The face is red or even purple, the breathing heavy and irregular, pulse irregular. Loosen clothing, place on back with head slightly elevated. Give hot drinks, apply heat to the spine and the extremities.

9. Position in which a Patient should be Placed after Injury. Injuries to the head require that the head be raised higher than the level of the body. In all cases, if practical, lay the patient on his back with the limbs stretched out in their natural positions; loosen the collar and waistbands, and unless the head be injured, remember to have the head on the same level as the body. Do not bolster it up with anything.

### INSTRUCTION FOR STRETCHERS.

The equipment includes—

- 1 Stretcher,
- 1 Pair of Blankets,
- 1 Pillow,
- 1 Pillow Case,
- 1 Rubber Pillow Case,
- 1 Water-proof Cover,
- 1 Pair Wall Brackets.

The bedding and side pieces are to be kept strapped on the stretcher, and the latter placed on the wall bracket.

When about to use the stretcher, unbuckle the straps from the side pieces which hold down the bedding, and buckle them tightly underneath, to guard against the breaking of a spring; place the side pieces properly on the sides, place the rubber cover over the stretcher for protection against blood and discharges. The blanket is to be used double, as a cover for the patient.

Whenever necessary to do so, the patient may be lifted on the inner portion of the stretcher, resting on the springs, without lifting the whole stretcher. In cramped positions, and for purposes of examination, this will be found convenient.

When storing the stretcher away, fold the blanket and pillow neatly into a narrow, even and compact parcel, and envelop this in the rubber cover, folding in the ends first. Place this on the stretcher with the side pieces on top, to assist in holding it in position, then pass the straps through the keepers on the side pieces, and fasten all snugly in place. This will protect the bedding, if properly done, from moths and wet. The whole stretcher should then be placed on the brackets.

The blanket should be taken out occasionally and shaken, to prevent damage from moths, as well as to keep it cleanly at all times. Replace at once, so that the stretcher is ready for immediate use whenever required.

The stretcher and bedding must not be used for any other purpose than in transporting injured persons.

Agents will be personally responsible for the care of property, and will be particular to take proper receipts whenever it is allowed to go out of his possession, and will notify his Division Superintendent when sent out and by whom.

Stations where stretchers are kept are as follows:

St. Paul Frt. Office,	Sioux Falls,	Glasgow,	Leavenworth,
St. Paul Shops,	Sioux City,	Havre,	Everett,
Minneapolis Jct.,	Breckenridge,	Great Falls Shops,	Carman,
Hamline Transfer,	Grand Forks,	Cut Bank,	Cass Lake,
St. Cloud Shops,	Larimore,	Kalispell,	West Superior,
Melrose,	Devils Lake,	Libby,	Sandstone,
Barnesville,	Minot,	Spokane Shops,	Swan River,
Willmar,	Williston,		

### COMPANY SURGEONS.

St. Paul.....	J. A. QUINN, Chief Surgeon.	Fairhaven.....	H. A. COMPTON
Everett.....	W. C. COX	Seattle.....	J. R. EAGLESON
Leavenworth.....	G. W. HOXSIR	Seattle.....	A. B. KIBBEE, Oculist
		Anacortes.....	GEO. B. SMITH